ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	1	1	64	138	138	25
Mindanao	2025	1	1	2	60	138	138	25
Mindanao	2025	1	1	3	57	138	138	25
Mindanao	2025	1	1	4	55	138	138	25
Mindanao	2025	1	1	5	53	138	138	25
Mindanao	2025	1	1	6	51	138	138	25
Mindanao	2025	1	1	7	50	138	138	25
Mindanao	2025	1	1	8	50	138	138	25
Mindanao	2025	1	1	9	51	138	138	25
Mindanao	2025	1	1	10	51	138	138	25
Mindanao	2025	1	1	11	52	138	138	25
Mindanao	2025	1	1	12	54	138	138	25
Mindanao	2025	1	1	13	55	138	138	25
Mindanao	2025	1	1	14	55	138	138	25
Mindanao	2025	1	1	15	55	138	138	25
Mindanao	2025	1	1	16	55	138	138	25
Mindanao	2025	1	1	17	57	138	138	25
Mindanao	2025	1	1	18	67	138	138	25
Mindanao	2025	1	1	19	66	138	138	25
Mindanao	2025	1	1	20	64	138	138	25
Mindanao	2025	1	1	21	62	138	138	25
Mindanao	2025	1	1	22	58	138	138	25
Mindanao	2025	1	1	23	53	138	138	25
Mindanao	2025	1	1	24	53	138	138	25
Mindanao	2025	1	2	1	58	138	138	25
Mindanao	2025	1	2	2	56	138	138	25
Mindanao	2025	1	2	3	55	138	138	25
Mindanao	2025	1	2	4	55	138	138	25
Mindanao	2025	1	2	5	58	138	138	25
Mindanao	2025	1	2	6	63	138	138	25
Mindanao	2025	1	2	7	61	138	138	25
Mindanao	2025	1	2	8	65	138	138	25
Mindanao	2025	1	2	9	75	138	138	25
Mindanao	2025	1	2	10	79	138	138	25
Mindanao	2025	1	2	11	84	138	138	25
Mindanao	2025	1	2	12	83	138	138	25
Mindanao	2025	1	2	13	84	138	138	25
Mindanao	2025	1	2	14	88	138	138	25
Mindanao	2025	1	2	15	89	138	138	25
Mindanao	2025	1	2	16	87	138	138	25
Mindanao	2025	1	2	17	85	138	138	25
Mindanao	2025	1	2	18	87	138	138	25
Mindanao	2025	1	2	19	81	138	138	25
Mindanao	2025	1	2	20	79	138	138	25
Mindanao	2025	1	2	21	77	138	138	25
Mindanao	2025	1	2	22	71	138	138	25
Mindanao	2025	1	2	23	66	138	138	25
Mindanao	2025	1	2	24	63	138	138	25
Mindanao	2025	1	3	1	60	138	138	25
Mindanao	2025	1	3	2	58	138	138	25
Mindanao	2025	1	3	3	57	138	138	25
Mindanao	2025	1	3	4	57	138	138	25
Mindanao	2025	1	3	5	60	138	138	25
Mindanao	2025	1	3	6	63	138	138	25
Mindanao	2025	1	3	7	60	138	138	25
Mindanao	2025	1	3	8	65	138	138	25
Mindanao	2025	1	3	9	75	138	138	25
Mindanao	2025	1	3	10	83	138	138	25
Mindanao	2025	1	3	11	88	138	138	25
Mindanao	2025	1	3	12	87	138	138	25
Mindanao	2025	1	3	13	88	138	138	25
Mindanao	2025	1	3	14	92	138	138	25
Mindanao	2025	1	3	15	92	138	138	25
Mindanao	2025	1	3	16	87	138	138	25
Mindanao	2025	1	3	17	84	138	138	25
Mindanao	2025	1	3	18	89	138	138	25
Mindanao	2025	1	3	19	86	138	138	25
Mindanao	2025	1	3	20	82	138	138	25
Mindanao	2025	1	3	21	79	138	138	25
Mindanao	2025	1	3	22	73	138	138	25
Mindanao	2025	1	3	23	70	138	138	25
Mindanao	2025	1	3	24	65	138	138	25
Mindanao	2025	1	4	1	63	138	138	25
Mindanao	2025	1	4	2	61	138	138	25
Mindanao	2025	1	4	3	58	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	4	4	58	138	138	25
Mindanao	2025	1	4	5	58	138	138	25
Mindanao	2025	1	4	6	61	138	138	25
Mindanao	2025	1	4	7	61	138	138	25
Mindanao	2025	1	4	8	62	138	138	25
Mindanao	2025	1	4	9	67	138	138	25
Mindanao	2025	1	4	10	70	138	138	25
Mindanao	2025	1	4	11	73	138	138	25
Mindanao	2025	1	4	12	72	138	138	25
Mindanao	2025	1	4	13	72	138	138	25
Mindanao	2025	1	4	14	74	138	138	25
Mindanao	2025	1	4	15	74	138	138	25
Mindanao	2025	1	4	16	74	138	138	25
Mindanao	2025	1	4	17	74	138	138	25
Mindanao	2025	1	4	18	82	138	138	25
Mindanao	2025	1	4	19	80	138	138	25
Mindanao	2025	1	4	20	77	138	138	25
Mindanao	2025	1	4	21	73	138	138	25
Mindanao	2025	1	4	22	68	138	138	25
Mindanao	2025	1	4	23	66	138	138	25
Mindanao	2025	1	4	24	62	138	138	25
Mindanao	2025	1	5	1	59	138	138	25
Mindanao	2025	1	5	2	56	138	138	25
Mindanao	2025	1	5	3	56	138	138	25
Mindanao	2025	1	5	4	54	138	138	25
Mindanao	2025	1	5	5	55	138	138	25
Mindanao	2025	1	5	6	57	138	138	25
Mindanao	2025	1	5	7	57	138	138	25
Mindanao	2025	1	5	8	57	138	138	25
Mindanao	2025	1	5	9	58	138	138	25
Mindanao	2025	1	5	10	61	138	138	25
Mindanao	2025	1	5	11	62	138	138	25
Mindanao	2025	1	5	12	62	138	138	25
Mindanao	2025	1	5	13	62	138	138	25
Mindanao	2025	1	5	14	63	138	138	25
Mindanao	2025	1	5	15	64	138	138	25
Mindanao	2025	1	5	16	64	138	138	25
Mindanao	2025	1	5	17	67	138	138	25
Mindanao	2025	1	5	18	77	138	138	25
Mindanao	2025	1	5	19	76	138	138	25
Mindanao	2025	1	5	20	72	138	138	25
Mindanao	2025	1	5	21	69	138	138	25
Mindanao	2025	1	5	22	64	138	138	25
Mindanao	2025	1	5	23	60	138	138	25
Mindanao	2025	1	5	24	59	138	138	25
Mindanao	2025	1	6	1	56	138	138	25
Mindanao	2025	1	6	2	55	138	138	25
Mindanao	2025	1	6	3	55	138	138	25
Mindanao	2025	1	6	4	54	138	138	25
Mindanao	2025	1	6	5	59	138	138	25
Mindanao	2025	1	6	6	64	138	138	25
Mindanao	2025	1	6	7	59	138	138	25
Mindanao	2025	1	6	8	64	138	138	25
Mindanao	2025	1	6	9	73	138	138	25
Mindanao	2025	1	6	10	79	138	138	25
Mindanao	2025	1	6	11	83	138	138	25
Mindanao	2025	1	6	12	81	138	138	25
Mindanao	2025	1	6	13	82	138	138	25
Mindanao	2025	1	6	14	85	138	138	25
Mindanao	2025	1	6	15	85	138	138	25
Mindanao	2025	1	6	16	83	138	138	25
Mindanao	2025	1	6	17	81	138	138	25
Mindanao	2025	1	6	18	88	138	138	25
Mindanao	2025	1	6	19	84	138	138	25
Mindanao	2025	1	6	20	80	138	138	25
Mindanao	2025	1	6	21	77	138	138	25
Mindanao	2025	1	6	22	71	138	138	25
Mindanao	2025	1	6	23	67	138	138	25
Mindanao	2025	1	6	24	63	138	138	25
Mindanao	2025	1	7	1	60	138	138	25
Mindanao	2025	1	7	2	58	138	138	25
Mindanao	2025	1	7	3	57	138	138	25
Mindanao	2025	1	7	4	58	138	138	25
Mindanao	2025	1	7	5	61	138	138	25
Mindanao	2025	1	7	6	66	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	7	7	62	138	138	25
Mindanao	2025	1	7	8	65	138	138	25
Mindanao	2025	1	7	9	74	138	138	25
Mindanao	2025	1	7	10	78	138	138	25
Mindanao	2025	1	7	11	81	138	138	25
Mindanao	2025	1	7	12	80	138	138	25
Mindanao	2025	1	7	13	80	138	138	25
Mindanao	2025	1	7	14	84	138	138	25
Mindanao	2025	1	7	15	83	138	138	25
Mindanao	2025	1	7	16	82	138	138	25
Mindanao	2025	1	7	17	80	138	138	25
Mindanao	2025	1	7	18	86	138	138	25
Mindanao	2025	1	7	19	82	138	138	25
Mindanao	2025	1	7	20	77	138	138	25
Mindanao	2025	1	7	21	74	138	138	25
Mindanao	2025	1	7	22	68	138	138	25
Mindanao	2025	1	7	23	64	138	138	25
Mindanao	2025	1	7	24	61	138	138	25
Mindanao	2025	1	8	1	59	138	138	25
Mindanao	2025	1	8	2	57	138	138	25
Mindanao	2025	1	8	3	54	138	138	25
Mindanao	2025	1	8	4	55	138	138	25
Mindanao	2025	1	8	5	59	138	138	25
Mindanao	2025	1	8	6	65	138	138	25
Mindanao	2025	1	8	7	60	138	138	25
Mindanao	2025	1	8	8	65	138	138	25
Mindanao	2025	1	8	9	72	138	138	25
Mindanao	2025	1	8	10	77	138	138	25
Mindanao	2025	1	8	11	80	138	138	25
Mindanao	2025	1	8	12	77	138	138	25
Mindanao	2025	1	8	13	78	138	138	25
Mindanao	2025	1	8	14	79	138	138	25
Mindanao	2025	1	8	15	79	138	138	25
Mindanao	2025	1	8	16	78	138	138	25
Mindanao	2025	1	8	17	78	138	138	25
Mindanao	2025	1	8	18	84	138	138	25
Mindanao	2025	1	8	19	79	138	138	25
Mindanao	2025	1	8	20	75	138	138	25
Mindanao	2025	1	8	21	71	138	138	25
Mindanao	2025	1	8	22	64	138	138	25
Mindanao	2025	1	8	23	61	138	138	25
Mindanao	2025	1	8	24	58	138	138	25
Mindanao	2025	1	9	1	57	138	138	25
Mindanao	2025	1	9	2	54	138	138	25
Mindanao	2025	1	9	3	54	138	138	25
Mindanao	2025	1	9	4	54	138	138	25
Mindanao	2025	1	9	5	56	138	138	25
Mindanao	2025	1	9	6	61	138	138	25
Mindanao	2025	1	9	7	57	138	138	25
Mindanao	2025	1	9	8	62	138	138	25
Mindanao	2025	1	9	9	70	138	138	25
Mindanao	2025	1	9	10	75	138	138	25
Mindanao	2025	1	9	11	79	138	138	25
Mindanao	2025	1	9	12	78	138	138	25
Mindanao	2025	1	9	13	79	138	138	25
Mindanao	2025	1	9	14	83	138	138	25
Mindanao	2025	1	9	15	82	138	138	25
Mindanao	2025	1	9	16	79	138	138	25
Mindanao	2025	1	9	17	81	138	138	25
Mindanao	2025	1	9	18	85	138	138	25
Mindanao	2025	1	9	19	77	138	138	25
Mindanao	2025	1	9	20	77	138	138	25
Mindanao	2025	1	9	21	75	138	138	25
Mindanao	2025	1	9	22	69	138	138	25
Mindanao	2025	1	9	23	65	138	138	25
Mindanao	2025	1	9	24	61	138	138	25
Mindanao	2025	1	10	1	60	138	138	25
Mindanao	2025	1	10	2	58	138	138	25
Mindanao	2025	1	10	3	57	138	138	25
Mindanao	2025	1	10	4	55	138	138	25
Mindanao	2025	1	10	5	60	138	138	25
Mindanao	2025	1	10	6	64	138	138	25
Mindanao	2025	1	10	7	60	138	138	25
Mindanao	2025	1	10	8	66	138	138	25
Mindanao	2025	1	10	9	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	10	10	82	138	138	25
Mindanao	2025	1	10	11	85	138	138	25
Mindanao	2025	1	10	12	84	138	138	25
Mindanao	2025	1	10	13	83	138	138	25
Mindanao	2025	1	10	14	86	138	138	25
Mindanao	2025	1	10	15	86	138	138	25
Mindanao	2025	1	10	16	85	138	138	25
Mindanao	2025	1	10	17	83	138	138	25
Mindanao	2025	1	10	18	88	138	138	25
Mindanao	2025	1	10	19	83	138	138	25
Mindanao	2025	1	10	20	80	138	138	25
Mindanao	2025	1	10	21	75	138	138	25
Mindanao	2025	1	10	22	69	138	138	25
Mindanao	2025	1	10	23	66	138	138	25
Mindanao	2025	1	10	24	63	138	138	25
Mindanao	2025	1	11	1	60	138	138	25
Mindanao	2025	1	11	2	59	138	138	25
Mindanao	2025	1	11	3	57	138	138	25
Mindanao	2025	1	11	4	56	138	138	25
Mindanao	2025	1	11	5	56	138	138	25
Mindanao	2025	1	11	6	60	138	138	25
Mindanao	2025	1	11	7	62	138	138	25
Mindanao	2025	1	11	8	63	138	138	25
Mindanao	2025	1	11	9	68	138	138	25
Mindanao	2025	1	11	10	71	138	138	25
Mindanao	2025	1	11	11	74	138	138	25
Mindanao	2025	1	11	12	74	138	138	25
Mindanao	2025	1	11	13	74	138	138	25
Mindanao	2025	1	11	14	74	138	138	25
Mindanao	2025	1	11	15	75	138	138	25
Mindanao	2025	1	11	16	75	138	138	25
Mindanao	2025	1	11	17	77	138	138	25
Mindanao	2025	1	11	18	81	138	138	25
Mindanao	2025	1	11	19	79	138	138	25
Mindanao	2025	1	11	20	76	138	138	25
Mindanao	2025	1	11	21	72	138	138	25
Mindanao	2025	1	11	22	67	138	138	25
Mindanao	2025	1	11	23	65	138	138	25
Mindanao	2025	1	11	24	62	138	138	25
Mindanao	2025	1	12	1	58	138	138	25
Mindanao	2025	1	12	2	57	138	138	25
Mindanao	2025	1	12	3	55	138	138	25
Mindanao	2025	1	12	4	55	138	138	25
Mindanao	2025	1	12	5	56	138	138	25
Mindanao	2025	1	12	6	58	138	138	25
Mindanao	2025	1	12	7	57	138	138	25
Mindanao	2025	1	12	8	58	138	138	25
Mindanao	2025	1	12	9	61	138	138	25
Mindanao	2025	1	12	10	64	138	138	25
Mindanao	2025	1	12	11	67	138	138	25
Mindanao	2025	1	12	12	68	138	138	25
Mindanao	2025	1	12	13	68	138	138	25
Mindanao	2025	1	12	14	70	138	138	25
Mindanao	2025	1	12	15	71	138	138	25
Mindanao	2025	1	12	16	71	138	138	25
Mindanao	2025	1	12	17	71	138	138	25
Mindanao	2025	1	12	18	81	138	138	25
Mindanao	2025	1	12	19	82	138	138	25
Mindanao	2025	1	12	20	79	138	138	25
Mindanao	2025	1	12	21	77	138	138	25
Mindanao	2025	1	12	22	73	138	138	25
Mindanao	2025	1	12	23	68	138	138	25
Mindanao	2025	1	12	24	64	138	138	25
Mindanao	2025	1	13	1	61	138	138	25
Mindanao	2025	1	13	2	60	138	138	25
Mindanao	2025	1	13	3	57	138	138	25
Mindanao	2025	1	13	4	59	138	138	25
Mindanao	2025	1	13	5	61	138	138	25
Mindanao	2025	1	13	6	68	138	138	25
Mindanao	2025	1	13	7	60	138	138	25
Mindanao	2025	1	13	8	66	138	138	25
Mindanao	2025	1	13	9	77	138	138	25
Mindanao	2025	1	13	10	84	138	138	25
Mindanao	2025	1	13	11	88	138	138	25
Mindanao	2025	1	13	12	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	13	13	89	138	138	25
Mindanao	2025	1	13	14	92	138	138	25
Mindanao	2025	1	13	15	92	138	138	25
Mindanao	2025	1	13	16	90	138	138	25
Mindanao	2025	1	13	17	86	138	138	25
Mindanao	2025	1	13	18	90	138	138	25
Mindanao	2025	1	13	19	87	138	138	25
Mindanao	2025	1	13	20	84	138	138	25
Mindanao	2025	1	13	21	81	138	138	25
Mindanao	2025	1	13	22	76	138	138	25
Mindanao	2025	1	13	23	71	138	138	25
Mindanao	2025	1	13	24	67	138	138	25
Mindanao	2025	1	14	1	63	138	138	25
Mindanao	2025	1	14	2	60	138	138	25
Mindanao	2025	1	14	3	59	138	138	25
Mindanao	2025	1	14	4	59	138	138	25
Mindanao	2025	1	14	5	63	138	138	25
Mindanao	2025	1	14	6	69	138	138	25
Mindanao	2025	1	14	7	62	138	138	25
Mindanao	2025	1	14	8	67	138	138	25
Mindanao	2025	1	14	9	79	138	138	25
Mindanao	2025	1	14	10	85	138	138	25
Mindanao	2025	1	14	11	89	138	138	25
Mindanao	2025	1	14	12	87	138	138	25
Mindanao	2025	1	14	13	90	138	138	25
Mindanao	2025	1	14	14	94	138	138	25
Mindanao	2025	1	14	15	91	138	138	25
Mindanao	2025	1	14	16	90	138	138	25
Mindanao	2025	1	14	17	87	138	138	25
Mindanao	2025	1	14	18	92	138	138	25
Mindanao	2025	1	14	19	87	138	138	25
Mindanao	2025	1	14	20	84	138	138	25
Mindanao	2025	1	14	21	82	138	138	25
Mindanao	2025	1	14	22	76	138	138	25
Mindanao	2025	1	14	23	70	138	138	25
Mindanao	2025	1	14	24	66	138	138	25
Mindanao	2025	1	15	1	65	138	138	25
Mindanao	2025	1	15	2	61	138	138	25
Mindanao	2025	1	15	3	60	138	138	25
Mindanao	2025	1	15	4	59	138	138	25
Mindanao	2025	1	15	5	64	138	138	25
Mindanao	2025	1	15	6	69	138	138	25
Mindanao	2025	1	15	7	62	138	138	25
Mindanao	2025	1	15	8	67	138	138	25
Mindanao	2025	1	15	9	77	138	138	25
Mindanao	2025	1	15	10	86	138	138	25
Mindanao	2025	1	15	11	91	138	138	25
Mindanao	2025	1	15	12	89	138	138	25
Mindanao	2025	1	15	13	91	138	138	25
Mindanao	2025	1	15	14	93	138	138	25
Mindanao	2025	1	15	15	91	138	138	25
Mindanao	2025	1	15	16	87	138	138	25
Mindanao	2025	1	15	17	83	138	138	25
Mindanao	2025	1	15	18	89	138	138	25
Mindanao	2025	1	15	19	87	138	138	25
Mindanao	2025	1	15	20	83	138	138	25
Mindanao	2025	1	15	21	81	138	138	25
Mindanao	2025	1	15	22	76	138	138	25
Mindanao	2025	1	15	23	68	138	138	25
Mindanao	2025	1	15	24	65	138	138	25
Mindanao	2025	1	16	1	63	138	138	25
Mindanao	2025	1	16	2	60	138	138	25
Mindanao	2025	1	16	3	60	138	138	25
Mindanao	2025	1	16	4	59	138	138	25
Mindanao	2025	1	16	5	62	138	138	25
Mindanao	2025	1	16	6	69	138	138	25
Mindanao	2025	1	16	7	62	138	138	25
Mindanao	2025	1	16	8	68	138	138	25
Mindanao	2025	1	16	9	79	138	138	25
Mindanao	2025	1	16	10	85	138	138	25
Mindanao	2025	1	16	11	90	138	138	25
Mindanao	2025	1	16	12	89	138	138	25
Mindanao	2025	1	16	13	90	138	138	25
Mindanao	2025	1	16	14	94	138	138	25
Mindanao	2025	1	16	15	91	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	16	16	92	138	138	25
Mindanao	2025	1	16	17	87	138	138	25
Mindanao	2025	1	16	18	92	138	138	25
Mindanao	2025	1	16	19	90	138	138	25
Mindanao	2025	1	16	20	88	138	138	25
Mindanao	2025	1	16	21	84	138	138	25
Mindanao	2025	1	16	22	80	138	138	25
Mindanao	2025	1	16	23	73	138	138	25
Mindanao	2025	1	16	24	70	138	138	25
Mindanao	2025	1	17	1	67	138	138	25
Mindanao	2025	1	17	2	65	138	138	25
Mindanao	2025	1	17	3	63	138	138	25
Mindanao	2025	1	17	4	61	138	138	25
Mindanao	2025	1	17	5	64	138	138	25
Mindanao	2025	1	17	6	70	138	138	25
Mindanao	2025	1	17	7	65	138	138	25
Mindanao	2025	1	17	8	72	138	138	25
Mindanao	2025	1	17	9	81	138	138	25
Mindanao	2025	1	17	10	86	138	138	25
Mindanao	2025	1	17	11	91	138	138	25
Mindanao	2025	1	17	12	89	138	138	25
Mindanao	2025	1	17	13	90	138	138	25
Mindanao	2025	1	17	14	94	138	138	25
Mindanao	2025	1	17	15	93	138	138	25
Mindanao	2025	1	17	16	90	138	138	25
Mindanao	2025	1	17	17	86	138	138	25
Mindanao	2025	1	17	18	91	138	138	25
Mindanao	2025	1	17	19	89	138	138	25
Mindanao	2025	1	17	20	85	138	138	25
Mindanao	2025	1	17	21	82	138	138	25
Mindanao	2025	1	17	22	77	138	138	25
Mindanao	2025	1	17	23	73	138	138	25
Mindanao	2025	1	17	24	68	138	138	25
Mindanao	2025	1	18	1	65	138	138	25
Mindanao	2025	1	18	2	62	138	138	25
Mindanao	2025	1	18	3	61	138	138	25
Mindanao	2025	1	18	4	59	138	138	25
Mindanao	2025	1	18	5	60	138	138	25
Mindanao	2025	1	18	6	61	138	138	25
Mindanao	2025	1	18	7	63	138	138	25
Mindanao	2025	1	18	8	65	138	138	25
Mindanao	2025	1	18	9	73	138	138	25
Mindanao	2025	1	18	10	76	138	138	25
Mindanao	2025	1	18	11	79	138	138	25
Mindanao	2025	1	18	12	77	138	138	25
Mindanao	2025	1	18	13	77	138	138	25
Mindanao	2025	1	18	14	78	138	138	25
Mindanao	2025	1	18	15	77	138	138	25
Mindanao	2025	1	18	16	76	138	138	25
Mindanao	2025	1	18	17	76	138	138	25
Mindanao	2025	1	18	18	82	138	138	25
Mindanao	2025	1	18	19	79	138	138	25
Mindanao	2025	1	18	20	75	138	138	25
Mindanao	2025	1	18	21	72	138	138	25
Mindanao	2025	1	18	22	67	138	138	25
Mindanao	2025	1	18	23	63	138	138	25
Mindanao	2025	1	18	24	60	138	138	25
Mindanao	2025	1	19	1	57	138	138	25
Mindanao	2025	1	19	2	55	138	138	25
Mindanao	2025	1	19	3	53	138	138	25
Mindanao	2025	1	19	4	52	138	138	25
Mindanao	2025	1	19	5	53	138	138	25
Mindanao	2025	1	19	6	58	138	138	25
Mindanao	2025	1	19	7	57	138	138	25
Mindanao	2025	1	19	8	58	138	138	25
Mindanao	2025	1	19	9	60	138	138	25
Mindanao	2025	1	19	10	64	138	138	25
Mindanao	2025	1	19	11	66	138	138	25
Mindanao	2025	1	19	12	64	138	138	25
Mindanao	2025	1	19	13	64	138	138	25
Mindanao	2025	1	19	14	64	138	138	25
Mindanao	2025	1	19	15	65	138	138	25
Mindanao	2025	1	19	16	65	138	138	25
Mindanao	2025	1	19	17	67	138	138	25
Mindanao	2025	1	19	18	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	19	19	75	138	138	25
Mindanao	2025	1	19	20	73	138	138	25
Mindanao	2025	1	19	21	70	138	138	25
Mindanao	2025	1	19	22	66	138	138	25
Mindanao	2025	1	19	23	60	138	138	25
Mindanao	2025	1	19	24	59	138	138	25
Mindanao	2025	1	20	1	56	138	138	25
Mindanao	2025	1	20	2	56	138	138	25
Mindanao	2025	1	20	3	54	138	138	25
Mindanao	2025	1	20	4	54	138	138	25
Mindanao	2025	1	20	5	59	138	138	25
Mindanao	2025	1	20	6	65	138	138	25
Mindanao	2025	1	20	7	60	138	138	25
Mindanao	2025	1	20	8	64	138	138	25
Mindanao	2025	1	20	9	74	138	138	25
Mindanao	2025	1	20	10	78	138	138	25
Mindanao	2025	1	20	11	82	138	138	25
Mindanao	2025	1	20	12	80	138	138	25
Mindanao	2025	1	20	13	80	138	138	25
Mindanao	2025	1	20	14	81	138	138	25
Mindanao	2025	1	20	15	81	138	138	25
Mindanao	2025	1	20	16	80	138	138	25
Mindanao	2025	1	20	17	81	138	138	25
Mindanao	2025	1	20	18	84	138	138	25
Mindanao	2025	1	20	19	81	138	138	25
Mindanao	2025	1	20	20	76	138	138	25
Mindanao	2025	1	20	21	73	138	138	25
Mindanao	2025	1	20	22	67	138	138	25
Mindanao	2025	1	20	23	63	138	138	25
Mindanao	2025	1	20	24	60	138	138	25
Mindanao	2025	1	21	1	58	138	138	25
Mindanao	2025	1	21	2	57	138	138	25
Mindanao	2025	1	21	3	57	138	138	25
Mindanao	2025	1	21	4	56	138	138	25
Mindanao	2025	1	21	5	60	138	138	25
Mindanao	2025	1	21	6	67	138	138	25
Mindanao	2025	1	21	7	61	138	138	25
Mindanao	2025	1	21	8	64	138	138	25
Mindanao	2025	1	21	9	74	138	138	25
Mindanao	2025	1	21	10	81	138	138	25
Mindanao	2025	1	21	11	85	138	138	25
Mindanao	2025	1	21	12	81	138	138	25
Mindanao	2025	1	21	13	83	138	138	25
Mindanao	2025	1	21	14	86	138	138	25
Mindanao	2025	1	21	15	84	138	138	25
Mindanao	2025	1	21	16	83	138	138	25
Mindanao	2025	1	21	17	81	138	138	25
Mindanao	2025	1	21	18	83	138	138	25
Mindanao	2025	1	21	19	80	138	138	25
Mindanao	2025	1	21	20	75	138	138	25
Mindanao	2025	1	21	21	72	138	138	25
Mindanao	2025	1	21	22	67	138	138	25
Mindanao	2025	1	21	23	64	138	138	25
Mindanao	2025	1	21	24	59	138	138	25
Mindanao	2025	1	22	1	58	138	138	25
Mindanao	2025	1	22	2	56	138	138	25
Mindanao	2025	1	22	3	57	138	138	25
Mindanao	2025	1	22	4	57	138	138	25
Mindanao	2025	1	22	5	61	138	138	25
Mindanao	2025	1	22	6	66	138	138	25
Mindanao	2025	1	22	7	60	138	138	25
Mindanao	2025	1	22	8	64	138	138	25
Mindanao	2025	1	22	9	72	138	138	25
Mindanao	2025	1	22	10	77	138	138	25
Mindanao	2025	1	22	11	78	138	138	25
Mindanao	2025	1	22	12	77	138	138	25
Mindanao	2025	1	22	13	77	138	138	25
Mindanao	2025	1	22	14	81	138	138	25
Mindanao	2025	1	22	15	79	138	138	25
Mindanao	2025	1	22	16	79	138	138	25
Mindanao	2025	1	22	17	78	138	138	25
Mindanao	2025	1	22	18	82	138	138	25
Mindanao	2025	1	22	19	82	138	138	25
Mindanao	2025	1	22	20	79	138	138	25
Mindanao	2025	1	22	21	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	22	22	70	138	138	25
Mindanao	2025	1	22	23	65	138	138	25
Mindanao	2025	1	22	24	61	138	138	25
Mindanao	2025	1	23	1	60	138	138	25
Mindanao	2025	1	23	2	59	138	138	25
Mindanao	2025	1	23	3	57	138	138	25
Mindanao	2025	1	23	4	58	138	138	25
Mindanao	2025	1	23	5	62	138	138	25
Mindanao	2025	1	23	6	67	138	138	25
Mindanao	2025	1	23	7	62	138	138	25
Mindanao	2025	1	23	8	64	138	138	25
Mindanao	2025	1	23	9	75	138	138	25
Mindanao	2025	1	23	10	81	138	138	25
Mindanao	2025	1	23	11	84	138	138	25
Mindanao	2025	1	23	12	83	138	138	25
Mindanao	2025	1	23	13	83	138	138	25
Mindanao	2025	1	23	14	87	138	138	25
Mindanao	2025	1	23	15	87	138	138	25
Mindanao	2025	1	23	16	86	138	138	25
Mindanao	2025	1	23	17	84	138	138	25
Mindanao	2025	1	23	18	88	138	138	25
Mindanao	2025	1	23	19	86	138	138	25
Mindanao	2025	1	23	20	84	138	138	25
Mindanao	2025	1	23	21	80	138	138	25
Mindanao	2025	1	23	22	75	138	138	25
Mindanao	2025	1	23	23	70	138	138	25
Mindanao	2025	1	23	24	66	138	138	25
Mindanao	2025	1	24	1	63	138	138	25
Mindanao	2025	1	24	2	62	138	138	25
Mindanao	2025	1	24	3	61	138	138	25
Mindanao	2025	1	24	4	62	138	138	25
Mindanao	2025	1	24	5	63	138	138	25
Mindanao	2025	1	24	6	68	138	138	25
Mindanao	2025	1	24	7	64	138	138	25
Mindanao	2025	1	24	8	70	138	138	25
Mindanao	2025	1	24	9	81	138	138	25
Mindanao	2025	1	24	10	87	138	138	25
Mindanao	2025	1	24	11	91	138	138	25
Mindanao	2025	1	24	12	89	138	138	25
Mindanao	2025	1	24	13	90	138	138	25
Mindanao	2025	1	24	14	94	138	138	25
Mindanao	2025	1	24	15	93	138	138	25
Mindanao	2025	1	24	16	92	138	138	25
Mindanao	2025	1	24	17	86	138	138	25
Mindanao	2025	1	24	18	91	138	138	25
Mindanao	2025	1	24	19	90	138	138	25
Mindanao	2025	1	24	20	86	138	138	25
Mindanao	2025	1	24	21	83	138	138	25
Mindanao	2025	1	24	22	77	138	138	25
Mindanao	2025	1	24	23	72	138	138	25
Mindanao	2025	1	24	24	68	138	138	25
Mindanao	2025	1	25	1	66	138	138	25
Mindanao	2025	1	25	2	64	138	138	25
Mindanao	2025	1	25	3	61	138	138	25
Mindanao	2025	1	25	4	61	138	138	25
Mindanao	2025	1	25	5	61	138	138	25
Mindanao	2025	1	25	6	65	138	138	25
Mindanao	2025	1	25	7	63	138	138	25
Mindanao	2025	1	25	8	65	138	138	25
Mindanao	2025	1	25	9	72	138	138	25
Mindanao	2025	1	25	10	79	138	138	25
Mindanao	2025	1	25	11	83	138	138	25
Mindanao	2025	1	25	12	82	138	138	25
Mindanao	2025	1	25	13	83	138	138	25
Mindanao	2025	1	25	14	86	138	138	25
Mindanao	2025	1	25	15	85	138	138	25
Mindanao	2025	1	25	16	85	138	138	25
Mindanao	2025	1	25	17	81	138	138	25
Mindanao	2025	1	25	18	88	138	138	25
Mindanao	2025	1	25	19	88	138	138	25
Mindanao	2025	1	25	20	87	138	138	25
Mindanao	2025	1	25	21	82	138	138	25
Mindanao	2025	1	25	22	77	138	138	25
Mindanao	2025	1	25	23	73	138	138	25
Mindanao	2025	1	25	24	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	26	1	66	138	138	25
Mindanao	2025	1	26	2	64	138	138	25
Mindanao	2025	1	26	3	62	138	138	25
Mindanao	2025	1	26	4	61	138	138	25
Mindanao	2025	1	26	5	61	138	138	25
Mindanao	2025	1	26	6	60	138	138	25
Mindanao	2025	1	26	7	61	138	138	25
Mindanao	2025	1	26	8	62	138	138	25
Mindanao	2025	1	26	9	63	138	138	25
Mindanao	2025	1	26	10	66	138	138	25
Mindanao	2025	1	26	11	69	138	138	25
Mindanao	2025	1	26	12	69	138	138	25
Mindanao	2025	1	26	13	69	138	138	25
Mindanao	2025	1	26	14	68	138	138	25
Mindanao	2025	1	26	15	69	138	138	25
Mindanao	2025	1	26	16	68	138	138	25
Mindanao	2025	1	26	17	70	138	138	25
Mindanao	2025	1	26	18	79	138	138	25
Mindanao	2025	1	26	19	80	138	138	25
Mindanao	2025	1	26	20	78	138	138	25
Mindanao	2025	1	26	21	76	138	138	25
Mindanao	2025	1	26	22	70	138	138	25
Mindanao	2025	1	26	23	67	138	138	25
Mindanao	2025	1	26	24	63	138	138	25
Mindanao	2025	1	27	1	61	138	138	25
Mindanao	2025	1	27	2	59	138	138	25
Mindanao	2025	1	27	3	58	138	138	25
Mindanao	2025	1	27	4	58	138	138	25
Mindanao	2025	1	27	5	62	138	138	25
Mindanao	2025	1	27	6	66	138	138	25
Mindanao	2025	1	27	7	62	138	138	25
Mindanao	2025	1	27	8	67	138	138	25
Mindanao	2025	1	27	9	79	138	138	25
Mindanao	2025	1	27	10	84	138	138	25
Mindanao	2025	1	27	11	87	138	138	25
Mindanao	2025	1	27	12	86	138	138	25
Mindanao	2025	1	27	13	87	138	138	25
Mindanao	2025	1	27	14	90	138	138	25
Mindanao	2025	1	27	15	88	138	138	25
Mindanao	2025	1	27	16	88	138	138	25
Mindanao	2025	1	27	17	84	138	138	25
Mindanao	2025	1	27	18	89	138	138	25
Mindanao	2025	1	27	19	87	138	138	25
Mindanao	2025	1	27	20	83	138	138	25
Mindanao	2025	1	27	21	79	138	138	25
Mindanao	2025	1	27	22	74	138	138	25
Mindanao	2025	1	27	23	70	138	138	25
Mindanao	2025	1	27	24	66	138	138	25
Mindanao	2025	1	28	1	63	138	138	25
Mindanao	2025	1	28	2	61	138	138	25
Mindanao	2025	1	28	3	59	138	138	25
Mindanao	2025	1	28	4	59	138	138	25
Mindanao	2025	1	28	5	63	138	138	25
Mindanao	2025	1	28	6	69	138	138	25
Mindanao	2025	1	28	7	63	138	138	25
Mindanao	2025	1	28	8	71	138	138	25
Mindanao	2025	1	28	9	78	138	138	25
Mindanao	2025	1	28	10	88	138	138	25
Mindanao	2025	1	28	11	90	138	138	25
Mindanao	2025	1	28	12	89	138	138	25
Mindanao	2025	1	28	13	89	138	138	25
Mindanao	2025	1	28	14	93	138	138	25
Mindanao	2025	1	28	15	92	138	138	25
Mindanao	2025	1	28	16	92	138	138	25
Mindanao	2025	1	28	17	87	138	138	25
Mindanao	2025	1	28	18	92	138	138	25
Mindanao	2025	1	28	19	92	138	138	25
Mindanao	2025	1	28	20	89	138	138	25
Mindanao	2025	1	28	21	85	138	138	25
Mindanao	2025	1	28	22	78	138	138	25
Mindanao	2025	1	28	23	73	138	138	25
Mindanao	2025	1	28	24	70	138	138	25
Mindanao	2025	1	29	1	67	138	138	25
Mindanao	2025	1	29	2	65	138	138	25
Mindanao	2025	1	29	3	62	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	1	29	4	62	138	138	25
Mindanao	2025	1	29	5	65	138	138	25
Mindanao	2025	1	29	6	70	138	138	25
Mindanao	2025	1	29	7	65	138	138	25
Mindanao	2025	1	29	8	69	138	138	25
Mindanao	2025	1	29	9	79	138	138	25
Mindanao	2025	1	29	10	86	138	138	25
Mindanao	2025	1	29	11	90	138	138	25
Mindanao	2025	1	29	12	88	138	138	25
Mindanao	2025	1	29	13	90	138	138	25
Mindanao	2025	1	29	14	91	138	138	25
Mindanao	2025	1	29	15	93	138	138	25
Mindanao	2025	1	29	16	92	138	138	25
Mindanao	2025	1	29	17	88	138	138	25
Mindanao	2025	1	29	18	92	138	138	25
Mindanao	2025	1	29	19	90	138	138	25
Mindanao	2025	1	29	20	87	138	138	25
Mindanao	2025	1	29	21	85	138	138	25
Mindanao	2025	1	29	22	79	138	138	25
Mindanao	2025	1	29	23	75	138	138	25
Mindanao	2025	1	29	24	72	138	138	25
Mindanao	2025	1	30	1	68	138	138	25
Mindanao	2025	1	30	2	65	138	138	25
Mindanao	2025	1	30	3	62	138	138	25
Mindanao	2025	1	30	4	62	138	138	25
Mindanao	2025	1	30	5	66	138	138	25
Mindanao	2025	1	30	6	71	138	138	25
Mindanao	2025	1	30	7	64	138	138	25
Mindanao	2025	1	30	8	70	138	138	25
Mindanao	2025	1	30	9	82	138	138	25
Mindanao	2025	1	30	10	88	138	138	25
Mindanao	2025	1	30	11	91	138	138	25
Mindanao	2025	1	30	12	90	138	138	25
Mindanao	2025	1	30	13	92	138	138	25
Mindanao	2025	1	30	14	97	138	138	25
Mindanao	2025	1	30	15	95	138	138	25
Mindanao	2025	1	30	16	94	138	138	25
Mindanao	2025	1	30	17	86	138	138	25
Mindanao	2025	1	30	18	91	138	138	25
Mindanao	2025	1	30	19	91	138	138	25
Mindanao	2025	1	30	20	88	138	138	25
Mindanao	2025	1	30	21	85	138	138	25
Mindanao	2025	1	30	22	79	138	138	25
Mindanao	2025	1	30	23	74	138	138	25
Mindanao	2025	1	30	24	70	138	138	25
Mindanao	2025	1	31	1	67	138	138	25
Mindanao	2025	1	31	2	63	138	138	25
Mindanao	2025	1	31	3	61	138	138	25
Mindanao	2025	1	31	4	62	138	138	25
Mindanao	2025	1	31	5	64	138	138	25
Mindanao	2025	1	31	6	69	138	138	25
Mindanao	2025	1	31	7	63	138	138	25
Mindanao	2025	1	31	8	71	138	138	25
Mindanao	2025	1	31	9	81	138	138	25
Mindanao	2025	1	31	10	87	138	138	25
Mindanao	2025	1	31	11	91	138	138	25
Mindanao	2025	1	31	12	89	138	138	25
Mindanao	2025	1	31	13	91	138	138	25
Mindanao	2025	1	31	14	96	138	138	25
Mindanao	2025	1	31	15	95	138	138	25
Mindanao	2025	1	31	16	94	138	138	25
Mindanao	2025	1	31	17	88	138	138	25
Mindanao	2025	1	31	18	92	138	138	25
Mindanao	2025	1	31	19	91	138	138	25
Mindanao	2025	1	31	20	89	138	138	25
Mindanao	2025	1	31	21	84	138	138	25
Mindanao	2025	1	31	22	80	138	138	25
Mindanao	2025	1	31	23	74	138	138	25
Mindanao	2025	1	31	24	69	138	138	25
Mindanao	2025	2	1	1	66	138	138	25
Mindanao	2025	2	1	2	63	138	138	25
Mindanao	2025	2	1	3	63	138	138	25
Mindanao	2025	2	1	4	60	138	138	25
Mindanao	2025	2	1	5	61	138	138	25
Mindanao	2025	2	1	6	62	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	1	7	63	138	138	25
Mindanao	2025	2	1	8	66	138	138	25
Mindanao	2025	2	1	9	71	138	138	25
Mindanao	2025	2	1	10	79	138	138	25
Mindanao	2025	2	1	11	82	138	138	25
Mindanao	2025	2	1	12	79	138	138	25
Mindanao	2025	2	1	13	82	138	138	25
Mindanao	2025	2	1	14	85	138	138	25
Mindanao	2025	2	1	15	82	138	138	25
Mindanao	2025	2	1	16	80	138	138	25
Mindanao	2025	2	1	17	80	138	138	25
Mindanao	2025	2	1	18	84	138	138	25
Mindanao	2025	2	1	19	84	138	138	25
Mindanao	2025	2	1	20	84	138	138	25
Mindanao	2025	2	1	21	79	138	138	25
Mindanao	2025	2	1	22	76	138	138	25
Mindanao	2025	2	1	23	70	138	138	25
Mindanao	2025	2	1	24	66	138	138	25
Mindanao	2025	2	2	1	63	138	138	25
Mindanao	2025	2	2	2	61	138	138	25
Mindanao	2025	2	2	3	59	138	138	25
Mindanao	2025	2	2	4	59	138	138	25
Mindanao	2025	2	2	5	58	138	138	25
Mindanao	2025	2	2	6	61	138	138	25
Mindanao	2025	2	2	7	59	138	138	25
Mindanao	2025	2	2	8	59	138	138	25
Mindanao	2025	2	2	9	64	138	138	25
Mindanao	2025	2	2	10	68	138	138	25
Mindanao	2025	2	2	11	67	138	138	25
Mindanao	2025	2	2	12	72	138	138	25
Mindanao	2025	2	2	13	73	138	138	25
Mindanao	2025	2	2	14	75	138	138	25
Mindanao	2025	2	2	15	74	138	138	25
Mindanao	2025	2	2	16	74	138	138	25
Mindanao	2025	2	2	17	74	138	138	25
Mindanao	2025	2	2	18	81	138	138	25
Mindanao	2025	2	2	19	83	138	138	25
Mindanao	2025	2	2	20	81	138	138	25
Mindanao	2025	2	2	21	79	138	138	25
Mindanao	2025	2	2	22	74	138	138	25
Mindanao	2025	2	2	23	69	138	138	25
Mindanao	2025	2	2	24	65	138	138	25
Mindanao	2025	2	3	1	61	138	138	25
Mindanao	2025	2	3	2	59	138	138	25
Mindanao	2025	2	3	3	58	138	138	25
Mindanao	2025	2	3	4	58	138	138	25
Mindanao	2025	2	3	5	59	138	138	25
Mindanao	2025	2	3	6	63	138	138	25
Mindanao	2025	2	3	7	63	138	138	25
Mindanao	2025	2	3	8	68	138	138	25
Mindanao	2025	2	3	9	79	138	138	25
Mindanao	2025	2	3	10	86	138	138	25
Mindanao	2025	2	3	11	91	138	138	25
Mindanao	2025	2	3	12	90	138	138	25
Mindanao	2025	2	3	13	92	138	138	25
Mindanao	2025	2	3	14	97	138	138	25
Mindanao	2025	2	3	15	95	138	138	25
Mindanao	2025	2	3	16	94	138	138	25
Mindanao	2025	2	3	17	87	138	138	25
Mindanao	2025	2	3	18	92	138	138	25
Mindanao	2025	2	3	19	91	138	138	25
Mindanao	2025	2	3	20	87	138	138	25
Mindanao	2025	2	3	21	83	138	138	25
Mindanao	2025	2	3	22	78	138	138	25
Mindanao	2025	2	3	23	74	138	138	25
Mindanao	2025	2	3	24	69	138	138	25
Mindanao	2025	2	4	1	65	138	138	25
Mindanao	2025	2	4	2	63	138	138	25
Mindanao	2025	2	4	3	62	138	138	25
Mindanao	2025	2	4	4	62	138	138	25
Mindanao	2025	2	4	5	63	138	138	25
Mindanao	2025	2	4	6	69	138	138	25
Mindanao	2025	2	4	7	64	138	138	25
Mindanao	2025	2	4	8	70	138	138	25
Mindanao	2025	2	4	9	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	4	10	86	138	138	25
Mindanao	2025	2	4	11	91	138	138	25
Mindanao	2025	2	4	12	88	138	138	25
Mindanao	2025	2	4	13	90	138	138	25
Mindanao	2025	2	4	14	94	138	138	25
Mindanao	2025	2	4	15	92	138	138	25
Mindanao	2025	2	4	16	90	138	138	25
Mindanao	2025	2	4	17	85	138	138	25
Mindanao	2025	2	4	18	89	138	138	25
Mindanao	2025	2	4	19	88	138	138	25
Mindanao	2025	2	4	20	85	138	138	25
Mindanao	2025	2	4	21	82	138	138	25
Mindanao	2025	2	4	22	76	138	138	25
Mindanao	2025	2	4	23	72	138	138	25
Mindanao	2025	2	4	24	67	138	138	25
Mindanao	2025	2	5	1	64	138	138	25
Mindanao	2025	2	5	2	62	138	138	25
Mindanao	2025	2	5	3	60	138	138	25
Mindanao	2025	2	5	4	60	138	138	25
Mindanao	2025	2	5	5	60	138	138	25
Mindanao	2025	2	5	6	63	138	138	25
Mindanao	2025	2	5	7	64	138	138	25
Mindanao	2025	2	5	8	70	138	138	25
Mindanao	2025	2	5	9	79	138	138	25
Mindanao	2025	2	5	10	86	138	138	25
Mindanao	2025	2	5	11	90	138	138	25
Mindanao	2025	2	5	12	88	138	138	25
Mindanao	2025	2	5	13	88	138	138	25
Mindanao	2025	2	5	14	92	138	138	25
Mindanao	2025	2	5	15	90	138	138	25
Mindanao	2025	2	5	16	88	138	138	25
Mindanao	2025	2	5	17	85	138	138	25
Mindanao	2025	2	5	18	89	138	138	25
Mindanao	2025	2	5	19	87	138	138	25
Mindanao	2025	2	5	20	85	138	138	25
Mindanao	2025	2	5	21	80	138	138	25
Mindanao	2025	2	5	22	76	138	138	25
Mindanao	2025	2	5	23	71	138	138	25
Mindanao	2025	2	5	24	64	138	138	25
Mindanao	2025	2	6	1	65	138	138	25
Mindanao	2025	2	6	2	62	138	138	25
Mindanao	2025	2	6	3	62	138	138	25
Mindanao	2025	2	6	4	61	138	138	25
Mindanao	2025	2	6	5	62	138	138	25
Mindanao	2025	2	6	6	67	138	138	25
Mindanao	2025	2	6	7	64	138	138	25
Mindanao	2025	2	6	8	70	138	138	25
Mindanao	2025	2	6	9	80	138	138	25
Mindanao	2025	2	6	10	87	138	138	25
Mindanao	2025	2	6	11	90	138	138	25
Mindanao	2025	2	6	12	89	138	138	25
Mindanao	2025	2	6	13	89	138	138	25
Mindanao	2025	2	6	14	89	138	138	25
Mindanao	2025	2	6	15	92	138	138	25
Mindanao	2025	2	6	16	90	138	138	25
Mindanao	2025	2	6	17	85	138	138	25
Mindanao	2025	2	6	18	87	138	138	25
Mindanao	2025	2	6	19	87	138	138	25
Mindanao	2025	2	6	20	85	138	138	25
Mindanao	2025	2	6	21	83	138	138	25
Mindanao	2025	2	6	22	77	138	138	25
Mindanao	2025	2	6	23	72	138	138	25
Mindanao	2025	2	6	24	67	138	138	25
Mindanao	2025	2	7	1	63	138	138	25
Mindanao	2025	2	7	2	63	138	138	25
Mindanao	2025	2	7	3	60	138	138	25
Mindanao	2025	2	7	4	59	138	138	25
Mindanao	2025	2	7	5	60	138	138	25
Mindanao	2025	2	7	6	66	138	138	25
Mindanao	2025	2	7	7	66	138	138	25
Mindanao	2025	2	7	8	71	138	138	25
Mindanao	2025	2	7	9	80	138	138	25
Mindanao	2025	2	7	10	85	138	138	25
Mindanao	2025	2	7	11	90	138	138	25
Mindanao	2025	2	7	12	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	7	13	89	138	138	25
Mindanao	2025	2	7	14	95	138	138	25
Mindanao	2025	2	7	15	94	138	138	25
Mindanao	2025	2	7	16	93	138	138	25
Mindanao	2025	2	7	17	87	138	138	25
Mindanao	2025	2	7	18	90	138	138	25
Mindanao	2025	2	7	19	90	138	138	25
Mindanao	2025	2	7	20	87	138	138	25
Mindanao	2025	2	7	21	84	138	138	25
Mindanao	2025	2	7	22	78	138	138	25
Mindanao	2025	2	7	23	74	138	138	25
Mindanao	2025	2	7	24	69	138	138	25
Mindanao	2025	2	8	1	66	138	138	25
Mindanao	2025	2	8	2	63	138	138	25
Mindanao	2025	2	8	3	62	138	138	25
Mindanao	2025	2	8	4	61	138	138	25
Mindanao	2025	2	8	5	61	138	138	25
Mindanao	2025	2	8	6	64	138	138	25
Mindanao	2025	2	8	7	63	138	138	25
Mindanao	2025	2	8	8	64	138	138	25
Mindanao	2025	2	8	9	72	138	138	25
Mindanao	2025	2	8	10	79	138	138	25
Mindanao	2025	2	8	11	83	138	138	25
Mindanao	2025	2	8	12	83	138	138	25
Mindanao	2025	2	8	13	84	138	138	25
Mindanao	2025	2	8	14	87	138	138	25
Mindanao	2025	2	8	15	88	138	138	25
Mindanao	2025	2	8	16	85	138	138	25
Mindanao	2025	2	8	17	80	138	138	25
Mindanao	2025	2	8	18	85	138	138	25
Mindanao	2025	2	8	19	88	138	138	25
Mindanao	2025	2	8	20	83	138	138	25
Mindanao	2025	2	8	21	81	138	138	25
Mindanao	2025	2	8	22	76	138	138	25
Mindanao	2025	2	8	23	72	138	138	25
Mindanao	2025	2	8	24	69	138	138	25
Mindanao	2025	2	9	1	65	138	138	25
Mindanao	2025	2	9	2	63	138	138	25
Mindanao	2025	2	9	3	62	138	138	25
Mindanao	2025	2	9	4	61	138	138	25
Mindanao	2025	2	9	5	60	138	138	25
Mindanao	2025	2	9	6	62	138	138	25
Mindanao	2025	2	9	7	62	138	138	25
Mindanao	2025	2	9	8	60	138	138	25
Mindanao	2025	2	9	9	64	138	138	25
Mindanao	2025	2	9	10	69	138	138	25
Mindanao	2025	2	9	11	72	138	138	25
Mindanao	2025	2	9	12	72	138	138	25
Mindanao	2025	2	9	13	73	138	138	25
Mindanao	2025	2	9	14	75	138	138	25
Mindanao	2025	2	9	15	73	138	138	25
Mindanao	2025	2	9	16	74	138	138	25
Mindanao	2025	2	9	17	71	138	138	25
Mindanao	2025	2	9	18	79	138	138	25
Mindanao	2025	2	9	19	85	138	138	25
Mindanao	2025	2	9	20	81	138	138	25
Mindanao	2025	2	9	21	80	138	138	25
Mindanao	2025	2	9	22	75	138	138	25
Mindanao	2025	2	9	23	69	138	138	25
Mindanao	2025	2	9	24	67	138	138	25
Mindanao	2025	2	10	1	64	138	138	25
Mindanao	2025	2	10	2	62	138	138	25
Mindanao	2025	2	10	3	60	138	138	25
Mindanao	2025	2	10	4	60	138	138	25
Mindanao	2025	2	10	5	65	138	138	25
Mindanao	2025	2	10	6	71	138	138	25
Mindanao	2025	2	10	7	64	138	138	25
Mindanao	2025	2	10	8	67	138	138	25
Mindanao	2025	2	10	9	79	138	138	25
Mindanao	2025	2	10	10	86	138	138	25
Mindanao	2025	2	10	11	88	138	138	25
Mindanao	2025	2	10	12	88	138	138	25
Mindanao	2025	2	10	13	88	138	138	25
Mindanao	2025	2	10	14	92	138	138	25
Mindanao	2025	2	10	15	91	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	10	16	89	138	138	25
Mindanao	2025	2	10	17	87	138	138	25
Mindanao	2025	2	10	18	90	138	138	25
Mindanao	2025	2	10	19	89	138	138	25
Mindanao	2025	2	10	20	86	138	138	25
Mindanao	2025	2	10	21	82	138	138	25
Mindanao	2025	2	10	22	76	138	138	25
Mindanao	2025	2	10	23	72	138	138	25
Mindanao	2025	2	10	24	68	138	138	25
Mindanao	2025	2	11	1	65	138	138	25
Mindanao	2025	2	11	2	63	138	138	25
Mindanao	2025	2	11	3	61	138	138	25
Mindanao	2025	2	11	4	62	138	138	25
Mindanao	2025	2	11	5	66	138	138	25
Mindanao	2025	2	11	6	71	138	138	25
Mindanao	2025	2	11	7	66	138	138	25
Mindanao	2025	2	11	8	69	138	138	25
Mindanao	2025	2	11	9	77	138	138	25
Mindanao	2025	2	11	10	84	138	138	25
Mindanao	2025	2	11	11	86	138	138	25
Mindanao	2025	2	11	12	82	138	138	25
Mindanao	2025	2	11	13	82	138	138	25
Mindanao	2025	2	11	14	84	138	138	25
Mindanao	2025	2	11	15	82	138	138	25
Mindanao	2025	2	11	16	81	138	138	25
Mindanao	2025	2	11	17	80	138	138	25
Mindanao	2025	2	11	18	84	138	138	25
Mindanao	2025	2	11	19	83	138	138	25
Mindanao	2025	2	11	20	78	138	138	25
Mindanao	2025	2	11	21	74	138	138	25
Mindanao	2025	2	11	22	69	138	138	25
Mindanao	2025	2	11	23	66	138	138	25
Mindanao	2025	2	11	24	62	138	138	25
Mindanao	2025	2	12	1	59	138	138	25
Mindanao	2025	2	12	2	58	138	138	25
Mindanao	2025	2	12	3	57	138	138	25
Mindanao	2025	2	12	4	56	138	138	25
Mindanao	2025	2	12	5	60	138	138	25
Mindanao	2025	2	12	6	66	138	138	25
Mindanao	2025	2	12	7	64	138	138	25
Mindanao	2025	2	12	8	64	138	138	25
Mindanao	2025	2	12	9	74	138	138	25
Mindanao	2025	2	12	10	82	138	138	25
Mindanao	2025	2	12	11	84	138	138	25
Mindanao	2025	2	12	12	83	138	138	25
Mindanao	2025	2	12	13	82	138	138	25
Mindanao	2025	2	12	14	86	138	138	25
Mindanao	2025	2	12	15	85	138	138	25
Mindanao	2025	2	12	16	86	138	138	25
Mindanao	2025	2	12	17	82	138	138	25
Mindanao	2025	2	12	18	88	138	138	25
Mindanao	2025	2	12	19	88	138	138	25
Mindanao	2025	2	12	20	84	138	138	25
Mindanao	2025	2	12	21	81	138	138	25
Mindanao	2025	2	12	22	75	138	138	25
Mindanao	2025	2	12	23	71	138	138	25
Mindanao	2025	2	12	24	67	138	138	25
Mindanao	2025	2	13	1	64	138	138	25
Mindanao	2025	2	13	2	61	138	138	25
Mindanao	2025	2	13	3	59	138	138	25
Mindanao	2025	2	13	4	58	138	138	25
Mindanao	2025	2	13	5	60	138	138	25
Mindanao	2025	2	13	6	66	138	138	25
Mindanao	2025	2	13	7	60	138	138	25
Mindanao	2025	2	13	8	64	138	138	25
Mindanao	2025	2	13	9	72	138	138	25
Mindanao	2025	2	13	10	76	138	138	25
Mindanao	2025	2	13	11	79	138	138	25
Mindanao	2025	2	13	12	77	138	138	25
Mindanao	2025	2	13	13	77	138	138	25
Mindanao	2025	2	13	14	80	138	138	25
Mindanao	2025	2	13	15	75	138	138	25
Mindanao	2025	2	13	16	76	138	138	25
Mindanao	2025	2	13	17	75	138	138	25
Mindanao	2025	2	13	18	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	13	19	80	138	138	25
Mindanao	2025	2	13	20	75	138	138	25
Mindanao	2025	2	13	21	72	138	138	25
Mindanao	2025	2	13	22	66	138	138	25
Mindanao	2025	2	13	23	61	138	138	25
Mindanao	2025	2	13	24	62	138	138	25
Mindanao	2025	2	14	1	61	138	138	25
Mindanao	2025	2	14	2	58	138	138	25
Mindanao	2025	2	14	3	58	138	138	25
Mindanao	2025	2	14	4	58	138	138	25
Mindanao	2025	2	14	5	60	138	138	25
Mindanao	2025	2	14	6	67	138	138	25
Mindanao	2025	2	14	7	63	138	138	25
Mindanao	2025	2	14	8	66	138	138	25
Mindanao	2025	2	14	9	75	138	138	25
Mindanao	2025	2	14	10	80	138	138	25
Mindanao	2025	2	14	11	82	138	138	25
Mindanao	2025	2	14	12	79	138	138	25
Mindanao	2025	2	14	13	79	138	138	25
Mindanao	2025	2	14	14	81	138	138	25
Mindanao	2025	2	14	15	81	138	138	25
Mindanao	2025	2	14	16	82	138	138	25
Mindanao	2025	2	14	17	81	138	138	25
Mindanao	2025	2	14	18	84	138	138	25
Mindanao	2025	2	14	19	82	138	138	25
Mindanao	2025	2	14	20	78	138	138	25
Mindanao	2025	2	14	21	74	138	138	25
Mindanao	2025	2	14	22	68	138	138	25
Mindanao	2025	2	14	23	66	138	138	25
Mindanao	2025	2	14	24	62	138	138	25
Mindanao	2025	2	15	1	59	138	138	25
Mindanao	2025	2	15	2	58	138	138	25
Mindanao	2025	2	15	3	57	138	138	25
Mindanao	2025	2	15	4	56	138	138	25
Mindanao	2025	2	15	5	56	138	138	25
Mindanao	2025	2	15	6	59	138	138	25
Mindanao	2025	2	15	7	62	138	138	25
Mindanao	2025	2	15	8	63	138	138	25
Mindanao	2025	2	15	9	68	138	138	25
Mindanao	2025	2	15	10	71	138	138	25
Mindanao	2025	2	15	11	73	138	138	25
Mindanao	2025	2	15	12	73	138	138	25
Mindanao	2025	2	15	13	73	138	138	25
Mindanao	2025	2	15	14	76	138	138	25
Mindanao	2025	2	15	15	75	138	138	25
Mindanao	2025	2	15	16	76	138	138	25
Mindanao	2025	2	15	17	75	138	138	25
Mindanao	2025	2	15	18	81	138	138	25
Mindanao	2025	2	15	19	84	138	138	25
Mindanao	2025	2	15	20	80	138	138	25
Mindanao	2025	2	15	21	77	138	138	25
Mindanao	2025	2	15	22	71	138	138	25
Mindanao	2025	2	15	23	67	138	138	25
Mindanao	2025	2	15	24	62	138	138	25
Mindanao	2025	2	16	1	60	138	138	25
Mindanao	2025	2	16	2	59	138	138	25
Mindanao	2025	2	16	3	56	138	138	25
Mindanao	2025	2	16	4	56	138	138	25
Mindanao	2025	2	16	5	57	138	138	25
Mindanao	2025	2	16	6	60	138	138	25
Mindanao	2025	2	16	7	58	138	138	25
Mindanao	2025	2	16	8	59	138	138	25
Mindanao	2025	2	16	9	63	138	138	25
Mindanao	2025	2	16	10	67	138	138	25
Mindanao	2025	2	16	11	70	138	138	25
Mindanao	2025	2	16	12	71	138	138	25
Mindanao	2025	2	16	13	73	138	138	25
Mindanao	2025	2	16	14	74	138	138	25
Mindanao	2025	2	16	15	73	138	138	25
Mindanao	2025	2	16	16	72	138	138	25
Mindanao	2025	2	16	17	72	138	138	25
Mindanao	2025	2	16	18	80	138	138	25
Mindanao	2025	2	16	19	84	138	138	25
Mindanao	2025	2	16	20	81	138	138	25
Mindanao	2025	2	16	21	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	16	22	74	138	138	25
Mindanao	2025	2	16	23	72	138	138	25
Mindanao	2025	2	16	24	67	138	138	25
Mindanao	2025	2	17	1	64	138	138	25
Mindanao	2025	2	17	2	62	138	138	25
Mindanao	2025	2	17	3	61	138	138	25
Mindanao	2025	2	17	4	60	138	138	25
Mindanao	2025	2	17	5	64	138	138	25
Mindanao	2025	2	17	6	70	138	138	25
Mindanao	2025	2	17	7	63	138	138	25
Mindanao	2025	2	17	8	70	138	138	25
Mindanao	2025	2	17	9	81	138	138	25
Mindanao	2025	2	17	10	89	138	138	25
Mindanao	2025	2	17	11	92	138	138	25
Mindanao	2025	2	17	12	89	138	138	25
Mindanao	2025	2	17	13	91	138	138	25
Mindanao	2025	2	17	14	93	138	138	25
Mindanao	2025	2	17	15	92	138	138	25
Mindanao	2025	2	17	16	89	138	138	25
Mindanao	2025	2	17	17	86	138	138	25
Mindanao	2025	2	17	18	89	138	138	25
Mindanao	2025	2	17	19	90	138	138	25
Mindanao	2025	2	17	20	87	138	138	25
Mindanao	2025	2	17	21	83	138	138	25
Mindanao	2025	2	17	22	76	138	138	25
Mindanao	2025	2	17	23	72	138	138	25
Mindanao	2025	2	17	24	67	138	138	25
Mindanao	2025	2	18	1	64	138	138	25
Mindanao	2025	2	18	2	63	138	138	25
Mindanao	2025	2	18	3	62	138	138	25
Mindanao	2025	2	18	4	60	138	138	25
Mindanao	2025	2	18	5	63	138	138	25
Mindanao	2025	2	18	6	71	138	138	25
Mindanao	2025	2	18	7	63	138	138	25
Mindanao	2025	2	18	8	69	138	138	25
Mindanao	2025	2	18	9	80	138	138	25
Mindanao	2025	2	18	10	88	138	138	25
Mindanao	2025	2	18	11	91	138	138	25
Mindanao	2025	2	18	12	89	138	138	25
Mindanao	2025	2	18	13	90	138	138	25
Mindanao	2025	2	18	14	95	138	138	25
Mindanao	2025	2	18	15	94	138	138	25
Mindanao	2025	2	18	16	92	138	138	25
Mindanao	2025	2	18	17	88	138	138	25
Mindanao	2025	2	18	18	89	138	138	25
Mindanao	2025	2	18	19	89	138	138	25
Mindanao	2025	2	18	20	82	138	138	25
Mindanao	2025	2	18	21	81	138	138	25
Mindanao	2025	2	18	22	75	138	138	25
Mindanao	2025	2	18	23	71	138	138	25
Mindanao	2025	2	18	24	67	138	138	25
Mindanao	2025	2	19	1	64	138	138	25
Mindanao	2025	2	19	2	62	138	138	25
Mindanao	2025	2	19	3	61	138	138	25
Mindanao	2025	2	19	4	60	138	138	25
Mindanao	2025	2	19	5	64	138	138	25
Mindanao	2025	2	19	6	70	138	138	25
Mindanao	2025	2	19	7	62	138	138	25
Mindanao	2025	2	19	8	68	138	138	25
Mindanao	2025	2	19	9	79	138	138	25
Mindanao	2025	2	19	10	85	138	138	25
Mindanao	2025	2	19	11	88	138	138	25
Mindanao	2025	2	19	12	86	138	138	25
Mindanao	2025	2	19	13	88	138	138	25
Mindanao	2025	2	19	14	94	138	138	25
Mindanao	2025	2	19	15	92	138	138	25
Mindanao	2025	2	19	16	90	138	138	25
Mindanao	2025	2	19	17	86	138	138	25
Mindanao	2025	2	19	18	89	138	138	25
Mindanao	2025	2	19	19	90	138	138	25
Mindanao	2025	2	19	20	88	138	138	25
Mindanao	2025	2	19	21	84	138	138	25
Mindanao	2025	2	19	22	80	138	138	25
Mindanao	2025	2	19	23	74	138	138	25
Mindanao	2025	2	19	24	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	20	1	65	138	138	25
Mindanao	2025	2	20	2	64	138	138	25
Mindanao	2025	2	20	3	61	138	138	25
Mindanao	2025	2	20	4	61	138	138	25
Mindanao	2025	2	20	5	65	138	138	25
Mindanao	2025	2	20	6	71	138	138	25
Mindanao	2025	2	20	7	63	138	138	25
Mindanao	2025	2	20	8	70	138	138	25
Mindanao	2025	2	20	9	81	138	138	25
Mindanao	2025	2	20	10	87	138	138	25
Mindanao	2025	2	20	11	92	138	138	25
Mindanao	2025	2	20	12	89	138	138	25
Mindanao	2025	2	20	13	92	138	138	25
Mindanao	2025	2	20	14	98	138	138	25
Mindanao	2025	2	20	15	97	138	138	25
Mindanao	2025	2	20	16	95	138	138	25
Mindanao	2025	2	20	17	89	138	138	25
Mindanao	2025	2	20	18	91	138	138	25
Mindanao	2025	2	20	19	92	138	138	25
Mindanao	2025	2	20	20	88	138	138	25
Mindanao	2025	2	20	21	86	138	138	25
Mindanao	2025	2	20	22	81	138	138	25
Mindanao	2025	2	20	23	76	138	138	25
Mindanao	2025	2	20	24	71	138	138	25
Mindanao	2025	2	21	1	61	138	138	25
Mindanao	2025	2	21	2	58	138	138	25
Mindanao	2025	2	21	3	58	138	138	25
Mindanao	2025	2	21	4	58	138	138	25
Mindanao	2025	2	21	5	60	138	138	25
Mindanao	2025	2	21	6	67	138	138	25
Mindanao	2025	2	21	7	63	138	138	25
Mindanao	2025	2	21	8	66	138	138	25
Mindanao	2025	2	21	9	75	138	138	25
Mindanao	2025	2	21	10	80	138	138	25
Mindanao	2025	2	21	11	82	138	138	25
Mindanao	2025	2	21	12	79	138	138	25
Mindanao	2025	2	21	13	79	138	138	25
Mindanao	2025	2	21	14	81	138	138	25
Mindanao	2025	2	21	15	81	138	138	25
Mindanao	2025	2	21	16	82	138	138	25
Mindanao	2025	2	21	17	81	138	138	25
Mindanao	2025	2	21	18	84	138	138	25
Mindanao	2025	2	21	19	82	138	138	25
Mindanao	2025	2	21	20	78	138	138	25
Mindanao	2025	2	21	21	74	138	138	25
Mindanao	2025	2	21	22	68	138	138	25
Mindanao	2025	2	21	23	66	138	138	25
Mindanao	2025	2	21	24	62	138	138	25
Mindanao	2025	2	22	1	67	138	138	25
Mindanao	2025	2	22	2	65	138	138	25
Mindanao	2025	2	22	3	63	138	138	25
Mindanao	2025	2	22	4	63	138	138	25
Mindanao	2025	2	22	5	63	138	138	25
Mindanao	2025	2	22	6	65	138	138	25
Mindanao	2025	2	22	7	65	138	138	25
Mindanao	2025	2	22	8	69	138	138	25
Mindanao	2025	2	22	9	71	138	138	25
Mindanao	2025	2	22	10	75	138	138	25
Mindanao	2025	2	22	11	80	138	138	25
Mindanao	2025	2	22	12	80	138	138	25
Mindanao	2025	2	22	13	82	138	138	25
Mindanao	2025	2	22	14	84	138	138	25
Mindanao	2025	2	22	15	81	138	138	25
Mindanao	2025	2	22	16	79	138	138	25
Mindanao	2025	2	22	17	79	138	138	25
Mindanao	2025	2	22	18	86	138	138	25
Mindanao	2025	2	22	19	87	138	138	25
Mindanao	2025	2	22	20	85	138	138	25
Mindanao	2025	2	22	21	80	138	138	25
Mindanao	2025	2	22	22	76	138	138	25
Mindanao	2025	2	22	23	70	138	138	25
Mindanao	2025	2	22	24	66	138	138	25
Mindanao	2025	2	23	1	64	138	138	25
Mindanao	2025	2	23	2	61	138	138	25
Mindanao	2025	2	23	3	60	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	23	4	60	138	138	25
Mindanao	2025	2	23	5	59	138	138	25
Mindanao	2025	2	23	6	60	138	138	25
Mindanao	2025	2	23	7	60	138	138	25
Mindanao	2025	2	23	8	61	138	138	25
Mindanao	2025	2	23	9	62	138	138	25
Mindanao	2025	2	23	10	65	138	138	25
Mindanao	2025	2	23	11	70	138	138	25
Mindanao	2025	2	23	12	70	138	138	25
Mindanao	2025	2	23	13	71	138	138	25
Mindanao	2025	2	23	14	73	138	138	25
Mindanao	2025	2	23	15	73	138	138	25
Mindanao	2025	2	23	16	71	138	138	25
Mindanao	2025	2	23	17	71	138	138	25
Mindanao	2025	2	23	18	79	138	138	25
Mindanao	2025	2	23	19	83	138	138	25
Mindanao	2025	2	23	20	79	138	138	25
Mindanao	2025	2	23	21	78	138	138	25
Mindanao	2025	2	23	22	74	138	138	25
Mindanao	2025	2	23	23	69	138	138	25
Mindanao	2025	2	23	24	65	138	138	25
Mindanao	2025	2	24	1	62	138	138	25
Mindanao	2025	2	24	2	60	138	138	25
Mindanao	2025	2	24	3	58	138	138	25
Mindanao	2025	2	24	4	58	138	138	25
Mindanao	2025	2	24	5	62	138	138	25
Mindanao	2025	2	24	6	67	138	138	25
Mindanao	2025	2	24	7	62	138	138	25
Mindanao	2025	2	24	8	68	138	138	25
Mindanao	2025	2	24	9	79	138	138	25
Mindanao	2025	2	24	10	84	138	138	25
Mindanao	2025	2	24	11	88	138	138	25
Mindanao	2025	2	24	12	87	138	138	25
Mindanao	2025	2	24	13	88	138	138	25
Mindanao	2025	2	24	14	91	138	138	25
Mindanao	2025	2	24	15	92	138	138	25
Mindanao	2025	2	24	16	90	138	138	25
Mindanao	2025	2	24	17	86	138	138	25
Mindanao	2025	2	24	18	89	138	138	25
Mindanao	2025	2	24	19	90	138	138	25
Mindanao	2025	2	24	20	88	138	138	25
Mindanao	2025	2	24	21	84	138	138	25
Mindanao	2025	2	24	22	78	138	138	25
Mindanao	2025	2	24	23	74	138	138	25
Mindanao	2025	2	24	24	69	138	138	25
Mindanao	2025	2	25	1	68	138	138	25
Mindanao	2025	2	25	2	65	138	138	25
Mindanao	2025	2	25	3	64	138	138	25
Mindanao	2025	2	25	4	62	138	138	25
Mindanao	2025	2	25	5	63	138	138	25
Mindanao	2025	2	25	6	67	138	138	25
Mindanao	2025	2	25	7	65	138	138	25
Mindanao	2025	2	25	8	69	138	138	25
Mindanao	2025	2	25	9	77	138	138	25
Mindanao	2025	2	25	10	85	138	138	25
Mindanao	2025	2	25	11	90	138	138	25
Mindanao	2025	2	25	12	89	138	138	25
Mindanao	2025	2	25	13	91	138	138	25
Mindanao	2025	2	25	14	93	138	138	25
Mindanao	2025	2	25	15	91	138	138	25
Mindanao	2025	2	25	16	89	138	138	25
Mindanao	2025	2	25	17	85	138	138	25
Mindanao	2025	2	25	18	88	138	138	25
Mindanao	2025	2	25	19	91	138	138	25
Mindanao	2025	2	25	20	88	138	138	25
Mindanao	2025	2	25	21	86	138	138	25
Mindanao	2025	2	25	22	80	138	138	25
Mindanao	2025	2	25	23	75	138	138	25
Mindanao	2025	2	25	24	72	138	138	25
Mindanao	2025	2	26	1	66	138	138	25
Mindanao	2025	2	26	2	63	138	138	25
Mindanao	2025	2	26	3	62	138	138	25
Mindanao	2025	2	26	4	62	138	138	25
Mindanao	2025	2	26	5	66	138	138	25
Mindanao	2025	2	26	6	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	2	26	7	63	138	138	25
Mindanao	2025	2	26	8	70	138	138	25
Mindanao	2025	2	26	9	83	138	138	25
Mindanao	2025	2	26	10	90	138	138	25
Mindanao	2025	2	26	11	91	138	138	25
Mindanao	2025	2	26	12	92	138	138	25
Mindanao	2025	2	26	13	94	138	138	25
Mindanao	2025	2	26	14	98	138	138	25
Mindanao	2025	2	26	15	96	138	138	25
Mindanao	2025	2	26	16	93	138	138	25
Mindanao	2025	2	26	17	88	138	138	25
Mindanao	2025	2	26	18	91	138	138	25
Mindanao	2025	2	26	19	92	138	138	25
Mindanao	2025	2	26	20	89	138	138	25
Mindanao	2025	2	26	21	85	138	138	25
Mindanao	2025	2	26	22	80	138	138	25
Mindanao	2025	2	26	23	75	138	138	25
Mindanao	2025	2	26	24	70	138	138	25
Mindanao	2025	2	27	1	67	138	138	25
Mindanao	2025	2	27	2	65	138	138	25
Mindanao	2025	2	27	3	63	138	138	25
Mindanao	2025	2	27	4	63	138	138	25
Mindanao	2025	2	27	5	65	138	138	25
Mindanao	2025	2	27	6	72	138	138	25
Mindanao	2025	2	27	7	63	138	138	25
Mindanao	2025	2	27	8	69	138	138	25
Mindanao	2025	2	27	9	80	138	138	25
Mindanao	2025	2	27	10	84	138	138	25
Mindanao	2025	2	27	11	86	138	138	25
Mindanao	2025	2	27	12	85	138	138	25
Mindanao	2025	2	27	13	86	138	138	25
Mindanao	2025	2	27	14	91	138	138	25
Mindanao	2025	2	27	15	90	138	138	25
Mindanao	2025	2	27	16	88	138	138	25
Mindanao	2025	2	27	17	84	138	138	25
Mindanao	2025	2	27	18	88	138	138	25
Mindanao	2025	2	27	19	88	138	138	25
Mindanao	2025	2	27	20	84	138	138	25
Mindanao	2025	2	27	21	83	138	138	25
Mindanao	2025	2	27	22	77	138	138	25
Mindanao	2025	2	27	23	71	138	138	25
Mindanao	2025	2	27	24	66	138	138	25
Mindanao	2025	2	28	1	64	138	138	25
Mindanao	2025	2	28	2	61	138	138	25
Mindanao	2025	2	28	3	60	138	138	25
Mindanao	2025	2	28	4	59	138	138	25
Mindanao	2025	2	28	5	62	138	138	25
Mindanao	2025	2	28	6	67	138	138	25
Mindanao	2025	2	28	7	62	138	138	25
Mindanao	2025	2	28	8	67	138	138	25
Mindanao	2025	2	28	9	77	138	138	25
Mindanao	2025	2	28	10	82	138	138	25
Mindanao	2025	2	28	11	85	138	138	25
Mindanao	2025	2	28	12	85	138	138	25
Mindanao	2025	2	28	13	86	138	138	25
Mindanao	2025	2	28	14	92	138	138	25
Mindanao	2025	2	28	15	90	138	138	25
Mindanao	2025	2	28	16	87	138	138	25
Mindanao	2025	2	28	17	84	138	138	25
Mindanao	2025	2	28	18	87	138	138	25
Mindanao	2025	2	28	19	88	138	138	25
Mindanao	2025	2	28	20	86	138	138	25
Mindanao	2025	2	28	21	82	138	138	25
Mindanao	2025	2	28	22	78	138	138	25
Mindanao	2025	2	28	23	72	138	138	25
Mindanao	2025	2	28	24	68	138	138	25
Mindanao	2025	3	1	1	64	138	138	25
Mindanao	2025	3	1	2	62	138	138	25
Mindanao	2025	3	1	3	61	138	138	25
Mindanao	2025	3	1	4	60	138	138	25
Mindanao	2025	3	1	5	61	138	138	25
Mindanao	2025	3	1	6	64	138	138	25
Mindanao	2025	3	1	7	62	138	138	25
Mindanao	2025	3	1	8	65	138	138	25
Mindanao	2025	3	1	9	68	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	1	10	73	138	138	25
Mindanao	2025	3	1	11	76	138	138	25
Mindanao	2025	3	1	12	76	138	138	25
Mindanao	2025	3	1	13	78	138	138	25
Mindanao	2025	3	1	14	81	138	138	25
Mindanao	2025	3	1	15	81	138	138	25
Mindanao	2025	3	1	16	80	138	138	25
Mindanao	2025	3	1	17	77	138	138	25
Mindanao	2025	3	1	18	82	138	138	25
Mindanao	2025	3	1	19	86	138	138	25
Mindanao	2025	3	1	20	83	138	138	25
Mindanao	2025	3	1	21	79	138	138	25
Mindanao	2025	3	1	22	75	138	138	25
Mindanao	2025	3	1	23	69	138	138	25
Mindanao	2025	3	1	24	66	138	138	25
Mindanao	2025	3	2	1	62	138	138	25
Mindanao	2025	3	2	2	60	138	138	25
Mindanao	2025	3	2	3	58	138	138	25
Mindanao	2025	3	2	4	57	138	138	25
Mindanao	2025	3	2	5	57	138	138	25
Mindanao	2025	3	2	6	59	138	138	25
Mindanao	2025	3	2	7	60	138	138	25
Mindanao	2025	3	2	8	59	138	138	25
Mindanao	2025	3	2	9	61	138	138	25
Mindanao	2025	3	2	10	67	138	138	25
Mindanao	2025	3	2	11	70	138	138	25
Mindanao	2025	3	2	12	71	138	138	25
Mindanao	2025	3	2	13	73	138	138	25
Mindanao	2025	3	2	14	74	138	138	25
Mindanao	2025	3	2	15	74	138	138	25
Mindanao	2025	3	2	16	73	138	138	25
Mindanao	2025	3	2	17	72	138	138	25
Mindanao	2025	3	2	18	82	138	138	25
Mindanao	2025	3	2	19	84	138	138	25
Mindanao	2025	3	2	20	82	138	138	25
Mindanao	2025	3	2	21	81	138	138	25
Mindanao	2025	3	2	22	76	138	138	25
Mindanao	2025	3	2	23	71	138	138	25
Mindanao	2025	3	2	24	66	138	138	25
Mindanao	2025	3	3	1	63	138	138	25
Mindanao	2025	3	3	2	61	138	138	25
Mindanao	2025	3	3	3	59	138	138	25
Mindanao	2025	3	3	4	59	138	138	25
Mindanao	2025	3	3	5	62	138	138	25
Mindanao	2025	3	3	6	68	138	138	25
Mindanao	2025	3	3	7	62	138	138	25
Mindanao	2025	3	3	8	68	138	138	25
Mindanao	2025	3	3	9	78	138	138	25
Mindanao	2025	3	3	10	85	138	138	25
Mindanao	2025	3	3	11	90	138	138	25
Mindanao	2025	3	3	12	87	138	138	25
Mindanao	2025	3	3	13	91	138	138	25
Mindanao	2025	3	3	14	95	138	138	25
Mindanao	2025	3	3	15	95	138	138	25
Mindanao	2025	3	3	16	93	138	138	25
Mindanao	2025	3	3	17	88	138	138	25
Mindanao	2025	3	3	18	91	138	138	25
Mindanao	2025	3	3	19	93	138	138	25
Mindanao	2025	3	3	20	88	138	138	25
Mindanao	2025	3	3	21	86	138	138	25
Mindanao	2025	3	3	22	80	138	138	25
Mindanao	2025	3	3	23	75	138	138	25
Mindanao	2025	3	3	24	70	138	138	25
Mindanao	2025	3	4	1	68	138	138	25
Mindanao	2025	3	4	2	66	138	138	25
Mindanao	2025	3	4	3	63	138	138	25
Mindanao	2025	3	4	4	63	138	138	25
Mindanao	2025	3	4	5	67	138	138	25
Mindanao	2025	3	4	6	72	138	138	25
Mindanao	2025	3	4	7	66	138	138	25
Mindanao	2025	3	4	8	73	138	138	25
Mindanao	2025	3	4	9	81	138	138	25
Mindanao	2025	3	4	10	86	138	138	25
Mindanao	2025	3	4	11	90	138	138	25
Mindanao	2025	3	4	12	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	4	13	87	138	138	25
Mindanao	2025	3	4	14	91	138	138	25
Mindanao	2025	3	4	15	88	138	138	25
Mindanao	2025	3	4	16	88	138	138	25
Mindanao	2025	3	4	17	82	138	138	25
Mindanao	2025	3	4	18	87	138	138	25
Mindanao	2025	3	4	19	87	138	138	25
Mindanao	2025	3	4	20	86	138	138	25
Mindanao	2025	3	4	21	83	138	138	25
Mindanao	2025	3	4	22	76	138	138	25
Mindanao	2025	3	4	23	72	138	138	25
Mindanao	2025	3	4	24	67	138	138	25
Mindanao	2025	3	5	1	64	138	138	25
Mindanao	2025	3	5	2	62	138	138	25
Mindanao	2025	3	5	3	62	138	138	25
Mindanao	2025	3	5	4	62	138	138	25
Mindanao	2025	3	5	5	65	138	138	25
Mindanao	2025	3	5	6	71	138	138	25
Mindanao	2025	3	5	7	64	138	138	25
Mindanao	2025	3	5	8	71	138	138	25
Mindanao	2025	3	5	9	81	138	138	25
Mindanao	2025	3	5	10	88	138	138	25
Mindanao	2025	3	5	11	93	138	138	25
Mindanao	2025	3	5	12	91	138	138	25
Mindanao	2025	3	5	13	94	138	138	25
Mindanao	2025	3	5	14	98	138	138	25
Mindanao	2025	3	5	15	98	138	138	25
Mindanao	2025	3	5	16	96	138	138	25
Mindanao	2025	3	5	17	90	138	138	25
Mindanao	2025	3	5	18	92	138	138	25
Mindanao	2025	3	5	19	94	138	138	25
Mindanao	2025	3	5	20	91	138	138	25
Mindanao	2025	3	5	21	87	138	138	25
Mindanao	2025	3	5	22	82	138	138	25
Mindanao	2025	3	5	23	77	138	138	25
Mindanao	2025	3	5	24	72	138	138	25
Mindanao	2025	3	6	1	69	138	138	25
Mindanao	2025	3	6	2	65	138	138	25
Mindanao	2025	3	6	3	64	138	138	25
Mindanao	2025	3	6	4	65	138	138	25
Mindanao	2025	3	6	5	69	138	138	25
Mindanao	2025	3	6	6	72	138	138	25
Mindanao	2025	3	6	7	65	138	138	25
Mindanao	2025	3	6	8	74	138	138	25
Mindanao	2025	3	6	9	84	138	138	25
Mindanao	2025	3	6	10	90	138	138	25
Mindanao	2025	3	6	11	95	138	138	25
Mindanao	2025	3	6	12	94	138	138	25
Mindanao	2025	3	6	13	94	138	138	25
Mindanao	2025	3	6	14	100	138	138	25
Mindanao	2025	3	6	15	99	138	138	25
Mindanao	2025	3	6	16	96	138	138	25
Mindanao	2025	3	6	17	90	138	138	25
Mindanao	2025	3	6	18	93	138	138	25
Mindanao	2025	3	6	19	95	138	138	25
Mindanao	2025	3	6	20	92	138	138	25
Mindanao	2025	3	6	21	88	138	138	25
Mindanao	2025	3	6	22	81	138	138	25
Mindanao	2025	3	6	23	77	138	138	25
Mindanao	2025	3	6	24	73	138	138	25
Mindanao	2025	3	7	1	69	138	138	25
Mindanao	2025	3	7	2	67	138	138	25
Mindanao	2025	3	7	3	65	138	138	25
Mindanao	2025	3	7	4	64	138	138	25
Mindanao	2025	3	7	5	66	138	138	25
Mindanao	2025	3	7	6	72	138	138	25
Mindanao	2025	3	7	7	67	138	138	25
Mindanao	2025	3	7	8	75	138	138	25
Mindanao	2025	3	7	9	85	138	138	25
Mindanao	2025	3	7	10	91	138	138	25
Mindanao	2025	3	7	11	93	138	138	25
Mindanao	2025	3	7	12	91	138	138	25
Mindanao	2025	3	7	13	93	138	138	25
Mindanao	2025	3	7	14	97	138	138	25
Mindanao	2025	3	7	15	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	7	16	94	138	138	25
Mindanao	2025	3	7	17	89	138	138	25
Mindanao	2025	3	7	18	91	138	138	25
Mindanao	2025	3	7	19	93	138	138	25
Mindanao	2025	3	7	20	90	138	138	25
Mindanao	2025	3	7	21	86	138	138	25
Mindanao	2025	3	7	22	81	138	138	25
Mindanao	2025	3	7	23	76	138	138	25
Mindanao	2025	3	7	24	71	138	138	25
Mindanao	2025	3	8	1	67	138	138	25
Mindanao	2025	3	8	2	66	138	138	25
Mindanao	2025	3	8	3	63	138	138	25
Mindanao	2025	3	8	4	61	138	138	25
Mindanao	2025	3	8	5	63	138	138	25
Mindanao	2025	3	8	6	65	138	138	25
Mindanao	2025	3	8	7	64	138	138	25
Mindanao	2025	3	8	8	69	138	138	25
Mindanao	2025	3	8	9	75	138	138	25
Mindanao	2025	3	8	10	82	138	138	25
Mindanao	2025	3	8	11	86	138	138	25
Mindanao	2025	3	8	12	85	138	138	25
Mindanao	2025	3	8	13	86	138	138	25
Mindanao	2025	3	8	14	90	138	138	25
Mindanao	2025	3	8	15	90	138	138	25
Mindanao	2025	3	8	16	88	138	138	25
Mindanao	2025	3	8	17	84	138	138	25
Mindanao	2025	3	8	18	87	138	138	25
Mindanao	2025	3	8	19	90	138	138	25
Mindanao	2025	3	8	20	87	138	138	25
Mindanao	2025	3	8	21	86	138	138	25
Mindanao	2025	3	8	22	80	138	138	25
Mindanao	2025	3	8	23	76	138	138	25
Mindanao	2025	3	8	24	70	138	138	25
Mindanao	2025	3	9	1	67	138	138	25
Mindanao	2025	3	9	2	65	138	138	25
Mindanao	2025	3	9	3	63	138	138	25
Mindanao	2025	3	9	4	62	138	138	25
Mindanao	2025	3	9	5	63	138	138	25
Mindanao	2025	3	9	6	64	138	138	25
Mindanao	2025	3	9	7	62	138	138	25
Mindanao	2025	3	9	8	65	138	138	25
Mindanao	2025	3	9	9	66	138	138	25
Mindanao	2025	3	9	10	71	138	138	25
Mindanao	2025	3	9	11	73	138	138	25
Mindanao	2025	3	9	12	74	138	138	25
Mindanao	2025	3	9	13	75	138	138	25
Mindanao	2025	3	9	14	77	138	138	25
Mindanao	2025	3	9	15	76	138	138	25
Mindanao	2025	3	9	16	73	138	138	25
Mindanao	2025	3	9	17	74	138	138	25
Mindanao	2025	3	9	18	83	138	138	25
Mindanao	2025	3	9	19	86	138	138	25
Mindanao	2025	3	9	20	84	138	138	25
Mindanao	2025	3	9	21	82	138	138	25
Mindanao	2025	3	9	22	76	138	138	25
Mindanao	2025	3	9	23	72	138	138	25
Mindanao	2025	3	9	24	69	138	138	25
Mindanao	2025	3	10	1	66	138	138	25
Mindanao	2025	3	10	2	63	138	138	25
Mindanao	2025	3	10	3	60	138	138	25
Mindanao	2025	3	10	4	61	138	138	25
Mindanao	2025	3	10	5	64	138	138	25
Mindanao	2025	3	10	6	71	138	138	25
Mindanao	2025	3	10	7	63	138	138	25
Mindanao	2025	3	10	8	71	138	138	25
Mindanao	2025	3	10	9	82	138	138	25
Mindanao	2025	3	10	10	89	138	138	25
Mindanao	2025	3	10	11	93	138	138	25
Mindanao	2025	3	10	12	92	138	138	25
Mindanao	2025	3	10	13	91	138	138	25
Mindanao	2025	3	10	14	96	138	138	25
Mindanao	2025	3	10	15	94	138	138	25
Mindanao	2025	3	10	16	91	138	138	25
Mindanao	2025	3	10	17	88	138	138	25
Mindanao	2025	3	10	18	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	10	19	90	138	138	25
Mindanao	2025	3	10	20	84	138	138	25
Mindanao	2025	3	10	21	81	138	138	25
Mindanao	2025	3	10	22	75	138	138	25
Mindanao	2025	3	10	23	70	138	138	25
Mindanao	2025	3	10	24	67	138	138	25
Mindanao	2025	3	11	1	64	138	138	25
Mindanao	2025	3	11	2	62	138	138	25
Mindanao	2025	3	11	3	61	138	138	25
Mindanao	2025	3	11	4	61	138	138	25
Mindanao	2025	3	11	5	65	138	138	25
Mindanao	2025	3	11	6	68	138	138	25
Mindanao	2025	3	11	7	66	138	138	25
Mindanao	2025	3	11	8	71	138	138	25
Mindanao	2025	3	11	9	78	138	138	25
Mindanao	2025	3	11	10	83	138	138	25
Mindanao	2025	3	11	11	85	138	138	25
Mindanao	2025	3	11	12	83	138	138	25
Mindanao	2025	3	11	13	84	138	138	25
Mindanao	2025	3	11	14	88	138	138	25
Mindanao	2025	3	11	15	88	138	138	25
Mindanao	2025	3	11	16	87	138	138	25
Mindanao	2025	3	11	17	83	138	138	25
Mindanao	2025	3	11	18	88	138	138	25
Mindanao	2025	3	11	19	88	138	138	25
Mindanao	2025	3	11	20	86	138	138	25
Mindanao	2025	3	11	21	81	138	138	25
Mindanao	2025	3	11	22	75	138	138	25
Mindanao	2025	3	11	23	71	138	138	25
Mindanao	2025	3	11	24	67	138	138	25
Mindanao	2025	3	12	1	63	138	138	25
Mindanao	2025	3	12	2	61	138	138	25
Mindanao	2025	3	12	3	59	138	138	25
Mindanao	2025	3	12	4	58	138	138	25
Mindanao	2025	3	12	5	64	138	138	25
Mindanao	2025	3	12	6	70	138	138	25
Mindanao	2025	3	12	7	62	138	138	25
Mindanao	2025	3	12	8	69	138	138	25
Mindanao	2025	3	12	9	80	138	138	25
Mindanao	2025	3	12	10	87	138	138	25
Mindanao	2025	3	12	11	90	138	138	25
Mindanao	2025	3	12	12	89	138	138	25
Mindanao	2025	3	12	13	91	138	138	25
Mindanao	2025	3	12	14	95	138	138	25
Mindanao	2025	3	12	15	94	138	138	25
Mindanao	2025	3	12	16	91	138	138	25
Mindanao	2025	3	12	17	85	138	138	25
Mindanao	2025	3	12	18	88	138	138	25
Mindanao	2025	3	12	19	89	138	138	25
Mindanao	2025	3	12	20	86	138	138	25
Mindanao	2025	3	12	21	84	138	138	25
Mindanao	2025	3	12	22	79	138	138	25
Mindanao	2025	3	12	23	72	138	138	25
Mindanao	2025	3	12	24	68	138	138	25
Mindanao	2025	3	13	1	63	138	138	25
Mindanao	2025	3	13	2	61	138	138	25
Mindanao	2025	3	13	3	59	138	138	25
Mindanao	2025	3	13	4	59	138	138	25
Mindanao	2025	3	13	5	63	138	138	25
Mindanao	2025	3	13	6	67	138	138	25
Mindanao	2025	3	13	7	61	138	138	25
Mindanao	2025	3	13	8	69	138	138	25
Mindanao	2025	3	13	9	80	138	138	25
Mindanao	2025	3	13	10	85	138	138	25
Mindanao	2025	3	13	11	88	138	138	25
Mindanao	2025	3	13	12	87	138	138	25
Mindanao	2025	3	13	13	90	138	138	25
Mindanao	2025	3	13	14	93	138	138	25
Mindanao	2025	3	13	15	91	138	138	25
Mindanao	2025	3	13	16	86	138	138	25
Mindanao	2025	3	13	17	81	138	138	25
Mindanao	2025	3	13	18	80	138	138	25
Mindanao	2025	3	13	19	83	138	138	25
Mindanao	2025	3	13	20	82	138	138	25
Mindanao	2025	3	13	21	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	13	22	73	138	138	25
Mindanao	2025	3	13	23	69	138	138	25
Mindanao	2025	3	13	24	65	138	138	25
Mindanao	2025	3	14	1	62	138	138	25
Mindanao	2025	3	14	2	59	138	138	25
Mindanao	2025	3	14	3	57	138	138	25
Mindanao	2025	3	14	4	57	138	138	25
Mindanao	2025	3	14	5	60	138	138	25
Mindanao	2025	3	14	6	65	138	138	25
Mindanao	2025	3	14	7	58	138	138	25
Mindanao	2025	3	14	8	67	138	138	25
Mindanao	2025	3	14	9	77	138	138	25
Mindanao	2025	3	14	10	83	138	138	25
Mindanao	2025	3	14	11	86	138	138	25
Mindanao	2025	3	14	12	85	138	138	25
Mindanao	2025	3	14	13	86	138	138	25
Mindanao	2025	3	14	14	91	138	138	25
Mindanao	2025	3	14	15	89	138	138	25
Mindanao	2025	3	14	16	88	138	138	25
Mindanao	2025	3	14	17	81	138	138	25
Mindanao	2025	3	14	18	85	138	138	25
Mindanao	2025	3	14	19	86	138	138	25
Mindanao	2025	3	14	20	81	138	138	25
Mindanao	2025	3	14	21	76	138	138	25
Mindanao	2025	3	14	22	74	138	138	25
Mindanao	2025	3	14	23	70	138	138	25
Mindanao	2025	3	14	24	66	138	138	25
Mindanao	2025	3	15	1	64	138	138	25
Mindanao	2025	3	15	2	61	138	138	25
Mindanao	2025	3	15	3	59	138	138	25
Mindanao	2025	3	15	4	57	138	138	25
Mindanao	2025	3	15	5	59	138	138	25
Mindanao	2025	3	15	6	61	138	138	25
Mindanao	2025	3	15	7	60	138	138	25
Mindanao	2025	3	15	8	63	138	138	25
Mindanao	2025	3	15	9	70	138	138	25
Mindanao	2025	3	15	10	75	138	138	25
Mindanao	2025	3	15	11	79	138	138	25
Mindanao	2025	3	15	12	78	138	138	25
Mindanao	2025	3	15	13	79	138	138	25
Mindanao	2025	3	15	14	81	138	138	25
Mindanao	2025	3	15	15	79	138	138	25
Mindanao	2025	3	15	16	76	138	138	25
Mindanao	2025	3	15	17	74	138	138	25
Mindanao	2025	3	15	18	79	138	138	25
Mindanao	2025	3	15	19	79	138	138	25
Mindanao	2025	3	15	20	76	138	138	25
Mindanao	2025	3	15	21	75	138	138	25
Mindanao	2025	3	15	22	70	138	138	25
Mindanao	2025	3	15	23	65	138	138	25
Mindanao	2025	3	15	24	61	138	138	25
Mindanao	2025	3	16	1	58	138	138	25
Mindanao	2025	3	16	2	57	138	138	25
Mindanao	2025	3	16	3	55	138	138	25
Mindanao	2025	3	16	4	54	138	138	25
Mindanao	2025	3	16	5	56	138	138	25
Mindanao	2025	3	16	6	58	138	138	25
Mindanao	2025	3	16	7	55	138	138	25
Mindanao	2025	3	16	8	57	138	138	25
Mindanao	2025	3	16	9	61	138	138	25
Mindanao	2025	3	16	10	64	138	138	25
Mindanao	2025	3	16	11	69	138	138	25
Mindanao	2025	3	16	12	71	138	138	25
Mindanao	2025	3	16	13	72	138	138	25
Mindanao	2025	3	16	14	75	138	138	25
Mindanao	2025	3	16	15	74	138	138	25
Mindanao	2025	3	16	16	73	138	138	25
Mindanao	2025	3	16	17	72	138	138	25
Mindanao	2025	3	16	18	79	138	138	25
Mindanao	2025	3	16	19	81	138	138	25
Mindanao	2025	3	16	20	80	138	138	25
Mindanao	2025	3	16	21	76	138	138	25
Mindanao	2025	3	16	22	73	138	138	25
Mindanao	2025	3	16	23	69	138	138	25
Mindanao	2025	3	16	24	63	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	17	1	59	138	138	25
Mindanao	2025	3	17	2	58	138	138	25
Mindanao	2025	3	17	3	56	138	138	25
Mindanao	2025	3	17	4	57	138	138	25
Mindanao	2025	3	17	5	59	138	138	25
Mindanao	2025	3	17	6	63	138	138	25
Mindanao	2025	3	17	7	59	138	138	25
Mindanao	2025	3	17	8	66	138	138	25
Mindanao	2025	3	17	9	78	138	138	25
Mindanao	2025	3	17	10	86	138	138	25
Mindanao	2025	3	17	11	88	138	138	25
Mindanao	2025	3	17	12	86	138	138	25
Mindanao	2025	3	17	13	88	138	138	25
Mindanao	2025	3	17	14	92	138	138	25
Mindanao	2025	3	17	15	92	138	138	25
Mindanao	2025	3	17	16	91	138	138	25
Mindanao	2025	3	17	17	85	138	138	25
Mindanao	2025	3	17	18	87	138	138	25
Mindanao	2025	3	17	19	89	138	138	25
Mindanao	2025	3	17	20	87	138	138	25
Mindanao	2025	3	17	21	85	138	138	25
Mindanao	2025	3	17	22	79	138	138	25
Mindanao	2025	3	17	23	74	138	138	25
Mindanao	2025	3	17	24	69	138	138	25
Mindanao	2025	3	18	1	65	138	138	25
Mindanao	2025	3	18	2	64	138	138	25
Mindanao	2025	3	18	3	60	138	138	25
Mindanao	2025	3	18	4	60	138	138	25
Mindanao	2025	3	18	5	62	138	138	25
Mindanao	2025	3	18	6	68	138	138	25
Mindanao	2025	3	18	7	61	138	138	25
Mindanao	2025	3	18	8	71	138	138	25
Mindanao	2025	3	18	9	81	138	138	25
Mindanao	2025	3	18	10	87	138	138	25
Mindanao	2025	3	18	11	90	138	138	25
Mindanao	2025	3	18	12	89	138	138	25
Mindanao	2025	3	18	13	92	138	138	25
Mindanao	2025	3	18	14	95	138	138	25
Mindanao	2025	3	18	15	94	138	138	25
Mindanao	2025	3	18	16	93	138	138	25
Mindanao	2025	3	18	17	86	138	138	25
Mindanao	2025	3	18	18	89	138	138	25
Mindanao	2025	3	18	19	89	138	138	25
Mindanao	2025	3	18	20	88	138	138	25
Mindanao	2025	3	18	21	84	138	138	25
Mindanao	2025	3	18	22	79	138	138	25
Mindanao	2025	3	18	23	72	138	138	25
Mindanao	2025	3	18	24	70	138	138	25
Mindanao	2025	3	19	1	66	138	138	25
Mindanao	2025	3	19	2	63	138	138	25
Mindanao	2025	3	19	3	61	138	138	25
Mindanao	2025	3	19	4	60	138	138	25
Mindanao	2025	3	19	5	63	138	138	25
Mindanao	2025	3	19	6	67	138	138	25
Mindanao	2025	3	19	7	61	138	138	25
Mindanao	2025	3	19	8	69	138	138	25
Mindanao	2025	3	19	9	81	138	138	25
Mindanao	2025	3	19	10	86	138	138	25
Mindanao	2025	3	19	11	89	138	138	25
Mindanao	2025	3	19	12	89	138	138	25
Mindanao	2025	3	19	13	90	138	138	25
Mindanao	2025	3	19	14	95	138	138	25
Mindanao	2025	3	19	15	94	138	138	25
Mindanao	2025	3	19	16	91	138	138	25
Mindanao	2025	3	19	17	84	138	138	25
Mindanao	2025	3	19	18	86	138	138	25
Mindanao	2025	3	19	19	88	138	138	25
Mindanao	2025	3	19	20	86	138	138	25
Mindanao	2025	3	19	21	84	138	138	25
Mindanao	2025	3	19	22	78	138	138	25
Mindanao	2025	3	19	23	72	138	138	25
Mindanao	2025	3	19	24	69	138	138	25
Mindanao	2025	3	20	1	65	138	138	25
Mindanao	2025	3	20	2	64	138	138	25
Mindanao	2025	3	20	3	63	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	20	4	61	138	138	25
Mindanao	2025	3	20	5	63	138	138	25
Mindanao	2025	3	20	6	66	138	138	25
Mindanao	2025	3	20	7	60	138	138	25
Mindanao	2025	3	20	8	68	138	138	25
Mindanao	2025	3	20	9	80	138	138	25
Mindanao	2025	3	20	10	87	138	138	25
Mindanao	2025	3	20	11	90	138	138	25
Mindanao	2025	3	20	12	90	138	138	25
Mindanao	2025	3	20	13	92	138	138	25
Mindanao	2025	3	20	14	96	138	138	25
Mindanao	2025	3	20	15	94	138	138	25
Mindanao	2025	3	20	16	93	138	138	25
Mindanao	2025	3	20	17	87	138	138	25
Mindanao	2025	3	20	18	89	138	138	25
Mindanao	2025	3	20	19	89	138	138	25
Mindanao	2025	3	20	20	87	138	138	25
Mindanao	2025	3	20	21	86	138	138	25
Mindanao	2025	3	20	22	80	138	138	25
Mindanao	2025	3	20	23	74	138	138	25
Mindanao	2025	3	20	24	70	138	138	25
Mindanao	2025	3	21	1	67	138	138	25
Mindanao	2025	3	21	2	65	138	138	25
Mindanao	2025	3	21	3	64	138	138	25
Mindanao	2025	3	21	4	62	138	138	25
Mindanao	2025	3	21	5	64	138	138	25
Mindanao	2025	3	21	6	67	138	138	25
Mindanao	2025	3	21	7	62	138	138	25
Mindanao	2025	3	21	8	70	138	138	25
Mindanao	2025	3	21	9	80	138	138	25
Mindanao	2025	3	21	10	87	138	138	25
Mindanao	2025	3	21	11	90	138	138	25
Mindanao	2025	3	21	12	91	138	138	25
Mindanao	2025	3	21	13	93	138	138	25
Mindanao	2025	3	21	14	98	138	138	25
Mindanao	2025	3	21	15	97	138	138	25
Mindanao	2025	3	21	16	94	138	138	25
Mindanao	2025	3	21	17	88	138	138	25
Mindanao	2025	3	21	18	88	138	138	25
Mindanao	2025	3	21	19	88	138	138	25
Mindanao	2025	3	21	20	84	138	138	25
Mindanao	2025	3	21	21	83	138	138	25
Mindanao	2025	3	21	22	77	138	138	25
Mindanao	2025	3	21	23	71	138	138	25
Mindanao	2025	3	21	24	70	138	138	25
Mindanao	2025	3	22	1	65	138	138	25
Mindanao	2025	3	22	2	64	138	138	25
Mindanao	2025	3	22	3	64	138	138	25
Mindanao	2025	3	22	4	61	138	138	25
Mindanao	2025	3	22	5	63	138	138	25
Mindanao	2025	3	22	6	63	138	138	25
Mindanao	2025	3	22	7	59	138	138	25
Mindanao	2025	3	22	8	64	138	138	25
Mindanao	2025	3	22	9	72	138	138	25
Mindanao	2025	3	22	10	77	138	138	25
Mindanao	2025	3	22	11	80	138	138	25
Mindanao	2025	3	22	12	80	138	138	25
Mindanao	2025	3	22	13	83	138	138	25
Mindanao	2025	3	22	14	88	138	138	25
Mindanao	2025	3	22	15	87	138	138	25
Mindanao	2025	3	22	16	86	138	138	25
Mindanao	2025	3	22	17	82	138	138	25
Mindanao	2025	3	22	18	86	138	138	25
Mindanao	2025	3	22	19	88	138	138	25
Mindanao	2025	3	22	20	85	138	138	25
Mindanao	2025	3	22	21	82	138	138	25
Mindanao	2025	3	22	22	79	138	138	25
Mindanao	2025	3	22	23	75	138	138	25
Mindanao	2025	3	22	24	70	138	138	25
Mindanao	2025	3	23	1	67	138	138	25
Mindanao	2025	3	23	2	65	138	138	25
Mindanao	2025	3	23	3	64	138	138	25
Mindanao	2025	3	23	4	62	138	138	25
Mindanao	2025	3	23	5	61	138	138	25
Mindanao	2025	3	23	6	60	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	23	7	59	138	138	25
Mindanao	2025	3	23	8	61	138	138	25
Mindanao	2025	3	23	9	64	138	138	25
Mindanao	2025	3	23	10	68	138	138	25
Mindanao	2025	3	23	11	72	138	138	25
Mindanao	2025	3	23	12	73	138	138	25
Mindanao	2025	3	23	13	75	138	138	25
Mindanao	2025	3	23	14	76	138	138	25
Mindanao	2025	3	23	15	76	138	138	25
Mindanao	2025	3	23	16	74	138	138	25
Mindanao	2025	3	23	17	74	138	138	25
Mindanao	2025	3	23	18	81	138	138	25
Mindanao	2025	3	23	19	84	138	138	25
Mindanao	2025	3	23	20	82	138	138	25
Mindanao	2025	3	23	21	82	138	138	25
Mindanao	2025	3	23	22	75	138	138	25
Mindanao	2025	3	23	23	71	138	138	25
Mindanao	2025	3	23	24	67	138	138	25
Mindanao	2025	3	24	1	64	138	138	25
Mindanao	2025	3	24	2	62	138	138	25
Mindanao	2025	3	24	3	61	138	138	25
Mindanao	2025	3	24	4	59	138	138	25
Mindanao	2025	3	24	5	61	138	138	25
Mindanao	2025	3	24	6	64	138	138	25
Mindanao	2025	3	24	7	60	138	138	25
Mindanao	2025	3	24	8	67	138	138	25
Mindanao	2025	3	24	9	77	138	138	25
Mindanao	2025	3	24	10	85	138	138	25
Mindanao	2025	3	24	11	90	138	138	25
Mindanao	2025	3	24	12	90	138	138	25
Mindanao	2025	3	24	13	90	138	138	25
Mindanao	2025	3	24	14	96	138	138	25
Mindanao	2025	3	24	15	94	138	138	25
Mindanao	2025	3	24	16	92	138	138	25
Mindanao	2025	3	24	17	86	138	138	25
Mindanao	2025	3	24	18	88	138	138	25
Mindanao	2025	3	24	19	89	138	138	25
Mindanao	2025	3	24	20	87	138	138	25
Mindanao	2025	3	24	21	83	138	138	25
Mindanao	2025	3	24	22	78	138	138	25
Mindanao	2025	3	24	23	75	138	138	25
Mindanao	2025	3	24	24	71	138	138	25
Mindanao	2025	3	25	1	66	138	138	25
Mindanao	2025	3	25	2	65	138	138	25
Mindanao	2025	3	25	3	64	138	138	25
Mindanao	2025	3	25	4	62	138	138	25
Mindanao	2025	3	25	5	64	138	138	25
Mindanao	2025	3	25	6	68	138	138	25
Mindanao	2025	3	25	7	61	138	138	25
Mindanao	2025	3	25	8	70	138	138	25
Mindanao	2025	3	25	9	80	138	138	25
Mindanao	2025	3	25	10	87	138	138	25
Mindanao	2025	3	25	11	91	138	138	25
Mindanao	2025	3	25	12	90	138	138	25
Mindanao	2025	3	25	13	91	138	138	25
Mindanao	2025	3	25	14	90	138	138	25
Mindanao	2025	3	25	15	94	138	138	25
Mindanao	2025	3	25	16	91	138	138	25
Mindanao	2025	3	25	17	87	138	138	25
Mindanao	2025	3	25	18	89	138	138	25
Mindanao	2025	3	25	19	88	138	138	25
Mindanao	2025	3	25	20	86	138	138	25
Mindanao	2025	3	25	21	83	138	138	25
Mindanao	2025	3	25	22	77	138	138	25
Mindanao	2025	3	25	23	73	138	138	25
Mindanao	2025	3	25	24	69	138	138	25
Mindanao	2025	3	26	1	67	138	138	25
Mindanao	2025	3	26	2	69	138	138	25
Mindanao	2025	3	26	3	69	138	138	25
Mindanao	2025	3	26	4	68	138	138	25
Mindanao	2025	3	26	5	69	138	138	25
Mindanao	2025	3	26	6	73	138	138	25
Mindanao	2025	3	26	7	67	138	138	25
Mindanao	2025	3	26	8	77	138	138	25
Mindanao	2025	3	26	9	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	26	10	93	138	138	25
Mindanao	2025	3	26	11	97	138	138	25
Mindanao	2025	3	26	12	96	138	138	25
Mindanao	2025	3	26	13	97	138	138	25
Mindanao	2025	3	26	14	99	138	138	25
Mindanao	2025	3	26	15	95	138	138	25
Mindanao	2025	3	26	16	94	138	138	25
Mindanao	2025	3	26	17	90	138	138	25
Mindanao	2025	3	26	18	92	138	138	25
Mindanao	2025	3	26	19	91	138	138	25
Mindanao	2025	3	26	20	87	138	138	25
Mindanao	2025	3	26	21	85	138	138	25
Mindanao	2025	3	26	22	81	138	138	25
Mindanao	2025	3	26	23	76	138	138	25
Mindanao	2025	3	26	24	72	138	138	25
Mindanao	2025	3	27	1	68	138	138	25
Mindanao	2025	3	27	2	66	138	138	25
Mindanao	2025	3	27	3	67	138	138	25
Mindanao	2025	3	27	4	63	138	138	25
Mindanao	2025	3	27	5	68	138	138	25
Mindanao	2025	3	27	6	70	138	138	25
Mindanao	2025	3	27	7	65	138	138	25
Mindanao	2025	3	27	8	73	138	138	25
Mindanao	2025	3	27	9	84	138	138	25
Mindanao	2025	3	27	10	91	138	138	25
Mindanao	2025	3	27	11	96	138	138	25
Mindanao	2025	3	27	12	94	138	138	25
Mindanao	2025	3	27	13	96	138	138	25
Mindanao	2025	3	27	14	99	138	138	25
Mindanao	2025	3	27	15	98	138	138	25
Mindanao	2025	3	27	16	94	138	138	25
Mindanao	2025	3	27	17	91	138	138	25
Mindanao	2025	3	27	18	93	138	138	25
Mindanao	2025	3	27	19	92	138	138	25
Mindanao	2025	3	27	20	88	138	138	25
Mindanao	2025	3	27	21	86	138	138	25
Mindanao	2025	3	27	22	81	138	138	25
Mindanao	2025	3	27	23	77	138	138	25
Mindanao	2025	3	27	24	72	138	138	25
Mindanao	2025	3	28	1	69	138	138	25
Mindanao	2025	3	28	2	68	138	138	25
Mindanao	2025	3	28	3	66	138	138	25
Mindanao	2025	3	28	4	64	138	138	25
Mindanao	2025	3	28	5	67	138	138	25
Mindanao	2025	3	28	6	71	138	138	25
Mindanao	2025	3	28	7	66	138	138	25
Mindanao	2025	3	28	8	73	138	138	25
Mindanao	2025	3	28	9	83	138	138	25
Mindanao	2025	3	28	10	89	138	138	25
Mindanao	2025	3	28	11	94	138	138	25
Mindanao	2025	3	28	12	94	138	138	25
Mindanao	2025	3	28	13	96	138	138	25
Mindanao	2025	3	28	14	101	138	138	25
Mindanao	2025	3	28	15	97	138	138	25
Mindanao	2025	3	28	16	95	138	138	25
Mindanao	2025	3	28	17	89	138	138	25
Mindanao	2025	3	28	18	93	138	138	25
Mindanao	2025	3	28	19	92	138	138	25
Mindanao	2025	3	28	20	89	138	138	25
Mindanao	2025	3	28	21	86	138	138	25
Mindanao	2025	3	28	22	81	138	138	25
Mindanao	2025	3	28	23	77	138	138	25
Mindanao	2025	3	28	24	73	138	138	25
Mindanao	2025	3	29	1	70	138	138	25
Mindanao	2025	3	29	2	68	138	138	25
Mindanao	2025	3	29	3	66	138	138	25
Mindanao	2025	3	29	4	65	138	138	25
Mindanao	2025	3	29	5	64	138	138	25
Mindanao	2025	3	29	6	67	138	138	25
Mindanao	2025	3	29	7	66	138	138	25
Mindanao	2025	3	29	8	70	138	138	25
Mindanao	2025	3	29	9	77	138	138	25
Mindanao	2025	3	29	10	82	138	138	25
Mindanao	2025	3	29	11	84	138	138	25
Mindanao	2025	3	29	12	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	3	29	13	85	138	138	25
Mindanao	2025	3	29	14	88	138	138	25
Mindanao	2025	3	29	15	87	138	138	25
Mindanao	2025	3	29	16	86	138	138	25
Mindanao	2025	3	29	17	84	138	138	25
Mindanao	2025	3	29	18	90	138	138	25
Mindanao	2025	3	29	19	88	138	138	25
Mindanao	2025	3	29	20	85	138	138	25
Mindanao	2025	3	29	21	83	138	138	25
Mindanao	2025	3	29	22	76	138	138	25
Mindanao	2025	3	29	23	73	138	138	25
Mindanao	2025	3	29	24	69	138	138	25
Mindanao	2025	3	30	1	65	138	138	25
Mindanao	2025	3	30	2	64	138	138	25
Mindanao	2025	3	30	3	63	138	138	25
Mindanao	2025	3	30	4	60	138	138	25
Mindanao	2025	3	30	5	60	138	138	25
Mindanao	2025	3	30	6	61	138	138	25
Mindanao	2025	3	30	7	59	138	138	25
Mindanao	2025	3	30	8	60	138	138	25
Mindanao	2025	3	30	9	66	138	138	25
Mindanao	2025	3	30	10	74	138	138	25
Mindanao	2025	3	30	11	75	138	138	25
Mindanao	2025	3	30	12	76	138	138	25
Mindanao	2025	3	30	13	75	138	138	25
Mindanao	2025	3	30	14	76	138	138	25
Mindanao	2025	3	30	15	77	138	138	25
Mindanao	2025	3	30	16	75	138	138	25
Mindanao	2025	3	30	17	73	138	138	25
Mindanao	2025	3	30	18	84	138	138	25
Mindanao	2025	3	30	19	84	138	138	25
Mindanao	2025	3	30	20	84	138	138	25
Mindanao	2025	3	30	21	82	138	138	25
Mindanao	2025	3	30	22	76	138	138	25
Mindanao	2025	3	30	23	71	138	138	25
Mindanao	2025	3	30	24	69	138	138	25
Mindanao	2025	3	31	1	65	138	138	25
Mindanao	2025	3	31	2	63	138	138	25
Mindanao	2025	3	31	3	62	138	138	25
Mindanao	2025	3	31	4	63	138	138	25
Mindanao	2025	3	31	5	65	138	138	25
Mindanao	2025	3	31	6	69	138	138	25
Mindanao	2025	3	31	7	65	138	138	25
Mindanao	2025	3	31	8	72	138	138	25
Mindanao	2025	3	31	9	83	138	138	25
Mindanao	2025	3	31	10	92	138	138	25
Mindanao	2025	3	31	11	96	138	138	25
Mindanao	2025	3	31	12	95	138	138	25
Mindanao	2025	3	31	13	96	138	138	25
Mindanao	2025	3	31	14	100	138	138	25
Mindanao	2025	3	31	15	98	138	138	25
Mindanao	2025	3	31	16	96	138	138	25
Mindanao	2025	3	31	17	91	138	138	25
Mindanao	2025	3	31	18	93	138	138	25
Mindanao	2025	3	31	19	93	138	138	25
Mindanao	2025	3	31	20	90	138	138	25
Mindanao	2025	3	31	21	87	138	138	25
Mindanao	2025	3	31	22	81	138	138	25
Mindanao	2025	3	31	23	76	138	138	25
Mindanao	2025	3	31	24	73	138	138	25
Mindanao	2025	4	1	1	69	138	138	25
Mindanao	2025	4	1	2	67	138	138	25
Mindanao	2025	4	1	3	66	138	138	25
Mindanao	2025	4	1	4	63	138	138	25
Mindanao	2025	4	1	5	66	138	138	25
Mindanao	2025	4	1	6	70	138	138	25
Mindanao	2025	4	1	7	64	138	138	25
Mindanao	2025	4	1	8	73	138	138	25
Mindanao	2025	4	1	9	83	138	138	25
Mindanao	2025	4	1	10	89	138	138	25
Mindanao	2025	4	1	11	93	138	138	25
Mindanao	2025	4	1	12	92	138	138	25
Mindanao	2025	4	1	13	94	138	138	25
Mindanao	2025	4	1	14	100	138	138	25
Mindanao	2025	4	1	15	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	1	16	95	138	138	25
Mindanao	2025	4	1	17	90	138	138	25
Mindanao	2025	4	1	18	93	138	138	25
Mindanao	2025	4	1	19	93	138	138	25
Mindanao	2025	4	1	20	90	138	138	25
Mindanao	2025	4	1	21	87	138	138	25
Mindanao	2025	4	1	22	83	138	138	25
Mindanao	2025	4	1	23	77	138	138	25
Mindanao	2025	4	1	24	74	138	138	25
Mindanao	2025	4	2	1	70	138	138	25
Mindanao	2025	4	2	2	67	138	138	25
Mindanao	2025	4	2	3	66	138	138	25
Mindanao	2025	4	2	4	65	138	138	25
Mindanao	2025	4	2	5	67	138	138	25
Mindanao	2025	4	2	6	68	138	138	25
Mindanao	2025	4	2	7	64	138	138	25
Mindanao	2025	4	2	8	72	138	138	25
Mindanao	2025	4	2	9	82	138	138	25
Mindanao	2025	4	2	10	89	138	138	25
Mindanao	2025	4	2	11	92	138	138	25
Mindanao	2025	4	2	12	89	138	138	25
Mindanao	2025	4	2	13	88	138	138	25
Mindanao	2025	4	2	14	91	138	138	25
Mindanao	2025	4	2	15	90	138	138	25
Mindanao	2025	4	2	16	88	138	138	25
Mindanao	2025	4	2	17	84	138	138	25
Mindanao	2025	4	2	18	89	138	138	25
Mindanao	2025	4	2	19	89	138	138	25
Mindanao	2025	4	2	20	86	138	138	25
Mindanao	2025	4	2	21	82	138	138	25
Mindanao	2025	4	2	22	78	138	138	25
Mindanao	2025	4	2	23	74	138	138	25
Mindanao	2025	4	2	24	69	138	138	25
Mindanao	2025	4	3	1	68	138	138	25
Mindanao	2025	4	3	2	66	138	138	25
Mindanao	2025	4	3	3	67	138	138	25
Mindanao	2025	4	3	4	63	138	138	25
Mindanao	2025	4	3	5	68	138	138	25
Mindanao	2025	4	3	6	70	138	138	25
Mindanao	2025	4	3	7	65	138	138	25
Mindanao	2025	4	3	8	73	138	138	25
Mindanao	2025	4	3	9	84	138	138	25
Mindanao	2025	4	3	10	91	138	138	25
Mindanao	2025	4	3	11	96	138	138	25
Mindanao	2025	4	3	12	94	138	138	25
Mindanao	2025	4	3	13	96	138	138	25
Mindanao	2025	4	3	14	99	138	138	25
Mindanao	2025	4	3	15	98	138	138	25
Mindanao	2025	4	3	16	94	138	138	25
Mindanao	2025	4	3	17	91	138	138	25
Mindanao	2025	4	3	18	93	138	138	25
Mindanao	2025	4	3	19	92	138	138	25
Mindanao	2025	4	3	20	88	138	138	25
Mindanao	2025	4	3	21	86	138	138	25
Mindanao	2025	4	3	22	81	138	138	25
Mindanao	2025	4	3	23	77	138	138	25
Mindanao	2025	4	3	24	72	138	138	25
Mindanao	2025	4	4	1	69	138	138	25
Mindanao	2025	4	4	2	68	138	138	25
Mindanao	2025	4	4	3	66	138	138	25
Mindanao	2025	4	4	4	64	138	138	25
Mindanao	2025	4	4	5	67	138	138	25
Mindanao	2025	4	4	6	71	138	138	25
Mindanao	2025	4	4	7	66	138	138	25
Mindanao	2025	4	4	8	73	138	138	25
Mindanao	2025	4	4	9	83	138	138	25
Mindanao	2025	4	4	10	89	138	138	25
Mindanao	2025	4	4	11	94	138	138	25
Mindanao	2025	4	4	12	94	138	138	25
Mindanao	2025	4	4	13	96	138	138	25
Mindanao	2025	4	4	14	101	138	138	25
Mindanao	2025	4	4	15	97	138	138	25
Mindanao	2025	4	4	16	95	138	138	25
Mindanao	2025	4	4	17	89	138	138	25
Mindanao	2025	4	4	18	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	4	19	92	138	138	25
Mindanao	2025	4	4	20	89	138	138	25
Mindanao	2025	4	4	21	86	138	138	25
Mindanao	2025	4	4	22	81	138	138	25
Mindanao	2025	4	4	23	77	138	138	25
Mindanao	2025	4	4	24	73	138	138	25
Mindanao	2025	4	5	1	59	138	138	25
Mindanao	2025	4	5	2	57	138	138	25
Mindanao	2025	4	5	3	55	138	138	25
Mindanao	2025	4	5	4	55	138	138	25
Mindanao	2025	4	5	5	54	138	138	25
Mindanao	2025	4	5	6	55	138	138	25
Mindanao	2025	4	5	7	57	138	138	25
Mindanao	2025	4	5	8	61	138	138	25
Mindanao	2025	4	5	9	65	138	138	25
Mindanao	2025	4	5	10	71	138	138	25
Mindanao	2025	4	5	11	75	138	138	25
Mindanao	2025	4	5	12	75	138	138	25
Mindanao	2025	4	5	13	77	138	138	25
Mindanao	2025	4	5	14	78	138	138	25
Mindanao	2025	4	5	15	79	138	138	25
Mindanao	2025	4	5	16	78	138	138	25
Mindanao	2025	4	5	17	77	138	138	25
Mindanao	2025	4	5	18	82	138	138	25
Mindanao	2025	4	5	19	83	138	138	25
Mindanao	2025	4	5	20	80	138	138	25
Mindanao	2025	4	5	21	79	138	138	25
Mindanao	2025	4	5	22	75	138	138	25
Mindanao	2025	4	5	23	70	138	138	25
Mindanao	2025	4	5	24	66	138	138	25
Mindanao	2025	4	6	1	64	138	138	25
Mindanao	2025	4	6	2	63	138	138	25
Mindanao	2025	4	6	3	62	138	138	25
Mindanao	2025	4	6	4	61	138	138	25
Mindanao	2025	4	6	5	59	138	138	25
Mindanao	2025	4	6	6	60	138	138	25
Mindanao	2025	4	6	7	62	138	138	25
Mindanao	2025	4	6	8	62	138	138	25
Mindanao	2025	4	6	9	66	138	138	25
Mindanao	2025	4	6	10	71	138	138	25
Mindanao	2025	4	6	11	75	138	138	25
Mindanao	2025	4	6	12	75	138	138	25
Mindanao	2025	4	6	13	75	138	138	25
Mindanao	2025	4	6	14	75	138	138	25
Mindanao	2025	4	6	15	75	138	138	25
Mindanao	2025	4	6	16	75	138	138	25
Mindanao	2025	4	6	17	74	138	138	25
Mindanao	2025	4	6	18	75	138	138	25
Mindanao	2025	4	6	19	79	138	138	25
Mindanao	2025	4	6	20	78	138	138	25
Mindanao	2025	4	6	21	76	138	138	25
Mindanao	2025	4	6	22	70	138	138	25
Mindanao	2025	4	6	23	65	138	138	25
Mindanao	2025	4	6	24	63	138	138	25
Mindanao	2025	4	7	1	65	138	138	25
Mindanao	2025	4	7	2	63	138	138	25
Mindanao	2025	4	7	3	62	138	138	25
Mindanao	2025	4	7	4	63	138	138	25
Mindanao	2025	4	7	5	65	138	138	25
Mindanao	2025	4	7	6	69	138	138	25
Mindanao	2025	4	7	7	65	138	138	25
Mindanao	2025	4	7	8	72	138	138	25
Mindanao	2025	4	7	9	83	138	138	25
Mindanao	2025	4	7	10	92	138	138	25
Mindanao	2025	4	7	11	96	138	138	25
Mindanao	2025	4	7	12	95	138	138	25
Mindanao	2025	4	7	13	96	138	138	25
Mindanao	2025	4	7	14	100	138	138	25
Mindanao	2025	4	7	15	98	138	138	25
Mindanao	2025	4	7	16	96	138	138	25
Mindanao	2025	4	7	17	91	138	138	25
Mindanao	2025	4	7	18	93	138	138	25
Mindanao	2025	4	7	19	93	138	138	25
Mindanao	2025	4	7	20	90	138	138	25
Mindanao	2025	4	7	21	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	7	22	81	138	138	25
Mindanao	2025	4	7	23	76	138	138	25
Mindanao	2025	4	7	24	73	138	138	25
Mindanao	2025	4	8	1	66	138	138	25
Mindanao	2025	4	8	2	64	138	138	25
Mindanao	2025	4	8	3	62	138	138	25
Mindanao	2025	4	8	4	61	138	138	25
Mindanao	2025	4	8	5	65	138	138	25
Mindanao	2025	4	8	6	69	138	138	25
Mindanao	2025	4	8	7	62	138	138	25
Mindanao	2025	4	8	8	72	138	138	25
Mindanao	2025	4	8	9	83	138	138	25
Mindanao	2025	4	8	10	90	138	138	25
Mindanao	2025	4	8	11	95	138	138	25
Mindanao	2025	4	8	12	92	138	138	25
Mindanao	2025	4	8	13	96	138	138	25
Mindanao	2025	4	8	14	101	138	138	25
Mindanao	2025	4	8	15	101	138	138	25
Mindanao	2025	4	8	16	98	138	138	25
Mindanao	2025	4	8	17	93	138	138	25
Mindanao	2025	4	8	18	95	138	138	25
Mindanao	2025	4	8	19	94	138	138	25
Mindanao	2025	4	8	20	91	138	138	25
Mindanao	2025	4	8	21	87	138	138	25
Mindanao	2025	4	8	22	82	138	138	25
Mindanao	2025	4	8	23	77	138	138	25
Mindanao	2025	4	8	24	73	138	138	25
Mindanao	2025	4	9	1	60	138	138	25
Mindanao	2025	4	9	2	59	138	138	25
Mindanao	2025	4	9	3	60	138	138	25
Mindanao	2025	4	9	4	56	138	138	25
Mindanao	2025	4	9	5	57	138	138	25
Mindanao	2025	4	9	6	58	138	138	25
Mindanao	2025	4	9	7	59	138	138	25
Mindanao	2025	4	9	8	62	138	138	25
Mindanao	2025	4	9	9	68	138	138	25
Mindanao	2025	4	9	10	74	138	138	25
Mindanao	2025	4	9	11	78	138	138	25
Mindanao	2025	4	9	12	78	138	138	25
Mindanao	2025	4	9	13	79	138	138	25
Mindanao	2025	4	9	14	82	138	138	25
Mindanao	2025	4	9	15	81	138	138	25
Mindanao	2025	4	9	16	80	138	138	25
Mindanao	2025	4	9	17	80	138	138	25
Mindanao	2025	4	9	18	85	138	138	25
Mindanao	2025	4	9	19	85	138	138	25
Mindanao	2025	4	9	20	85	138	138	25
Mindanao	2025	4	9	21	81	138	138	25
Mindanao	2025	4	9	22	76	138	138	25
Mindanao	2025	4	9	23	72	138	138	25
Mindanao	2025	4	9	24	68	138	138	25
Mindanao	2025	4	10	1	73	138	138	25
Mindanao	2025	4	10	2	71	138	138	25
Mindanao	2025	4	10	3	69	138	138	25
Mindanao	2025	4	10	4	68	138	138	25
Mindanao	2025	4	10	5	70	138	138	25
Mindanao	2025	4	10	6	73	138	138	25
Mindanao	2025	4	10	7	67	138	138	25
Mindanao	2025	4	10	8	76	138	138	25
Mindanao	2025	4	10	9	89	138	138	25
Mindanao	2025	4	10	10	95	138	138	25
Mindanao	2025	4	10	11	99	138	138	25
Mindanao	2025	4	10	12	100	138	138	25
Mindanao	2025	4	10	13	102	138	138	25
Mindanao	2025	4	10	14	106	138	138	25
Mindanao	2025	4	10	15	105	138	138	25
Mindanao	2025	4	10	16	103	138	138	25
Mindanao	2025	4	10	17	97	138	138	25
Mindanao	2025	4	10	18	99	138	138	25
Mindanao	2025	4	10	19	100	138	138	25
Mindanao	2025	4	10	20	97	138	138	25
Mindanao	2025	4	10	21	95	138	138	25
Mindanao	2025	4	10	22	89	138	138	25
Mindanao	2025	4	10	23	85	138	138	25
Mindanao	2025	4	10	24	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	11	1	76	138	138	25
Mindanao	2025	4	11	2	73	138	138	25
Mindanao	2025	4	11	3	72	138	138	25
Mindanao	2025	4	11	4	70	138	138	25
Mindanao	2025	4	11	5	69	138	138	25
Mindanao	2025	4	11	6	75	138	138	25
Mindanao	2025	4	11	7	68	138	138	25
Mindanao	2025	4	11	8	78	138	138	25
Mindanao	2025	4	11	9	90	138	138	25
Mindanao	2025	4	11	10	97	138	138	25
Mindanao	2025	4	11	11	101	138	138	25
Mindanao	2025	4	11	12	100	138	138	25
Mindanao	2025	4	11	13	102	138	138	25
Mindanao	2025	4	11	14	107	138	138	25
Mindanao	2025	4	11	15	106	138	138	25
Mindanao	2025	4	11	16	103	138	138	25
Mindanao	2025	4	11	17	99	138	138	25
Mindanao	2025	4	11	18	98	138	138	25
Mindanao	2025	4	11	19	98	138	138	25
Mindanao	2025	4	11	20	94	138	138	25
Mindanao	2025	4	11	21	91	138	138	25
Mindanao	2025	4	11	22	89	138	138	25
Mindanao	2025	4	11	23	84	138	138	25
Mindanao	2025	4	11	24	80	138	138	25
Mindanao	2025	4	12	1	77	138	138	25
Mindanao	2025	4	12	2	74	138	138	25
Mindanao	2025	4	12	3	73	138	138	25
Mindanao	2025	4	12	4	71	138	138	25
Mindanao	2025	4	12	5	72	138	138	25
Mindanao	2025	4	12	6	72	138	138	25
Mindanao	2025	4	12	7	69	138	138	25
Mindanao	2025	4	12	8	76	138	138	25
Mindanao	2025	4	12	9	85	138	138	25
Mindanao	2025	4	12	10	92	138	138	25
Mindanao	2025	4	12	11	97	138	138	25
Mindanao	2025	4	12	12	97	138	138	25
Mindanao	2025	4	12	13	99	138	138	25
Mindanao	2025	4	12	14	101	138	138	25
Mindanao	2025	4	12	15	100	138	138	25
Mindanao	2025	4	12	16	98	138	138	25
Mindanao	2025	4	12	17	93	138	138	25
Mindanao	2025	4	12	18	97	138	138	25
Mindanao	2025	4	12	19	97	138	138	25
Mindanao	2025	4	12	20	93	138	138	25
Mindanao	2025	4	12	21	89	138	138	25
Mindanao	2025	4	12	22	85	138	138	25
Mindanao	2025	4	12	23	80	138	138	25
Mindanao	2025	4	12	24	77	138	138	25
Mindanao	2025	4	13	1	74	138	138	25
Mindanao	2025	4	13	2	72	138	138	25
Mindanao	2025	4	13	3	69	138	138	25
Mindanao	2025	4	13	4	66	138	138	25
Mindanao	2025	4	13	5	65	138	138	25
Mindanao	2025	4	13	6	64	138	138	25
Mindanao	2025	4	13	7	65	138	138	25
Mindanao	2025	4	13	8	67	138	138	25
Mindanao	2025	4	13	9	71	138	138	25
Mindanao	2025	4	13	10	77	138	138	25
Mindanao	2025	4	13	11	82	138	138	25
Mindanao	2025	4	13	12	84	138	138	25
Mindanao	2025	4	13	13	86	138	138	25
Mindanao	2025	4	13	14	86	138	138	25
Mindanao	2025	4	13	15	86	138	138	25
Mindanao	2025	4	13	16	85	138	138	25
Mindanao	2025	4	13	17	83	138	138	25
Mindanao	2025	4	13	18	88	138	138	25
Mindanao	2025	4	13	19	92	138	138	25
Mindanao	2025	4	13	20	91	138	138	25
Mindanao	2025	4	13	21	89	138	138	25
Mindanao	2025	4	13	22	84	138	138	25
Mindanao	2025	4	13	23	80	138	138	25
Mindanao	2025	4	13	24	76	138	138	25
Mindanao	2025	4	14	1	70	138	138	25
Mindanao	2025	4	14	2	69	138	138	25
Mindanao	2025	4	14	3	67	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	14	4	66	138	138	25
Mindanao	2025	4	14	5	68	138	138	25
Mindanao	2025	4	14	6	71	138	138	25
Mindanao	2025	4	14	7	66	138	138	25
Mindanao	2025	4	14	8	76	138	138	25
Mindanao	2025	4	14	9	88	138	138	25
Mindanao	2025	4	14	10	94	138	138	25
Mindanao	2025	4	14	11	99	138	138	25
Mindanao	2025	4	14	12	99	138	138	25
Mindanao	2025	4	14	13	101	138	138	25
Mindanao	2025	4	14	14	106	138	138	25
Mindanao	2025	4	14	15	104	138	138	25
Mindanao	2025	4	14	16	101	138	138	25
Mindanao	2025	4	14	17	95	138	138	25
Mindanao	2025	4	14	18	98	138	138	25
Mindanao	2025	4	14	19	97	138	138	25
Mindanao	2025	4	14	20	96	138	138	25
Mindanao	2025	4	14	21	92	138	138	25
Mindanao	2025	4	14	22	88	138	138	25
Mindanao	2025	4	14	23	82	138	138	25
Mindanao	2025	4	14	24	77	138	138	25
Mindanao	2025	4	15	1	75	138	138	25
Mindanao	2025	4	15	2	72	138	138	25
Mindanao	2025	4	15	3	71	138	138	25
Mindanao	2025	4	15	4	69	138	138	25
Mindanao	2025	4	15	5	72	138	138	25
Mindanao	2025	4	15	6	74	138	138	25
Mindanao	2025	4	15	7	68	138	138	25
Mindanao	2025	4	15	8	77	138	138	25
Mindanao	2025	4	15	9	90	138	138	25
Mindanao	2025	4	15	10	96	138	138	25
Mindanao	2025	4	15	11	102	138	138	25
Mindanao	2025	4	15	12	101	138	138	25
Mindanao	2025	4	15	13	101	138	138	25
Mindanao	2025	4	15	14	107	138	138	25
Mindanao	2025	4	15	15	105	138	138	25
Mindanao	2025	4	15	16	104	138	138	25
Mindanao	2025	4	15	17	99	138	138	25
Mindanao	2025	4	15	18	101	138	138	25
Mindanao	2025	4	15	19	102	138	138	25
Mindanao	2025	4	15	20	100	138	138	25
Mindanao	2025	4	15	21	97	138	138	25
Mindanao	2025	4	15	22	92	138	138	25
Mindanao	2025	4	15	23	86	138	138	25
Mindanao	2025	4	15	24	80	138	138	25
Mindanao	2025	4	16	1	77	138	138	25
Mindanao	2025	4	16	2	74	138	138	25
Mindanao	2025	4	16	3	73	138	138	25
Mindanao	2025	4	16	4	72	138	138	25
Mindanao	2025	4	16	5	73	138	138	25
Mindanao	2025	4	16	6	74	138	138	25
Mindanao	2025	4	16	7	70	138	138	25
Mindanao	2025	4	16	8	80	138	138	25
Mindanao	2025	4	16	9	92	138	138	25
Mindanao	2025	4	16	10	99	138	138	25
Mindanao	2025	4	16	11	103	138	138	25
Mindanao	2025	4	16	12	100	138	138	25
Mindanao	2025	4	16	13	105	138	138	25
Mindanao	2025	4	16	14	109	138	138	25
Mindanao	2025	4	16	15	107	138	138	25
Mindanao	2025	4	16	16	105	138	138	25
Mindanao	2025	4	16	17	101	138	138	25
Mindanao	2025	4	16	18	101	138	138	25
Mindanao	2025	4	16	19	102	138	138	25
Mindanao	2025	4	16	20	100	138	138	25
Mindanao	2025	4	16	21	98	138	138	25
Mindanao	2025	4	16	22	92	138	138	25
Mindanao	2025	4	16	23	88	138	138	25
Mindanao	2025	4	16	24	83	138	138	25
Mindanao	2025	4	17	1	66	138	138	25
Mindanao	2025	4	17	2	62	138	138	25
Mindanao	2025	4	17	3	61	138	138	25
Mindanao	2025	4	17	4	59	138	138	25
Mindanao	2025	4	17	5	59	138	138	25
Mindanao	2025	4	17	6	59	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	17	7	58	138	138	25
Mindanao	2025	4	17	8	58	138	138	25
Mindanao	2025	4	17	9	63	138	138	25
Mindanao	2025	4	17	10	66	138	138	25
Mindanao	2025	4	17	11	70	138	138	25
Mindanao	2025	4	17	12	71	138	138	25
Mindanao	2025	4	17	13	72	138	138	25
Mindanao	2025	4	17	14	74	138	138	25
Mindanao	2025	4	17	15	74	138	138	25
Mindanao	2025	4	17	16	72	138	138	25
Mindanao	2025	4	17	17	70	138	138	25
Mindanao	2025	4	17	18	77	138	138	25
Mindanao	2025	4	17	19	77	138	138	25
Mindanao	2025	4	17	20	75	138	138	25
Mindanao	2025	4	17	21	74	138	138	25
Mindanao	2025	4	17	22	69	138	138	25
Mindanao	2025	4	17	23	66	138	138	25
Mindanao	2025	4	17	24	62	138	138	25
Mindanao	2025	4	18	1	59	138	138	25
Mindanao	2025	4	18	2	58	138	138	25
Mindanao	2025	4	18	3	57	138	138	25
Mindanao	2025	4	18	4	54	138	138	25
Mindanao	2025	4	18	5	54	138	138	25
Mindanao	2025	4	18	6	53	138	138	25
Mindanao	2025	4	18	7	53	138	138	25
Mindanao	2025	4	18	8	54	138	138	25
Mindanao	2025	4	18	9	55	138	138	25
Mindanao	2025	4	18	10	56	138	138	25
Mindanao	2025	4	18	11	61	138	138	25
Mindanao	2025	4	18	12	62	138	138	25
Mindanao	2025	4	18	13	63	138	138	25
Mindanao	2025	4	18	14	64	138	138	25
Mindanao	2025	4	18	15	65	138	138	25
Mindanao	2025	4	18	16	62	138	138	25
Mindanao	2025	4	18	17	62	138	138	25
Mindanao	2025	4	18	18	69	138	138	25
Mindanao	2025	4	18	19	72	138	138	25
Mindanao	2025	4	18	20	72	138	138	25
Mindanao	2025	4	18	21	70	138	138	25
Mindanao	2025	4	18	22	68	138	138	25
Mindanao	2025	4	18	23	63	138	138	25
Mindanao	2025	4	18	24	60	138	138	25
Mindanao	2025	4	19	1	72	138	138	25
Mindanao	2025	4	19	2	70	138	138	25
Mindanao	2025	4	19	3	69	138	138	25
Mindanao	2025	4	19	4	66	138	138	25
Mindanao	2025	4	19	5	69	138	138	25
Mindanao	2025	4	19	6	67	138	138	25
Mindanao	2025	4	19	7	67	138	138	25
Mindanao	2025	4	19	8	71	138	138	25
Mindanao	2025	4	19	9	80	138	138	25
Mindanao	2025	4	19	10	87	138	138	25
Mindanao	2025	4	19	11	91	138	138	25
Mindanao	2025	4	19	12	92	138	138	25
Mindanao	2025	4	19	13	94	138	138	25
Mindanao	2025	4	19	14	97	138	138	25
Mindanao	2025	4	19	15	95	138	138	25
Mindanao	2025	4	19	16	91	138	138	25
Mindanao	2025	4	19	17	89	138	138	25
Mindanao	2025	4	19	18	94	138	138	25
Mindanao	2025	4	19	19	94	138	138	25
Mindanao	2025	4	19	20	92	138	138	25
Mindanao	2025	4	19	21	90	138	138	25
Mindanao	2025	4	19	22	84	138	138	25
Mindanao	2025	4	19	23	81	138	138	25
Mindanao	2025	4	19	24	76	138	138	25
Mindanao	2025	4	20	1	73	138	138	25
Mindanao	2025	4	20	2	70	138	138	25
Mindanao	2025	4	20	3	67	138	138	25
Mindanao	2025	4	20	4	66	138	138	25
Mindanao	2025	4	20	5	66	138	138	25
Mindanao	2025	4	20	6	67	138	138	25
Mindanao	2025	4	20	7	65	138	138	25
Mindanao	2025	4	20	8	67	138	138	25
Mindanao	2025	4	20	9	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	20	10	75	138	138	25
Mindanao	2025	4	20	11	82	138	138	25
Mindanao	2025	4	20	12	83	138	138	25
Mindanao	2025	4	20	13	86	138	138	25
Mindanao	2025	4	20	14	87	138	138	25
Mindanao	2025	4	20	15	86	138	138	25
Mindanao	2025	4	20	16	83	138	138	25
Mindanao	2025	4	20	17	82	138	138	25
Mindanao	2025	4	20	18	90	138	138	25
Mindanao	2025	4	20	19	93	138	138	25
Mindanao	2025	4	20	20	91	138	138	25
Mindanao	2025	4	20	21	89	138	138	25
Mindanao	2025	4	20	22	84	138	138	25
Mindanao	2025	4	20	23	80	138	138	25
Mindanao	2025	4	20	24	76	138	138	25
Mindanao	2025	4	21	1	71	138	138	25
Mindanao	2025	4	21	2	70	138	138	25
Mindanao	2025	4	21	3	68	138	138	25
Mindanao	2025	4	21	4	67	138	138	25
Mindanao	2025	4	21	5	70	138	138	25
Mindanao	2025	4	21	6	73	138	138	25
Mindanao	2025	4	21	7	68	138	138	25
Mindanao	2025	4	21	8	79	138	138	25
Mindanao	2025	4	21	9	90	138	138	25
Mindanao	2025	4	21	10	97	138	138	25
Mindanao	2025	4	21	11	101	138	138	25
Mindanao	2025	4	21	12	102	138	138	25
Mindanao	2025	4	21	13	104	138	138	25
Mindanao	2025	4	21	14	109	138	138	25
Mindanao	2025	4	21	15	107	138	138	25
Mindanao	2025	4	21	16	105	138	138	25
Mindanao	2025	4	21	17	98	138	138	25
Mindanao	2025	4	21	18	100	138	138	25
Mindanao	2025	4	21	19	101	138	138	25
Mindanao	2025	4	21	20	96	138	138	25
Mindanao	2025	4	21	21	95	138	138	25
Mindanao	2025	4	21	22	89	138	138	25
Mindanao	2025	4	21	23	83	138	138	25
Mindanao	2025	4	21	24	79	138	138	25
Mindanao	2025	4	22	1	74	138	138	25
Mindanao	2025	4	22	2	71	138	138	25
Mindanao	2025	4	22	3	70	138	138	25
Mindanao	2025	4	22	4	67	138	138	25
Mindanao	2025	4	22	5	72	138	138	25
Mindanao	2025	4	22	6	72	138	138	25
Mindanao	2025	4	22	7	68	138	138	25
Mindanao	2025	4	22	8	76	138	138	25
Mindanao	2025	4	22	9	88	138	138	25
Mindanao	2025	4	22	10	97	138	138	25
Mindanao	2025	4	22	11	100	138	138	25
Mindanao	2025	4	22	12	100	138	138	25
Mindanao	2025	4	22	13	103	138	138	25
Mindanao	2025	4	22	14	105	138	138	25
Mindanao	2025	4	22	15	103	138	138	25
Mindanao	2025	4	22	16	100	138	138	25
Mindanao	2025	4	22	17	97	138	138	25
Mindanao	2025	4	22	18	99	138	138	25
Mindanao	2025	4	22	19	101	138	138	25
Mindanao	2025	4	22	20	97	138	138	25
Mindanao	2025	4	22	21	96	138	138	25
Mindanao	2025	4	22	22	89	138	138	25
Mindanao	2025	4	22	23	85	138	138	25
Mindanao	2025	4	22	24	81	138	138	25
Mindanao	2025	4	23	1	77	138	138	25
Mindanao	2025	4	23	2	72	138	138	25
Mindanao	2025	4	23	3	71	138	138	25
Mindanao	2025	4	23	4	70	138	138	25
Mindanao	2025	4	23	5	72	138	138	25
Mindanao	2025	4	23	6	73	138	138	25
Mindanao	2025	4	23	7	68	138	138	25
Mindanao	2025	4	23	8	78	138	138	25
Mindanao	2025	4	23	9	90	138	138	25
Mindanao	2025	4	23	10	94	138	138	25
Mindanao	2025	4	23	11	98	138	138	25
Mindanao	2025	4	23	12	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	23	13	97	138	138	25
Mindanao	2025	4	23	14	102	138	138	25
Mindanao	2025	4	23	15	101	138	138	25
Mindanao	2025	4	23	16	104	138	138	25
Mindanao	2025	4	23	17	98	138	138	25
Mindanao	2025	4	23	18	102	138	138	25
Mindanao	2025	4	23	19	103	138	138	25
Mindanao	2025	4	23	20	100	138	138	25
Mindanao	2025	4	23	21	99	138	138	25
Mindanao	2025	4	23	22	92	138	138	25
Mindanao	2025	4	23	23	88	138	138	25
Mindanao	2025	4	23	24	83	138	138	25
Mindanao	2025	4	24	1	79	138	138	25
Mindanao	2025	4	24	2	76	138	138	25
Mindanao	2025	4	24	3	73	138	138	25
Mindanao	2025	4	24	4	70	138	138	25
Mindanao	2025	4	24	5	73	138	138	25
Mindanao	2025	4	24	6	73	138	138	25
Mindanao	2025	4	24	7	69	138	138	25
Mindanao	2025	4	24	8	80	138	138	25
Mindanao	2025	4	24	9	91	138	138	25
Mindanao	2025	4	24	10	98	138	138	25
Mindanao	2025	4	24	11	102	138	138	25
Mindanao	2025	4	24	12	101	138	138	25
Mindanao	2025	4	24	13	103	138	138	25
Mindanao	2025	4	24	14	106	138	138	25
Mindanao	2025	4	24	15	104	138	138	25
Mindanao	2025	4	24	16	102	138	138	25
Mindanao	2025	4	24	17	96	138	138	25
Mindanao	2025	4	24	18	99	138	138	25
Mindanao	2025	4	24	19	101	138	138	25
Mindanao	2025	4	24	20	98	138	138	25
Mindanao	2025	4	24	21	97	138	138	25
Mindanao	2025	4	24	22	91	138	138	25
Mindanao	2025	4	24	23	85	138	138	25
Mindanao	2025	4	24	24	81	138	138	25
Mindanao	2025	4	25	1	77	138	138	25
Mindanao	2025	4	25	2	73	138	138	25
Mindanao	2025	4	25	3	70	138	138	25
Mindanao	2025	4	25	4	69	138	138	25
Mindanao	2025	4	25	5	72	138	138	25
Mindanao	2025	4	25	6	71	138	138	25
Mindanao	2025	4	25	7	68	138	138	25
Mindanao	2025	4	25	8	78	138	138	25
Mindanao	2025	4	25	9	90	138	138	25
Mindanao	2025	4	25	10	98	138	138	25
Mindanao	2025	4	25	11	102	138	138	25
Mindanao	2025	4	25	12	101	138	138	25
Mindanao	2025	4	25	13	104	138	138	25
Mindanao	2025	4	25	14	107	138	138	25
Mindanao	2025	4	25	15	107	138	138	25
Mindanao	2025	4	25	16	104	138	138	25
Mindanao	2025	4	25	17	98	138	138	25
Mindanao	2025	4	25	18	100	138	138	25
Mindanao	2025	4	25	19	101	138	138	25
Mindanao	2025	4	25	20	100	138	138	25
Mindanao	2025	4	25	21	97	138	138	25
Mindanao	2025	4	25	22	91	138	138	25
Mindanao	2025	4	25	23	86	138	138	25
Mindanao	2025	4	25	24	82	138	138	25
Mindanao	2025	4	26	1	75	138	138	25
Mindanao	2025	4	26	2	74	138	138	25
Mindanao	2025	4	26	3	72	138	138	25
Mindanao	2025	4	26	4	70	138	138	25
Mindanao	2025	4	26	5	71	138	138	25
Mindanao	2025	4	26	6	70	138	138	25
Mindanao	2025	4	26	7	69	138	138	25
Mindanao	2025	4	26	8	75	138	138	25
Mindanao	2025	4	26	9	84	138	138	25
Mindanao	2025	4	26	10	90	138	138	25
Mindanao	2025	4	26	11	94	138	138	25
Mindanao	2025	4	26	12	94	138	138	25
Mindanao	2025	4	26	13	96	138	138	25
Mindanao	2025	4	26	14	98	138	138	25
Mindanao	2025	4	26	15	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	26	16	92	138	138	25
Mindanao	2025	4	26	17	90	138	138	25
Mindanao	2025	4	26	18	91	138	138	25
Mindanao	2025	4	26	19	90	138	138	25
Mindanao	2025	4	26	20	88	138	138	25
Mindanao	2025	4	26	21	85	138	138	25
Mindanao	2025	4	26	22	82	138	138	25
Mindanao	2025	4	26	23	77	138	138	25
Mindanao	2025	4	26	24	73	138	138	25
Mindanao	2025	4	27	1	69	138	138	25
Mindanao	2025	4	27	2	68	138	138	25
Mindanao	2025	4	27	3	64	138	138	25
Mindanao	2025	4	27	4	63	138	138	25
Mindanao	2025	4	27	5	63	138	138	25
Mindanao	2025	4	27	6	62	138	138	25
Mindanao	2025	4	27	7	59	138	138	25
Mindanao	2025	4	27	8	59	138	138	25
Mindanao	2025	4	27	9	63	138	138	25
Mindanao	2025	4	27	10	68	138	138	25
Mindanao	2025	4	27	11	69	138	138	25
Mindanao	2025	4	27	12	71	138	138	25
Mindanao	2025	4	27	13	73	138	138	25
Mindanao	2025	4	27	14	76	138	138	25
Mindanao	2025	4	27	15	74	138	138	25
Mindanao	2025	4	27	16	72	138	138	25
Mindanao	2025	4	27	17	74	138	138	25
Mindanao	2025	4	27	18	82	138	138	25
Mindanao	2025	4	27	19	84	138	138	25
Mindanao	2025	4	27	20	84	138	138	25
Mindanao	2025	4	27	21	84	138	138	25
Mindanao	2025	4	27	22	79	138	138	25
Mindanao	2025	4	27	23	74	138	138	25
Mindanao	2025	4	27	24	70	138	138	25
Mindanao	2025	4	28	1	71	138	138	25
Mindanao	2025	4	28	2	70	138	138	25
Mindanao	2025	4	28	3	68	138	138	25
Mindanao	2025	4	28	4	67	138	138	25
Mindanao	2025	4	28	5	70	138	138	25
Mindanao	2025	4	28	6	73	138	138	25
Mindanao	2025	4	28	7	68	138	138	25
Mindanao	2025	4	28	8	79	138	138	25
Mindanao	2025	4	28	9	90	138	138	25
Mindanao	2025	4	28	10	97	138	138	25
Mindanao	2025	4	28	11	101	138	138	25
Mindanao	2025	4	28	12	102	138	138	25
Mindanao	2025	4	28	13	104	138	138	25
Mindanao	2025	4	28	14	109	138	138	25
Mindanao	2025	4	28	15	107	138	138	25
Mindanao	2025	4	28	16	105	138	138	25
Mindanao	2025	4	28	17	98	138	138	25
Mindanao	2025	4	28	18	100	138	138	25
Mindanao	2025	4	28	19	101	138	138	25
Mindanao	2025	4	28	20	96	138	138	25
Mindanao	2025	4	28	21	95	138	138	25
Mindanao	2025	4	28	22	89	138	138	25
Mindanao	2025	4	28	23	83	138	138	25
Mindanao	2025	4	28	24	79	138	138	25
Mindanao	2025	4	29	1	70	138	138	25
Mindanao	2025	4	29	2	67	138	138	25
Mindanao	2025	4	29	3	65	138	138	25
Mindanao	2025	4	29	4	64	138	138	25
Mindanao	2025	4	29	5	68	138	138	25
Mindanao	2025	4	29	6	69	138	138	25
Mindanao	2025	4	29	7	65	138	138	25
Mindanao	2025	4	29	8	75	138	138	25
Mindanao	2025	4	29	9	88	138	138	25
Mindanao	2025	4	29	10	95	138	138	25
Mindanao	2025	4	29	11	99	138	138	25
Mindanao	2025	4	29	12	98	138	138	25
Mindanao	2025	4	29	13	98	138	138	25
Mindanao	2025	4	29	14	98	138	138	25
Mindanao	2025	4	29	15	96	138	138	25
Mindanao	2025	4	29	16	95	138	138	25
Mindanao	2025	4	29	17	92	138	138	25
Mindanao	2025	4	29	18	91	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	4	29	19	91	138	138	25
Mindanao	2025	4	29	20	89	138	138	25
Mindanao	2025	4	29	21	87	138	138	25
Mindanao	2025	4	29	22	82	138	138	25
Mindanao	2025	4	29	23	78	138	138	25
Mindanao	2025	4	29	24	74	138	138	25
Mindanao	2025	4	30	1	71	138	138	25
Mindanao	2025	4	30	2	69	138	138	25
Mindanao	2025	4	30	3	66	138	138	25
Mindanao	2025	4	30	4	66	138	138	25
Mindanao	2025	4	30	5	70	138	138	25
Mindanao	2025	4	30	6	72	138	138	25
Mindanao	2025	4	30	7	66	138	138	25
Mindanao	2025	4	30	8	76	138	138	25
Mindanao	2025	4	30	9	86	138	138	25
Mindanao	2025	4	30	10	93	138	138	25
Mindanao	2025	4	30	11	96	138	138	25
Mindanao	2025	4	30	12	93	138	138	25
Mindanao	2025	4	30	13	94	138	138	25
Mindanao	2025	4	30	14	96	138	138	25
Mindanao	2025	4	30	15	95	138	138	25
Mindanao	2025	4	30	16	94	138	138	25
Mindanao	2025	4	30	17	91	138	138	25
Mindanao	2025	4	30	18	97	138	138	25
Mindanao	2025	4	30	19	95	138	138	25
Mindanao	2025	4	30	20	93	138	138	25
Mindanao	2025	4	30	21	91	138	138	25
Mindanao	2025	4	30	22	84	138	138	25
Mindanao	2025	4	30	23	79	138	138	25
Mindanao	2025	4	30	24	74	138	138	25
Mindanao	2025	5	1	1	67	138	138	25
Mindanao	2025	5	1	2	64	138	138	25
Mindanao	2025	5	1	3	64	138	138	25
Mindanao	2025	5	1	4	62	138	138	25
Mindanao	2025	5	1	5	62	138	138	25
Mindanao	2025	5	1	6	62	138	138	25
Mindanao	2025	5	1	7	61	138	138	25
Mindanao	2025	5	1	8	64	138	138	25
Mindanao	2025	5	1	9	71	138	138	25
Mindanao	2025	5	1	10	77	138	138	25
Mindanao	2025	5	1	11	79	138	138	25
Mindanao	2025	5	1	12	80	138	138	25
Mindanao	2025	5	1	13	82	138	138	25
Mindanao	2025	5	1	14	85	138	138	25
Mindanao	2025	5	1	15	83	138	138	25
Mindanao	2025	5	1	16	80	138	138	25
Mindanao	2025	5	1	17	79	138	138	25
Mindanao	2025	5	1	18	86	138	138	25
Mindanao	2025	5	1	19	89	138	138	25
Mindanao	2025	5	1	20	88	138	138	25
Mindanao	2025	5	1	21	85	138	138	25
Mindanao	2025	5	1	22	80	138	138	25
Mindanao	2025	5	1	23	76	138	138	25
Mindanao	2025	5	1	24	73	138	138	25
Mindanao	2025	5	2	1	75	138	138	25
Mindanao	2025	5	2	2	71	138	138	25
Mindanao	2025	5	2	3	69	138	138	25
Mindanao	2025	5	2	4	68	138	138	25
Mindanao	2025	5	2	5	72	138	138	25
Mindanao	2025	5	2	6	71	138	138	25
Mindanao	2025	5	2	7	68	138	138	25
Mindanao	2025	5	2	8	78	138	138	25
Mindanao	2025	5	2	9	90	138	138	25
Mindanao	2025	5	2	10	97	138	138	25
Mindanao	2025	5	2	11	100	138	138	25
Mindanao	2025	5	2	12	100	138	138	25
Mindanao	2025	5	2	13	100	138	138	25
Mindanao	2025	5	2	14	101	138	138	25
Mindanao	2025	5	2	15	101	138	138	25
Mindanao	2025	5	2	16	96	138	138	25
Mindanao	2025	5	2	17	92	138	138	25
Mindanao	2025	5	2	18	95	138	138	25
Mindanao	2025	5	2	19	94	138	138	25
Mindanao	2025	5	2	20	94	138	138	25
Mindanao	2025	5	2	21	91	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	2	22	86	138	138	25
Mindanao	2025	5	2	23	80	138	138	25
Mindanao	2025	5	2	24	77	138	138	25
Mindanao	2025	5	3	1	73	138	138	25
Mindanao	2025	5	3	2	71	138	138	25
Mindanao	2025	5	3	3	69	138	138	25
Mindanao	2025	5	3	4	67	138	138	25
Mindanao	2025	5	3	5	69	138	138	25
Mindanao	2025	5	3	6	69	138	138	25
Mindanao	2025	5	3	7	66	138	138	25
Mindanao	2025	5	3	8	72	138	138	25
Mindanao	2025	5	3	9	81	138	138	25
Mindanao	2025	5	3	10	85	138	138	25
Mindanao	2025	5	3	11	90	138	138	25
Mindanao	2025	5	3	12	91	138	138	25
Mindanao	2025	5	3	13	93	138	138	25
Mindanao	2025	5	3	14	97	138	138	25
Mindanao	2025	5	3	15	94	138	138	25
Mindanao	2025	5	3	16	92	138	138	25
Mindanao	2025	5	3	17	90	138	138	25
Mindanao	2025	5	3	18	96	138	138	25
Mindanao	2025	5	3	19	96	138	138	25
Mindanao	2025	5	3	20	95	138	138	25
Mindanao	2025	5	3	21	92	138	138	25
Mindanao	2025	5	3	22	87	138	138	25
Mindanao	2025	5	3	23	82	138	138	25
Mindanao	2025	5	3	24	78	138	138	25
Mindanao	2025	5	4	1	73	138	138	25
Mindanao	2025	5	4	2	71	138	138	25
Mindanao	2025	5	4	3	69	138	138	25
Mindanao	2025	5	4	4	66	138	138	25
Mindanao	2025	5	4	5	67	138	138	25
Mindanao	2025	5	4	6	66	138	138	25
Mindanao	2025	5	4	7	64	138	138	25
Mindanao	2025	5	4	8	66	138	138	25
Mindanao	2025	5	4	9	72	138	138	25
Mindanao	2025	5	4	10	78	138	138	25
Mindanao	2025	5	4	11	82	138	138	25
Mindanao	2025	5	4	12	83	138	138	25
Mindanao	2025	5	4	13	84	138	138	25
Mindanao	2025	5	4	14	85	138	138	25
Mindanao	2025	5	4	15	84	138	138	25
Mindanao	2025	5	4	16	81	138	138	25
Mindanao	2025	5	4	17	80	138	138	25
Mindanao	2025	5	4	18	88	138	138	25
Mindanao	2025	5	4	19	92	138	138	25
Mindanao	2025	5	4	20	92	138	138	25
Mindanao	2025	5	4	21	91	138	138	25
Mindanao	2025	5	4	22	86	138	138	25
Mindanao	2025	5	4	23	81	138	138	25
Mindanao	2025	5	4	24	77	138	138	25
Mindanao	2025	5	5	1	74	138	138	25
Mindanao	2025	5	5	2	71	138	138	25
Mindanao	2025	5	5	3	68	138	138	25
Mindanao	2025	5	5	4	67	138	138	25
Mindanao	2025	5	5	5	73	138	138	25
Mindanao	2025	5	5	6	74	138	138	25
Mindanao	2025	5	5	7	68	138	138	25
Mindanao	2025	5	5	8	80	138	138	25
Mindanao	2025	5	5	9	93	138	138	25
Mindanao	2025	5	5	10	99	138	138	25
Mindanao	2025	5	5	11	103	138	138	25
Mindanao	2025	5	5	12	103	138	138	25
Mindanao	2025	5	5	13	104	138	138	25
Mindanao	2025	5	5	14	109	138	138	25
Mindanao	2025	5	5	15	108	138	138	25
Mindanao	2025	5	5	16	106	138	138	25
Mindanao	2025	5	5	17	99	138	138	25
Mindanao	2025	5	5	18	98	138	138	25
Mindanao	2025	5	5	19	103	138	138	25
Mindanao	2025	5	5	20	101	138	138	25
Mindanao	2025	5	5	21	97	138	138	25
Mindanao	2025	5	5	22	92	138	138	25
Mindanao	2025	5	5	23	86	138	138	25
Mindanao	2025	5	5	24	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	6	1	78	138	138	25
Mindanao	2025	5	6	2	75	138	138	25
Mindanao	2025	5	6	3	72	138	138	25
Mindanao	2025	5	6	4	71	138	138	25
Mindanao	2025	5	6	5	73	138	138	25
Mindanao	2025	5	6	6	76	138	138	25
Mindanao	2025	5	6	7	71	138	138	25
Mindanao	2025	5	6	8	80	138	138	25
Mindanao	2025	5	6	9	94	138	138	25
Mindanao	2025	5	6	10	100	138	138	25
Mindanao	2025	5	6	11	105	138	138	25
Mindanao	2025	5	6	12	104	138	138	25
Mindanao	2025	5	6	13	106	138	138	25
Mindanao	2025	5	6	14	111	138	138	25
Mindanao	2025	5	6	15	108	138	138	25
Mindanao	2025	5	6	16	106	138	138	25
Mindanao	2025	5	6	17	100	138	138	25
Mindanao	2025	5	6	18	101	138	138	25
Mindanao	2025	5	6	19	104	138	138	25
Mindanao	2025	5	6	20	100	138	138	25
Mindanao	2025	5	6	21	99	138	138	25
Mindanao	2025	5	6	22	92	138	138	25
Mindanao	2025	5	6	23	86	138	138	25
Mindanao	2025	5	6	24	81	138	138	25
Mindanao	2025	5	7	1	77	138	138	25
Mindanao	2025	5	7	2	75	138	138	25
Mindanao	2025	5	7	3	72	138	138	25
Mindanao	2025	5	7	4	71	138	138	25
Mindanao	2025	5	7	5	74	138	138	25
Mindanao	2025	5	7	6	74	138	138	25
Mindanao	2025	5	7	7	68	138	138	25
Mindanao	2025	5	7	8	80	138	138	25
Mindanao	2025	5	7	9	94	138	138	25
Mindanao	2025	5	7	10	101	138	138	25
Mindanao	2025	5	7	11	105	138	138	25
Mindanao	2025	5	7	12	105	138	138	25
Mindanao	2025	5	7	13	106	138	138	25
Mindanao	2025	5	7	14	108	138	138	25
Mindanao	2025	5	7	15	108	138	138	25
Mindanao	2025	5	7	16	106	138	138	25
Mindanao	2025	5	7	17	100	138	138	25
Mindanao	2025	5	7	18	102	138	138	25
Mindanao	2025	5	7	19	102	138	138	25
Mindanao	2025	5	7	20	100	138	138	25
Mindanao	2025	5	7	21	98	138	138	25
Mindanao	2025	5	7	22	93	138	138	25
Mindanao	2025	5	7	23	86	138	138	25
Mindanao	2025	5	7	24	81	138	138	25
Mindanao	2025	5	8	1	78	138	138	25
Mindanao	2025	5	8	2	74	138	138	25
Mindanao	2025	5	8	3	72	138	138	25
Mindanao	2025	5	8	4	70	138	138	25
Mindanao	2025	5	8	5	73	138	138	25
Mindanao	2025	5	8	6	74	138	138	25
Mindanao	2025	5	8	7	70	138	138	25
Mindanao	2025	5	8	8	81	138	138	25
Mindanao	2025	5	8	9	92	138	138	25
Mindanao	2025	5	8	10	101	138	138	25
Mindanao	2025	5	8	11	105	138	138	25
Mindanao	2025	5	8	12	104	138	138	25
Mindanao	2025	5	8	13	106	138	138	25
Mindanao	2025	5	8	14	107	138	138	25
Mindanao	2025	5	8	15	106	138	138	25
Mindanao	2025	5	8	16	105	138	138	25
Mindanao	2025	5	8	17	98	138	138	25
Mindanao	2025	5	8	18	100	138	138	25
Mindanao	2025	5	8	19	103	138	138	25
Mindanao	2025	5	8	20	100	138	138	25
Mindanao	2025	5	8	21	98	138	138	25
Mindanao	2025	5	8	22	92	138	138	25
Mindanao	2025	5	8	23	86	138	138	25
Mindanao	2025	5	8	24	81	138	138	25
Mindanao	2025	5	9	1	77	138	138	25
Mindanao	2025	5	9	2	74	138	138	25
Mindanao	2025	5	9	3	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	9	4	69	138	138	25
Mindanao	2025	5	9	5	73	138	138	25
Mindanao	2025	5	9	6	74	138	138	25
Mindanao	2025	5	9	7	71	138	138	25
Mindanao	2025	5	9	8	80	138	138	25
Mindanao	2025	5	9	9	91	138	138	25
Mindanao	2025	5	9	10	98	138	138	25
Mindanao	2025	5	9	11	104	138	138	25
Mindanao	2025	5	9	12	104	138	138	25
Mindanao	2025	5	9	13	106	138	138	25
Mindanao	2025	5	9	14	110	138	138	25
Mindanao	2025	5	9	15	108	138	138	25
Mindanao	2025	5	9	16	104	138	138	25
Mindanao	2025	5	9	17	98	138	138	25
Mindanao	2025	5	9	18	99	138	138	25
Mindanao	2025	5	9	19	100	138	138	25
Mindanao	2025	5	9	20	98	138	138	25
Mindanao	2025	5	9	21	96	138	138	25
Mindanao	2025	5	9	22	93	138	138	25
Mindanao	2025	5	9	23	86	138	138	25
Mindanao	2025	5	9	24	82	138	138	25
Mindanao	2025	5	10	1	78	138	138	25
Mindanao	2025	5	10	2	75	138	138	25
Mindanao	2025	5	10	3	72	138	138	25
Mindanao	2025	5	10	4	69	138	138	25
Mindanao	2025	5	10	5	69	138	138	25
Mindanao	2025	5	10	6	70	138	138	25
Mindanao	2025	5	10	7	69	138	138	25
Mindanao	2025	5	10	8	74	138	138	25
Mindanao	2025	5	10	9	82	138	138	25
Mindanao	2025	5	10	10	88	138	138	25
Mindanao	2025	5	10	11	95	138	138	25
Mindanao	2025	5	10	12	94	138	138	25
Mindanao	2025	5	10	13	97	138	138	25
Mindanao	2025	5	10	14	101	138	138	25
Mindanao	2025	5	10	15	97	138	138	25
Mindanao	2025	5	10	16	94	138	138	25
Mindanao	2025	5	10	17	93	138	138	25
Mindanao	2025	5	10	18	97	138	138	25
Mindanao	2025	5	10	19	100	138	138	25
Mindanao	2025	5	10	20	98	138	138	25
Mindanao	2025	5	10	21	98	138	138	25
Mindanao	2025	5	10	22	91	138	138	25
Mindanao	2025	5	10	23	86	138	138	25
Mindanao	2025	5	10	24	81	138	138	25
Mindanao	2025	5	11	1	77	138	138	25
Mindanao	2025	5	11	2	74	138	138	25
Mindanao	2025	5	11	3	72	138	138	25
Mindanao	2025	5	11	4	70	138	138	25
Mindanao	2025	5	11	5	71	138	138	25
Mindanao	2025	5	11	6	68	138	138	25
Mindanao	2025	5	11	7	68	138	138	25
Mindanao	2025	5	11	8	70	138	138	25
Mindanao	2025	5	11	9	75	138	138	25
Mindanao	2025	5	11	10	78	138	138	25
Mindanao	2025	5	11	11	84	138	138	25
Mindanao	2025	5	11	12	84	138	138	25
Mindanao	2025	5	11	13	87	138	138	25
Mindanao	2025	5	11	14	88	138	138	25
Mindanao	2025	5	11	15	87	138	138	25
Mindanao	2025	5	11	16	85	138	138	25
Mindanao	2025	5	11	17	83	138	138	25
Mindanao	2025	5	11	18	89	138	138	25
Mindanao	2025	5	11	19	93	138	138	25
Mindanao	2025	5	11	20	89	138	138	25
Mindanao	2025	5	11	21	88	138	138	25
Mindanao	2025	5	11	22	84	138	138	25
Mindanao	2025	5	11	23	79	138	138	25
Mindanao	2025	5	11	24	74	138	138	25
Mindanao	2025	5	12	1	71	138	138	25
Mindanao	2025	5	12	2	68	138	138	25
Mindanao	2025	5	12	3	66	138	138	25
Mindanao	2025	5	12	4	66	138	138	25
Mindanao	2025	5	12	5	69	138	138	25
Mindanao	2025	5	12	6	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	12	7	66	138	138	25
Mindanao	2025	5	12	8	77	138	138	25
Mindanao	2025	5	12	9	90	138	138	25
Mindanao	2025	5	12	10	98	138	138	25
Mindanao	2025	5	12	11	100	138	138	25
Mindanao	2025	5	12	12	102	138	138	25
Mindanao	2025	5	12	13	102	138	138	25
Mindanao	2025	5	12	14	108	138	138	25
Mindanao	2025	5	12	15	107	138	138	25
Mindanao	2025	5	12	16	103	138	138	25
Mindanao	2025	5	12	17	97	138	138	25
Mindanao	2025	5	12	18	98	138	138	25
Mindanao	2025	5	12	19	99	138	138	25
Mindanao	2025	5	12	20	94	138	138	25
Mindanao	2025	5	12	21	92	138	138	25
Mindanao	2025	5	12	22	87	138	138	25
Mindanao	2025	5	12	23	82	138	138	25
Mindanao	2025	5	12	24	77	138	138	25
Mindanao	2025	5	13	1	75	138	138	25
Mindanao	2025	5	13	2	71	138	138	25
Mindanao	2025	5	13	3	66	138	138	25
Mindanao	2025	5	13	4	65	138	138	25
Mindanao	2025	5	13	5	70	138	138	25
Mindanao	2025	5	13	6	72	138	138	25
Mindanao	2025	5	13	7	63	138	138	25
Mindanao	2025	5	13	8	76	138	138	25
Mindanao	2025	5	13	9	91	138	138	25
Mindanao	2025	5	13	10	98	138	138	25
Mindanao	2025	5	13	11	103	138	138	25
Mindanao	2025	5	13	12	103	138	138	25
Mindanao	2025	5	13	13	105	138	138	25
Mindanao	2025	5	13	14	109	138	138	25
Mindanao	2025	5	13	15	108	138	138	25
Mindanao	2025	5	13	16	103	138	138	25
Mindanao	2025	5	13	17	96	138	138	25
Mindanao	2025	5	13	18	98	138	138	25
Mindanao	2025	5	13	19	98	138	138	25
Mindanao	2025	5	13	20	96	138	138	25
Mindanao	2025	5	13	21	93	138	138	25
Mindanao	2025	5	13	22	87	138	138	25
Mindanao	2025	5	13	23	82	138	138	25
Mindanao	2025	5	13	24	77	138	138	25
Mindanao	2025	5	14	1	73	138	138	25
Mindanao	2025	5	14	2	71	138	138	25
Mindanao	2025	5	14	3	69	138	138	25
Mindanao	2025	5	14	4	68	138	138	25
Mindanao	2025	5	14	5	72	138	138	25
Mindanao	2025	5	14	6	72	138	138	25
Mindanao	2025	5	14	7	68	138	138	25
Mindanao	2025	5	14	8	79	138	138	25
Mindanao	2025	5	14	9	92	138	138	25
Mindanao	2025	5	14	10	98	138	138	25
Mindanao	2025	5	14	11	99	138	138	25
Mindanao	2025	5	14	12	100	138	138	25
Mindanao	2025	5	14	13	103	138	138	25
Mindanao	2025	5	14	14	106	138	138	25
Mindanao	2025	5	14	15	104	138	138	25
Mindanao	2025	5	14	16	101	138	138	25
Mindanao	2025	5	14	17	95	138	138	25
Mindanao	2025	5	14	18	96	138	138	25
Mindanao	2025	5	14	19	98	138	138	25
Mindanao	2025	5	14	20	96	138	138	25
Mindanao	2025	5	14	21	93	138	138	25
Mindanao	2025	5	14	22	88	138	138	25
Mindanao	2025	5	14	23	81	138	138	25
Mindanao	2025	5	14	24	78	138	138	25
Mindanao	2025	5	15	1	73	138	138	25
Mindanao	2025	5	15	2	71	138	138	25
Mindanao	2025	5	15	3	69	138	138	25
Mindanao	2025	5	15	4	68	138	138	25
Mindanao	2025	5	15	5	71	138	138	25
Mindanao	2025	5	15	6	73	138	138	25
Mindanao	2025	5	15	7	68	138	138	25
Mindanao	2025	5	15	8	77	138	138	25
Mindanao	2025	5	15	9	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	15	10	94	138	138	25
Mindanao	2025	5	15	11	100	138	138	25
Mindanao	2025	5	15	12	100	138	138	25
Mindanao	2025	5	15	13	101	138	138	25
Mindanao	2025	5	15	14	105	138	138	25
Mindanao	2025	5	15	15	99	138	138	25
Mindanao	2025	5	15	16	95	138	138	25
Mindanao	2025	5	15	17	90	138	138	25
Mindanao	2025	5	15	18	93	138	138	25
Mindanao	2025	5	15	19	95	138	138	25
Mindanao	2025	5	15	20	92	138	138	25
Mindanao	2025	5	15	21	91	138	138	25
Mindanao	2025	5	15	22	86	138	138	25
Mindanao	2025	5	15	23	81	138	138	25
Mindanao	2025	5	15	24	76	138	138	25
Mindanao	2025	5	16	1	73	138	138	25
Mindanao	2025	5	16	2	70	138	138	25
Mindanao	2025	5	16	3	68	138	138	25
Mindanao	2025	5	16	4	67	138	138	25
Mindanao	2025	5	16	5	69	138	138	25
Mindanao	2025	5	16	6	72	138	138	25
Mindanao	2025	5	16	7	70	138	138	25
Mindanao	2025	5	16	8	79	138	138	25
Mindanao	2025	5	16	9	91	138	138	25
Mindanao	2025	5	16	10	97	138	138	25
Mindanao	2025	5	16	11	100	138	138	25
Mindanao	2025	5	16	12	100	138	138	25
Mindanao	2025	5	16	13	100	138	138	25
Mindanao	2025	5	16	14	101	138	138	25
Mindanao	2025	5	16	15	97	138	138	25
Mindanao	2025	5	16	16	93	138	138	25
Mindanao	2025	5	16	17	89	138	138	25
Mindanao	2025	5	16	18	93	138	138	25
Mindanao	2025	5	16	19	94	138	138	25
Mindanao	2025	5	16	20	90	138	138	25
Mindanao	2025	5	16	21	88	138	138	25
Mindanao	2025	5	16	22	83	138	138	25
Mindanao	2025	5	16	23	78	138	138	25
Mindanao	2025	5	16	24	72	138	138	25
Mindanao	2025	5	17	1	70	138	138	25
Mindanao	2025	5	17	2	68	138	138	25
Mindanao	2025	5	17	3	66	138	138	25
Mindanao	2025	5	17	4	65	138	138	25
Mindanao	2025	5	17	5	67	138	138	25
Mindanao	2025	5	17	6	68	138	138	25
Mindanao	2025	5	17	7	67	138	138	25
Mindanao	2025	5	17	8	70	138	138	25
Mindanao	2025	5	17	9	79	138	138	25
Mindanao	2025	5	17	10	85	138	138	25
Mindanao	2025	5	17	11	90	138	138	25
Mindanao	2025	5	17	12	86	138	138	25
Mindanao	2025	5	17	13	88	138	138	25
Mindanao	2025	5	17	14	91	138	138	25
Mindanao	2025	5	17	15	88	138	138	25
Mindanao	2025	5	17	16	86	138	138	25
Mindanao	2025	5	17	17	83	138	138	25
Mindanao	2025	5	17	18	89	138	138	25
Mindanao	2025	5	17	19	90	138	138	25
Mindanao	2025	5	17	20	89	138	138	25
Mindanao	2025	5	17	21	86	138	138	25
Mindanao	2025	5	17	22	82	138	138	25
Mindanao	2025	5	17	23	77	138	138	25
Mindanao	2025	5	17	24	73	138	138	25
Mindanao	2025	5	18	1	69	138	138	25
Mindanao	2025	5	18	2	68	138	138	25
Mindanao	2025	5	18	3	64	138	138	25
Mindanao	2025	5	18	4	63	138	138	25
Mindanao	2025	5	18	5	64	138	138	25
Mindanao	2025	5	18	6	64	138	138	25
Mindanao	2025	5	18	7	65	138	138	25
Mindanao	2025	5	18	8	65	138	138	25
Mindanao	2025	5	18	9	71	138	138	25
Mindanao	2025	5	18	10	74	138	138	25
Mindanao	2025	5	18	11	78	138	138	25
Mindanao	2025	5	18	12	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	18	13	80	138	138	25
Mindanao	2025	5	18	14	80	138	138	25
Mindanao	2025	5	18	15	81	138	138	25
Mindanao	2025	5	18	16	77	138	138	25
Mindanao	2025	5	18	17	78	138	138	25
Mindanao	2025	5	18	18	85	138	138	25
Mindanao	2025	5	18	19	88	138	138	25
Mindanao	2025	5	18	20	86	138	138	25
Mindanao	2025	5	18	21	83	138	138	25
Mindanao	2025	5	18	22	83	138	138	25
Mindanao	2025	5	18	23	78	138	138	25
Mindanao	2025	5	18	24	72	138	138	25
Mindanao	2025	5	19	1	69	138	138	25
Mindanao	2025	5	19	2	67	138	138	25
Mindanao	2025	5	19	3	65	138	138	25
Mindanao	2025	5	19	4	63	138	138	25
Mindanao	2025	5	19	5	68	138	138	25
Mindanao	2025	5	19	6	69	138	138	25
Mindanao	2025	5	19	7	65	138	138	25
Mindanao	2025	5	19	8	77	138	138	25
Mindanao	2025	5	19	9	89	138	138	25
Mindanao	2025	5	19	10	97	138	138	25
Mindanao	2025	5	19	11	100	138	138	25
Mindanao	2025	5	19	12	101	138	138	25
Mindanao	2025	5	19	13	101	138	138	25
Mindanao	2025	5	19	14	106	138	138	25
Mindanao	2025	5	19	15	105	138	138	25
Mindanao	2025	5	19	16	102	138	138	25
Mindanao	2025	5	19	17	96	138	138	25
Mindanao	2025	5	19	18	98	138	138	25
Mindanao	2025	5	19	19	97	138	138	25
Mindanao	2025	5	19	20	93	138	138	25
Mindanao	2025	5	19	21	91	138	138	25
Mindanao	2025	5	19	22	84	138	138	25
Mindanao	2025	5	19	23	80	138	138	25
Mindanao	2025	5	19	24	77	138	138	25
Mindanao	2025	5	20	1	73	138	138	25
Mindanao	2025	5	20	2	71	138	138	25
Mindanao	2025	5	20	3	69	138	138	25
Mindanao	2025	5	20	4	68	138	138	25
Mindanao	2025	5	20	5	71	138	138	25
Mindanao	2025	5	20	6	72	138	138	25
Mindanao	2025	5	20	7	68	138	138	25
Mindanao	2025	5	20	8	79	138	138	25
Mindanao	2025	5	20	9	91	138	138	25
Mindanao	2025	5	20	10	96	138	138	25
Mindanao	2025	5	20	11	101	138	138	25
Mindanao	2025	5	20	12	99	138	138	25
Mindanao	2025	5	20	13	101	138	138	25
Mindanao	2025	5	20	14	106	138	138	25
Mindanao	2025	5	20	15	105	138	138	25
Mindanao	2025	5	20	16	102	138	138	25
Mindanao	2025	5	20	17	97	138	138	25
Mindanao	2025	5	20	18	96	138	138	25
Mindanao	2025	5	20	19	99	138	138	25
Mindanao	2025	5	20	20	96	138	138	25
Mindanao	2025	5	20	21	91	138	138	25
Mindanao	2025	5	20	22	87	138	138	25
Mindanao	2025	5	20	23	82	138	138	25
Mindanao	2025	5	20	24	78	138	138	25
Mindanao	2025	5	21	1	74	138	138	25
Mindanao	2025	5	21	2	72	138	138	25
Mindanao	2025	5	21	3	70	138	138	25
Mindanao	2025	5	21	4	69	138	138	25
Mindanao	2025	5	21	5	71	138	138	25
Mindanao	2025	5	21	6	74	138	138	25
Mindanao	2025	5	21	7	68	138	138	25
Mindanao	2025	5	21	8	76	138	138	25
Mindanao	2025	5	21	9	88	138	138	25
Mindanao	2025	5	21	10	95	138	138	25
Mindanao	2025	5	21	11	98	138	138	25
Mindanao	2025	5	21	12	98	138	138	25
Mindanao	2025	5	21	13	100	138	138	25
Mindanao	2025	5	21	14	103	138	138	25
Mindanao	2025	5	21	15	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	21	16	98	138	138	25
Mindanao	2025	5	21	17	94	138	138	25
Mindanao	2025	5	21	18	93	138	138	25
Mindanao	2025	5	21	19	93	138	138	25
Mindanao	2025	5	21	20	93	138	138	25
Mindanao	2025	5	21	21	91	138	138	25
Mindanao	2025	5	21	22	85	138	138	25
Mindanao	2025	5	21	23	79	138	138	25
Mindanao	2025	5	21	24	75	138	138	25
Mindanao	2025	5	22	1	73	138	138	25
Mindanao	2025	5	22	2	70	138	138	25
Mindanao	2025	5	22	3	68	138	138	25
Mindanao	2025	5	22	4	67	138	138	25
Mindanao	2025	5	22	5	71	138	138	25
Mindanao	2025	5	22	6	71	138	138	25
Mindanao	2025	5	22	7	67	138	138	25
Mindanao	2025	5	22	8	78	138	138	25
Mindanao	2025	5	22	9	88	138	138	25
Mindanao	2025	5	22	10	96	138	138	25
Mindanao	2025	5	22	11	98	138	138	25
Mindanao	2025	5	22	12	98	138	138	25
Mindanao	2025	5	22	13	98	138	138	25
Mindanao	2025	5	22	14	97	138	138	25
Mindanao	2025	5	22	15	95	138	138	25
Mindanao	2025	5	22	16	95	138	138	25
Mindanao	2025	5	22	17	91	138	138	25
Mindanao	2025	5	22	18	93	138	138	25
Mindanao	2025	5	22	19	93	138	138	25
Mindanao	2025	5	22	20	91	138	138	25
Mindanao	2025	5	22	21	89	138	138	25
Mindanao	2025	5	22	22	81	138	138	25
Mindanao	2025	5	22	23	78	138	138	25
Mindanao	2025	5	22	24	73	138	138	25
Mindanao	2025	5	23	1	71	138	138	25
Mindanao	2025	5	23	2	69	138	138	25
Mindanao	2025	5	23	3	67	138	138	25
Mindanao	2025	5	23	4	66	138	138	25
Mindanao	2025	5	23	5	69	138	138	25
Mindanao	2025	5	23	6	71	138	138	25
Mindanao	2025	5	23	7	68	138	138	25
Mindanao	2025	5	23	8	78	138	138	25
Mindanao	2025	5	23	9	90	138	138	25
Mindanao	2025	5	23	10	97	138	138	25
Mindanao	2025	5	23	11	99	138	138	25
Mindanao	2025	5	23	12	99	138	138	25
Mindanao	2025	5	23	13	100	138	138	25
Mindanao	2025	5	23	14	103	138	138	25
Mindanao	2025	5	23	15	102	138	138	25
Mindanao	2025	5	23	16	100	138	138	25
Mindanao	2025	5	23	17	94	138	138	25
Mindanao	2025	5	23	18	96	138	138	25
Mindanao	2025	5	23	19	97	138	138	25
Mindanao	2025	5	23	20	94	138	138	25
Mindanao	2025	5	23	21	91	138	138	25
Mindanao	2025	5	23	22	86	138	138	25
Mindanao	2025	5	23	23	82	138	138	25
Mindanao	2025	5	23	24	77	138	138	25
Mindanao	2025	5	24	1	74	138	138	25
Mindanao	2025	5	24	2	71	138	138	25
Mindanao	2025	5	24	3	67	138	138	25
Mindanao	2025	5	24	4	67	138	138	25
Mindanao	2025	5	24	5	69	138	138	25
Mindanao	2025	5	24	6	69	138	138	25
Mindanao	2025	5	24	7	68	138	138	25
Mindanao	2025	5	24	8	73	138	138	25
Mindanao	2025	5	24	9	80	138	138	25
Mindanao	2025	5	24	10	84	138	138	25
Mindanao	2025	5	24	11	88	138	138	25
Mindanao	2025	5	24	12	83	138	138	25
Mindanao	2025	5	24	13	83	138	138	25
Mindanao	2025	5	24	14	87	138	138	25
Mindanao	2025	5	24	15	85	138	138	25
Mindanao	2025	5	24	16	85	138	138	25
Mindanao	2025	5	24	17	84	138	138	25
Mindanao	2025	5	24	18	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	24	19	90	138	138	25
Mindanao	2025	5	24	20	88	138	138	25
Mindanao	2025	5	24	21	86	138	138	25
Mindanao	2025	5	24	22	81	138	138	25
Mindanao	2025	5	24	23	77	138	138	25
Mindanao	2025	5	24	24	72	138	138	25
Mindanao	2025	5	25	1	69	138	138	25
Mindanao	2025	5	25	2	67	138	138	25
Mindanao	2025	5	25	3	63	138	138	25
Mindanao	2025	5	25	4	62	138	138	25
Mindanao	2025	5	25	5	59	138	138	25
Mindanao	2025	5	25	6	61	138	138	25
Mindanao	2025	5	25	7	60	138	138	25
Mindanao	2025	5	25	8	61	138	138	25
Mindanao	2025	5	25	9	66	138	138	25
Mindanao	2025	5	25	10	71	138	138	25
Mindanao	2025	5	25	11	73	138	138	25
Mindanao	2025	5	25	12	72	138	138	25
Mindanao	2025	5	25	13	70	138	138	25
Mindanao	2025	5	25	14	71	138	138	25
Mindanao	2025	5	25	15	72	138	138	25
Mindanao	2025	5	25	16	72	138	138	25
Mindanao	2025	5	25	17	73	138	138	25
Mindanao	2025	5	25	18	80	138	138	25
Mindanao	2025	5	25	19	87	138	138	25
Mindanao	2025	5	25	20	87	138	138	25
Mindanao	2025	5	25	21	85	138	138	25
Mindanao	2025	5	25	22	80	138	138	25
Mindanao	2025	5	25	23	75	138	138	25
Mindanao	2025	5	25	24	72	138	138	25
Mindanao	2025	5	26	1	68	138	138	25
Mindanao	2025	5	26	2	67	138	138	25
Mindanao	2025	5	26	3	64	138	138	25
Mindanao	2025	5	26	4	64	138	138	25
Mindanao	2025	5	26	5	67	138	138	25
Mindanao	2025	5	26	6	69	138	138	25
Mindanao	2025	5	26	7	64	138	138	25
Mindanao	2025	5	26	8	75	138	138	25
Mindanao	2025	5	26	9	87	138	138	25
Mindanao	2025	5	26	10	96	138	138	25
Mindanao	2025	5	26	11	99	138	138	25
Mindanao	2025	5	26	12	98	138	138	25
Mindanao	2025	5	26	13	99	138	138	25
Mindanao	2025	5	26	14	103	138	138	25
Mindanao	2025	5	26	15	103	138	138	25
Mindanao	2025	5	26	16	100	138	138	25
Mindanao	2025	5	26	17	94	138	138	25
Mindanao	2025	5	26	18	95	138	138	25
Mindanao	2025	5	26	19	97	138	138	25
Mindanao	2025	5	26	20	94	138	138	25
Mindanao	2025	5	26	21	90	138	138	25
Mindanao	2025	5	26	22	85	138	138	25
Mindanao	2025	5	26	23	81	138	138	25
Mindanao	2025	5	26	24	76	138	138	25
Mindanao	2025	5	27	1	74	138	138	25
Mindanao	2025	5	27	2	71	138	138	25
Mindanao	2025	5	27	3	67	138	138	25
Mindanao	2025	5	27	4	68	138	138	25
Mindanao	2025	5	27	5	72	138	138	25
Mindanao	2025	5	27	6	73	138	138	25
Mindanao	2025	5	27	7	69	138	138	25
Mindanao	2025	5	27	8	80	138	138	25
Mindanao	2025	5	27	9	91	138	138	25
Mindanao	2025	5	27	10	98	138	138	25
Mindanao	2025	5	27	11	102	138	138	25
Mindanao	2025	5	27	12	101	138	138	25
Mindanao	2025	5	27	13	103	138	138	25
Mindanao	2025	5	27	14	107	138	138	25
Mindanao	2025	5	27	15	106	138	138	25
Mindanao	2025	5	27	16	103	138	138	25
Mindanao	2025	5	27	17	97	138	138	25
Mindanao	2025	5	27	18	99	138	138	25
Mindanao	2025	5	27	19	100	138	138	25
Mindanao	2025	5	27	20	97	138	138	25
Mindanao	2025	5	27	21	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	27	22	90	138	138	25
Mindanao	2025	5	27	23	82	138	138	25
Mindanao	2025	5	27	24	79	138	138	25
Mindanao	2025	5	28	1	75	138	138	25
Mindanao	2025	5	28	2	73	138	138	25
Mindanao	2025	5	28	3	71	138	138	25
Mindanao	2025	5	28	4	70	138	138	25
Mindanao	2025	5	28	5	72	138	138	25
Mindanao	2025	5	28	6	73	138	138	25
Mindanao	2025	5	28	7	70	138	138	25
Mindanao	2025	5	28	8	79	138	138	25
Mindanao	2025	5	28	9	91	138	138	25
Mindanao	2025	5	28	10	99	138	138	25
Mindanao	2025	5	28	11	102	138	138	25
Mindanao	2025	5	28	12	101	138	138	25
Mindanao	2025	5	28	13	101	138	138	25
Mindanao	2025	5	28	14	106	138	138	25
Mindanao	2025	5	28	15	103	138	138	25
Mindanao	2025	5	28	16	102	138	138	25
Mindanao	2025	5	28	17	96	138	138	25
Mindanao	2025	5	28	18	98	138	138	25
Mindanao	2025	5	28	19	99	138	138	25
Mindanao	2025	5	28	20	96	138	138	25
Mindanao	2025	5	28	21	93	138	138	25
Mindanao	2025	5	28	22	88	138	138	25
Mindanao	2025	5	28	23	83	138	138	25
Mindanao	2025	5	28	24	79	138	138	25
Mindanao	2025	5	29	1	75	138	138	25
Mindanao	2025	5	29	2	74	138	138	25
Mindanao	2025	5	29	3	69	138	138	25
Mindanao	2025	5	29	4	69	138	138	25
Mindanao	2025	5	29	5	73	138	138	25
Mindanao	2025	5	29	6	74	138	138	25
Mindanao	2025	5	29	7	70	138	138	25
Mindanao	2025	5	29	8	78	138	138	25
Mindanao	2025	5	29	9	89	138	138	25
Mindanao	2025	5	29	10	97	138	138	25
Mindanao	2025	5	29	11	101	138	138	25
Mindanao	2025	5	29	12	100	138	138	25
Mindanao	2025	5	29	13	102	138	138	25
Mindanao	2025	5	29	14	106	138	138	25
Mindanao	2025	5	29	15	104	138	138	25
Mindanao	2025	5	29	16	102	138	138	25
Mindanao	2025	5	29	17	95	138	138	25
Mindanao	2025	5	29	18	95	138	138	25
Mindanao	2025	5	29	19	98	138	138	25
Mindanao	2025	5	29	20	97	138	138	25
Mindanao	2025	5	29	21	96	138	138	25
Mindanao	2025	5	29	22	89	138	138	25
Mindanao	2025	5	29	23	84	138	138	25
Mindanao	2025	5	29	24	79	138	138	25
Mindanao	2025	5	30	1	76	138	138	25
Mindanao	2025	5	30	2	72	138	138	25
Mindanao	2025	5	30	3	70	138	138	25
Mindanao	2025	5	30	4	69	138	138	25
Mindanao	2025	5	30	5	71	138	138	25
Mindanao	2025	5	30	6	71	138	138	25
Mindanao	2025	5	30	7	66	138	138	25
Mindanao	2025	5	30	8	77	138	138	25
Mindanao	2025	5	30	9	90	138	138	25
Mindanao	2025	5	30	10	97	138	138	25
Mindanao	2025	5	30	11	100	138	138	25
Mindanao	2025	5	30	12	100	138	138	25
Mindanao	2025	5	30	13	101	138	138	25
Mindanao	2025	5	30	14	101	138	138	25
Mindanao	2025	5	30	15	103	138	138	25
Mindanao	2025	5	30	16	100	138	138	25
Mindanao	2025	5	30	17	94	138	138	25
Mindanao	2025	5	30	18	97	138	138	25
Mindanao	2025	5	30	19	97	138	138	25
Mindanao	2025	5	30	20	96	138	138	25
Mindanao	2025	5	30	21	94	138	138	25
Mindanao	2025	5	30	22	88	138	138	25
Mindanao	2025	5	30	23	83	138	138	25
Mindanao	2025	5	30	24	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	5	31	1	74	138	138	25
Mindanao	2025	5	31	2	71	138	138	25
Mindanao	2025	5	31	3	69	138	138	25
Mindanao	2025	5	31	4	67	138	138	25
Mindanao	2025	5	31	5	68	138	138	25
Mindanao	2025	5	31	6	67	138	138	25
Mindanao	2025	5	31	7	63	138	138	25
Mindanao	2025	5	31	8	70	138	138	25
Mindanao	2025	5	31	9	77	138	138	25
Mindanao	2025	5	31	10	84	138	138	25
Mindanao	2025	5	31	11	88	138	138	25
Mindanao	2025	5	31	12	88	138	138	25
Mindanao	2025	5	31	13	90	138	138	25
Mindanao	2025	5	31	14	94	138	138	25
Mindanao	2025	5	31	15	89	138	138	25
Mindanao	2025	5	31	16	86	138	138	25
Mindanao	2025	5	31	17	83	138	138	25
Mindanao	2025	5	31	18	91	138	138	25
Mindanao	2025	5	31	19	93	138	138	25
Mindanao	2025	5	31	20	91	138	138	25
Mindanao	2025	5	31	21	89	138	138	25
Mindanao	2025	5	31	22	85	138	138	25
Mindanao	2025	5	31	23	80	138	138	25
Mindanao	2025	5	31	24	77	138	138	25
Mindanao	2025	6	1	1	70	138	138	25
Mindanao	2025	6	1	2	70	138	138	25
Mindanao	2025	6	1	3	67	138	138	25
Mindanao	2025	6	1	4	61	138	138	25
Mindanao	2025	6	1	5	62	138	138	25
Mindanao	2025	6	1	6	61	138	138	25
Mindanao	2025	6	1	7	59	138	138	25
Mindanao	2025	6	1	8	63	138	138	25
Mindanao	2025	6	1	9	68	138	138	25
Mindanao	2025	6	1	10	73	138	138	25
Mindanao	2025	6	1	11	77	138	138	25
Mindanao	2025	6	1	12	78	138	138	25
Mindanao	2025	6	1	13	79	138	138	25
Mindanao	2025	6	1	14	80	138	138	25
Mindanao	2025	6	1	15	79	138	138	25
Mindanao	2025	6	1	16	77	138	138	25
Mindanao	2025	6	1	17	78	138	138	25
Mindanao	2025	6	1	18	85	138	138	25
Mindanao	2025	6	1	19	87	138	138	25
Mindanao	2025	6	1	20	87	138	138	25
Mindanao	2025	6	1	21	83	138	138	25
Mindanao	2025	6	1	22	78	138	138	25
Mindanao	2025	6	1	23	71	138	138	25
Mindanao	2025	6	1	24	69	138	138	25
Mindanao	2025	6	2	1	66	138	138	25
Mindanao	2025	6	2	2	64	138	138	25
Mindanao	2025	6	2	3	62	138	138	25
Mindanao	2025	6	2	4	62	138	138	25
Mindanao	2025	6	2	5	65	138	138	25
Mindanao	2025	6	2	6	67	138	138	25
Mindanao	2025	6	2	7	63	138	138	25
Mindanao	2025	6	2	8	71	138	138	25
Mindanao	2025	6	2	9	82	138	138	25
Mindanao	2025	6	2	10	89	138	138	25
Mindanao	2025	6	2	11	95	138	138	25
Mindanao	2025	6	2	12	95	138	138	25
Mindanao	2025	6	2	13	97	138	138	25
Mindanao	2025	6	2	14	100	138	138	25
Mindanao	2025	6	2	15	102	138	138	25
Mindanao	2025	6	2	16	98	138	138	25
Mindanao	2025	6	2	17	93	138	138	25
Mindanao	2025	6	2	18	95	138	138	25
Mindanao	2025	6	2	19	95	138	138	25
Mindanao	2025	6	2	20	93	138	138	25
Mindanao	2025	6	2	21	91	138	138	25
Mindanao	2025	6	2	22	87	138	138	25
Mindanao	2025	6	2	23	82	138	138	25
Mindanao	2025	6	2	24	74	138	138	25
Mindanao	2025	6	3	1	72	138	138	25
Mindanao	2025	6	3	2	70	138	138	25
Mindanao	2025	6	3	3	67	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	3	4	66	138	138	25
Mindanao	2025	6	3	5	70	138	138	25
Mindanao	2025	6	3	6	71	138	138	25
Mindanao	2025	6	3	7	66	138	138	25
Mindanao	2025	6	3	8	72	138	138	25
Mindanao	2025	6	3	9	85	138	138	25
Mindanao	2025	6	3	10	94	138	138	25
Mindanao	2025	6	3	11	98	138	138	25
Mindanao	2025	6	3	12	97	138	138	25
Mindanao	2025	6	3	13	99	138	138	25
Mindanao	2025	6	3	14	102	138	138	25
Mindanao	2025	6	3	15	99	138	138	25
Mindanao	2025	6	3	16	96	138	138	25
Mindanao	2025	6	3	17	89	138	138	25
Mindanao	2025	6	3	18	93	138	138	25
Mindanao	2025	6	3	19	93	138	138	25
Mindanao	2025	6	3	20	90	138	138	25
Mindanao	2025	6	3	21	85	138	138	25
Mindanao	2025	6	3	22	81	138	138	25
Mindanao	2025	6	3	23	77	138	138	25
Mindanao	2025	6	3	24	73	138	138	25
Mindanao	2025	6	4	1	70	138	138	25
Mindanao	2025	6	4	2	68	138	138	25
Mindanao	2025	6	4	3	66	138	138	25
Mindanao	2025	6	4	4	66	138	138	25
Mindanao	2025	6	4	5	68	138	138	25
Mindanao	2025	6	4	6	71	138	138	25
Mindanao	2025	6	4	7	65	138	138	25
Mindanao	2025	6	4	8	74	138	138	25
Mindanao	2025	6	4	9	85	138	138	25
Mindanao	2025	6	4	10	92	138	138	25
Mindanao	2025	6	4	11	97	138	138	25
Mindanao	2025	6	4	12	96	138	138	25
Mindanao	2025	6	4	13	97	138	138	25
Mindanao	2025	6	4	14	102	138	138	25
Mindanao	2025	6	4	15	99	138	138	25
Mindanao	2025	6	4	16	96	138	138	25
Mindanao	2025	6	4	17	91	138	138	25
Mindanao	2025	6	4	18	92	138	138	25
Mindanao	2025	6	4	19	93	138	138	25
Mindanao	2025	6	4	20	90	138	138	25
Mindanao	2025	6	4	21	89	138	138	25
Mindanao	2025	6	4	22	83	138	138	25
Mindanao	2025	6	4	23	79	138	138	25
Mindanao	2025	6	4	24	75	138	138	25
Mindanao	2025	6	5	1	71	138	138	25
Mindanao	2025	6	5	2	69	138	138	25
Mindanao	2025	6	5	3	67	138	138	25
Mindanao	2025	6	5	4	66	138	138	25
Mindanao	2025	6	5	5	70	138	138	25
Mindanao	2025	6	5	6	72	138	138	25
Mindanao	2025	6	5	7	65	138	138	25
Mindanao	2025	6	5	8	75	138	138	25
Mindanao	2025	6	5	9	86	138	138	25
Mindanao	2025	6	5	10	93	138	138	25
Mindanao	2025	6	5	11	98	138	138	25
Mindanao	2025	6	5	12	97	138	138	25
Mindanao	2025	6	5	13	99	138	138	25
Mindanao	2025	6	5	14	101	138	138	25
Mindanao	2025	6	5	15	100	138	138	25
Mindanao	2025	6	5	16	97	138	138	25
Mindanao	2025	6	5	17	93	138	138	25
Mindanao	2025	6	5	18	95	138	138	25
Mindanao	2025	6	5	19	95	138	138	25
Mindanao	2025	6	5	20	93	138	138	25
Mindanao	2025	6	5	21	91	138	138	25
Mindanao	2025	6	5	22	86	138	138	25
Mindanao	2025	6	5	23	81	138	138	25
Mindanao	2025	6	5	24	77	138	138	25
Mindanao	2025	6	6	1	72	138	138	25
Mindanao	2025	6	6	2	68	138	138	25
Mindanao	2025	6	6	3	68	138	138	25
Mindanao	2025	6	6	4	68	138	138	25
Mindanao	2025	6	6	5	71	138	138	25
Mindanao	2025	6	6	6	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	6	7	66	138	138	25
Mindanao	2025	6	6	8	76	138	138	25
Mindanao	2025	6	6	9	88	138	138	25
Mindanao	2025	6	6	10	94	138	138	25
Mindanao	2025	6	6	11	99	138	138	25
Mindanao	2025	6	6	12	99	138	138	25
Mindanao	2025	6	6	13	100	138	138	25
Mindanao	2025	6	6	14	103	138	138	25
Mindanao	2025	6	6	15	100	138	138	25
Mindanao	2025	6	6	16	97	138	138	25
Mindanao	2025	6	6	17	92	138	138	25
Mindanao	2025	6	6	18	92	138	138	25
Mindanao	2025	6	6	19	95	138	138	25
Mindanao	2025	6	6	20	92	138	138	25
Mindanao	2025	6	6	21	90	138	138	25
Mindanao	2025	6	6	22	83	138	138	25
Mindanao	2025	6	6	23	80	138	138	25
Mindanao	2025	6	6	24	75	138	138	25
Mindanao	2025	6	7	1	71	138	138	25
Mindanao	2025	6	7	2	69	138	138	25
Mindanao	2025	6	7	3	67	138	138	25
Mindanao	2025	6	7	4	66	138	138	25
Mindanao	2025	6	7	5	66	138	138	25
Mindanao	2025	6	7	6	67	138	138	25
Mindanao	2025	6	7	7	64	138	138	25
Mindanao	2025	6	7	8	70	138	138	25
Mindanao	2025	6	7	9	77	138	138	25
Mindanao	2025	6	7	10	83	138	138	25
Mindanao	2025	6	7	11	87	138	138	25
Mindanao	2025	6	7	12	86	138	138	25
Mindanao	2025	6	7	13	88	138	138	25
Mindanao	2025	6	7	14	91	138	138	25
Mindanao	2025	6	7	15	89	138	138	25
Mindanao	2025	6	7	16	86	138	138	25
Mindanao	2025	6	7	17	83	138	138	25
Mindanao	2025	6	7	18	89	138	138	25
Mindanao	2025	6	7	19	91	138	138	25
Mindanao	2025	6	7	20	88	138	138	25
Mindanao	2025	6	7	21	87	138	138	25
Mindanao	2025	6	7	22	82	138	138	25
Mindanao	2025	6	7	23	78	138	138	25
Mindanao	2025	6	7	24	74	138	138	25
Mindanao	2025	6	8	1	69	138	138	25
Mindanao	2025	6	8	2	68	138	138	25
Mindanao	2025	6	8	3	66	138	138	25
Mindanao	2025	6	8	4	63	138	138	25
Mindanao	2025	6	8	5	64	138	138	25
Mindanao	2025	6	8	6	62	138	138	25
Mindanao	2025	6	8	7	62	138	138	25
Mindanao	2025	6	8	8	63	138	138	25
Mindanao	2025	6	8	9	67	138	138	25
Mindanao	2025	6	8	10	72	138	138	25
Mindanao	2025	6	8	11	75	138	138	25
Mindanao	2025	6	8	12	77	138	138	25
Mindanao	2025	6	8	13	78	138	138	25
Mindanao	2025	6	8	14	79	138	138	25
Mindanao	2025	6	8	15	79	138	138	25
Mindanao	2025	6	8	16	76	138	138	25
Mindanao	2025	6	8	17	76	138	138	25
Mindanao	2025	6	8	18	83	138	138	25
Mindanao	2025	6	8	19	85	138	138	25
Mindanao	2025	6	8	20	85	138	138	25
Mindanao	2025	6	8	21	83	138	138	25
Mindanao	2025	6	8	22	79	138	138	25
Mindanao	2025	6	8	23	75	138	138	25
Mindanao	2025	6	8	24	71	138	138	25
Mindanao	2025	6	9	1	66	138	138	25
Mindanao	2025	6	9	2	64	138	138	25
Mindanao	2025	6	9	3	62	138	138	25
Mindanao	2025	6	9	4	62	138	138	25
Mindanao	2025	6	9	5	65	138	138	25
Mindanao	2025	6	9	6	67	138	138	25
Mindanao	2025	6	9	7	63	138	138	25
Mindanao	2025	6	9	8	71	138	138	25
Mindanao	2025	6	9	9	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	9	10	89	138	138	25
Mindanao	2025	6	9	11	95	138	138	25
Mindanao	2025	6	9	12	95	138	138	25
Mindanao	2025	6	9	13	97	138	138	25
Mindanao	2025	6	9	14	100	138	138	25
Mindanao	2025	6	9	15	102	138	138	25
Mindanao	2025	6	9	16	98	138	138	25
Mindanao	2025	6	9	17	93	138	138	25
Mindanao	2025	6	9	18	95	138	138	25
Mindanao	2025	6	9	19	95	138	138	25
Mindanao	2025	6	9	20	93	138	138	25
Mindanao	2025	6	9	21	91	138	138	25
Mindanao	2025	6	9	22	87	138	138	25
Mindanao	2025	6	9	23	82	138	138	25
Mindanao	2025	6	9	24	74	138	138	25
Mindanao	2025	6	10	1	71	138	138	25
Mindanao	2025	6	10	2	69	138	138	25
Mindanao	2025	6	10	3	66	138	138	25
Mindanao	2025	6	10	4	65	138	138	25
Mindanao	2025	6	10	5	69	138	138	25
Mindanao	2025	6	10	6	70	138	138	25
Mindanao	2025	6	10	7	66	138	138	25
Mindanao	2025	6	10	8	76	138	138	25
Mindanao	2025	6	10	9	89	138	138	25
Mindanao	2025	6	10	10	97	138	138	25
Mindanao	2025	6	10	11	100	138	138	25
Mindanao	2025	6	10	12	82	138	138	25
Mindanao	2025	6	10	13	93	138	138	25
Mindanao	2025	6	10	14	103	138	138	25
Mindanao	2025	6	10	15	103	138	138	25
Mindanao	2025	6	10	16	100	138	138	25
Mindanao	2025	6	10	17	93	138	138	25
Mindanao	2025	6	10	18	91	138	138	25
Mindanao	2025	6	10	19	93	138	138	25
Mindanao	2025	6	10	20	91	138	138	25
Mindanao	2025	6	10	21	91	138	138	25
Mindanao	2025	6	10	22	85	138	138	25
Mindanao	2025	6	10	23	80	138	138	25
Mindanao	2025	6	10	24	77	138	138	25
Mindanao	2025	6	11	1	74	138	138	25
Mindanao	2025	6	11	2	71	138	138	25
Mindanao	2025	6	11	3	68	138	138	25
Mindanao	2025	6	11	4	67	138	138	25
Mindanao	2025	6	11	5	70	138	138	25
Mindanao	2025	6	11	6	72	138	138	25
Mindanao	2025	6	11	7	67	138	138	25
Mindanao	2025	6	11	8	74	138	138	25
Mindanao	2025	6	11	9	85	138	138	25
Mindanao	2025	6	11	10	91	138	138	25
Mindanao	2025	6	11	11	95	138	138	25
Mindanao	2025	6	11	12	94	138	138	25
Mindanao	2025	6	11	13	95	138	138	25
Mindanao	2025	6	11	14	99	138	138	25
Mindanao	2025	6	11	15	96	138	138	25
Mindanao	2025	6	11	16	95	138	138	25
Mindanao	2025	6	11	17	91	138	138	25
Mindanao	2025	6	11	18	92	138	138	25
Mindanao	2025	6	11	19	94	138	138	25
Mindanao	2025	6	11	20	90	138	138	25
Mindanao	2025	6	11	21	88	138	138	25
Mindanao	2025	6	11	22	82	138	138	25
Mindanao	2025	6	11	23	76	138	138	25
Mindanao	2025	6	11	24	72	138	138	25
Mindanao	2025	6	12	1	68	138	138	25
Mindanao	2025	6	12	2	64	138	138	25
Mindanao	2025	6	12	3	63	138	138	25
Mindanao	2025	6	12	4	61	138	138	25
Mindanao	2025	6	12	5	62	138	138	25
Mindanao	2025	6	12	6	63	138	138	25
Mindanao	2025	6	12	7	61	138	138	25
Mindanao	2025	6	12	8	65	138	138	25
Mindanao	2025	6	12	9	73	138	138	25
Mindanao	2025	6	12	10	78	138	138	25
Mindanao	2025	6	12	11	83	138	138	25
Mindanao	2025	6	12	12	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	12	13	85	138	138	25
Mindanao	2025	6	12	14	88	138	138	25
Mindanao	2025	6	12	15	89	138	138	25
Mindanao	2025	6	12	16	84	138	138	25
Mindanao	2025	6	12	17	82	138	138	25
Mindanao	2025	6	12	18	88	138	138	25
Mindanao	2025	6	12	19	93	138	138	25
Mindanao	2025	6	12	20	91	138	138	25
Mindanao	2025	6	12	21	90	138	138	25
Mindanao	2025	6	12	22	85	138	138	25
Mindanao	2025	6	12	23	79	138	138	25
Mindanao	2025	6	12	24	75	138	138	25
Mindanao	2025	6	13	1	70	138	138	25
Mindanao	2025	6	13	2	67	138	138	25
Mindanao	2025	6	13	3	65	138	138	25
Mindanao	2025	6	13	4	64	138	138	25
Mindanao	2025	6	13	5	67	138	138	25
Mindanao	2025	6	13	6	70	138	138	25
Mindanao	2025	6	13	7	67	138	138	25
Mindanao	2025	6	13	8	71	138	138	25
Mindanao	2025	6	13	9	81	138	138	25
Mindanao	2025	6	13	10	88	138	138	25
Mindanao	2025	6	13	11	93	138	138	25
Mindanao	2025	6	13	12	92	138	138	25
Mindanao	2025	6	13	13	93	138	138	25
Mindanao	2025	6	13	14	96	138	138	25
Mindanao	2025	6	13	15	97	138	138	25
Mindanao	2025	6	13	16	94	138	138	25
Mindanao	2025	6	13	17	88	138	138	25
Mindanao	2025	6	13	18	90	138	138	25
Mindanao	2025	6	13	19	90	138	138	25
Mindanao	2025	6	13	20	87	138	138	25
Mindanao	2025	6	13	21	85	138	138	25
Mindanao	2025	6	13	22	79	138	138	25
Mindanao	2025	6	13	23	74	138	138	25
Mindanao	2025	6	13	24	71	138	138	25
Mindanao	2025	6	14	1	68	138	138	25
Mindanao	2025	6	14	2	66	138	138	25
Mindanao	2025	6	14	3	64	138	138	25
Mindanao	2025	6	14	4	63	138	138	25
Mindanao	2025	6	14	5	65	138	138	25
Mindanao	2025	6	14	6	65	138	138	25
Mindanao	2025	6	14	7	64	138	138	25
Mindanao	2025	6	14	8	68	138	138	25
Mindanao	2025	6	14	9	75	138	138	25
Mindanao	2025	6	14	10	81	138	138	25
Mindanao	2025	6	14	11	84	138	138	25
Mindanao	2025	6	14	12	84	138	138	25
Mindanao	2025	6	14	13	86	138	138	25
Mindanao	2025	6	14	14	89	138	138	25
Mindanao	2025	6	14	15	87	138	138	25
Mindanao	2025	6	14	16	86	138	138	25
Mindanao	2025	6	14	17	84	138	138	25
Mindanao	2025	6	14	18	87	138	138	25
Mindanao	2025	6	14	19	89	138	138	25
Mindanao	2025	6	14	20	87	138	138	25
Mindanao	2025	6	14	21	84	138	138	25
Mindanao	2025	6	14	22	79	138	138	25
Mindanao	2025	6	14	23	75	138	138	25
Mindanao	2025	6	14	24	71	138	138	25
Mindanao	2025	6	15	1	68	138	138	25
Mindanao	2025	6	15	2	65	138	138	25
Mindanao	2025	6	15	3	63	138	138	25
Mindanao	2025	6	15	4	62	138	138	25
Mindanao	2025	6	15	5	62	138	138	25
Mindanao	2025	6	15	6	62	138	138	25
Mindanao	2025	6	15	7	61	138	138	25
Mindanao	2025	6	15	8	61	138	138	25
Mindanao	2025	6	15	9	66	138	138	25
Mindanao	2025	6	15	10	70	138	138	25
Mindanao	2025	6	15	11	72	138	138	25
Mindanao	2025	6	15	12	75	138	138	25
Mindanao	2025	6	15	13	75	138	138	25
Mindanao	2025	6	15	14	77	138	138	25
Mindanao	2025	6	15	15	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	15	16	77	138	138	25
Mindanao	2025	6	15	17	76	138	138	25
Mindanao	2025	6	15	18	82	138	138	25
Mindanao	2025	6	15	19	84	138	138	25
Mindanao	2025	6	15	20	82	138	138	25
Mindanao	2025	6	15	21	79	138	138	25
Mindanao	2025	6	15	22	75	138	138	25
Mindanao	2025	6	15	23	71	138	138	25
Mindanao	2025	6	15	24	68	138	138	25
Mindanao	2025	6	16	1	63	138	138	25
Mindanao	2025	6	16	2	62	138	138	25
Mindanao	2025	6	16	3	62	138	138	25
Mindanao	2025	6	16	4	61	138	138	25
Mindanao	2025	6	16	5	65	138	138	25
Mindanao	2025	6	16	6	68	138	138	25
Mindanao	2025	6	16	7	65	138	138	25
Mindanao	2025	6	16	8	72	138	138	25
Mindanao	2025	6	16	9	84	138	138	25
Mindanao	2025	6	16	10	91	138	138	25
Mindanao	2025	6	16	11	97	138	138	25
Mindanao	2025	6	16	12	97	138	138	25
Mindanao	2025	6	16	13	97	138	138	25
Mindanao	2025	6	16	14	101	138	138	25
Mindanao	2025	6	16	15	100	138	138	25
Mindanao	2025	6	16	16	98	138	138	25
Mindanao	2025	6	16	17	93	138	138	25
Mindanao	2025	6	16	18	93	138	138	25
Mindanao	2025	6	16	19	92	138	138	25
Mindanao	2025	6	16	20	90	138	138	25
Mindanao	2025	6	16	21	85	138	138	25
Mindanao	2025	6	16	22	81	138	138	25
Mindanao	2025	6	16	23	76	138	138	25
Mindanao	2025	6	16	24	71	138	138	25
Mindanao	2025	6	17	1	68	138	138	25
Mindanao	2025	6	17	2	66	138	138	25
Mindanao	2025	6	17	3	64	138	138	25
Mindanao	2025	6	17	4	64	138	138	25
Mindanao	2025	6	17	5	67	138	138	25
Mindanao	2025	6	17	6	71	138	138	25
Mindanao	2025	6	17	7	66	138	138	25
Mindanao	2025	6	17	8	74	138	138	25
Mindanao	2025	6	17	9	84	138	138	25
Mindanao	2025	6	17	10	92	138	138	25
Mindanao	2025	6	17	11	96	138	138	25
Mindanao	2025	6	17	12	95	138	138	25
Mindanao	2025	6	17	13	97	138	138	25
Mindanao	2025	6	17	14	101	138	138	25
Mindanao	2025	6	17	15	103	138	138	25
Mindanao	2025	6	17	16	100	138	138	25
Mindanao	2025	6	17	17	94	138	138	25
Mindanao	2025	6	17	18	92	138	138	25
Mindanao	2025	6	17	19	91	138	138	25
Mindanao	2025	6	17	20	89	138	138	25
Mindanao	2025	6	17	21	86	138	138	25
Mindanao	2025	6	17	22	80	138	138	25
Mindanao	2025	6	17	23	77	138	138	25
Mindanao	2025	6	17	24	73	138	138	25
Mindanao	2025	6	18	1	69	138	138	25
Mindanao	2025	6	18	2	67	138	138	25
Mindanao	2025	6	18	3	65	138	138	25
Mindanao	2025	6	18	4	64	138	138	25
Mindanao	2025	6	18	5	69	138	138	25
Mindanao	2025	6	18	6	71	138	138	25
Mindanao	2025	6	18	7	67	138	138	25
Mindanao	2025	6	18	8	73	138	138	25
Mindanao	2025	6	18	9	83	138	138	25
Mindanao	2025	6	18	10	90	138	138	25
Mindanao	2025	6	18	11	93	138	138	25
Mindanao	2025	6	18	12	89	138	138	25
Mindanao	2025	6	18	13	92	138	138	25
Mindanao	2025	6	18	14	96	138	138	25
Mindanao	2025	6	18	15	95	138	138	25
Mindanao	2025	6	18	16	93	138	138	25
Mindanao	2025	6	18	17	89	138	138	25
Mindanao	2025	6	18	18	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	18	19	89	138	138	25
Mindanao	2025	6	18	20	85	138	138	25
Mindanao	2025	6	18	21	84	138	138	25
Mindanao	2025	6	18	22	78	138	138	25
Mindanao	2025	6	18	23	72	138	138	25
Mindanao	2025	6	18	24	70	138	138	25
Mindanao	2025	6	19	1	66	138	138	25
Mindanao	2025	6	19	2	64	138	138	25
Mindanao	2025	6	19	3	62	138	138	25
Mindanao	2025	6	19	4	62	138	138	25
Mindanao	2025	6	19	5	65	138	138	25
Mindanao	2025	6	19	6	68	138	138	25
Mindanao	2025	6	19	7	65	138	138	25
Mindanao	2025	6	19	8	69	138	138	25
Mindanao	2025	6	19	9	78	138	138	25
Mindanao	2025	6	19	10	86	138	138	25
Mindanao	2025	6	19	11	88	138	138	25
Mindanao	2025	6	19	12	87	138	138	25
Mindanao	2025	6	19	13	88	138	138	25
Mindanao	2025	6	19	14	94	138	138	25
Mindanao	2025	6	19	15	94	138	138	25
Mindanao	2025	6	19	16	93	138	138	25
Mindanao	2025	6	19	17	88	138	138	25
Mindanao	2025	6	19	18	91	138	138	25
Mindanao	2025	6	19	19	93	138	138	25
Mindanao	2025	6	19	20	91	138	138	25
Mindanao	2025	6	19	21	87	138	138	25
Mindanao	2025	6	19	22	80	138	138	25
Mindanao	2025	6	19	23	77	138	138	25
Mindanao	2025	6	19	24	71	138	138	25
Mindanao	2025	6	20	1	69	138	138	25
Mindanao	2025	6	20	2	66	138	138	25
Mindanao	2025	6	20	3	63	138	138	25
Mindanao	2025	6	20	4	64	138	138	25
Mindanao	2025	6	20	5	66	138	138	25
Mindanao	2025	6	20	6	68	138	138	25
Mindanao	2025	6	20	7	66	138	138	25
Mindanao	2025	6	20	8	74	138	138	25
Mindanao	2025	6	20	9	83	138	138	25
Mindanao	2025	6	20	10	89	138	138	25
Mindanao	2025	6	20	11	93	138	138	25
Mindanao	2025	6	20	12	94	138	138	25
Mindanao	2025	6	20	13	96	138	138	25
Mindanao	2025	6	20	14	99	138	138	25
Mindanao	2025	6	20	15	100	138	138	25
Mindanao	2025	6	20	16	99	138	138	25
Mindanao	2025	6	20	17	94	138	138	25
Mindanao	2025	6	20	18	94	138	138	25
Mindanao	2025	6	20	19	95	138	138	25
Mindanao	2025	6	20	20	92	138	138	25
Mindanao	2025	6	20	21	89	138	138	25
Mindanao	2025	6	20	22	85	138	138	25
Mindanao	2025	6	20	23	80	138	138	25
Mindanao	2025	6	20	24	75	138	138	25
Mindanao	2025	6	21	1	72	138	138	25
Mindanao	2025	6	21	2	69	138	138	25
Mindanao	2025	6	21	3	67	138	138	25
Mindanao	2025	6	21	4	66	138	138	25
Mindanao	2025	6	21	5	67	138	138	25
Mindanao	2025	6	21	6	67	138	138	25
Mindanao	2025	6	21	7	68	138	138	25
Mindanao	2025	6	21	8	69	138	138	25
Mindanao	2025	6	21	9	75	138	138	25
Mindanao	2025	6	21	10	79	138	138	25
Mindanao	2025	6	21	11	83	138	138	25
Mindanao	2025	6	21	12	82	138	138	25
Mindanao	2025	6	21	13	84	138	138	25
Mindanao	2025	6	21	14	88	138	138	25
Mindanao	2025	6	21	15	87	138	138	25
Mindanao	2025	6	21	16	85	138	138	25
Mindanao	2025	6	21	17	84	138	138	25
Mindanao	2025	6	21	18	88	138	138	25
Mindanao	2025	6	21	19	88	138	138	25
Mindanao	2025	6	21	20	85	138	138	25
Mindanao	2025	6	21	21	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	21	22	79	138	138	25
Mindanao	2025	6	21	23	74	138	138	25
Mindanao	2025	6	21	24	69	138	138	25
Mindanao	2025	6	22	1	67	138	138	25
Mindanao	2025	6	22	2	65	138	138	25
Mindanao	2025	6	22	3	63	138	138	25
Mindanao	2025	6	22	4	62	138	138	25
Mindanao	2025	6	22	5	63	138	138	25
Mindanao	2025	6	22	6	63	138	138	25
Mindanao	2025	6	22	7	62	138	138	25
Mindanao	2025	6	22	8	63	138	138	25
Mindanao	2025	6	22	9	67	138	138	25
Mindanao	2025	6	22	10	70	138	138	25
Mindanao	2025	6	22	11	72	138	138	25
Mindanao	2025	6	22	12	74	138	138	25
Mindanao	2025	6	22	13	74	138	138	25
Mindanao	2025	6	22	14	73	138	138	25
Mindanao	2025	6	22	15	73	138	138	25
Mindanao	2025	6	22	16	75	138	138	25
Mindanao	2025	6	22	17	75	138	138	25
Mindanao	2025	6	22	18	81	138	138	25
Mindanao	2025	6	22	19	85	138	138	25
Mindanao	2025	6	22	20	83	138	138	25
Mindanao	2025	6	22	21	81	138	138	25
Mindanao	2025	6	22	22	77	138	138	25
Mindanao	2025	6	22	23	73	138	138	25
Mindanao	2025	6	22	24	70	138	138	25
Mindanao	2025	6	23	1	67	138	138	25
Mindanao	2025	6	23	2	64	138	138	25
Mindanao	2025	6	23	3	62	138	138	25
Mindanao	2025	6	23	4	62	138	138	25
Mindanao	2025	6	23	5	65	138	138	25
Mindanao	2025	6	23	6	68	138	138	25
Mindanao	2025	6	23	7	63	138	138	25
Mindanao	2025	6	23	8	72	138	138	25
Mindanao	2025	6	23	9	83	138	138	25
Mindanao	2025	6	23	10	90	138	138	25
Mindanao	2025	6	23	11	94	138	138	25
Mindanao	2025	6	23	12	94	138	138	25
Mindanao	2025	6	23	13	94	138	138	25
Mindanao	2025	6	23	14	99	138	138	25
Mindanao	2025	6	23	15	100	138	138	25
Mindanao	2025	6	23	16	97	138	138	25
Mindanao	2025	6	23	17	91	138	138	25
Mindanao	2025	6	23	18	92	138	138	25
Mindanao	2025	6	23	19	96	138	138	25
Mindanao	2025	6	23	20	92	138	138	25
Mindanao	2025	6	23	21	89	138	138	25
Mindanao	2025	6	23	22	83	138	138	25
Mindanao	2025	6	23	23	79	138	138	25
Mindanao	2025	6	23	24	75	138	138	25
Mindanao	2025	6	24	1	72	138	138	25
Mindanao	2025	6	24	2	69	138	138	25
Mindanao	2025	6	24	3	67	138	138	25
Mindanao	2025	6	24	4	66	138	138	25
Mindanao	2025	6	24	5	68	138	138	25
Mindanao	2025	6	24	6	70	138	138	25
Mindanao	2025	6	24	7	66	138	138	25
Mindanao	2025	6	24	8	74	138	138	25
Mindanao	2025	6	24	9	85	138	138	25
Mindanao	2025	6	24	10	94	138	138	25
Mindanao	2025	6	24	11	99	138	138	25
Mindanao	2025	6	24	12	96	138	138	25
Mindanao	2025	6	24	13	96	138	138	25
Mindanao	2025	6	24	14	102	138	138	25
Mindanao	2025	6	24	15	103	138	138	25
Mindanao	2025	6	24	16	100	138	138	25
Mindanao	2025	6	24	17	94	138	138	25
Mindanao	2025	6	24	18	93	138	138	25
Mindanao	2025	6	24	19	94	138	138	25
Mindanao	2025	6	24	20	93	138	138	25
Mindanao	2025	6	24	21	89	138	138	25
Mindanao	2025	6	24	22	84	138	138	25
Mindanao	2025	6	24	23	80	138	138	25
Mindanao	2025	6	24	24	75	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	25	1	71	138	138	25
Mindanao	2025	6	25	2	69	138	138	25
Mindanao	2025	6	25	3	66	138	138	25
Mindanao	2025	6	25	4	66	138	138	25
Mindanao	2025	6	25	5	66	138	138	25
Mindanao	2025	6	25	6	65	138	138	25
Mindanao	2025	6	25	7	64	138	138	25
Mindanao	2025	6	25	8	68	138	138	25
Mindanao	2025	6	25	9	74	138	138	25
Mindanao	2025	6	25	10	80	138	138	25
Mindanao	2025	6	25	11	85	138	138	25
Mindanao	2025	6	25	12	84	138	138	25
Mindanao	2025	6	25	13	86	138	138	25
Mindanao	2025	6	25	14	90	138	138	25
Mindanao	2025	6	25	15	88	138	138	25
Mindanao	2025	6	25	16	87	138	138	25
Mindanao	2025	6	25	17	86	138	138	25
Mindanao	2025	6	25	18	90	138	138	25
Mindanao	2025	6	25	19	92	138	138	25
Mindanao	2025	6	25	20	90	138	138	25
Mindanao	2025	6	25	21	87	138	138	25
Mindanao	2025	6	25	22	80	138	138	25
Mindanao	2025	6	25	23	76	138	138	25
Mindanao	2025	6	25	24	70	138	138	25
Mindanao	2025	6	26	1	67	138	138	25
Mindanao	2025	6	26	2	66	138	138	25
Mindanao	2025	6	26	3	65	138	138	25
Mindanao	2025	6	26	4	64	138	138	25
Mindanao	2025	6	26	5	68	138	138	25
Mindanao	2025	6	26	6	71	138	138	25
Mindanao	2025	6	26	7	66	138	138	25
Mindanao	2025	6	26	8	74	138	138	25
Mindanao	2025	6	26	9	86	138	138	25
Mindanao	2025	6	26	10	92	138	138	25
Mindanao	2025	6	26	11	96	138	138	25
Mindanao	2025	6	26	12	95	138	138	25
Mindanao	2025	6	26	13	98	138	138	25
Mindanao	2025	6	26	14	102	138	138	25
Mindanao	2025	6	26	15	103	138	138	25
Mindanao	2025	6	26	16	100	138	138	25
Mindanao	2025	6	26	17	94	138	138	25
Mindanao	2025	6	26	18	95	138	138	25
Mindanao	2025	6	26	19	95	138	138	25
Mindanao	2025	6	26	20	94	138	138	25
Mindanao	2025	6	26	21	89	138	138	25
Mindanao	2025	6	26	22	83	138	138	25
Mindanao	2025	6	26	23	77	138	138	25
Mindanao	2025	6	26	24	75	138	138	25
Mindanao	2025	6	27	1	71	138	138	25
Mindanao	2025	6	27	2	68	138	138	25
Mindanao	2025	6	27	3	66	138	138	25
Mindanao	2025	6	27	4	65	138	138	25
Mindanao	2025	6	27	5	68	138	138	25
Mindanao	2025	6	27	6	70	138	138	25
Mindanao	2025	6	27	7	66	138	138	25
Mindanao	2025	6	27	8	74	138	138	25
Mindanao	2025	6	27	9	84	138	138	25
Mindanao	2025	6	27	10	90	138	138	25
Mindanao	2025	6	27	11	96	138	138	25
Mindanao	2025	6	27	12	95	138	138	25
Mindanao	2025	6	27	13	97	138	138	25
Mindanao	2025	6	27	14	100	138	138	25
Mindanao	2025	6	27	15	100	138	138	25
Mindanao	2025	6	27	16	97	138	138	25
Mindanao	2025	6	27	17	92	138	138	25
Mindanao	2025	6	27	18	93	138	138	25
Mindanao	2025	6	27	19	96	138	138	25
Mindanao	2025	6	27	20	92	138	138	25
Mindanao	2025	6	27	21	91	138	138	25
Mindanao	2025	6	27	22	86	138	138	25
Mindanao	2025	6	27	23	82	138	138	25
Mindanao	2025	6	27	24	77	138	138	25
Mindanao	2025	6	28	1	74	138	138	25
Mindanao	2025	6	28	2	72	138	138	25
Mindanao	2025	6	28	3	68	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	6	28	4	66	138	138	25
Mindanao	2025	6	28	5	68	138	138	25
Mindanao	2025	6	28	6	69	138	138	25
Mindanao	2025	6	28	7	67	138	138	25
Mindanao	2025	6	28	8	71	138	138	25
Mindanao	2025	6	28	9	79	138	138	25
Mindanao	2025	6	28	10	83	138	138	25
Mindanao	2025	6	28	11	87	138	138	25
Mindanao	2025	6	28	12	86	138	138	25
Mindanao	2025	6	28	13	88	138	138	25
Mindanao	2025	6	28	14	90	138	138	25
Mindanao	2025	6	28	15	88	138	138	25
Mindanao	2025	6	28	16	89	138	138	25
Mindanao	2025	6	28	17	84	138	138	25
Mindanao	2025	6	28	18	88	138	138	25
Mindanao	2025	6	28	19	91	138	138	25
Mindanao	2025	6	28	20	88	138	138	25
Mindanao	2025	6	28	21	86	138	138	25
Mindanao	2025	6	28	22	83	138	138	25
Mindanao	2025	6	28	23	77	138	138	25
Mindanao	2025	6	28	24	74	138	138	25
Mindanao	2025	6	29	1	70	138	138	25
Mindanao	2025	6	29	2	68	138	138	25
Mindanao	2025	6	29	3	65	138	138	25
Mindanao	2025	6	29	4	63	138	138	25
Mindanao	2025	6	29	5	64	138	138	25
Mindanao	2025	6	29	6	63	138	138	25
Mindanao	2025	6	29	7	60	138	138	25
Mindanao	2025	6	29	8	62	138	138	25
Mindanao	2025	6	29	9	66	138	138	25
Mindanao	2025	6	29	10	71	138	138	25
Mindanao	2025	6	29	11	74	138	138	25
Mindanao	2025	6	29	12	76	138	138	25
Mindanao	2025	6	29	13	77	138	138	25
Mindanao	2025	6	29	14	77	138	138	25
Mindanao	2025	6	29	15	78	138	138	25
Mindanao	2025	6	29	16	77	138	138	25
Mindanao	2025	6	29	17	76	138	138	25
Mindanao	2025	6	29	18	83	138	138	25
Mindanao	2025	6	29	19	89	138	138	25
Mindanao	2025	6	29	20	87	138	138	25
Mindanao	2025	6	29	21	85	138	138	25
Mindanao	2025	6	29	22	81	138	138	25
Mindanao	2025	6	29	23	77	138	138	25
Mindanao	2025	6	29	24	73	138	138	25
Mindanao	2025	6	30	1	68	138	138	25
Mindanao	2025	6	30	2	65	138	138	25
Mindanao	2025	6	30	3	65	138	138	25
Mindanao	2025	6	30	4	63	138	138	25
Mindanao	2025	6	30	5	66	138	138	25
Mindanao	2025	6	30	6	68	138	138	25
Mindanao	2025	6	30	7	67	138	138	25
Mindanao	2025	6	30	8	73	138	138	25
Mindanao	2025	6	30	9	82	138	138	25
Mindanao	2025	6	30	10	88	138	138	25
Mindanao	2025	6	30	11	91	138	138	25
Mindanao	2025	6	30	12	90	138	138	25
Mindanao	2025	6	30	13	91	138	138	25
Mindanao	2025	6	30	14	94	138	138	25
Mindanao	2025	6	30	15	94	138	138	25
Mindanao	2025	6	30	16	94	138	138	25
Mindanao	2025	6	30	17	89	138	138	25
Mindanao	2025	6	30	18	91	138	138	25
Mindanao	2025	6	30	19	92	138	138	25
Mindanao	2025	6	30	20	88	138	138	25
Mindanao	2025	6	30	21	85	138	138	25
Mindanao	2025	6	30	22	81	138	138	25
Mindanao	2025	6	30	23	77	138	138	25
Mindanao	2025	6	30	24	72	138	138	25
Mindanao	2025	7	1	1	70	138	138	25
Mindanao	2025	7	1	2	67	138	138	25
Mindanao	2025	7	1	3	64	138	138	25
Mindanao	2025	7	1	4	64	138	138	25
Mindanao	2025	7	1	5	66	138	138	25
Mindanao	2025	7	1	6	68	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	1	7	68	138	138	25
Mindanao	2025	7	1	8	74	138	138	25
Mindanao	2025	7	1	9	84	138	138	25
Mindanao	2025	7	1	10	89	138	138	25
Mindanao	2025	7	1	11	92	138	138	25
Mindanao	2025	7	1	12	93	138	138	25
Mindanao	2025	7	1	13	94	138	138	25
Mindanao	2025	7	1	14	95	138	138	25
Mindanao	2025	7	1	15	96	138	138	25
Mindanao	2025	7	1	16	94	138	138	25
Mindanao	2025	7	1	17	88	138	138	25
Mindanao	2025	7	1	18	89	138	138	25
Mindanao	2025	7	1	19	90	138	138	25
Mindanao	2025	7	1	20	88	138	138	25
Mindanao	2025	7	1	21	85	138	138	25
Mindanao	2025	7	1	22	79	138	138	25
Mindanao	2025	7	1	23	75	138	138	25
Mindanao	2025	7	1	24	71	138	138	25
Mindanao	2025	7	2	1	67	138	138	25
Mindanao	2025	7	2	2	65	138	138	25
Mindanao	2025	7	2	3	63	138	138	25
Mindanao	2025	7	2	4	62	138	138	25
Mindanao	2025	7	2	5	64	138	138	25
Mindanao	2025	7	2	6	68	138	138	25
Mindanao	2025	7	2	7	66	138	138	25
Mindanao	2025	7	2	8	71	138	138	25
Mindanao	2025	7	2	9	79	138	138	25
Mindanao	2025	7	2	10	88	138	138	25
Mindanao	2025	7	2	11	91	138	138	25
Mindanao	2025	7	2	12	92	138	138	25
Mindanao	2025	7	2	13	94	138	138	25
Mindanao	2025	7	2	14	98	138	138	25
Mindanao	2025	7	2	15	100	138	138	25
Mindanao	2025	7	2	16	98	138	138	25
Mindanao	2025	7	2	17	93	138	138	25
Mindanao	2025	7	2	18	93	138	138	25
Mindanao	2025	7	2	19	97	138	138	25
Mindanao	2025	7	2	20	95	138	138	25
Mindanao	2025	7	2	21	92	138	138	25
Mindanao	2025	7	2	22	87	138	138	25
Mindanao	2025	7	2	23	83	138	138	25
Mindanao	2025	7	2	24	77	138	138	25
Mindanao	2025	7	3	1	74	138	138	25
Mindanao	2025	7	3	2	69	138	138	25
Mindanao	2025	7	3	3	69	138	138	25
Mindanao	2025	7	3	4	67	138	138	25
Mindanao	2025	7	3	5	70	138	138	25
Mindanao	2025	7	3	6	71	138	138	25
Mindanao	2025	7	3	7	69	138	138	25
Mindanao	2025	7	3	8	78	138	138	25
Mindanao	2025	7	3	9	91	138	138	25
Mindanao	2025	7	3	10	97	138	138	25
Mindanao	2025	7	3	11	101	138	138	25
Mindanao	2025	7	3	12	101	138	138	25
Mindanao	2025	7	3	13	103	138	138	25
Mindanao	2025	7	3	14	105	138	138	25
Mindanao	2025	7	3	15	102	138	138	25
Mindanao	2025	7	3	16	101	138	138	25
Mindanao	2025	7	3	17	93	138	138	25
Mindanao	2025	7	3	18	93	138	138	25
Mindanao	2025	7	3	19	94	138	138	25
Mindanao	2025	7	3	20	92	138	138	25
Mindanao	2025	7	3	21	90	138	138	25
Mindanao	2025	7	3	22	85	138	138	25
Mindanao	2025	7	3	23	81	138	138	25
Mindanao	2025	7	3	24	76	138	138	25
Mindanao	2025	7	4	1	72	138	138	25
Mindanao	2025	7	4	2	71	138	138	25
Mindanao	2025	7	4	3	68	138	138	25
Mindanao	2025	7	4	4	67	138	138	25
Mindanao	2025	7	4	5	69	138	138	25
Mindanao	2025	7	4	6	72	138	138	25
Mindanao	2025	7	4	7	70	138	138	25
Mindanao	2025	7	4	8	79	138	138	25
Mindanao	2025	7	4	9	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	4	10	96	138	138	25
Mindanao	2025	7	4	11	101	138	138	25
Mindanao	2025	7	4	12	99	138	138	25
Mindanao	2025	7	4	13	100	138	138	25
Mindanao	2025	7	4	14	104	138	138	25
Mindanao	2025	7	4	15	103	138	138	25
Mindanao	2025	7	4	16	102	138	138	25
Mindanao	2025	7	4	17	93	138	138	25
Mindanao	2025	7	4	18	91	138	138	25
Mindanao	2025	7	4	19	96	138	138	25
Mindanao	2025	7	4	20	95	138	138	25
Mindanao	2025	7	4	21	91	138	138	25
Mindanao	2025	7	4	22	88	138	138	25
Mindanao	2025	7	4	23	82	138	138	25
Mindanao	2025	7	4	24	78	138	138	25
Mindanao	2025	7	5	1	74	138	138	25
Mindanao	2025	7	5	2	72	138	138	25
Mindanao	2025	7	5	3	69	138	138	25
Mindanao	2025	7	5	4	68	138	138	25
Mindanao	2025	7	5	5	68	138	138	25
Mindanao	2025	7	5	6	69	138	138	25
Mindanao	2025	7	5	7	65	138	138	25
Mindanao	2025	7	5	8	72	138	138	25
Mindanao	2025	7	5	9	78	138	138	25
Mindanao	2025	7	5	10	85	138	138	25
Mindanao	2025	7	5	11	88	138	138	25
Mindanao	2025	7	5	12	87	138	138	25
Mindanao	2025	7	5	13	88	138	138	25
Mindanao	2025	7	5	14	90	138	138	25
Mindanao	2025	7	5	15	88	138	138	25
Mindanao	2025	7	5	16	86	138	138	25
Mindanao	2025	7	5	17	84	138	138	25
Mindanao	2025	7	5	18	87	138	138	25
Mindanao	2025	7	5	19	89	138	138	25
Mindanao	2025	7	5	20	87	138	138	25
Mindanao	2025	7	5	21	85	138	138	25
Mindanao	2025	7	5	22	80	138	138	25
Mindanao	2025	7	5	23	75	138	138	25
Mindanao	2025	7	5	24	71	138	138	25
Mindanao	2025	7	6	1	68	138	138	25
Mindanao	2025	7	6	2	67	138	138	25
Mindanao	2025	7	6	3	64	138	138	25
Mindanao	2025	7	6	4	63	138	138	25
Mindanao	2025	7	6	5	63	138	138	25
Mindanao	2025	7	6	6	65	138	138	25
Mindanao	2025	7	6	7	62	138	138	25
Mindanao	2025	7	6	8	63	138	138	25
Mindanao	2025	7	6	9	68	138	138	25
Mindanao	2025	7	6	10	72	138	138	25
Mindanao	2025	7	6	11	76	138	138	25
Mindanao	2025	7	6	12	78	138	138	25
Mindanao	2025	7	6	13	79	138	138	25
Mindanao	2025	7	6	14	80	138	138	25
Mindanao	2025	7	6	15	79	138	138	25
Mindanao	2025	7	6	16	76	138	138	25
Mindanao	2025	7	6	17	78	138	138	25
Mindanao	2025	7	6	18	83	138	138	25
Mindanao	2025	7	6	19	86	138	138	25
Mindanao	2025	7	6	20	82	138	138	25
Mindanao	2025	7	6	21	81	138	138	25
Mindanao	2025	7	6	22	75	138	138	25
Mindanao	2025	7	6	23	71	138	138	25
Mindanao	2025	7	6	24	68	138	138	25
Mindanao	2025	7	7	1	65	138	138	25
Mindanao	2025	7	7	2	64	138	138	25
Mindanao	2025	7	7	3	61	138	138	25
Mindanao	2025	7	7	4	61	138	138	25
Mindanao	2025	7	7	5	62	138	138	25
Mindanao	2025	7	7	6	66	138	138	25
Mindanao	2025	7	7	7	66	138	138	25
Mindanao	2025	7	7	8	72	138	138	25
Mindanao	2025	7	7	9	84	138	138	25
Mindanao	2025	7	7	10	92	138	138	25
Mindanao	2025	7	7	11	97	138	138	25
Mindanao	2025	7	7	12	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	7	13	98	138	138	25
Mindanao	2025	7	7	14	102	138	138	25
Mindanao	2025	7	7	15	101	138	138	25
Mindanao	2025	7	7	16	100	138	138	25
Mindanao	2025	7	7	17	94	138	138	25
Mindanao	2025	7	7	18	93	138	138	25
Mindanao	2025	7	7	19	94	138	138	25
Mindanao	2025	7	7	20	92	138	138	25
Mindanao	2025	7	7	21	90	138	138	25
Mindanao	2025	7	7	22	85	138	138	25
Mindanao	2025	7	7	23	81	138	138	25
Mindanao	2025	7	7	24	77	138	138	25
Mindanao	2025	7	8	1	73	138	138	25
Mindanao	2025	7	8	2	72	138	138	25
Mindanao	2025	7	8	3	69	138	138	25
Mindanao	2025	7	8	4	67	138	138	25
Mindanao	2025	7	8	5	69	138	138	25
Mindanao	2025	7	8	6	70	138	138	25
Mindanao	2025	7	8	7	68	138	138	25
Mindanao	2025	7	8	8	77	138	138	25
Mindanao	2025	7	8	9	88	138	138	25
Mindanao	2025	7	8	10	94	138	138	25
Mindanao	2025	7	8	11	100	138	138	25
Mindanao	2025	7	8	12	99	138	138	25
Mindanao	2025	7	8	13	100	138	138	25
Mindanao	2025	7	8	14	102	138	138	25
Mindanao	2025	7	8	15	101	138	138	25
Mindanao	2025	7	8	16	100	138	138	25
Mindanao	2025	7	8	17	93	138	138	25
Mindanao	2025	7	8	18	91	138	138	25
Mindanao	2025	7	8	19	94	138	138	25
Mindanao	2025	7	8	20	92	138	138	25
Mindanao	2025	7	8	21	89	138	138	25
Mindanao	2025	7	8	22	85	138	138	25
Mindanao	2025	7	8	23	81	138	138	25
Mindanao	2025	7	8	24	76	138	138	25
Mindanao	2025	7	9	1	73	138	138	25
Mindanao	2025	7	9	2	71	138	138	25
Mindanao	2025	7	9	3	69	138	138	25
Mindanao	2025	7	9	4	68	138	138	25
Mindanao	2025	7	9	5	69	138	138	25
Mindanao	2025	7	9	6	70	138	138	25
Mindanao	2025	7	9	7	69	138	138	25
Mindanao	2025	7	9	8	76	138	138	25
Mindanao	2025	7	9	9	86	138	138	25
Mindanao	2025	7	9	10	93	138	138	25
Mindanao	2025	7	9	11	96	138	138	25
Mindanao	2025	7	9	12	95	138	138	25
Mindanao	2025	7	9	13	95	138	138	25
Mindanao	2025	7	9	14	99	138	138	25
Mindanao	2025	7	9	15	98	138	138	25
Mindanao	2025	7	9	16	94	138	138	25
Mindanao	2025	7	9	17	89	138	138	25
Mindanao	2025	7	9	18	89	138	138	25
Mindanao	2025	7	9	19	90	138	138	25
Mindanao	2025	7	9	20	89	138	138	25
Mindanao	2025	7	9	21	85	138	138	25
Mindanao	2025	7	9	22	81	138	138	25
Mindanao	2025	7	9	23	77	138	138	25
Mindanao	2025	7	9	24	73	138	138	25
Mindanao	2025	7	10	1	69	138	138	25
Mindanao	2025	7	10	2	65	138	138	25
Mindanao	2025	7	10	3	62	138	138	25
Mindanao	2025	7	10	4	61	138	138	25
Mindanao	2025	7	10	5	63	138	138	25
Mindanao	2025	7	10	6	66	138	138	25
Mindanao	2025	7	10	7	67	138	138	25
Mindanao	2025	7	10	8	74	138	138	25
Mindanao	2025	7	10	9	85	138	138	25
Mindanao	2025	7	10	10	91	138	138	25
Mindanao	2025	7	10	11	94	138	138	25
Mindanao	2025	7	10	12	92	138	138	25
Mindanao	2025	7	10	13	92	138	138	25
Mindanao	2025	7	10	14	94	138	138	25
Mindanao	2025	7	10	15	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	10	16	88	138	138	25
Mindanao	2025	7	10	17	84	138	138	25
Mindanao	2025	7	10	18	85	138	138	25
Mindanao	2025	7	10	19	89	138	138	25
Mindanao	2025	7	10	20	86	138	138	25
Mindanao	2025	7	10	21	85	138	138	25
Mindanao	2025	7	10	22	80	138	138	25
Mindanao	2025	7	10	23	76	138	138	25
Mindanao	2025	7	10	24	72	138	138	25
Mindanao	2025	7	11	1	68	138	138	25
Mindanao	2025	7	11	2	66	138	138	25
Mindanao	2025	7	11	3	65	138	138	25
Mindanao	2025	7	11	4	64	138	138	25
Mindanao	2025	7	11	5	66	138	138	25
Mindanao	2025	7	11	6	67	138	138	25
Mindanao	2025	7	11	7	66	138	138	25
Mindanao	2025	7	11	8	75	138	138	25
Mindanao	2025	7	11	9	85	138	138	25
Mindanao	2025	7	11	10	91	138	138	25
Mindanao	2025	7	11	11	96	138	138	25
Mindanao	2025	7	11	12	95	138	138	25
Mindanao	2025	7	11	13	95	138	138	25
Mindanao	2025	7	11	14	99	138	138	25
Mindanao	2025	7	11	15	94	138	138	25
Mindanao	2025	7	11	16	94	138	138	25
Mindanao	2025	7	11	17	88	138	138	25
Mindanao	2025	7	11	18	87	138	138	25
Mindanao	2025	7	11	19	88	138	138	25
Mindanao	2025	7	11	20	86	138	138	25
Mindanao	2025	7	11	21	83	138	138	25
Mindanao	2025	7	11	22	80	138	138	25
Mindanao	2025	7	11	23	76	138	138	25
Mindanao	2025	7	11	24	72	138	138	25
Mindanao	2025	7	12	1	68	138	138	25
Mindanao	2025	7	12	2	66	138	138	25
Mindanao	2025	7	12	3	65	138	138	25
Mindanao	2025	7	12	4	63	138	138	25
Mindanao	2025	7	12	5	64	138	138	25
Mindanao	2025	7	12	6	65	138	138	25
Mindanao	2025	7	12	7	64	138	138	25
Mindanao	2025	7	12	8	68	138	138	25
Mindanao	2025	7	12	9	76	138	138	25
Mindanao	2025	7	12	10	83	138	138	25
Mindanao	2025	7	12	11	86	138	138	25
Mindanao	2025	7	12	12	87	138	138	25
Mindanao	2025	7	12	13	89	138	138	25
Mindanao	2025	7	12	14	91	138	138	25
Mindanao	2025	7	12	15	91	138	138	25
Mindanao	2025	7	12	16	88	138	138	25
Mindanao	2025	7	12	17	84	138	138	25
Mindanao	2025	7	12	18	89	138	138	25
Mindanao	2025	7	12	19	91	138	138	25
Mindanao	2025	7	12	20	88	138	138	25
Mindanao	2025	7	12	21	86	138	138	25
Mindanao	2025	7	12	22	81	138	138	25
Mindanao	2025	7	12	23	78	138	138	25
Mindanao	2025	7	12	24	74	138	138	25
Mindanao	2025	7	13	1	70	138	138	25
Mindanao	2025	7	13	2	69	138	138	25
Mindanao	2025	7	13	3	67	138	138	25
Mindanao	2025	7	13	4	66	138	138	25
Mindanao	2025	7	13	5	64	138	138	25
Mindanao	2025	7	13	6	64	138	138	25
Mindanao	2025	7	13	7	65	138	138	25
Mindanao	2025	7	13	8	62	138	138	25
Mindanao	2025	7	13	9	69	138	138	25
Mindanao	2025	7	13	10	71	138	138	25
Mindanao	2025	7	13	11	75	138	138	25
Mindanao	2025	7	13	12	73	138	138	25
Mindanao	2025	7	13	13	74	138	138	25
Mindanao	2025	7	13	14	75	138	138	25
Mindanao	2025	7	13	15	75	138	138	25
Mindanao	2025	7	13	16	74	138	138	25
Mindanao	2025	7	13	17	74	138	138	25
Mindanao	2025	7	13	18	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	13	19	84	138	138	25
Mindanao	2025	7	13	20	84	138	138	25
Mindanao	2025	7	13	21	82	138	138	25
Mindanao	2025	7	13	22	78	138	138	25
Mindanao	2025	7	13	23	74	138	138	25
Mindanao	2025	7	13	24	70	138	138	25
Mindanao	2025	7	14	1	67	138	138	25
Mindanao	2025	7	14	2	66	138	138	25
Mindanao	2025	7	14	3	63	138	138	25
Mindanao	2025	7	14	4	62	138	138	25
Mindanao	2025	7	14	5	64	138	138	25
Mindanao	2025	7	14	6	66	138	138	25
Mindanao	2025	7	14	7	67	138	138	25
Mindanao	2025	7	14	8	75	138	138	25
Mindanao	2025	7	14	9	85	138	138	25
Mindanao	2025	7	14	10	91	138	138	25
Mindanao	2025	7	14	11	99	138	138	25
Mindanao	2025	7	14	12	99	138	138	25
Mindanao	2025	7	14	13	100	138	138	25
Mindanao	2025	7	14	14	103	138	138	25
Mindanao	2025	7	14	15	103	138	138	25
Mindanao	2025	7	14	16	100	138	138	25
Mindanao	2025	7	14	17	94	138	138	25
Mindanao	2025	7	14	18	93	138	138	25
Mindanao	2025	7	14	19	97	138	138	25
Mindanao	2025	7	14	20	95	138	138	25
Mindanao	2025	7	14	21	92	138	138	25
Mindanao	2025	7	14	22	88	138	138	25
Mindanao	2025	7	14	23	82	138	138	25
Mindanao	2025	7	14	24	78	138	138	25
Mindanao	2025	7	15	1	73	138	138	25
Mindanao	2025	7	15	2	72	138	138	25
Mindanao	2025	7	15	3	70	138	138	25
Mindanao	2025	7	15	4	69	138	138	25
Mindanao	2025	7	15	5	69	138	138	25
Mindanao	2025	7	15	6	71	138	138	25
Mindanao	2025	7	15	7	71	138	138	25
Mindanao	2025	7	15	8	78	138	138	25
Mindanao	2025	7	15	9	86	138	138	25
Mindanao	2025	7	15	10	90	138	138	25
Mindanao	2025	7	15	11	91	138	138	25
Mindanao	2025	7	15	12	90	138	138	25
Mindanao	2025	7	15	13	92	138	138	25
Mindanao	2025	7	15	14	95	138	138	25
Mindanao	2025	7	15	15	94	138	138	25
Mindanao	2025	7	15	16	92	138	138	25
Mindanao	2025	7	15	17	90	138	138	25
Mindanao	2025	7	15	18	91	138	138	25
Mindanao	2025	7	15	19	90	138	138	25
Mindanao	2025	7	15	20	88	138	138	25
Mindanao	2025	7	15	21	85	138	138	25
Mindanao	2025	7	15	22	78	138	138	25
Mindanao	2025	7	15	23	74	138	138	25
Mindanao	2025	7	15	24	71	138	138	25
Mindanao	2025	7	16	1	69	138	138	25
Mindanao	2025	7	16	2	67	138	138	25
Mindanao	2025	7	16	3	64	138	138	25
Mindanao	2025	7	16	4	64	138	138	25
Mindanao	2025	7	16	5	65	138	138	25
Mindanao	2025	7	16	6	67	138	138	25
Mindanao	2025	7	16	7	68	138	138	25
Mindanao	2025	7	16	8	72	138	138	25
Mindanao	2025	7	16	9	79	138	138	25
Mindanao	2025	7	16	10	86	138	138	25
Mindanao	2025	7	16	11	88	138	138	25
Mindanao	2025	7	16	12	88	138	138	25
Mindanao	2025	7	16	13	88	138	138	25
Mindanao	2025	7	16	14	92	138	138	25
Mindanao	2025	7	16	15	94	138	138	25
Mindanao	2025	7	16	16	92	138	138	25
Mindanao	2025	7	16	17	86	138	138	25
Mindanao	2025	7	16	18	88	138	138	25
Mindanao	2025	7	16	19	91	138	138	25
Mindanao	2025	7	16	20	88	138	138	25
Mindanao	2025	7	16	21	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	16	22	82	138	138	25
Mindanao	2025	7	16	23	75	138	138	25
Mindanao	2025	7	16	24	73	138	138	25
Mindanao	2025	7	17	1	70	138	138	25
Mindanao	2025	7	17	2	67	138	138	25
Mindanao	2025	7	17	3	66	138	138	25
Mindanao	2025	7	17	4	64	138	138	25
Mindanao	2025	7	17	5	66	138	138	25
Mindanao	2025	7	17	6	69	138	138	25
Mindanao	2025	7	17	7	69	138	138	25
Mindanao	2025	7	17	8	77	138	138	25
Mindanao	2025	7	17	9	87	138	138	25
Mindanao	2025	7	17	10	94	138	138	25
Mindanao	2025	7	17	11	99	138	138	25
Mindanao	2025	7	17	12	98	138	138	25
Mindanao	2025	7	17	13	99	138	138	25
Mindanao	2025	7	17	14	103	138	138	25
Mindanao	2025	7	17	15	102	138	138	25
Mindanao	2025	7	17	16	101	138	138	25
Mindanao	2025	7	17	17	95	138	138	25
Mindanao	2025	7	17	18	94	138	138	25
Mindanao	2025	7	17	19	96	138	138	25
Mindanao	2025	7	17	20	95	138	138	25
Mindanao	2025	7	17	21	91	138	138	25
Mindanao	2025	7	17	22	86	138	138	25
Mindanao	2025	7	17	23	81	138	138	25
Mindanao	2025	7	17	24	77	138	138	25
Mindanao	2025	7	18	1	74	138	138	25
Mindanao	2025	7	18	2	71	138	138	25
Mindanao	2025	7	18	3	68	138	138	25
Mindanao	2025	7	18	4	67	138	138	25
Mindanao	2025	7	18	5	68	138	138	25
Mindanao	2025	7	18	6	71	138	138	25
Mindanao	2025	7	18	7	70	138	138	25
Mindanao	2025	7	18	8	77	138	138	25
Mindanao	2025	7	18	9	88	138	138	25
Mindanao	2025	7	18	10	95	138	138	25
Mindanao	2025	7	18	11	98	138	138	25
Mindanao	2025	7	18	12	97	138	138	25
Mindanao	2025	7	18	13	99	138	138	25
Mindanao	2025	7	18	14	103	138	138	25
Mindanao	2025	7	18	15	103	138	138	25
Mindanao	2025	7	18	16	101	138	138	25
Mindanao	2025	7	18	17	95	138	138	25
Mindanao	2025	7	18	18	94	138	138	25
Mindanao	2025	7	18	19	97	138	138	25
Mindanao	2025	7	18	20	94	138	138	25
Mindanao	2025	7	18	21	92	138	138	25
Mindanao	2025	7	18	22	87	138	138	25
Mindanao	2025	7	18	23	82	138	138	25
Mindanao	2025	7	18	24	70	138	138	25
Mindanao	2025	7	19	1	72	138	138	25
Mindanao	2025	7	19	2	70	138	138	25
Mindanao	2025	7	19	3	71	138	138	25
Mindanao	2025	7	19	4	69	138	138	25
Mindanao	2025	7	19	5	68	138	138	25
Mindanao	2025	7	19	6	70	138	138	25
Mindanao	2025	7	19	7	69	138	138	25
Mindanao	2025	7	19	8	71	138	138	25
Mindanao	2025	7	19	9	80	138	138	25
Mindanao	2025	7	19	10	84	138	138	25
Mindanao	2025	7	19	11	87	138	138	25
Mindanao	2025	7	19	12	86	138	138	25
Mindanao	2025	7	19	13	86	138	138	25
Mindanao	2025	7	19	14	83	138	138	25
Mindanao	2025	7	19	15	83	138	138	25
Mindanao	2025	7	19	16	79	138	138	25
Mindanao	2025	7	19	17	78	138	138	25
Mindanao	2025	7	19	18	82	138	138	25
Mindanao	2025	7	19	19	85	138	138	25
Mindanao	2025	7	19	20	83	138	138	25
Mindanao	2025	7	19	21	81	138	138	25
Mindanao	2025	7	19	22	78	138	138	25
Mindanao	2025	7	19	23	74	138	138	25
Mindanao	2025	7	19	24	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	20	1	68	138	138	25
Mindanao	2025	7	20	2	65	138	138	25
Mindanao	2025	7	20	3	63	138	138	25
Mindanao	2025	7	20	4	62	138	138	25
Mindanao	2025	7	20	5	63	138	138	25
Mindanao	2025	7	20	6	63	138	138	25
Mindanao	2025	7	20	7	62	138	138	25
Mindanao	2025	7	20	8	64	138	138	25
Mindanao	2025	7	20	9	64	138	138	25
Mindanao	2025	7	20	10	68	138	138	25
Mindanao	2025	7	20	11	71	138	138	25
Mindanao	2025	7	20	12	73	138	138	25
Mindanao	2025	7	20	13	72	138	138	25
Mindanao	2025	7	20	14	73	138	138	25
Mindanao	2025	7	20	15	73	138	138	25
Mindanao	2025	7	20	16	73	138	138	25
Mindanao	2025	7	20	17	74	138	138	25
Mindanao	2025	7	20	18	82	138	138	25
Mindanao	2025	7	20	19	85	138	138	25
Mindanao	2025	7	20	20	84	138	138	25
Mindanao	2025	7	20	21	83	138	138	25
Mindanao	2025	7	20	22	77	138	138	25
Mindanao	2025	7	20	23	73	138	138	25
Mindanao	2025	7	20	24	70	138	138	25
Mindanao	2025	7	21	1	68	138	138	25
Mindanao	2025	7	21	2	64	138	138	25
Mindanao	2025	7	21	3	63	138	138	25
Mindanao	2025	7	21	4	63	138	138	25
Mindanao	2025	7	21	5	62	138	138	25
Mindanao	2025	7	21	6	66	138	138	25
Mindanao	2025	7	21	7	65	138	138	25
Mindanao	2025	7	21	8	74	138	138	25
Mindanao	2025	7	21	9	86	138	138	25
Mindanao	2025	7	21	10	92	138	138	25
Mindanao	2025	7	21	11	95	138	138	25
Mindanao	2025	7	21	12	94	138	138	25
Mindanao	2025	7	21	13	94	138	138	25
Mindanao	2025	7	21	14	97	138	138	25
Mindanao	2025	7	21	15	95	138	138	25
Mindanao	2025	7	21	16	94	138	138	25
Mindanao	2025	7	21	17	89	138	138	25
Mindanao	2025	7	21	18	89	138	138	25
Mindanao	2025	7	21	19	91	138	138	25
Mindanao	2025	7	21	20	90	138	138	25
Mindanao	2025	7	21	21	84	138	138	25
Mindanao	2025	7	21	22	81	138	138	25
Mindanao	2025	7	21	23	77	138	138	25
Mindanao	2025	7	21	24	72	138	138	25
Mindanao	2025	7	22	1	70	138	138	25
Mindanao	2025	7	22	2	68	138	138	25
Mindanao	2025	7	22	3	65	138	138	25
Mindanao	2025	7	22	4	65	138	138	25
Mindanao	2025	7	22	5	65	138	138	25
Mindanao	2025	7	22	6	67	138	138	25
Mindanao	2025	7	22	7	68	138	138	25
Mindanao	2025	7	22	8	77	138	138	25
Mindanao	2025	7	22	9	88	138	138	25
Mindanao	2025	7	22	10	89	138	138	25
Mindanao	2025	7	22	11	97	138	138	25
Mindanao	2025	7	22	12	97	138	138	25
Mindanao	2025	7	22	13	95	138	138	25
Mindanao	2025	7	22	14	93	138	138	25
Mindanao	2025	7	22	15	90	138	138	25
Mindanao	2025	7	22	16	82	138	138	25
Mindanao	2025	7	22	17	82	138	138	25
Mindanao	2025	7	22	18	84	138	138	25
Mindanao	2025	7	22	19	87	138	138	25
Mindanao	2025	7	22	20	85	138	138	25
Mindanao	2025	7	22	21	84	138	138	25
Mindanao	2025	7	22	22	80	138	138	25
Mindanao	2025	7	22	23	76	138	138	25
Mindanao	2025	7	22	24	73	138	138	25
Mindanao	2025	7	23	1	69	138	138	25
Mindanao	2025	7	23	2	67	138	138	25
Mindanao	2025	7	23	3	65	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	23	4	63	138	138	25
Mindanao	2025	7	23	5	64	138	138	25
Mindanao	2025	7	23	6	68	138	138	25
Mindanao	2025	7	23	7	66	138	138	25
Mindanao	2025	7	23	8	74	138	138	25
Mindanao	2025	7	23	9	87	138	138	25
Mindanao	2025	7	23	10	92	138	138	25
Mindanao	2025	7	23	11	97	138	138	25
Mindanao	2025	7	23	12	96	138	138	25
Mindanao	2025	7	23	13	99	138	138	25
Mindanao	2025	7	23	14	103	138	138	25
Mindanao	2025	7	23	15	103	138	138	25
Mindanao	2025	7	23	16	101	138	138	25
Mindanao	2025	7	23	17	95	138	138	25
Mindanao	2025	7	23	18	95	138	138	25
Mindanao	2025	7	23	19	96	138	138	25
Mindanao	2025	7	23	20	95	138	138	25
Mindanao	2025	7	23	21	92	138	138	25
Mindanao	2025	7	23	22	86	138	138	25
Mindanao	2025	7	23	23	82	138	138	25
Mindanao	2025	7	23	24	78	138	138	25
Mindanao	2025	7	24	1	74	138	138	25
Mindanao	2025	7	24	2	72	138	138	25
Mindanao	2025	7	24	3	70	138	138	25
Mindanao	2025	7	24	4	68	138	138	25
Mindanao	2025	7	24	5	69	138	138	25
Mindanao	2025	7	24	6	73	138	138	25
Mindanao	2025	7	24	7	70	138	138	25
Mindanao	2025	7	24	8	78	138	138	25
Mindanao	2025	7	24	9	89	138	138	25
Mindanao	2025	7	24	10	96	138	138	25
Mindanao	2025	7	24	11	101	138	138	25
Mindanao	2025	7	24	12	99	138	138	25
Mindanao	2025	7	24	13	101	138	138	25
Mindanao	2025	7	24	14	104	138	138	25
Mindanao	2025	7	24	15	104	138	138	25
Mindanao	2025	7	24	16	101	138	138	25
Mindanao	2025	7	24	17	95	138	138	25
Mindanao	2025	7	24	18	95	138	138	25
Mindanao	2025	7	24	19	96	138	138	25
Mindanao	2025	7	24	20	93	138	138	25
Mindanao	2025	7	24	21	91	138	138	25
Mindanao	2025	7	24	22	86	138	138	25
Mindanao	2025	7	24	23	82	138	138	25
Mindanao	2025	7	24	24	78	138	138	25
Mindanao	2025	7	25	1	74	138	138	25
Mindanao	2025	7	25	2	73	138	138	25
Mindanao	2025	7	25	3	69	138	138	25
Mindanao	2025	7	25	4	67	138	138	25
Mindanao	2025	7	25	5	68	138	138	25
Mindanao	2025	7	25	6	71	138	138	25
Mindanao	2025	7	25	7	67	138	138	25
Mindanao	2025	7	25	8	74	138	138	25
Mindanao	2025	7	25	9	86	138	138	25
Mindanao	2025	7	25	10	90	138	138	25
Mindanao	2025	7	25	11	95	138	138	25
Mindanao	2025	7	25	12	94	138	138	25
Mindanao	2025	7	25	13	94	138	138	25
Mindanao	2025	7	25	14	95	138	138	25
Mindanao	2025	7	25	15	92	138	138	25
Mindanao	2025	7	25	16	91	138	138	25
Mindanao	2025	7	25	17	87	138	138	25
Mindanao	2025	7	25	18	89	138	138	25
Mindanao	2025	7	25	19	87	138	138	25
Mindanao	2025	7	25	20	86	138	138	25
Mindanao	2025	7	25	21	85	138	138	25
Mindanao	2025	7	25	22	80	138	138	25
Mindanao	2025	7	25	23	75	138	138	25
Mindanao	2025	7	25	24	72	138	138	25
Mindanao	2025	7	26	1	69	138	138	25
Mindanao	2025	7	26	2	67	138	138	25
Mindanao	2025	7	26	3	66	138	138	25
Mindanao	2025	7	26	4	64	138	138	25
Mindanao	2025	7	26	5	64	138	138	25
Mindanao	2025	7	26	6	66	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	26	7	66	138	138	25
Mindanao	2025	7	26	8	72	138	138	25
Mindanao	2025	7	26	9	78	138	138	25
Mindanao	2025	7	26	10	83	138	138	25
Mindanao	2025	7	26	11	89	138	138	25
Mindanao	2025	7	26	12	89	138	138	25
Mindanao	2025	7	26	13	90	138	138	25
Mindanao	2025	7	26	14	93	138	138	25
Mindanao	2025	7	26	15	92	138	138	25
Mindanao	2025	7	26	16	90	138	138	25
Mindanao	2025	7	26	17	87	138	138	25
Mindanao	2025	7	26	18	91	138	138	25
Mindanao	2025	7	26	19	94	138	138	25
Mindanao	2025	7	26	20	92	138	138	25
Mindanao	2025	7	26	21	89	138	138	25
Mindanao	2025	7	26	22	85	138	138	25
Mindanao	2025	7	26	23	82	138	138	25
Mindanao	2025	7	26	24	77	138	138	25
Mindanao	2025	7	27	1	74	138	138	25
Mindanao	2025	7	27	2	69	138	138	25
Mindanao	2025	7	27	3	67	138	138	25
Mindanao	2025	7	27	4	66	138	138	25
Mindanao	2025	7	27	5	66	138	138	25
Mindanao	2025	7	27	6	66	138	138	25
Mindanao	2025	7	27	7	63	138	138	25
Mindanao	2025	7	27	8	66	138	138	25
Mindanao	2025	7	27	9	69	138	138	25
Mindanao	2025	7	27	10	75	138	138	25
Mindanao	2025	7	27	11	77	138	138	25
Mindanao	2025	7	27	12	77	138	138	25
Mindanao	2025	7	27	13	79	138	138	25
Mindanao	2025	7	27	14	80	138	138	25
Mindanao	2025	7	27	15	81	138	138	25
Mindanao	2025	7	27	16	79	138	138	25
Mindanao	2025	7	27	17	80	138	138	25
Mindanao	2025	7	27	18	84	138	138	25
Mindanao	2025	7	27	19	91	138	138	25
Mindanao	2025	7	27	20	89	138	138	25
Mindanao	2025	7	27	21	88	138	138	25
Mindanao	2025	7	27	22	84	138	138	25
Mindanao	2025	7	27	23	78	138	138	25
Mindanao	2025	7	27	24	75	138	138	25
Mindanao	2025	7	28	1	70	138	138	25
Mindanao	2025	7	28	2	68	138	138	25
Mindanao	2025	7	28	3	64	138	138	25
Mindanao	2025	7	28	4	63	138	138	25
Mindanao	2025	7	28	5	65	138	138	25
Mindanao	2025	7	28	6	66	138	138	25
Mindanao	2025	7	28	7	66	138	138	25
Mindanao	2025	7	28	8	75	138	138	25
Mindanao	2025	7	28	9	89	138	138	25
Mindanao	2025	7	28	10	97	138	138	25
Mindanao	2025	7	28	11	102	138	138	25
Mindanao	2025	7	28	12	102	138	138	25
Mindanao	2025	7	28	13	104	138	138	25
Mindanao	2025	7	28	14	108	138	138	25
Mindanao	2025	7	28	15	106	138	138	25
Mindanao	2025	7	28	16	105	138	138	25
Mindanao	2025	7	28	17	98	138	138	25
Mindanao	2025	7	28	18	94	138	138	25
Mindanao	2025	7	28	19	99	138	138	25
Mindanao	2025	7	28	20	94	138	138	25
Mindanao	2025	7	28	21	94	138	138	25
Mindanao	2025	7	28	22	89	138	138	25
Mindanao	2025	7	28	23	83	138	138	25
Mindanao	2025	7	28	24	79	138	138	25
Mindanao	2025	7	29	1	75	138	138	25
Mindanao	2025	7	29	2	74	138	138	25
Mindanao	2025	7	29	3	71	138	138	25
Mindanao	2025	7	29	4	69	138	138	25
Mindanao	2025	7	29	5	71	138	138	25
Mindanao	2025	7	29	6	72	138	138	25
Mindanao	2025	7	29	7	70	138	138	25
Mindanao	2025	7	29	8	78	138	138	25
Mindanao	2025	7	29	9	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	7	29	10	96	138	138	25
Mindanao	2025	7	29	11	101	138	138	25
Mindanao	2025	7	29	12	100	138	138	25
Mindanao	2025	7	29	13	101	138	138	25
Mindanao	2025	7	29	14	106	138	138	25
Mindanao	2025	7	29	15	105	138	138	25
Mindanao	2025	7	29	16	104	138	138	25
Mindanao	2025	7	29	17	97	138	138	25
Mindanao	2025	7	29	18	94	138	138	25
Mindanao	2025	7	29	19	99	138	138	25
Mindanao	2025	7	29	20	97	138	138	25
Mindanao	2025	7	29	21	94	138	138	25
Mindanao	2025	7	29	22	90	138	138	25
Mindanao	2025	7	29	23	85	138	138	25
Mindanao	2025	7	29	24	80	138	138	25
Mindanao	2025	7	30	1	77	138	138	25
Mindanao	2025	7	30	2	73	138	138	25
Mindanao	2025	7	30	3	70	138	138	25
Mindanao	2025	7	30	4	69	138	138	25
Mindanao	2025	7	30	5	68	138	138	25
Mindanao	2025	7	30	6	72	138	138	25
Mindanao	2025	7	30	7	69	138	138	25
Mindanao	2025	7	30	8	78	138	138	25
Mindanao	2025	7	30	9	90	138	138	25
Mindanao	2025	7	30	10	97	138	138	25
Mindanao	2025	7	30	11	101	138	138	25
Mindanao	2025	7	30	12	100	138	138	25
Mindanao	2025	7	30	13	103	138	138	25
Mindanao	2025	7	30	14	107	138	138	25
Mindanao	2025	7	30	15	106	138	138	25
Mindanao	2025	7	30	16	104	138	138	25
Mindanao	2025	7	30	17	99	138	138	25
Mindanao	2025	7	30	18	96	138	138	25
Mindanao	2025	7	30	19	101	138	138	25
Mindanao	2025	7	30	20	98	138	138	25
Mindanao	2025	7	30	21	96	138	138	25
Mindanao	2025	7	30	22	92	138	138	25
Mindanao	2025	7	30	23	87	138	138	25
Mindanao	2025	7	30	24	82	138	138	25
Mindanao	2025	7	31	1	78	138	138	25
Mindanao	2025	7	31	2	74	138	138	25
Mindanao	2025	7	31	3	72	138	138	25
Mindanao	2025	7	31	4	71	138	138	25
Mindanao	2025	7	31	5	70	138	138	25
Mindanao	2025	7	31	6	71	138	138	25
Mindanao	2025	7	31	7	69	138	138	25
Mindanao	2025	7	31	8	79	138	138	25
Mindanao	2025	7	31	9	90	138	138	25
Mindanao	2025	7	31	10	97	138	138	25
Mindanao	2025	7	31	11	102	138	138	25
Mindanao	2025	7	31	12	100	138	138	25
Mindanao	2025	7	31	13	102	138	138	25
Mindanao	2025	7	31	14	106	138	138	25
Mindanao	2025	7	31	15	104	138	138	25
Mindanao	2025	7	31	16	102	138	138	25
Mindanao	2025	7	31	17	95	138	138	25
Mindanao	2025	7	31	18	94	138	138	25
Mindanao	2025	7	31	19	98	138	138	25
Mindanao	2025	7	31	20	98	138	138	25
Mindanao	2025	7	31	21	96	138	138	25
Mindanao	2025	7	31	22	90	138	138	25
Mindanao	2025	7	31	23	84	138	138	25
Mindanao	2025	7	31	24	78	138	138	25
Mindanao	2025	8	1	1	76	138	138	25
Mindanao	2025	8	1	2	72	138	138	25
Mindanao	2025	8	1	3	69	138	138	25
Mindanao	2025	8	1	4	70	138	138	25
Mindanao	2025	8	1	5	69	138	138	25
Mindanao	2025	8	1	6	71	138	138	25
Mindanao	2025	8	1	7	68	138	138	25
Mindanao	2025	8	1	8	78	138	138	25
Mindanao	2025	8	1	9	90	138	138	25
Mindanao	2025	8	1	10	97	138	138	25
Mindanao	2025	8	1	11	102	138	138	25
Mindanao	2025	8	1	12	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	1	13	100	138	138	25
Mindanao	2025	8	1	14	105	138	138	25
Mindanao	2025	8	1	15	105	138	138	25
Mindanao	2025	8	1	16	101	138	138	25
Mindanao	2025	8	1	17	96	138	138	25
Mindanao	2025	8	1	18	94	138	138	25
Mindanao	2025	8	1	19	94	138	138	25
Mindanao	2025	8	1	20	96	138	138	25
Mindanao	2025	8	1	21	91	138	138	25
Mindanao	2025	8	1	22	87	138	138	25
Mindanao	2025	8	1	23	81	138	138	25
Mindanao	2025	8	1	24	77	138	138	25
Mindanao	2025	8	2	1	74	138	138	25
Mindanao	2025	8	2	2	72	138	138	25
Mindanao	2025	8	2	3	69	138	138	25
Mindanao	2025	8	2	4	67	138	138	25
Mindanao	2025	8	2	5	68	138	138	25
Mindanao	2025	8	2	6	69	138	138	25
Mindanao	2025	8	2	7	65	138	138	25
Mindanao	2025	8	2	8	71	138	138	25
Mindanao	2025	8	2	9	78	138	138	25
Mindanao	2025	8	2	10	85	138	138	25
Mindanao	2025	8	2	11	89	138	138	25
Mindanao	2025	8	2	12	89	138	138	25
Mindanao	2025	8	2	13	89	138	138	25
Mindanao	2025	8	2	14	95	138	138	25
Mindanao	2025	8	2	15	95	138	138	25
Mindanao	2025	8	2	16	93	138	138	25
Mindanao	2025	8	2	17	89	138	138	25
Mindanao	2025	8	2	18	90	138	138	25
Mindanao	2025	8	2	19	98	138	138	25
Mindanao	2025	8	2	20	95	138	138	25
Mindanao	2025	8	2	21	93	138	138	25
Mindanao	2025	8	2	22	89	138	138	25
Mindanao	2025	8	2	23	83	138	138	25
Mindanao	2025	8	2	24	80	138	138	25
Mindanao	2025	8	3	1	76	138	138	25
Mindanao	2025	8	3	2	73	138	138	25
Mindanao	2025	8	3	3	71	138	138	25
Mindanao	2025	8	3	4	68	138	138	25
Mindanao	2025	8	3	5	68	138	138	25
Mindanao	2025	8	3	6	67	138	138	25
Mindanao	2025	8	3	7	64	138	138	25
Mindanao	2025	8	3	8	66	138	138	25
Mindanao	2025	8	3	9	69	138	138	25
Mindanao	2025	8	3	10	72	138	138	25
Mindanao	2025	8	3	11	77	138	138	25
Mindanao	2025	8	3	12	78	138	138	25
Mindanao	2025	8	3	13	79	138	138	25
Mindanao	2025	8	3	14	81	138	138	25
Mindanao	2025	8	3	15	78	138	138	25
Mindanao	2025	8	3	16	79	138	138	25
Mindanao	2025	8	3	17	79	138	138	25
Mindanao	2025	8	3	18	84	138	138	25
Mindanao	2025	8	3	19	91	138	138	25
Mindanao	2025	8	3	20	88	138	138	25
Mindanao	2025	8	3	21	87	138	138	25
Mindanao	2025	8	3	22	84	138	138	25
Mindanao	2025	8	3	23	80	138	138	25
Mindanao	2025	8	3	24	76	138	138	25
Mindanao	2025	8	4	1	73	138	138	25
Mindanao	2025	8	4	2	68	138	138	25
Mindanao	2025	8	4	3	68	138	138	25
Mindanao	2025	8	4	4	65	138	138	25
Mindanao	2025	8	4	5	67	138	138	25
Mindanao	2025	8	4	6	68	138	138	25
Mindanao	2025	8	4	7	66	138	138	25
Mindanao	2025	8	4	8	76	138	138	25
Mindanao	2025	8	4	9	87	138	138	25
Mindanao	2025	8	4	10	95	138	138	25
Mindanao	2025	8	4	11	99	138	138	25
Mindanao	2025	8	4	12	97	138	138	25
Mindanao	2025	8	4	13	98	138	138	25
Mindanao	2025	8	4	14	98	138	138	25
Mindanao	2025	8	4	15	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	4	16	97	138	138	25
Mindanao	2025	8	4	17	95	138	138	25
Mindanao	2025	8	4	18	92	138	138	25
Mindanao	2025	8	4	19	95	138	138	25
Mindanao	2025	8	4	20	92	138	138	25
Mindanao	2025	8	4	21	92	138	138	25
Mindanao	2025	8	4	22	89	138	138	25
Mindanao	2025	8	4	23	84	138	138	25
Mindanao	2025	8	4	24	80	138	138	25
Mindanao	2025	8	5	1	76	138	138	25
Mindanao	2025	8	5	2	73	138	138	25
Mindanao	2025	8	5	3	71	138	138	25
Mindanao	2025	8	5	4	69	138	138	25
Mindanao	2025	8	5	5	70	138	138	25
Mindanao	2025	8	5	6	71	138	138	25
Mindanao	2025	8	5	7	69	138	138	25
Mindanao	2025	8	5	8	78	138	138	25
Mindanao	2025	8	5	9	90	138	138	25
Mindanao	2025	8	5	10	97	138	138	25
Mindanao	2025	8	5	11	101	138	138	25
Mindanao	2025	8	5	12	98	138	138	25
Mindanao	2025	8	5	13	100	138	138	25
Mindanao	2025	8	5	14	103	138	138	25
Mindanao	2025	8	5	15	101	138	138	25
Mindanao	2025	8	5	16	99	138	138	25
Mindanao	2025	8	5	17	96	138	138	25
Mindanao	2025	8	5	18	95	138	138	25
Mindanao	2025	8	5	19	97	138	138	25
Mindanao	2025	8	5	20	94	138	138	25
Mindanao	2025	8	5	21	93	138	138	25
Mindanao	2025	8	5	22	89	138	138	25
Mindanao	2025	8	5	23	85	138	138	25
Mindanao	2025	8	5	24	79	138	138	25
Mindanao	2025	8	6	1	76	138	138	25
Mindanao	2025	8	6	2	74	138	138	25
Mindanao	2025	8	6	3	71	138	138	25
Mindanao	2025	8	6	4	71	138	138	25
Mindanao	2025	8	6	5	71	138	138	25
Mindanao	2025	8	6	6	72	138	138	25
Mindanao	2025	8	6	7	71	138	138	25
Mindanao	2025	8	6	8	78	138	138	25
Mindanao	2025	8	6	9	86	138	138	25
Mindanao	2025	8	6	10	92	138	138	25
Mindanao	2025	8	6	11	102	138	138	25
Mindanao	2025	8	6	12	101	138	138	25
Mindanao	2025	8	6	13	102	138	138	25
Mindanao	2025	8	6	14	106	138	138	25
Mindanao	2025	8	6	15	106	138	138	25
Mindanao	2025	8	6	16	104	138	138	25
Mindanao	2025	8	6	17	98	138	138	25
Mindanao	2025	8	6	18	97	138	138	25
Mindanao	2025	8	6	19	100	138	138	25
Mindanao	2025	8	6	20	98	138	138	25
Mindanao	2025	8	6	21	94	138	138	25
Mindanao	2025	8	6	22	92	138	138	25
Mindanao	2025	8	6	23	86	138	138	25
Mindanao	2025	8	6	24	80	138	138	25
Mindanao	2025	8	7	1	77	138	138	25
Mindanao	2025	8	7	2	76	138	138	25
Mindanao	2025	8	7	3	74	138	138	25
Mindanao	2025	8	7	4	74	138	138	25
Mindanao	2025	8	7	5	74	138	138	25
Mindanao	2025	8	7	6	74	138	138	25
Mindanao	2025	8	7	7	71	138	138	25
Mindanao	2025	8	7	8	80	138	138	25
Mindanao	2025	8	7	9	89	138	138	25
Mindanao	2025	8	7	10	96	138	138	25
Mindanao	2025	8	7	11	100	138	138	25
Mindanao	2025	8	7	12	96	138	138	25
Mindanao	2025	8	7	13	98	138	138	25
Mindanao	2025	8	7	14	101	138	138	25
Mindanao	2025	8	7	15	99	138	138	25
Mindanao	2025	8	7	16	95	138	138	25
Mindanao	2025	8	7	17	92	138	138	25
Mindanao	2025	8	7	18	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	7	19	94	138	138	25
Mindanao	2025	8	7	20	93	138	138	25
Mindanao	2025	8	7	21	89	138	138	25
Mindanao	2025	8	7	22	87	138	138	25
Mindanao	2025	8	7	23	81	138	138	25
Mindanao	2025	8	7	24	78	138	138	25
Mindanao	2025	8	8	1	75	138	138	25
Mindanao	2025	8	8	2	74	138	138	25
Mindanao	2025	8	8	3	71	138	138	25
Mindanao	2025	8	8	4	69	138	138	25
Mindanao	2025	8	8	5	71	138	138	25
Mindanao	2025	8	8	6	73	138	138	25
Mindanao	2025	8	8	7	70	138	138	25
Mindanao	2025	8	8	8	78	138	138	25
Mindanao	2025	8	8	9	88	138	138	25
Mindanao	2025	8	8	10	93	138	138	25
Mindanao	2025	8	8	11	98	138	138	25
Mindanao	2025	8	8	12	95	138	138	25
Mindanao	2025	8	8	13	97	138	138	25
Mindanao	2025	8	8	14	100	138	138	25
Mindanao	2025	8	8	15	98	138	138	25
Mindanao	2025	8	8	16	95	138	138	25
Mindanao	2025	8	8	17	92	138	138	25
Mindanao	2025	8	8	18	94	138	138	25
Mindanao	2025	8	8	19	95	138	138	25
Mindanao	2025	8	8	20	93	138	138	25
Mindanao	2025	8	8	21	90	138	138	25
Mindanao	2025	8	8	22	86	138	138	25
Mindanao	2025	8	8	23	82	138	138	25
Mindanao	2025	8	8	24	77	138	138	25
Mindanao	2025	8	9	1	73	138	138	25
Mindanao	2025	8	9	2	72	138	138	25
Mindanao	2025	8	9	3	71	138	138	25
Mindanao	2025	8	9	4	70	138	138	25
Mindanao	2025	8	9	5	70	138	138	25
Mindanao	2025	8	9	6	70	138	138	25
Mindanao	2025	8	9	7	68	138	138	25
Mindanao	2025	8	9	8	71	138	138	25
Mindanao	2025	8	9	9	77	138	138	25
Mindanao	2025	8	9	10	82	138	138	25
Mindanao	2025	8	9	11	84	138	138	25
Mindanao	2025	8	9	12	84	138	138	25
Mindanao	2025	8	9	13	84	138	138	25
Mindanao	2025	8	9	14	86	138	138	25
Mindanao	2025	8	9	15	85	138	138	25
Mindanao	2025	8	9	16	83	138	138	25
Mindanao	2025	8	9	17	81	138	138	25
Mindanao	2025	8	9	18	88	138	138	25
Mindanao	2025	8	9	19	90	138	138	25
Mindanao	2025	8	9	20	87	138	138	25
Mindanao	2025	8	9	21	84	138	138	25
Mindanao	2025	8	9	22	80	138	138	25
Mindanao	2025	8	9	23	76	138	138	25
Mindanao	2025	8	9	24	74	138	138	25
Mindanao	2025	8	10	1	72	138	138	25
Mindanao	2025	8	10	2	69	138	138	25
Mindanao	2025	8	10	3	68	138	138	25
Mindanao	2025	8	10	4	66	138	138	25
Mindanao	2025	8	10	5	66	138	138	25
Mindanao	2025	8	10	6	65	138	138	25
Mindanao	2025	8	10	7	65	138	138	25
Mindanao	2025	8	10	8	66	138	138	25
Mindanao	2025	8	10	9	69	138	138	25
Mindanao	2025	8	10	10	73	138	138	25
Mindanao	2025	8	10	11	76	138	138	25
Mindanao	2025	8	10	12	79	138	138	25
Mindanao	2025	8	10	13	79	138	138	25
Mindanao	2025	8	10	14	79	138	138	25
Mindanao	2025	8	10	15	79	138	138	25
Mindanao	2025	8	10	16	78	138	138	25
Mindanao	2025	8	10	17	78	138	138	25
Mindanao	2025	8	10	18	84	138	138	25
Mindanao	2025	8	10	19	87	138	138	25
Mindanao	2025	8	10	20	84	138	138	25
Mindanao	2025	8	10	21	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	10	22	78	138	138	25
Mindanao	2025	8	10	23	75	138	138	25
Mindanao	2025	8	10	24	70	138	138	25
Mindanao	2025	8	11	1	68	138	138	25
Mindanao	2025	8	11	2	67	138	138	25
Mindanao	2025	8	11	3	66	138	138	25
Mindanao	2025	8	11	4	64	138	138	25
Mindanao	2025	8	11	5	65	138	138	25
Mindanao	2025	8	11	6	67	138	138	25
Mindanao	2025	8	11	7	67	138	138	25
Mindanao	2025	8	11	8	74	138	138	25
Mindanao	2025	8	11	9	83	138	138	25
Mindanao	2025	8	11	10	91	138	138	25
Mindanao	2025	8	11	11	95	138	138	25
Mindanao	2025	8	11	12	94	138	138	25
Mindanao	2025	8	11	13	95	138	138	25
Mindanao	2025	8	11	14	98	138	138	25
Mindanao	2025	8	11	15	97	138	138	25
Mindanao	2025	8	11	16	93	138	138	25
Mindanao	2025	8	11	17	92	138	138	25
Mindanao	2025	8	11	18	93	138	138	25
Mindanao	2025	8	11	19	93	138	138	25
Mindanao	2025	8	11	20	90	138	138	25
Mindanao	2025	8	11	21	88	138	138	25
Mindanao	2025	8	11	22	84	138	138	25
Mindanao	2025	8	11	23	79	138	138	25
Mindanao	2025	8	11	24	76	138	138	25
Mindanao	2025	8	12	1	73	138	138	25
Mindanao	2025	8	12	2	70	138	138	25
Mindanao	2025	8	12	3	68	138	138	25
Mindanao	2025	8	12	4	65	138	138	25
Mindanao	2025	8	12	5	68	138	138	25
Mindanao	2025	8	12	6	71	138	138	25
Mindanao	2025	8	12	7	70	138	138	25
Mindanao	2025	8	12	8	75	138	138	25
Mindanao	2025	8	12	9	86	138	138	25
Mindanao	2025	8	12	10	91	138	138	25
Mindanao	2025	8	12	11	95	138	138	25
Mindanao	2025	8	12	12	94	138	138	25
Mindanao	2025	8	12	13	96	138	138	25
Mindanao	2025	8	12	14	98	138	138	25
Mindanao	2025	8	12	15	94	138	138	25
Mindanao	2025	8	12	16	93	138	138	25
Mindanao	2025	8	12	17	91	138	138	25
Mindanao	2025	8	12	18	94	138	138	25
Mindanao	2025	8	12	19	94	138	138	25
Mindanao	2025	8	12	20	92	138	138	25
Mindanao	2025	8	12	21	91	138	138	25
Mindanao	2025	8	12	22	85	138	138	25
Mindanao	2025	8	12	23	81	138	138	25
Mindanao	2025	8	12	24	77	138	138	25
Mindanao	2025	8	13	1	73	138	138	25
Mindanao	2025	8	13	2	71	138	138	25
Mindanao	2025	8	13	3	69	138	138	25
Mindanao	2025	8	13	4	69	138	138	25
Mindanao	2025	8	13	5	70	138	138	25
Mindanao	2025	8	13	6	72	138	138	25
Mindanao	2025	8	13	7	69	138	138	25
Mindanao	2025	8	13	8	76	138	138	25
Mindanao	2025	8	13	9	86	138	138	25
Mindanao	2025	8	13	10	92	138	138	25
Mindanao	2025	8	13	11	95	138	138	25
Mindanao	2025	8	13	12	94	138	138	25
Mindanao	2025	8	13	13	96	138	138	25
Mindanao	2025	8	13	14	98	138	138	25
Mindanao	2025	8	13	15	95	138	138	25
Mindanao	2025	8	13	16	93	138	138	25
Mindanao	2025	8	13	17	88	138	138	25
Mindanao	2025	8	13	18	89	138	138	25
Mindanao	2025	8	13	19	89	138	138	25
Mindanao	2025	8	13	20	84	138	138	25
Mindanao	2025	8	13	21	84	138	138	25
Mindanao	2025	8	13	22	80	138	138	25
Mindanao	2025	8	13	23	75	138	138	25
Mindanao	2025	8	13	24	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	14	1	68	138	138	25
Mindanao	2025	8	14	2	66	138	138	25
Mindanao	2025	8	14	3	65	138	138	25
Mindanao	2025	8	14	4	65	138	138	25
Mindanao	2025	8	14	5	65	138	138	25
Mindanao	2025	8	14	6	67	138	138	25
Mindanao	2025	8	14	7	65	138	138	25
Mindanao	2025	8	14	8	72	138	138	25
Mindanao	2025	8	14	9	83	138	138	25
Mindanao	2025	8	14	10	90	138	138	25
Mindanao	2025	8	14	11	94	138	138	25
Mindanao	2025	8	14	12	91	138	138	25
Mindanao	2025	8	14	13	92	138	138	25
Mindanao	2025	8	14	14	97	138	138	25
Mindanao	2025	8	14	15	95	138	138	25
Mindanao	2025	8	14	16	93	138	138	25
Mindanao	2025	8	14	17	90	138	138	25
Mindanao	2025	8	14	18	93	138	138	25
Mindanao	2025	8	14	19	92	138	138	25
Mindanao	2025	8	14	20	90	138	138	25
Mindanao	2025	8	14	21	85	138	138	25
Mindanao	2025	8	14	22	81	138	138	25
Mindanao	2025	8	14	23	77	138	138	25
Mindanao	2025	8	14	24	73	138	138	25
Mindanao	2025	8	15	1	70	138	138	25
Mindanao	2025	8	15	2	68	138	138	25
Mindanao	2025	8	15	3	65	138	138	25
Mindanao	2025	8	15	4	64	138	138	25
Mindanao	2025	8	15	5	66	138	138	25
Mindanao	2025	8	15	6	68	138	138	25
Mindanao	2025	8	15	7	67	138	138	25
Mindanao	2025	8	15	8	73	138	138	25
Mindanao	2025	8	15	9	84	138	138	25
Mindanao	2025	8	15	10	91	138	138	25
Mindanao	2025	8	15	11	95	138	138	25
Mindanao	2025	8	15	12	93	138	138	25
Mindanao	2025	8	15	13	95	138	138	25
Mindanao	2025	8	15	14	99	138	138	25
Mindanao	2025	8	15	15	96	138	138	25
Mindanao	2025	8	15	16	93	138	138	25
Mindanao	2025	8	15	17	90	138	138	25
Mindanao	2025	8	15	18	92	138	138	25
Mindanao	2025	8	15	19	91	138	138	25
Mindanao	2025	8	15	20	88	138	138	25
Mindanao	2025	8	15	21	85	138	138	25
Mindanao	2025	8	15	22	81	138	138	25
Mindanao	2025	8	15	23	76	138	138	25
Mindanao	2025	8	15	24	72	138	138	25
Mindanao	2025	8	16	1	69	138	138	25
Mindanao	2025	8	16	2	67	138	138	25
Mindanao	2025	8	16	3	65	138	138	25
Mindanao	2025	8	16	4	63	138	138	25
Mindanao	2025	8	16	5	65	138	138	25
Mindanao	2025	8	16	6	66	138	138	25
Mindanao	2025	8	16	7	65	138	138	25
Mindanao	2025	8	16	8	69	138	138	25
Mindanao	2025	8	16	9	76	138	138	25
Mindanao	2025	8	16	10	82	138	138	25
Mindanao	2025	8	16	11	85	138	138	25
Mindanao	2025	8	16	12	86	138	138	25
Mindanao	2025	8	16	13	87	138	138	25
Mindanao	2025	8	16	14	89	138	138	25
Mindanao	2025	8	16	15	87	138	138	25
Mindanao	2025	8	16	16	84	138	138	25
Mindanao	2025	8	16	17	85	138	138	25
Mindanao	2025	8	16	18	87	138	138	25
Mindanao	2025	8	16	19	87	138	138	25
Mindanao	2025	8	16	20	83	138	138	25
Mindanao	2025	8	16	21	84	138	138	25
Mindanao	2025	8	16	22	78	138	138	25
Mindanao	2025	8	16	23	74	138	138	25
Mindanao	2025	8	16	24	69	138	138	25
Mindanao	2025	8	17	1	67	138	138	25
Mindanao	2025	8	17	2	63	138	138	25
Mindanao	2025	8	17	3	63	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	17	4	61	138	138	25
Mindanao	2025	8	17	5	62	138	138	25
Mindanao	2025	8	17	6	62	138	138	25
Mindanao	2025	8	17	7	62	138	138	25
Mindanao	2025	8	17	8	63	138	138	25
Mindanao	2025	8	17	9	67	138	138	25
Mindanao	2025	8	17	10	72	138	138	25
Mindanao	2025	8	17	11	76	138	138	25
Mindanao	2025	8	17	12	78	138	138	25
Mindanao	2025	8	17	13	79	138	138	25
Mindanao	2025	8	17	14	80	138	138	25
Mindanao	2025	8	17	15	79	138	138	25
Mindanao	2025	8	17	16	77	138	138	25
Mindanao	2025	8	17	17	77	138	138	25
Mindanao	2025	8	17	18	83	138	138	25
Mindanao	2025	8	17	19	82	138	138	25
Mindanao	2025	8	17	20	82	138	138	25
Mindanao	2025	8	17	21	79	138	138	25
Mindanao	2025	8	17	22	75	138	138	25
Mindanao	2025	8	17	23	71	138	138	25
Mindanao	2025	8	17	24	67	138	138	25
Mindanao	2025	8	18	1	68	138	138	25
Mindanao	2025	8	18	2	67	138	138	25
Mindanao	2025	8	18	3	66	138	138	25
Mindanao	2025	8	18	4	64	138	138	25
Mindanao	2025	8	18	5	65	138	138	25
Mindanao	2025	8	18	6	67	138	138	25
Mindanao	2025	8	18	7	67	138	138	25
Mindanao	2025	8	18	8	74	138	138	25
Mindanao	2025	8	18	9	83	138	138	25
Mindanao	2025	8	18	10	91	138	138	25
Mindanao	2025	8	18	11	95	138	138	25
Mindanao	2025	8	18	12	94	138	138	25
Mindanao	2025	8	18	13	95	138	138	25
Mindanao	2025	8	18	14	98	138	138	25
Mindanao	2025	8	18	15	97	138	138	25
Mindanao	2025	8	18	16	93	138	138	25
Mindanao	2025	8	18	17	92	138	138	25
Mindanao	2025	8	18	18	93	138	138	25
Mindanao	2025	8	18	19	93	138	138	25
Mindanao	2025	8	18	20	90	138	138	25
Mindanao	2025	8	18	21	88	138	138	25
Mindanao	2025	8	18	22	84	138	138	25
Mindanao	2025	8	18	23	79	138	138	25
Mindanao	2025	8	18	24	76	138	138	25
Mindanao	2025	8	19	1	65	138	138	25
Mindanao	2025	8	19	2	62	138	138	25
Mindanao	2025	8	19	3	61	138	138	25
Mindanao	2025	8	19	4	59	138	138	25
Mindanao	2025	8	19	5	63	138	138	25
Mindanao	2025	8	19	6	65	138	138	25
Mindanao	2025	8	19	7	63	138	138	25
Mindanao	2025	8	19	8	71	138	138	25
Mindanao	2025	8	19	9	82	138	138	25
Mindanao	2025	8	19	10	90	138	138	25
Mindanao	2025	8	19	11	94	138	138	25
Mindanao	2025	8	19	12	93	138	138	25
Mindanao	2025	8	19	13	95	138	138	25
Mindanao	2025	8	19	14	97	138	138	25
Mindanao	2025	8	19	15	96	138	138	25
Mindanao	2025	8	19	16	93	138	138	25
Mindanao	2025	8	19	17	90	138	138	25
Mindanao	2025	8	19	18	91	138	138	25
Mindanao	2025	8	19	19	91	138	138	25
Mindanao	2025	8	19	20	88	138	138	25
Mindanao	2025	8	19	21	85	138	138	25
Mindanao	2025	8	19	22	80	138	138	25
Mindanao	2025	8	19	23	75	138	138	25
Mindanao	2025	8	19	24	71	138	138	25
Mindanao	2025	8	20	1	68	138	138	25
Mindanao	2025	8	20	2	66	138	138	25
Mindanao	2025	8	20	3	64	138	138	25
Mindanao	2025	8	20	4	63	138	138	25
Mindanao	2025	8	20	5	64	138	138	25
Mindanao	2025	8	20	6	67	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	20	7	65	138	138	25
Mindanao	2025	8	20	8	72	138	138	25
Mindanao	2025	8	20	9	83	138	138	25
Mindanao	2025	8	20	10	88	138	138	25
Mindanao	2025	8	20	11	93	138	138	25
Mindanao	2025	8	20	12	90	138	138	25
Mindanao	2025	8	20	13	91	138	138	25
Mindanao	2025	8	20	14	96	138	138	25
Mindanao	2025	8	20	15	95	138	138	25
Mindanao	2025	8	20	16	94	138	138	25
Mindanao	2025	8	20	17	89	138	138	25
Mindanao	2025	8	20	18	92	138	138	25
Mindanao	2025	8	20	19	93	138	138	25
Mindanao	2025	8	20	20	89	138	138	25
Mindanao	2025	8	20	21	86	138	138	25
Mindanao	2025	8	20	22	81	138	138	25
Mindanao	2025	8	20	23	76	138	138	25
Mindanao	2025	8	20	24	72	138	138	25
Mindanao	2025	8	21	1	64	138	138	25
Mindanao	2025	8	21	2	63	138	138	25
Mindanao	2025	8	21	3	61	138	138	25
Mindanao	2025	8	21	4	60	138	138	25
Mindanao	2025	8	21	5	60	138	138	25
Mindanao	2025	8	21	6	61	138	138	25
Mindanao	2025	8	21	7	60	138	138	25
Mindanao	2025	8	21	8	63	138	138	25
Mindanao	2025	8	21	9	70	138	138	25
Mindanao	2025	8	21	10	75	138	138	25
Mindanao	2025	8	21	11	79	138	138	25
Mindanao	2025	8	21	12	79	138	138	25
Mindanao	2025	8	21	13	80	138	138	25
Mindanao	2025	8	21	14	81	138	138	25
Mindanao	2025	8	21	15	80	138	138	25
Mindanao	2025	8	21	16	79	138	138	25
Mindanao	2025	8	21	17	79	138	138	25
Mindanao	2025	8	21	18	86	138	138	25
Mindanao	2025	8	21	19	86	138	138	25
Mindanao	2025	8	21	20	84	138	138	25
Mindanao	2025	8	21	21	82	138	138	25
Mindanao	2025	8	21	22	77	138	138	25
Mindanao	2025	8	21	23	71	138	138	25
Mindanao	2025	8	21	24	67	138	138	25
Mindanao	2025	8	22	1	69	138	138	25
Mindanao	2025	8	22	2	66	138	138	25
Mindanao	2025	8	22	3	65	138	138	25
Mindanao	2025	8	22	4	64	138	138	25
Mindanao	2025	8	22	5	65	138	138	25
Mindanao	2025	8	22	6	67	138	138	25
Mindanao	2025	8	22	7	65	138	138	25
Mindanao	2025	8	22	8	73	138	138	25
Mindanao	2025	8	22	9	86	138	138	25
Mindanao	2025	8	22	10	93	138	138	25
Mindanao	2025	8	22	11	97	138	138	25
Mindanao	2025	8	22	12	96	138	138	25
Mindanao	2025	8	22	13	98	138	138	25
Mindanao	2025	8	22	14	101	138	138	25
Mindanao	2025	8	22	15	99	138	138	25
Mindanao	2025	8	22	16	95	138	138	25
Mindanao	2025	8	22	17	91	138	138	25
Mindanao	2025	8	22	18	94	138	138	25
Mindanao	2025	8	22	19	94	138	138	25
Mindanao	2025	8	22	20	92	138	138	25
Mindanao	2025	8	22	21	87	138	138	25
Mindanao	2025	8	22	22	85	138	138	25
Mindanao	2025	8	22	23	79	138	138	25
Mindanao	2025	8	22	24	75	138	138	25
Mindanao	2025	8	23	1	69	138	138	25
Mindanao	2025	8	23	2	68	138	138	25
Mindanao	2025	8	23	3	67	138	138	25
Mindanao	2025	8	23	4	66	138	138	25
Mindanao	2025	8	23	5	66	138	138	25
Mindanao	2025	8	23	6	67	138	138	25
Mindanao	2025	8	23	7	65	138	138	25
Mindanao	2025	8	23	8	71	138	138	25
Mindanao	2025	8	23	9	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	23	10	85	138	138	25
Mindanao	2025	8	23	11	89	138	138	25
Mindanao	2025	8	23	12	89	138	138	25
Mindanao	2025	8	23	13	90	138	138	25
Mindanao	2025	8	23	14	94	138	138	25
Mindanao	2025	8	23	15	92	138	138	25
Mindanao	2025	8	23	16	89	138	138	25
Mindanao	2025	8	23	17	87	138	138	25
Mindanao	2025	8	23	18	92	138	138	25
Mindanao	2025	8	23	19	90	138	138	25
Mindanao	2025	8	23	20	88	138	138	25
Mindanao	2025	8	23	21	87	138	138	25
Mindanao	2025	8	23	22	82	138	138	25
Mindanao	2025	8	23	23	77	138	138	25
Mindanao	2025	8	23	24	73	138	138	25
Mindanao	2025	8	24	1	69	138	138	25
Mindanao	2025	8	24	2	67	138	138	25
Mindanao	2025	8	24	3	65	138	138	25
Mindanao	2025	8	24	4	63	138	138	25
Mindanao	2025	8	24	5	64	138	138	25
Mindanao	2025	8	24	6	61	138	138	25
Mindanao	2025	8	24	7	61	138	138	25
Mindanao	2025	8	24	8	61	138	138	25
Mindanao	2025	8	24	9	65	138	138	25
Mindanao	2025	8	24	10	70	138	138	25
Mindanao	2025	8	24	11	74	138	138	25
Mindanao	2025	8	24	12	76	138	138	25
Mindanao	2025	8	24	13	77	138	138	25
Mindanao	2025	8	24	14	79	138	138	25
Mindanao	2025	8	24	15	77	138	138	25
Mindanao	2025	8	24	16	75	138	138	25
Mindanao	2025	8	24	17	77	138	138	25
Mindanao	2025	8	24	18	83	138	138	25
Mindanao	2025	8	24	19	85	138	138	25
Mindanao	2025	8	24	20	83	138	138	25
Mindanao	2025	8	24	21	84	138	138	25
Mindanao	2025	8	24	22	80	138	138	25
Mindanao	2025	8	24	23	75	138	138	25
Mindanao	2025	8	24	24	70	138	138	25
Mindanao	2025	8	25	1	67	138	138	25
Mindanao	2025	8	25	2	66	138	138	25
Mindanao	2025	8	25	3	64	138	138	25
Mindanao	2025	8	25	4	62	138	138	25
Mindanao	2025	8	25	5	63	138	138	25
Mindanao	2025	8	25	6	62	138	138	25
Mindanao	2025	8	25	7	61	138	138	25
Mindanao	2025	8	25	8	64	138	138	25
Mindanao	2025	8	25	9	70	138	138	25
Mindanao	2025	8	25	10	78	138	138	25
Mindanao	2025	8	25	11	81	138	138	25
Mindanao	2025	8	25	12	80	138	138	25
Mindanao	2025	8	25	13	80	138	138	25
Mindanao	2025	8	25	14	82	138	138	25
Mindanao	2025	8	25	15	81	138	138	25
Mindanao	2025	8	25	16	79	138	138	25
Mindanao	2025	8	25	17	79	138	138	25
Mindanao	2025	8	25	18	86	138	138	25
Mindanao	2025	8	25	19	87	138	138	25
Mindanao	2025	8	25	20	84	138	138	25
Mindanao	2025	8	25	21	84	138	138	25
Mindanao	2025	8	25	22	79	138	138	25
Mindanao	2025	8	25	23	74	138	138	25
Mindanao	2025	8	25	24	70	138	138	25
Mindanao	2025	8	26	1	68	138	138	25
Mindanao	2025	8	26	2	65	138	138	25
Mindanao	2025	8	26	3	62	138	138	25
Mindanao	2025	8	26	4	63	138	138	25
Mindanao	2025	8	26	5	67	138	138	25
Mindanao	2025	8	26	6	69	138	138	25
Mindanao	2025	8	26	7	62	138	138	25
Mindanao	2025	8	26	8	71	138	138	25
Mindanao	2025	8	26	9	84	138	138	25
Mindanao	2025	8	26	10	90	138	138	25
Mindanao	2025	8	26	11	94	138	138	25
Mindanao	2025	8	26	12	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	26	13	94	138	138	25
Mindanao	2025	8	26	14	98	138	138	25
Mindanao	2025	8	26	15	97	138	138	25
Mindanao	2025	8	26	16	93	138	138	25
Mindanao	2025	8	26	17	90	138	138	25
Mindanao	2025	8	26	18	94	138	138	25
Mindanao	2025	8	26	19	97	138	138	25
Mindanao	2025	8	26	20	95	138	138	25
Mindanao	2025	8	26	21	93	138	138	25
Mindanao	2025	8	26	22	86	138	138	25
Mindanao	2025	8	26	23	81	138	138	25
Mindanao	2025	8	26	24	77	138	138	25
Mindanao	2025	8	27	1	72	138	138	25
Mindanao	2025	8	27	2	71	138	138	25
Mindanao	2025	8	27	3	67	138	138	25
Mindanao	2025	8	27	4	66	138	138	25
Mindanao	2025	8	27	5	70	138	138	25
Mindanao	2025	8	27	6	71	138	138	25
Mindanao	2025	8	27	7	64	138	138	25
Mindanao	2025	8	27	8	75	138	138	25
Mindanao	2025	8	27	9	86	138	138	25
Mindanao	2025	8	27	10	93	138	138	25
Mindanao	2025	8	27	11	98	138	138	25
Mindanao	2025	8	27	12	97	138	138	25
Mindanao	2025	8	27	13	99	138	138	25
Mindanao	2025	8	27	14	103	138	138	25
Mindanao	2025	8	27	15	103	138	138	25
Mindanao	2025	8	27	16	100	138	138	25
Mindanao	2025	8	27	17	96	138	138	25
Mindanao	2025	8	27	18	98	138	138	25
Mindanao	2025	8	27	19	100	138	138	25
Mindanao	2025	8	27	20	98	138	138	25
Mindanao	2025	8	27	21	95	138	138	25
Mindanao	2025	8	27	22	90	138	138	25
Mindanao	2025	8	27	23	84	138	138	25
Mindanao	2025	8	27	24	79	138	138	25
Mindanao	2025	8	28	1	76	138	138	25
Mindanao	2025	8	28	2	71	138	138	25
Mindanao	2025	8	28	3	69	138	138	25
Mindanao	2025	8	28	4	69	138	138	25
Mindanao	2025	8	28	5	73	138	138	25
Mindanao	2025	8	28	6	73	138	138	25
Mindanao	2025	8	28	7	67	138	138	25
Mindanao	2025	8	28	8	76	138	138	25
Mindanao	2025	8	28	9	87	138	138	25
Mindanao	2025	8	28	10	94	138	138	25
Mindanao	2025	8	28	11	98	138	138	25
Mindanao	2025	8	28	12	98	138	138	25
Mindanao	2025	8	28	13	99	138	138	25
Mindanao	2025	8	28	14	103	138	138	25
Mindanao	2025	8	28	15	102	138	138	25
Mindanao	2025	8	28	16	101	138	138	25
Mindanao	2025	8	28	17	95	138	138	25
Mindanao	2025	8	28	18	97	138	138	25
Mindanao	2025	8	28	19	98	138	138	25
Mindanao	2025	8	28	20	98	138	138	25
Mindanao	2025	8	28	21	96	138	138	25
Mindanao	2025	8	28	22	91	138	138	25
Mindanao	2025	8	28	23	84	138	138	25
Mindanao	2025	8	28	24	80	138	138	25
Mindanao	2025	8	29	1	76	138	138	25
Mindanao	2025	8	29	2	73	138	138	25
Mindanao	2025	8	29	3	70	138	138	25
Mindanao	2025	8	29	4	69	138	138	25
Mindanao	2025	8	29	5	72	138	138	25
Mindanao	2025	8	29	6	73	138	138	25
Mindanao	2025	8	29	7	68	138	138	25
Mindanao	2025	8	29	8	76	138	138	25
Mindanao	2025	8	29	9	86	138	138	25
Mindanao	2025	8	29	10	94	138	138	25
Mindanao	2025	8	29	11	98	138	138	25
Mindanao	2025	8	29	12	97	138	138	25
Mindanao	2025	8	29	13	98	138	138	25
Mindanao	2025	8	29	14	103	138	138	25
Mindanao	2025	8	29	15	101	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	8	29	16	99	138	138	25
Mindanao	2025	8	29	17	95	138	138	25
Mindanao	2025	8	29	18	97	138	138	25
Mindanao	2025	8	29	19	99	138	138	25
Mindanao	2025	8	29	20	96	138	138	25
Mindanao	2025	8	29	21	94	138	138	25
Mindanao	2025	8	29	22	90	138	138	25
Mindanao	2025	8	29	23	85	138	138	25
Mindanao	2025	8	29	24	80	138	138	25
Mindanao	2025	8	30	1	75	138	138	25
Mindanao	2025	8	30	2	73	138	138	25
Mindanao	2025	8	30	3	71	138	138	25
Mindanao	2025	8	30	4	67	138	138	25
Mindanao	2025	8	30	5	68	138	138	25
Mindanao	2025	8	30	6	68	138	138	25
Mindanao	2025	8	30	7	68	138	138	25
Mindanao	2025	8	30	8	73	138	138	25
Mindanao	2025	8	30	9	81	138	138	25
Mindanao	2025	8	30	10	87	138	138	25
Mindanao	2025	8	30	11	92	138	138	25
Mindanao	2025	8	30	12	92	138	138	25
Mindanao	2025	8	30	13	92	138	138	25
Mindanao	2025	8	30	14	96	138	138	25
Mindanao	2025	8	30	15	94	138	138	25
Mindanao	2025	8	30	16	91	138	138	25
Mindanao	2025	8	30	17	88	138	138	25
Mindanao	2025	8	30	18	93	138	138	25
Mindanao	2025	8	30	19	96	138	138	25
Mindanao	2025	8	30	20	93	138	138	25
Mindanao	2025	8	30	21	92	138	138	25
Mindanao	2025	8	30	22	87	138	138	25
Mindanao	2025	8	30	23	82	138	138	25
Mindanao	2025	8	30	24	77	138	138	25
Mindanao	2025	8	31	1	73	138	138	25
Mindanao	2025	8	31	2	71	138	138	25
Mindanao	2025	8	31	3	69	138	138	25
Mindanao	2025	8	31	4	67	138	138	25
Mindanao	2025	8	31	5	67	138	138	25
Mindanao	2025	8	31	6	67	138	138	25
Mindanao	2025	8	31	7	66	138	138	25
Mindanao	2025	8	31	8	65	138	138	25
Mindanao	2025	8	31	9	69	138	138	25
Mindanao	2025	8	31	10	73	138	138	25
Mindanao	2025	8	31	11	78	138	138	25
Mindanao	2025	8	31	12	80	138	138	25
Mindanao	2025	8	31	13	81	138	138	25
Mindanao	2025	8	31	14	82	138	138	25
Mindanao	2025	8	31	15	80	138	138	25
Mindanao	2025	8	31	16	79	138	138	25
Mindanao	2025	8	31	17	80	138	138	25
Mindanao	2025	8	31	18	87	138	138	25
Mindanao	2025	8	31	19	90	138	138	25
Mindanao	2025	8	31	20	89	138	138	25
Mindanao	2025	8	31	21	88	138	138	25
Mindanao	2025	8	31	22	82	138	138	25
Mindanao	2025	8	31	23	78	138	138	25
Mindanao	2025	8	31	24	72	138	138	25
Mindanao	2025	9	1	1	70	138	138	25
Mindanao	2025	9	1	2	67	138	138	25
Mindanao	2025	9	1	3	66	138	138	25
Mindanao	2025	9	1	4	64	138	138	25
Mindanao	2025	9	1	5	69	138	138	25
Mindanao	2025	9	1	6	70	138	138	25
Mindanao	2025	9	1	7	65	138	138	25
Mindanao	2025	9	1	8	75	138	138	25
Mindanao	2025	9	1	9	86	138	138	25
Mindanao	2025	9	1	10	95	138	138	25
Mindanao	2025	9	1	11	98	138	138	25
Mindanao	2025	9	1	12	98	138	138	25
Mindanao	2025	9	1	13	100	138	138	25
Mindanao	2025	9	1	14	104	138	138	25
Mindanao	2025	9	1	15	104	138	138	25
Mindanao	2025	9	1	16	102	138	138	25
Mindanao	2025	9	1	17	98	138	138	25
Mindanao	2025	9	1	18	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	1	19	99	138	138	25
Mindanao	2025	9	1	20	98	138	138	25
Mindanao	2025	9	1	21	95	138	138	25
Mindanao	2025	9	1	22	90	138	138	25
Mindanao	2025	9	1	23	84	138	138	25
Mindanao	2025	9	1	24	79	138	138	25
Mindanao	2025	9	2	1	76	138	138	25
Mindanao	2025	9	2	2	73	138	138	25
Mindanao	2025	9	2	3	71	138	138	25
Mindanao	2025	9	2	4	69	138	138	25
Mindanao	2025	9	2	5	73	138	138	25
Mindanao	2025	9	2	6	75	138	138	25
Mindanao	2025	9	2	7	68	138	138	25
Mindanao	2025	9	2	8	78	138	138	25
Mindanao	2025	9	2	9	89	138	138	25
Mindanao	2025	9	2	10	95	138	138	25
Mindanao	2025	9	2	11	101	138	138	25
Mindanao	2025	9	2	12	101	138	138	25
Mindanao	2025	9	2	13	102	138	138	25
Mindanao	2025	9	2	14	105	138	138	25
Mindanao	2025	9	2	15	103	138	138	25
Mindanao	2025	9	2	16	101	138	138	25
Mindanao	2025	9	2	17	96	138	138	25
Mindanao	2025	9	2	18	100	138	138	25
Mindanao	2025	9	2	19	100	138	138	25
Mindanao	2025	9	2	20	99	138	138	25
Mindanao	2025	9	2	21	96	138	138	25
Mindanao	2025	9	2	22	91	138	138	25
Mindanao	2025	9	2	23	86	138	138	25
Mindanao	2025	9	2	24	82	138	138	25
Mindanao	2025	9	3	1	77	138	138	25
Mindanao	2025	9	3	2	74	138	138	25
Mindanao	2025	9	3	3	71	138	138	25
Mindanao	2025	9	3	4	70	138	138	25
Mindanao	2025	9	3	5	73	138	138	25
Mindanao	2025	9	3	6	76	138	138	25
Mindanao	2025	9	3	7	68	138	138	25
Mindanao	2025	9	3	8	75	138	138	25
Mindanao	2025	9	3	9	82	138	138	25
Mindanao	2025	9	3	10	93	138	138	25
Mindanao	2025	9	3	11	98	138	138	25
Mindanao	2025	9	3	12	97	138	138	25
Mindanao	2025	9	3	13	97	138	138	25
Mindanao	2025	9	3	14	100	138	138	25
Mindanao	2025	9	3	15	99	138	138	25
Mindanao	2025	9	3	16	97	138	138	25
Mindanao	2025	9	3	17	94	138	138	25
Mindanao	2025	9	3	18	97	138	138	25
Mindanao	2025	9	3	19	97	138	138	25
Mindanao	2025	9	3	20	95	138	138	25
Mindanao	2025	9	3	21	93	138	138	25
Mindanao	2025	9	3	22	86	138	138	25
Mindanao	2025	9	3	23	81	138	138	25
Mindanao	2025	9	3	24	76	138	138	25
Mindanao	2025	9	4	1	73	138	138	25
Mindanao	2025	9	4	2	71	138	138	25
Mindanao	2025	9	4	3	69	138	138	25
Mindanao	2025	9	4	4	67	138	138	25
Mindanao	2025	9	4	5	71	138	138	25
Mindanao	2025	9	4	6	74	138	138	25
Mindanao	2025	9	4	7	66	138	138	25
Mindanao	2025	9	4	8	75	138	138	25
Mindanao	2025	9	4	9	86	138	138	25
Mindanao	2025	9	4	10	93	138	138	25
Mindanao	2025	9	4	11	98	138	138	25
Mindanao	2025	9	4	12	96	138	138	25
Mindanao	2025	9	4	13	98	138	138	25
Mindanao	2025	9	4	14	102	138	138	25
Mindanao	2025	9	4	15	101	138	138	25
Mindanao	2025	9	4	16	99	138	138	25
Mindanao	2025	9	4	17	96	138	138	25
Mindanao	2025	9	4	18	97	138	138	25
Mindanao	2025	9	4	19	99	138	138	25
Mindanao	2025	9	4	20	96	138	138	25
Mindanao	2025	9	4	21	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	4	22	87	138	138	25
Mindanao	2025	9	4	23	83	138	138	25
Mindanao	2025	9	4	24	77	138	138	25
Mindanao	2025	9	5	1	74	138	138	25
Mindanao	2025	9	5	2	71	138	138	25
Mindanao	2025	9	5	3	68	138	138	25
Mindanao	2025	9	5	4	67	138	138	25
Mindanao	2025	9	5	5	72	138	138	25
Mindanao	2025	9	5	6	73	138	138	25
Mindanao	2025	9	5	7	65	138	138	25
Mindanao	2025	9	5	8	75	138	138	25
Mindanao	2025	9	5	9	86	138	138	25
Mindanao	2025	9	5	10	94	138	138	25
Mindanao	2025	9	5	11	98	138	138	25
Mindanao	2025	9	5	12	98	138	138	25
Mindanao	2025	9	5	13	99	138	138	25
Mindanao	2025	9	5	14	101	138	138	25
Mindanao	2025	9	5	15	97	138	138	25
Mindanao	2025	9	5	16	95	138	138	25
Mindanao	2025	9	5	17	92	138	138	25
Mindanao	2025	9	5	18	95	138	138	25
Mindanao	2025	9	5	19	94	138	138	25
Mindanao	2025	9	5	20	91	138	138	25
Mindanao	2025	9	5	21	87	138	138	25
Mindanao	2025	9	5	22	83	138	138	25
Mindanao	2025	9	5	23	78	138	138	25
Mindanao	2025	9	5	24	73	138	138	25
Mindanao	2025	9	6	1	70	138	138	25
Mindanao	2025	9	6	2	67	138	138	25
Mindanao	2025	9	6	3	65	138	138	25
Mindanao	2025	9	6	4	64	138	138	25
Mindanao	2025	9	6	5	64	138	138	25
Mindanao	2025	9	6	6	65	138	138	25
Mindanao	2025	9	6	7	63	138	138	25
Mindanao	2025	9	6	8	65	138	138	25
Mindanao	2025	9	6	9	74	138	138	25
Mindanao	2025	9	6	10	79	138	138	25
Mindanao	2025	9	6	11	84	138	138	25
Mindanao	2025	9	6	12	84	138	138	25
Mindanao	2025	9	6	13	85	138	138	25
Mindanao	2025	9	6	14	87	138	138	25
Mindanao	2025	9	6	15	86	138	138	25
Mindanao	2025	9	6	16	85	138	138	25
Mindanao	2025	9	6	17	83	138	138	25
Mindanao	2025	9	6	18	91	138	138	25
Mindanao	2025	9	6	19	92	138	138	25
Mindanao	2025	9	6	20	88	138	138	25
Mindanao	2025	9	6	21	87	138	138	25
Mindanao	2025	9	6	22	83	138	138	25
Mindanao	2025	9	6	23	77	138	138	25
Mindanao	2025	9	6	24	75	138	138	25
Mindanao	2025	9	7	1	69	138	138	25
Mindanao	2025	9	7	2	67	138	138	25
Mindanao	2025	9	7	3	65	138	138	25
Mindanao	2025	9	7	4	62	138	138	25
Mindanao	2025	9	7	5	64	138	138	25
Mindanao	2025	9	7	6	63	138	138	25
Mindanao	2025	9	7	7	64	138	138	25
Mindanao	2025	9	7	8	63	138	138	25
Mindanao	2025	9	7	9	66	138	138	25
Mindanao	2025	9	7	10	71	138	138	25
Mindanao	2025	9	7	11	74	138	138	25
Mindanao	2025	9	7	12	74	138	138	25
Mindanao	2025	9	7	13	74	138	138	25
Mindanao	2025	9	7	14	75	138	138	25
Mindanao	2025	9	7	15	73	138	138	25
Mindanao	2025	9	7	16	76	138	138	25
Mindanao	2025	9	7	17	76	138	138	25
Mindanao	2025	9	7	18	85	138	138	25
Mindanao	2025	9	7	19	85	138	138	25
Mindanao	2025	9	7	20	84	138	138	25
Mindanao	2025	9	7	21	82	138	138	25
Mindanao	2025	9	7	22	76	138	138	25
Mindanao	2025	9	7	23	72	138	138	25
Mindanao	2025	9	7	24	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	8	1	66	138	138	25
Mindanao	2025	9	8	2	64	138	138	25
Mindanao	2025	9	8	3	61	138	138	25
Mindanao	2025	9	8	4	61	138	138	25
Mindanao	2025	9	8	5	67	138	138	25
Mindanao	2025	9	8	6	71	138	138	25
Mindanao	2025	9	8	7	62	138	138	25
Mindanao	2025	9	8	8	72	138	138	25
Mindanao	2025	9	8	9	84	138	138	25
Mindanao	2025	9	8	10	91	138	138	25
Mindanao	2025	9	8	11	98	138	138	25
Mindanao	2025	9	8	12	96	138	138	25
Mindanao	2025	9	8	13	96	138	138	25
Mindanao	2025	9	8	14	100	138	138	25
Mindanao	2025	9	8	15	96	138	138	25
Mindanao	2025	9	8	16	95	138	138	25
Mindanao	2025	9	8	17	93	138	138	25
Mindanao	2025	9	8	18	96	138	138	25
Mindanao	2025	9	8	19	95	138	138	25
Mindanao	2025	9	8	20	93	138	138	25
Mindanao	2025	9	8	21	90	138	138	25
Mindanao	2025	9	8	22	82	138	138	25
Mindanao	2025	9	8	23	79	138	138	25
Mindanao	2025	9	8	24	74	138	138	25
Mindanao	2025	9	9	1	71	138	138	25
Mindanao	2025	9	9	2	68	138	138	25
Mindanao	2025	9	9	3	67	138	138	25
Mindanao	2025	9	9	4	66	138	138	25
Mindanao	2025	9	9	5	71	138	138	25
Mindanao	2025	9	9	6	73	138	138	25
Mindanao	2025	9	9	7	65	138	138	25
Mindanao	2025	9	9	8	75	138	138	25
Mindanao	2025	9	9	9	86	138	138	25
Mindanao	2025	9	9	10	93	138	138	25
Mindanao	2025	9	9	11	97	138	138	25
Mindanao	2025	9	9	12	96	138	138	25
Mindanao	2025	9	9	13	98	138	138	25
Mindanao	2025	9	9	14	100	138	138	25
Mindanao	2025	9	9	15	99	138	138	25
Mindanao	2025	9	9	16	96	138	138	25
Mindanao	2025	9	9	17	92	138	138	25
Mindanao	2025	9	9	18	97	138	138	25
Mindanao	2025	9	9	19	96	138	138	25
Mindanao	2025	9	9	20	92	138	138	25
Mindanao	2025	9	9	21	89	138	138	25
Mindanao	2025	9	9	22	82	138	138	25
Mindanao	2025	9	9	23	76	138	138	25
Mindanao	2025	9	9	24	71	138	138	25
Mindanao	2025	9	10	1	69	138	138	25
Mindanao	2025	9	10	2	66	138	138	25
Mindanao	2025	9	10	3	65	138	138	25
Mindanao	2025	9	10	4	64	138	138	25
Mindanao	2025	9	10	5	69	138	138	25
Mindanao	2025	9	10	6	73	138	138	25
Mindanao	2025	9	10	7	64	138	138	25
Mindanao	2025	9	10	8	74	138	138	25
Mindanao	2025	9	10	9	85	138	138	25
Mindanao	2025	9	10	10	92	138	138	25
Mindanao	2025	9	10	11	96	138	138	25
Mindanao	2025	9	10	12	94	138	138	25
Mindanao	2025	9	10	13	95	138	138	25
Mindanao	2025	9	10	14	98	138	138	25
Mindanao	2025	9	10	15	96	138	138	25
Mindanao	2025	9	10	16	94	138	138	25
Mindanao	2025	9	10	17	92	138	138	25
Mindanao	2025	9	10	18	95	138	138	25
Mindanao	2025	9	10	19	92	138	138	25
Mindanao	2025	9	10	20	89	138	138	25
Mindanao	2025	9	10	21	86	138	138	25
Mindanao	2025	9	10	22	80	138	138	25
Mindanao	2025	9	10	23	75	138	138	25
Mindanao	2025	9	10	24	72	138	138	25
Mindanao	2025	9	11	1	68	138	138	25
Mindanao	2025	9	11	2	66	138	138	25
Mindanao	2025	9	11	3	64	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	11	4	63	138	138	25
Mindanao	2025	9	11	5	68	138	138	25
Mindanao	2025	9	11	6	73	138	138	25
Mindanao	2025	9	11	7	65	138	138	25
Mindanao	2025	9	11	8	73	138	138	25
Mindanao	2025	9	11	9	84	138	138	25
Mindanao	2025	9	11	10	89	138	138	25
Mindanao	2025	9	11	11	94	138	138	25
Mindanao	2025	9	11	12	93	138	138	25
Mindanao	2025	9	11	13	95	138	138	25
Mindanao	2025	9	11	14	99	138	138	25
Mindanao	2025	9	11	15	97	138	138	25
Mindanao	2025	9	11	16	96	138	138	25
Mindanao	2025	9	11	17	93	138	138	25
Mindanao	2025	9	11	18	97	138	138	25
Mindanao	2025	9	11	19	96	138	138	25
Mindanao	2025	9	11	20	93	138	138	25
Mindanao	2025	9	11	21	90	138	138	25
Mindanao	2025	9	11	22	84	138	138	25
Mindanao	2025	9	11	23	78	138	138	25
Mindanao	2025	9	11	24	74	138	138	25
Mindanao	2025	9	12	1	69	138	138	25
Mindanao	2025	9	12	2	67	138	138	25
Mindanao	2025	9	12	3	65	138	138	25
Mindanao	2025	9	12	4	65	138	138	25
Mindanao	2025	9	12	5	69	138	138	25
Mindanao	2025	9	12	6	73	138	138	25
Mindanao	2025	9	12	7	64	138	138	25
Mindanao	2025	9	12	8	74	138	138	25
Mindanao	2025	9	12	9	84	138	138	25
Mindanao	2025	9	12	10	89	138	138	25
Mindanao	2025	9	12	11	91	138	138	25
Mindanao	2025	9	12	12	90	138	138	25
Mindanao	2025	9	12	13	92	138	138	25
Mindanao	2025	9	12	14	97	138	138	25
Mindanao	2025	9	12	15	95	138	138	25
Mindanao	2025	9	12	16	96	138	138	25
Mindanao	2025	9	12	17	90	138	138	25
Mindanao	2025	9	12	18	97	138	138	25
Mindanao	2025	9	12	19	95	138	138	25
Mindanao	2025	9	12	20	93	138	138	25
Mindanao	2025	9	12	21	90	138	138	25
Mindanao	2025	9	12	22	83	138	138	25
Mindanao	2025	9	12	23	78	138	138	25
Mindanao	2025	9	12	24	74	138	138	25
Mindanao	2025	9	13	1	70	138	138	25
Mindanao	2025	9	13	2	69	138	138	25
Mindanao	2025	9	13	3	66	138	138	25
Mindanao	2025	9	13	4	65	138	138	25
Mindanao	2025	9	13	5	65	138	138	25
Mindanao	2025	9	13	6	67	138	138	25
Mindanao	2025	9	13	7	66	138	138	25
Mindanao	2025	9	13	8	68	138	138	25
Mindanao	2025	9	13	9	76	138	138	25
Mindanao	2025	9	13	10	83	138	138	25
Mindanao	2025	9	13	11	87	138	138	25
Mindanao	2025	9	13	12	85	138	138	25
Mindanao	2025	9	13	13	86	138	138	25
Mindanao	2025	9	13	14	86	138	138	25
Mindanao	2025	9	13	15	87	138	138	25
Mindanao	2025	9	13	16	84	138	138	25
Mindanao	2025	9	13	17	86	138	138	25
Mindanao	2025	9	13	18	89	138	138	25
Mindanao	2025	9	13	19	88	138	138	25
Mindanao	2025	9	13	20	86	138	138	25
Mindanao	2025	9	13	21	83	138	138	25
Mindanao	2025	9	13	22	78	138	138	25
Mindanao	2025	9	13	23	73	138	138	25
Mindanao	2025	9	13	24	69	138	138	25
Mindanao	2025	9	14	1	66	138	138	25
Mindanao	2025	9	14	2	64	138	138	25
Mindanao	2025	9	14	3	63	138	138	25
Mindanao	2025	9	14	4	62	138	138	25
Mindanao	2025	9	14	5	63	138	138	25
Mindanao	2025	9	14	6	63	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	14	7	61	138	138	25
Mindanao	2025	9	14	8	60	138	138	25
Mindanao	2025	9	14	9	65	138	138	25
Mindanao	2025	9	14	10	70	138	138	25
Mindanao	2025	9	14	11	74	138	138	25
Mindanao	2025	9	14	12	76	138	138	25
Mindanao	2025	9	14	13	76	138	138	25
Mindanao	2025	9	14	14	77	138	138	25
Mindanao	2025	9	14	15	75	138	138	25
Mindanao	2025	9	14	16	74	138	138	25
Mindanao	2025	9	14	17	75	138	138	25
Mindanao	2025	9	14	18	81	138	138	25
Mindanao	2025	9	14	19	84	138	138	25
Mindanao	2025	9	14	20	83	138	138	25
Mindanao	2025	9	14	21	81	138	138	25
Mindanao	2025	9	14	22	75	138	138	25
Mindanao	2025	9	14	23	69	138	138	25
Mindanao	2025	9	14	24	66	138	138	25
Mindanao	2025	9	15	1	64	138	138	25
Mindanao	2025	9	15	2	62	138	138	25
Mindanao	2025	9	15	3	59	138	138	25
Mindanao	2025	9	15	4	59	138	138	25
Mindanao	2025	9	15	5	65	138	138	25
Mindanao	2025	9	15	6	67	138	138	25
Mindanao	2025	9	15	7	61	138	138	25
Mindanao	2025	9	15	8	68	138	138	25
Mindanao	2025	9	15	9	79	138	138	25
Mindanao	2025	9	15	10	86	138	138	25
Mindanao	2025	9	15	11	91	138	138	25
Mindanao	2025	9	15	12	90	138	138	25
Mindanao	2025	9	15	13	91	138	138	25
Mindanao	2025	9	15	14	93	138	138	25
Mindanao	2025	9	15	15	92	138	138	25
Mindanao	2025	9	15	16	91	138	138	25
Mindanao	2025	9	15	17	88	138	138	25
Mindanao	2025	9	15	18	92	138	138	25
Mindanao	2025	9	15	19	90	138	138	25
Mindanao	2025	9	15	20	86	138	138	25
Mindanao	2025	9	15	21	85	138	138	25
Mindanao	2025	9	15	22	76	138	138	25
Mindanao	2025	9	15	23	74	138	138	25
Mindanao	2025	9	15	24	70	138	138	25
Mindanao	2025	9	16	1	67	138	138	25
Mindanao	2025	9	16	2	65	138	138	25
Mindanao	2025	9	16	3	64	138	138	25
Mindanao	2025	9	16	4	64	138	138	25
Mindanao	2025	9	16	5	69	138	138	25
Mindanao	2025	9	16	6	72	138	138	25
Mindanao	2025	9	16	7	65	138	138	25
Mindanao	2025	9	16	8	73	138	138	25
Mindanao	2025	9	16	9	82	138	138	25
Mindanao	2025	9	16	10	89	138	138	25
Mindanao	2025	9	16	11	97	138	138	25
Mindanao	2025	9	16	12	95	138	138	25
Mindanao	2025	9	16	13	96	138	138	25
Mindanao	2025	9	16	14	98	138	138	25
Mindanao	2025	9	16	15	96	138	138	25
Mindanao	2025	9	16	16	95	138	138	25
Mindanao	2025	9	16	17	93	138	138	25
Mindanao	2025	9	16	18	97	138	138	25
Mindanao	2025	9	16	19	95	138	138	25
Mindanao	2025	9	16	20	92	138	138	25
Mindanao	2025	9	16	21	90	138	138	25
Mindanao	2025	9	16	22	84	138	138	25
Mindanao	2025	9	16	23	78	138	138	25
Mindanao	2025	9	16	24	73	138	138	25
Mindanao	2025	9	17	1	71	138	138	25
Mindanao	2025	9	17	2	68	138	138	25
Mindanao	2025	9	17	3	66	138	138	25
Mindanao	2025	9	17	4	66	138	138	25
Mindanao	2025	9	17	5	71	138	138	25
Mindanao	2025	9	17	6	75	138	138	25
Mindanao	2025	9	17	7	67	138	138	25
Mindanao	2025	9	17	8	74	138	138	25
Mindanao	2025	9	17	9	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	17	10	91	138	138	25
Mindanao	2025	9	17	11	95	138	138	25
Mindanao	2025	9	17	12	93	138	138	25
Mindanao	2025	9	17	13	94	138	138	25
Mindanao	2025	9	17	14	100	138	138	25
Mindanao	2025	9	17	15	98	138	138	25
Mindanao	2025	9	17	16	96	138	138	25
Mindanao	2025	9	17	17	94	138	138	25
Mindanao	2025	9	17	18	98	138	138	25
Mindanao	2025	9	17	19	96	138	138	25
Mindanao	2025	9	17	20	91	138	138	25
Mindanao	2025	9	17	21	88	138	138	25
Mindanao	2025	9	17	22	82	138	138	25
Mindanao	2025	9	17	23	76	138	138	25
Mindanao	2025	9	17	24	73	138	138	25
Mindanao	2025	9	18	1	68	138	138	25
Mindanao	2025	9	18	2	67	138	138	25
Mindanao	2025	9	18	3	66	138	138	25
Mindanao	2025	9	18	4	65	138	138	25
Mindanao	2025	9	18	5	70	138	138	25
Mindanao	2025	9	18	6	73	138	138	25
Mindanao	2025	9	18	7	65	138	138	25
Mindanao	2025	9	18	8	72	138	138	25
Mindanao	2025	9	18	9	84	138	138	25
Mindanao	2025	9	18	10	91	138	138	25
Mindanao	2025	9	18	11	95	138	138	25
Mindanao	2025	9	18	12	93	138	138	25
Mindanao	2025	9	18	13	93	138	138	25
Mindanao	2025	9	18	14	97	138	138	25
Mindanao	2025	9	18	15	95	138	138	25
Mindanao	2025	9	18	16	94	138	138	25
Mindanao	2025	9	18	17	91	138	138	25
Mindanao	2025	9	18	18	94	138	138	25
Mindanao	2025	9	18	19	91	138	138	25
Mindanao	2025	9	18	20	89	138	138	25
Mindanao	2025	9	18	21	85	138	138	25
Mindanao	2025	9	18	22	79	138	138	25
Mindanao	2025	9	18	23	74	138	138	25
Mindanao	2025	9	18	24	71	138	138	25
Mindanao	2025	9	19	1	67	138	138	25
Mindanao	2025	9	19	2	66	138	138	25
Mindanao	2025	9	19	3	63	138	138	25
Mindanao	2025	9	19	4	63	138	138	25
Mindanao	2025	9	19	5	67	138	138	25
Mindanao	2025	9	19	6	70	138	138	25
Mindanao	2025	9	19	7	64	138	138	25
Mindanao	2025	9	19	8	73	138	138	25
Mindanao	2025	9	19	9	82	138	138	25
Mindanao	2025	9	19	10	90	138	138	25
Mindanao	2025	9	19	11	94	138	138	25
Mindanao	2025	9	19	12	93	138	138	25
Mindanao	2025	9	19	13	91	138	138	25
Mindanao	2025	9	19	14	95	138	138	25
Mindanao	2025	9	19	15	92	138	138	25
Mindanao	2025	9	19	16	92	138	138	25
Mindanao	2025	9	19	17	90	138	138	25
Mindanao	2025	9	19	18	94	138	138	25
Mindanao	2025	9	19	19	90	138	138	25
Mindanao	2025	9	19	20	88	138	138	25
Mindanao	2025	9	19	21	84	138	138	25
Mindanao	2025	9	19	22	79	138	138	25
Mindanao	2025	9	19	23	74	138	138	25
Mindanao	2025	9	19	24	70	138	138	25
Mindanao	2025	9	20	1	68	138	138	25
Mindanao	2025	9	20	2	65	138	138	25
Mindanao	2025	9	20	3	64	138	138	25
Mindanao	2025	9	20	4	64	138	138	25
Mindanao	2025	9	20	5	64	138	138	25
Mindanao	2025	9	20	6	65	138	138	25
Mindanao	2025	9	20	7	65	138	138	25
Mindanao	2025	9	20	8	68	138	138	25
Mindanao	2025	9	20	9	76	138	138	25
Mindanao	2025	9	20	10	82	138	138	25
Mindanao	2025	9	20	11	87	138	138	25
Mindanao	2025	9	20	12	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	20	13	88	138	138	25
Mindanao	2025	9	20	14	92	138	138	25
Mindanao	2025	9	20	15	91	138	138	25
Mindanao	2025	9	20	16	89	138	138	25
Mindanao	2025	9	20	17	87	138	138	25
Mindanao	2025	9	20	18	96	138	138	25
Mindanao	2025	9	20	19	94	138	138	25
Mindanao	2025	9	20	20	91	138	138	25
Mindanao	2025	9	20	21	89	138	138	25
Mindanao	2025	9	20	22	83	138	138	25
Mindanao	2025	9	20	23	78	138	138	25
Mindanao	2025	9	20	24	74	138	138	25
Mindanao	2025	9	21	1	71	138	138	25
Mindanao	2025	9	21	2	68	138	138	25
Mindanao	2025	9	21	3	67	138	138	25
Mindanao	2025	9	21	4	64	138	138	25
Mindanao	2025	9	21	5	65	138	138	25
Mindanao	2025	9	21	6	64	138	138	25
Mindanao	2025	9	21	7	61	138	138	25
Mindanao	2025	9	21	8	62	138	138	25
Mindanao	2025	9	21	9	67	138	138	25
Mindanao	2025	9	21	10	73	138	138	25
Mindanao	2025	9	21	11	77	138	138	25
Mindanao	2025	9	21	12	77	138	138	25
Mindanao	2025	9	21	13	79	138	138	25
Mindanao	2025	9	21	14	81	138	138	25
Mindanao	2025	9	21	15	80	138	138	25
Mindanao	2025	9	21	16	80	138	138	25
Mindanao	2025	9	21	17	79	138	138	25
Mindanao	2025	9	21	18	90	138	138	25
Mindanao	2025	9	21	19	91	138	138	25
Mindanao	2025	9	21	20	89	138	138	25
Mindanao	2025	9	21	21	88	138	138	25
Mindanao	2025	9	21	22	83	138	138	25
Mindanao	2025	9	21	23	78	138	138	25
Mindanao	2025	9	21	24	73	138	138	25
Mindanao	2025	9	22	1	70	138	138	25
Mindanao	2025	9	22	2	68	138	138	25
Mindanao	2025	9	22	3	65	138	138	25
Mindanao	2025	9	22	4	65	138	138	25
Mindanao	2025	9	22	5	69	138	138	25
Mindanao	2025	9	22	6	72	138	138	25
Mindanao	2025	9	22	7	65	138	138	25
Mindanao	2025	9	22	8	74	138	138	25
Mindanao	2025	9	22	9	89	138	138	25
Mindanao	2025	9	22	10	97	138	138	25
Mindanao	2025	9	22	11	101	138	138	25
Mindanao	2025	9	22	12	101	138	138	25
Mindanao	2025	9	22	13	100	138	138	25
Mindanao	2025	9	22	14	106	138	138	25
Mindanao	2025	9	22	15	102	138	138	25
Mindanao	2025	9	22	16	96	138	138	25
Mindanao	2025	9	22	17	94	138	138	25
Mindanao	2025	9	22	18	101	138	138	25
Mindanao	2025	9	22	19	99	138	138	25
Mindanao	2025	9	22	20	96	138	138	25
Mindanao	2025	9	22	21	93	138	138	25
Mindanao	2025	9	22	22	87	138	138	25
Mindanao	2025	9	22	23	81	138	138	25
Mindanao	2025	9	22	24	76	138	138	25
Mindanao	2025	9	23	1	73	138	138	25
Mindanao	2025	9	23	2	71	138	138	25
Mindanao	2025	9	23	3	69	138	138	25
Mindanao	2025	9	23	4	68	138	138	25
Mindanao	2025	9	23	5	72	138	138	25
Mindanao	2025	9	23	6	75	138	138	25
Mindanao	2025	9	23	7	68	138	138	25
Mindanao	2025	9	23	8	76	138	138	25
Mindanao	2025	9	23	9	87	138	138	25
Mindanao	2025	9	23	10	93	138	138	25
Mindanao	2025	9	23	11	96	138	138	25
Mindanao	2025	9	23	12	94	138	138	25
Mindanao	2025	9	23	13	94	138	138	25
Mindanao	2025	9	23	14	99	138	138	25
Mindanao	2025	9	23	15	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	23	16	95	138	138	25
Mindanao	2025	9	23	17	91	138	138	25
Mindanao	2025	9	23	18	98	138	138	25
Mindanao	2025	9	23	19	95	138	138	25
Mindanao	2025	9	23	20	92	138	138	25
Mindanao	2025	9	23	21	90	138	138	25
Mindanao	2025	9	23	22	84	138	138	25
Mindanao	2025	9	23	23	78	138	138	25
Mindanao	2025	9	23	24	75	138	138	25
Mindanao	2025	9	24	1	71	138	138	25
Mindanao	2025	9	24	2	69	138	138	25
Mindanao	2025	9	24	3	67	138	138	25
Mindanao	2025	9	24	4	66	138	138	25
Mindanao	2025	9	24	5	69	138	138	25
Mindanao	2025	9	24	6	72	138	138	25
Mindanao	2025	9	24	7	68	138	138	25
Mindanao	2025	9	24	8	76	138	138	25
Mindanao	2025	9	24	9	84	138	138	25
Mindanao	2025	9	24	10	92	138	138	25
Mindanao	2025	9	24	11	96	138	138	25
Mindanao	2025	9	24	12	93	138	138	25
Mindanao	2025	9	24	13	94	138	138	25
Mindanao	2025	9	24	14	98	138	138	25
Mindanao	2025	9	24	15	99	138	138	25
Mindanao	2025	9	24	16	96	138	138	25
Mindanao	2025	9	24	17	93	138	138	25
Mindanao	2025	9	24	18	100	138	138	25
Mindanao	2025	9	24	19	95	138	138	25
Mindanao	2025	9	24	20	94	138	138	25
Mindanao	2025	9	24	21	91	138	138	25
Mindanao	2025	9	24	22	81	138	138	25
Mindanao	2025	9	24	23	78	138	138	25
Mindanao	2025	9	24	24	76	138	138	25
Mindanao	2025	9	25	1	72	138	138	25
Mindanao	2025	9	25	2	69	138	138	25
Mindanao	2025	9	25	3	67	138	138	25
Mindanao	2025	9	25	4	67	138	138	25
Mindanao	2025	9	25	5	71	138	138	25
Mindanao	2025	9	25	6	74	138	138	25
Mindanao	2025	9	25	7	67	138	138	25
Mindanao	2025	9	25	8	76	138	138	25
Mindanao	2025	9	25	9	87	138	138	25
Mindanao	2025	9	25	10	95	138	138	25
Mindanao	2025	9	25	11	97	138	138	25
Mindanao	2025	9	25	12	96	138	138	25
Mindanao	2025	9	25	13	97	138	138	25
Mindanao	2025	9	25	14	102	138	138	25
Mindanao	2025	9	25	15	100	138	138	25
Mindanao	2025	9	25	16	98	138	138	25
Mindanao	2025	9	25	17	92	138	138	25
Mindanao	2025	9	25	18	98	138	138	25
Mindanao	2025	9	25	19	94	138	138	25
Mindanao	2025	9	25	20	94	138	138	25
Mindanao	2025	9	25	21	90	138	138	25
Mindanao	2025	9	25	22	84	138	138	25
Mindanao	2025	9	25	23	80	138	138	25
Mindanao	2025	9	25	24	76	138	138	25
Mindanao	2025	9	26	1	71	138	138	25
Mindanao	2025	9	26	2	69	138	138	25
Mindanao	2025	9	26	3	66	138	138	25
Mindanao	2025	9	26	4	66	138	138	25
Mindanao	2025	9	26	5	69	138	138	25
Mindanao	2025	9	26	6	71	138	138	25
Mindanao	2025	9	26	7	66	138	138	25
Mindanao	2025	9	26	8	78	138	138	25
Mindanao	2025	9	26	9	88	138	138	25
Mindanao	2025	9	26	10	96	138	138	25
Mindanao	2025	9	26	11	99	138	138	25
Mindanao	2025	9	26	12	97	138	138	25
Mindanao	2025	9	26	13	98	138	138	25
Mindanao	2025	9	26	14	103	138	138	25
Mindanao	2025	9	26	15	101	138	138	25
Mindanao	2025	9	26	16	99	138	138	25
Mindanao	2025	9	26	17	94	138	138	25
Mindanao	2025	9	26	18	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	26	19	96	138	138	25
Mindanao	2025	9	26	20	94	138	138	25
Mindanao	2025	9	26	21	91	138	138	25
Mindanao	2025	9	26	22	86	138	138	25
Mindanao	2025	9	26	23	81	138	138	25
Mindanao	2025	9	26	24	75	138	138	25
Mindanao	2025	9	27	1	73	138	138	25
Mindanao	2025	9	27	2	70	138	138	25
Mindanao	2025	9	27	3	68	138	138	25
Mindanao	2025	9	27	4	67	138	138	25
Mindanao	2025	9	27	5	68	138	138	25
Mindanao	2025	9	27	6	66	138	138	25
Mindanao	2025	9	27	7	65	138	138	25
Mindanao	2025	9	27	8	71	138	138	25
Mindanao	2025	9	27	9	79	138	138	25
Mindanao	2025	9	27	10	86	138	138	25
Mindanao	2025	9	27	11	90	138	138	25
Mindanao	2025	9	27	12	89	138	138	25
Mindanao	2025	9	27	13	92	138	138	25
Mindanao	2025	9	27	14	95	138	138	25
Mindanao	2025	9	27	15	93	138	138	25
Mindanao	2025	9	27	16	89	138	138	25
Mindanao	2025	9	27	17	89	138	138	25
Mindanao	2025	9	27	18	98	138	138	25
Mindanao	2025	9	27	19	94	138	138	25
Mindanao	2025	9	27	20	94	138	138	25
Mindanao	2025	9	27	21	91	138	138	25
Mindanao	2025	9	27	22	86	138	138	25
Mindanao	2025	9	27	23	81	138	138	25
Mindanao	2025	9	27	24	77	138	138	25
Mindanao	2025	9	28	1	74	138	138	25
Mindanao	2025	9	28	2	70	138	138	25
Mindanao	2025	9	28	3	69	138	138	25
Mindanao	2025	9	28	4	67	138	138	25
Mindanao	2025	9	28	5	67	138	138	25
Mindanao	2025	9	28	6	67	138	138	25
Mindanao	2025	9	28	7	64	138	138	25
Mindanao	2025	9	28	8	67	138	138	25
Mindanao	2025	9	28	9	71	138	138	25
Mindanao	2025	9	28	10	75	138	138	25
Mindanao	2025	9	28	11	76	138	138	25
Mindanao	2025	9	28	12	78	138	138	25
Mindanao	2025	9	28	13	79	138	138	25
Mindanao	2025	9	28	14	79	138	138	25
Mindanao	2025	9	28	15	79	138	138	25
Mindanao	2025	9	28	16	79	138	138	25
Mindanao	2025	9	28	17	78	138	138	25
Mindanao	2025	9	28	18	87	138	138	25
Mindanao	2025	9	28	19	85	138	138	25
Mindanao	2025	9	28	20	81	138	138	25
Mindanao	2025	9	28	21	83	138	138	25
Mindanao	2025	9	28	22	78	138	138	25
Mindanao	2025	9	28	23	75	138	138	25
Mindanao	2025	9	28	24	71	138	138	25
Mindanao	2025	9	29	1	68	138	138	25
Mindanao	2025	9	29	2	66	138	138	25
Mindanao	2025	9	29	3	64	138	138	25
Mindanao	2025	9	29	4	63	138	138	25
Mindanao	2025	9	29	5	68	138	138	25
Mindanao	2025	9	29	6	69	138	138	25
Mindanao	2025	9	29	7	65	138	138	25
Mindanao	2025	9	29	8	76	138	138	25
Mindanao	2025	9	29	9	86	138	138	25
Mindanao	2025	9	29	10	95	138	138	25
Mindanao	2025	9	29	11	99	138	138	25
Mindanao	2025	9	29	12	100	138	138	25
Mindanao	2025	9	29	13	100	138	138	25
Mindanao	2025	9	29	14	104	138	138	25
Mindanao	2025	9	29	15	103	138	138	25
Mindanao	2025	9	29	16	100	138	138	25
Mindanao	2025	9	29	17	95	138	138	25
Mindanao	2025	9	29	18	100	138	138	25
Mindanao	2025	9	29	19	97	138	138	25
Mindanao	2025	9	29	20	95	138	138	25
Mindanao	2025	9	29	21	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	9	29	22	87	138	138	25
Mindanao	2025	9	29	23	81	138	138	25
Mindanao	2025	9	29	24	78	138	138	25
Mindanao	2025	9	30	1	75	138	138	25
Mindanao	2025	9	30	2	72	138	138	25
Mindanao	2025	9	30	3	70	138	138	25
Mindanao	2025	9	30	4	70	138	138	25
Mindanao	2025	9	30	5	74	138	138	25
Mindanao	2025	9	30	6	76	138	138	25
Mindanao	2025	9	30	7	69	138	138	25
Mindanao	2025	9	30	8	78	138	138	25
Mindanao	2025	9	30	9	89	138	138	25
Mindanao	2025	9	30	10	95	138	138	25
Mindanao	2025	9	30	11	100	138	138	25
Mindanao	2025	9	30	12	103	138	138	25
Mindanao	2025	9	30	13	104	138	138	25
Mindanao	2025	9	30	14	107	138	138	25
Mindanao	2025	9	30	15	107	138	138	25
Mindanao	2025	9	30	16	102	138	138	25
Mindanao	2025	9	30	17	94	138	138	25
Mindanao	2025	9	30	18	101	138	138	25
Mindanao	2025	9	30	19	100	138	138	25
Mindanao	2025	9	30	20	99	138	138	25
Mindanao	2025	9	30	21	96	138	138	25
Mindanao	2025	9	30	22	89	138	138	25
Mindanao	2025	9	30	23	84	138	138	25
Mindanao	2025	9	30	24	80	138	138	25
Mindanao	2025	10	1	1	76	138	138	25
Mindanao	2025	10	1	2	74	138	138	25
Mindanao	2025	10	1	3	72	138	138	25
Mindanao	2025	10	1	4	72	138	138	25
Mindanao	2025	10	1	5	75	138	138	25
Mindanao	2025	10	1	6	76	138	138	25
Mindanao	2025	10	1	7	69	138	138	25
Mindanao	2025	10	1	8	81	138	138	25
Mindanao	2025	10	1	9	91	138	138	25
Mindanao	2025	10	1	10	98	138	138	25
Mindanao	2025	10	1	11	103	138	138	25
Mindanao	2025	10	1	12	102	138	138	25
Mindanao	2025	10	1	13	104	138	138	25
Mindanao	2025	10	1	14	108	138	138	25
Mindanao	2025	10	1	15	107	138	138	25
Mindanao	2025	10	1	16	104	138	138	25
Mindanao	2025	10	1	17	98	138	138	25
Mindanao	2025	10	1	18	103	138	138	25
Mindanao	2025	10	1	19	99	138	138	25
Mindanao	2025	10	1	20	96	138	138	25
Mindanao	2025	10	1	21	93	138	138	25
Mindanao	2025	10	1	22	87	138	138	25
Mindanao	2025	10	1	23	83	138	138	25
Mindanao	2025	10	1	24	79	138	138	25
Mindanao	2025	10	2	1	75	138	138	25
Mindanao	2025	10	2	2	73	138	138	25
Mindanao	2025	10	2	3	71	138	138	25
Mindanao	2025	10	2	4	70	138	138	25
Mindanao	2025	10	2	5	73	138	138	25
Mindanao	2025	10	2	6	74	138	138	25
Mindanao	2025	10	2	7	70	138	138	25
Mindanao	2025	10	2	8	80	138	138	25
Mindanao	2025	10	2	9	89	138	138	25
Mindanao	2025	10	2	10	97	138	138	25
Mindanao	2025	10	2	11	102	138	138	25
Mindanao	2025	10	2	12	103	138	138	25
Mindanao	2025	10	2	13	105	138	138	25
Mindanao	2025	10	2	14	108	138	138	25
Mindanao	2025	10	2	15	107	138	138	25
Mindanao	2025	10	2	16	105	138	138	25
Mindanao	2025	10	2	17	99	138	138	25
Mindanao	2025	10	2	18	104	138	138	25
Mindanao	2025	10	2	19	99	138	138	25
Mindanao	2025	10	2	20	100	138	138	25
Mindanao	2025	10	2	21	98	138	138	25
Mindanao	2025	10	2	22	92	138	138	25
Mindanao	2025	10	2	23	85	138	138	25
Mindanao	2025	10	2	24	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	3	1	80	138	138	25
Mindanao	2025	10	3	2	77	138	138	25
Mindanao	2025	10	3	3	73	138	138	25
Mindanao	2025	10	3	4	71	138	138	25
Mindanao	2025	10	3	5	73	138	138	25
Mindanao	2025	10	3	6	76	138	138	25
Mindanao	2025	10	3	7	71	138	138	25
Mindanao	2025	10	3	8	81	138	138	25
Mindanao	2025	10	3	9	92	138	138	25
Mindanao	2025	10	3	10	99	138	138	25
Mindanao	2025	10	3	11	105	138	138	25
Mindanao	2025	10	3	12	104	138	138	25
Mindanao	2025	10	3	13	106	138	138	25
Mindanao	2025	10	3	14	110	138	138	25
Mindanao	2025	10	3	15	107	138	138	25
Mindanao	2025	10	3	16	104	138	138	25
Mindanao	2025	10	3	17	95	138	138	25
Mindanao	2025	10	3	18	102	138	138	25
Mindanao	2025	10	3	19	96	138	138	25
Mindanao	2025	10	3	20	96	138	138	25
Mindanao	2025	10	3	21	92	138	138	25
Mindanao	2025	10	3	22	87	138	138	25
Mindanao	2025	10	3	23	84	138	138	25
Mindanao	2025	10	3	24	80	138	138	25
Mindanao	2025	10	4	1	76	138	138	25
Mindanao	2025	10	4	2	75	138	138	25
Mindanao	2025	10	4	3	73	138	138	25
Mindanao	2025	10	4	4	70	138	138	25
Mindanao	2025	10	4	5	71	138	138	25
Mindanao	2025	10	4	6	73	138	138	25
Mindanao	2025	10	4	7	69	138	138	25
Mindanao	2025	10	4	8	73	138	138	25
Mindanao	2025	10	4	9	74	138	138	25
Mindanao	2025	10	4	10	85	138	138	25
Mindanao	2025	10	4	11	89	138	138	25
Mindanao	2025	10	4	12	88	138	138	25
Mindanao	2025	10	4	13	89	138	138	25
Mindanao	2025	10	4	14	92	138	138	25
Mindanao	2025	10	4	15	90	138	138	25
Mindanao	2025	10	4	16	88	138	138	25
Mindanao	2025	10	4	17	85	138	138	25
Mindanao	2025	10	4	18	88	138	138	25
Mindanao	2025	10	4	19	86	138	138	25
Mindanao	2025	10	4	20	86	138	138	25
Mindanao	2025	10	4	21	86	138	138	25
Mindanao	2025	10	4	22	83	138	138	25
Mindanao	2025	10	4	23	77	138	138	25
Mindanao	2025	10	4	24	75	138	138	25
Mindanao	2025	10	5	1	72	138	138	25
Mindanao	2025	10	5	2	70	138	138	25
Mindanao	2025	10	5	3	67	138	138	25
Mindanao	2025	10	5	4	66	138	138	25
Mindanao	2025	10	5	5	67	138	138	25
Mindanao	2025	10	5	6	65	138	138	25
Mindanao	2025	10	5	7	65	138	138	25
Mindanao	2025	10	5	8	67	138	138	25
Mindanao	2025	10	5	9	72	138	138	25
Mindanao	2025	10	5	10	76	138	138	25
Mindanao	2025	10	5	11	79	138	138	25
Mindanao	2025	10	5	12	81	138	138	25
Mindanao	2025	10	5	13	82	138	138	25
Mindanao	2025	10	5	14	83	138	138	25
Mindanao	2025	10	5	15	80	138	138	25
Mindanao	2025	10	5	16	79	138	138	25
Mindanao	2025	10	5	17	79	138	138	25
Mindanao	2025	10	5	18	90	138	138	25
Mindanao	2025	10	5	19	89	138	138	25
Mindanao	2025	10	5	20	87	138	138	25
Mindanao	2025	10	5	21	85	138	138	25
Mindanao	2025	10	5	22	82	138	138	25
Mindanao	2025	10	5	23	78	138	138	25
Mindanao	2025	10	5	24	74	138	138	25
Mindanao	2025	10	6	1	73	138	138	25
Mindanao	2025	10	6	2	67	138	138	25
Mindanao	2025	10	6	3	66	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	6	4	67	138	138	25
Mindanao	2025	10	6	5	69	138	138	25
Mindanao	2025	10	6	6	74	138	138	25
Mindanao	2025	10	6	7	66	138	138	25
Mindanao	2025	10	6	8	76	138	138	25
Mindanao	2025	10	6	9	88	138	138	25
Mindanao	2025	10	6	10	95	138	138	25
Mindanao	2025	10	6	11	100	138	138	25
Mindanao	2025	10	6	12	99	138	138	25
Mindanao	2025	10	6	13	100	138	138	25
Mindanao	2025	10	6	14	104	138	138	25
Mindanao	2025	10	6	15	103	138	138	25
Mindanao	2025	10	6	16	101	138	138	25
Mindanao	2025	10	6	17	97	138	138	25
Mindanao	2025	10	6	18	100	138	138	25
Mindanao	2025	10	6	19	96	138	138	25
Mindanao	2025	10	6	20	94	138	138	25
Mindanao	2025	10	6	21	90	138	138	25
Mindanao	2025	10	6	22	85	138	138	25
Mindanao	2025	10	6	23	82	138	138	25
Mindanao	2025	10	6	24	79	138	138	25
Mindanao	2025	10	7	1	77	138	138	25
Mindanao	2025	10	7	2	75	138	138	25
Mindanao	2025	10	7	3	72	138	138	25
Mindanao	2025	10	7	4	72	138	138	25
Mindanao	2025	10	7	5	76	138	138	25
Mindanao	2025	10	7	6	78	138	138	25
Mindanao	2025	10	7	7	70	138	138	25
Mindanao	2025	10	7	8	78	138	138	25
Mindanao	2025	10	7	9	87	138	138	25
Mindanao	2025	10	7	10	96	138	138	25
Mindanao	2025	10	7	11	100	138	138	25
Mindanao	2025	10	7	12	97	138	138	25
Mindanao	2025	10	7	13	96	138	138	25
Mindanao	2025	10	7	14	97	138	138	25
Mindanao	2025	10	7	15	96	138	138	25
Mindanao	2025	10	7	16	94	138	138	25
Mindanao	2025	10	7	17	93	138	138	25
Mindanao	2025	10	7	18	97	138	138	25
Mindanao	2025	10	7	19	92	138	138	25
Mindanao	2025	10	7	20	91	138	138	25
Mindanao	2025	10	7	21	88	138	138	25
Mindanao	2025	10	7	22	82	138	138	25
Mindanao	2025	10	7	23	78	138	138	25
Mindanao	2025	10	7	24	74	138	138	25
Mindanao	2025	10	8	1	72	138	138	25
Mindanao	2025	10	8	2	71	138	138	25
Mindanao	2025	10	8	3	68	138	138	25
Mindanao	2025	10	8	4	68	138	138	25
Mindanao	2025	10	8	5	71	138	138	25
Mindanao	2025	10	8	6	75	138	138	25
Mindanao	2025	10	8	7	68	138	138	25
Mindanao	2025	10	8	8	77	138	138	25
Mindanao	2025	10	8	9	87	138	138	25
Mindanao	2025	10	8	10	93	138	138	25
Mindanao	2025	10	8	11	98	138	138	25
Mindanao	2025	10	8	12	96	138	138	25
Mindanao	2025	10	8	13	98	138	138	25
Mindanao	2025	10	8	14	102	138	138	25
Mindanao	2025	10	8	15	100	138	138	25
Mindanao	2025	10	8	16	97	138	138	25
Mindanao	2025	10	8	17	94	138	138	25
Mindanao	2025	10	8	18	98	138	138	25
Mindanao	2025	10	8	19	94	138	138	25
Mindanao	2025	10	8	20	91	138	138	25
Mindanao	2025	10	8	21	89	138	138	25
Mindanao	2025	10	8	22	85	138	138	25
Mindanao	2025	10	8	23	78	138	138	25
Mindanao	2025	10	8	24	75	138	138	25
Mindanao	2025	10	9	1	73	138	138	25
Mindanao	2025	10	9	2	72	138	138	25
Mindanao	2025	10	9	3	69	138	138	25
Mindanao	2025	10	9	4	69	138	138	25
Mindanao	2025	10	9	5	72	138	138	25
Mindanao	2025	10	9	6	75	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	9	7	67	138	138	25
Mindanao	2025	10	9	8	76	138	138	25
Mindanao	2025	10	9	9	88	138	138	25
Mindanao	2025	10	9	10	95	138	138	25
Mindanao	2025	10	9	11	99	138	138	25
Mindanao	2025	10	9	12	97	138	138	25
Mindanao	2025	10	9	13	96	138	138	25
Mindanao	2025	10	9	14	104	138	138	25
Mindanao	2025	10	9	15	102	138	138	25
Mindanao	2025	10	9	16	99	138	138	25
Mindanao	2025	10	9	17	95	138	138	25
Mindanao	2025	10	9	18	101	138	138	25
Mindanao	2025	10	9	19	97	138	138	25
Mindanao	2025	10	9	20	94	138	138	25
Mindanao	2025	10	9	21	91	138	138	25
Mindanao	2025	10	9	22	86	138	138	25
Mindanao	2025	10	9	23	81	138	138	25
Mindanao	2025	10	9	24	77	138	138	25
Mindanao	2025	10	10	1	76	138	138	25
Mindanao	2025	10	10	2	74	138	138	25
Mindanao	2025	10	10	3	71	138	138	25
Mindanao	2025	10	10	4	71	138	138	25
Mindanao	2025	10	10	5	73	138	138	25
Mindanao	2025	10	10	6	75	138	138	25
Mindanao	2025	10	10	7	69	138	138	25
Mindanao	2025	10	10	8	77	138	138	25
Mindanao	2025	10	10	9	85	138	138	25
Mindanao	2025	10	10	10	89	138	138	25
Mindanao	2025	10	10	11	93	138	138	25
Mindanao	2025	10	10	12	92	138	138	25
Mindanao	2025	10	10	13	93	138	138	25
Mindanao	2025	10	10	14	96	138	138	25
Mindanao	2025	10	10	15	95	138	138	25
Mindanao	2025	10	10	16	93	138	138	25
Mindanao	2025	10	10	17	90	138	138	25
Mindanao	2025	10	10	18	97	138	138	25
Mindanao	2025	10	10	19	92	138	138	25
Mindanao	2025	10	10	20	91	138	138	25
Mindanao	2025	10	10	21	88	138	138	25
Mindanao	2025	10	10	22	84	138	138	25
Mindanao	2025	10	10	23	80	138	138	25
Mindanao	2025	10	10	24	78	138	138	25
Mindanao	2025	10	11	1	75	138	138	25
Mindanao	2025	10	11	2	72	138	138	25
Mindanao	2025	10	11	3	71	138	138	25
Mindanao	2025	10	11	4	70	138	138	25
Mindanao	2025	10	11	5	70	138	138	25
Mindanao	2025	10	11	6	72	138	138	25
Mindanao	2025	10	11	7	68	138	138	25
Mindanao	2025	10	11	8	73	138	138	25
Mindanao	2025	10	11	9	80	138	138	25
Mindanao	2025	10	11	10	82	138	138	25
Mindanao	2025	10	11	11	86	138	138	25
Mindanao	2025	10	11	12	86	138	138	25
Mindanao	2025	10	11	13	87	138	138	25
Mindanao	2025	10	11	14	92	138	138	25
Mindanao	2025	10	11	15	90	138	138	25
Mindanao	2025	10	11	16	88	138	138	25
Mindanao	2025	10	11	17	86	138	138	25
Mindanao	2025	10	11	18	93	138	138	25
Mindanao	2025	10	11	19	94	138	138	25
Mindanao	2025	10	11	20	92	138	138	25
Mindanao	2025	10	11	21	90	138	138	25
Mindanao	2025	10	11	22	85	138	138	25
Mindanao	2025	10	11	23	81	138	138	25
Mindanao	2025	10	11	24	76	138	138	25
Mindanao	2025	10	12	1	74	138	138	25
Mindanao	2025	10	12	2	72	138	138	25
Mindanao	2025	10	12	3	70	138	138	25
Mindanao	2025	10	12	4	67	138	138	25
Mindanao	2025	10	12	5	67	138	138	25
Mindanao	2025	10	12	6	69	138	138	25
Mindanao	2025	10	12	7	66	138	138	25
Mindanao	2025	10	12	8	68	138	138	25
Mindanao	2025	10	12	9	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	12	10	76	138	138	25
Mindanao	2025	10	12	11	78	138	138	25
Mindanao	2025	10	12	12	81	138	138	25
Mindanao	2025	10	12	13	82	138	138	25
Mindanao	2025	10	12	14	85	138	138	25
Mindanao	2025	10	12	15	84	138	138	25
Mindanao	2025	10	12	16	81	138	138	25
Mindanao	2025	10	12	17	82	138	138	25
Mindanao	2025	10	12	18	91	138	138	25
Mindanao	2025	10	12	19	92	138	138	25
Mindanao	2025	10	12	20	90	138	138	25
Mindanao	2025	10	12	21	88	138	138	25
Mindanao	2025	10	12	22	83	138	138	25
Mindanao	2025	10	12	23	79	138	138	25
Mindanao	2025	10	12	24	74	138	138	25
Mindanao	2025	10	13	1	73	138	138	25
Mindanao	2025	10	13	2	69	138	138	25
Mindanao	2025	10	13	3	68	138	138	25
Mindanao	2025	10	13	4	67	138	138	25
Mindanao	2025	10	13	5	71	138	138	25
Mindanao	2025	10	13	6	74	138	138	25
Mindanao	2025	10	13	7	67	138	138	25
Mindanao	2025	10	13	8	76	138	138	25
Mindanao	2025	10	13	9	88	138	138	25
Mindanao	2025	10	13	10	96	138	138	25
Mindanao	2025	10	13	11	100	138	138	25
Mindanao	2025	10	13	12	99	138	138	25
Mindanao	2025	10	13	13	100	138	138	25
Mindanao	2025	10	13	14	103	138	138	25
Mindanao	2025	10	13	15	99	138	138	25
Mindanao	2025	10	13	16	97	138	138	25
Mindanao	2025	10	13	17	95	138	138	25
Mindanao	2025	10	13	18	98	138	138	25
Mindanao	2025	10	13	19	95	138	138	25
Mindanao	2025	10	13	20	94	138	138	25
Mindanao	2025	10	13	21	89	138	138	25
Mindanao	2025	10	13	22	85	138	138	25
Mindanao	2025	10	13	23	80	138	138	25
Mindanao	2025	10	13	24	75	138	138	25
Mindanao	2025	10	14	1	73	138	138	25
Mindanao	2025	10	14	2	72	138	138	25
Mindanao	2025	10	14	3	68	138	138	25
Mindanao	2025	10	14	4	68	138	138	25
Mindanao	2025	10	14	5	72	138	138	25
Mindanao	2025	10	14	6	76	138	138	25
Mindanao	2025	10	14	7	68	138	138	25
Mindanao	2025	10	14	8	79	138	138	25
Mindanao	2025	10	14	9	91	138	138	25
Mindanao	2025	10	14	10	98	138	138	25
Mindanao	2025	10	14	11	102	138	138	25
Mindanao	2025	10	14	12	102	138	138	25
Mindanao	2025	10	14	13	103	138	138	25
Mindanao	2025	10	14	14	105	138	138	25
Mindanao	2025	10	14	15	104	138	138	25
Mindanao	2025	10	14	16	102	138	138	25
Mindanao	2025	10	14	17	97	138	138	25
Mindanao	2025	10	14	18	101	138	138	25
Mindanao	2025	10	14	19	96	138	138	25
Mindanao	2025	10	14	20	94	138	138	25
Mindanao	2025	10	14	21	91	138	138	25
Mindanao	2025	10	14	22	86	138	138	25
Mindanao	2025	10	14	23	80	138	138	25
Mindanao	2025	10	14	24	76	138	138	25
Mindanao	2025	10	15	1	74	138	138	25
Mindanao	2025	10	15	2	71	138	138	25
Mindanao	2025	10	15	3	69	138	138	25
Mindanao	2025	10	15	4	68	138	138	25
Mindanao	2025	10	15	5	73	138	138	25
Mindanao	2025	10	15	6	76	138	138	25
Mindanao	2025	10	15	7	68	138	138	25
Mindanao	2025	10	15	8	78	138	138	25
Mindanao	2025	10	15	9	89	138	138	25
Mindanao	2025	10	15	10	99	138	138	25
Mindanao	2025	10	15	11	102	138	138	25
Mindanao	2025	10	15	12	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	15	13	104	138	138	25
Mindanao	2025	10	15	14	106	138	138	25
Mindanao	2025	10	15	15	105	138	138	25
Mindanao	2025	10	15	16	102	138	138	25
Mindanao	2025	10	15	17	97	138	138	25
Mindanao	2025	10	15	18	102	138	138	25
Mindanao	2025	10	15	19	99	138	138	25
Mindanao	2025	10	15	20	96	138	138	25
Mindanao	2025	10	15	21	93	138	138	25
Mindanao	2025	10	15	22	87	138	138	25
Mindanao	2025	10	15	23	82	138	138	25
Mindanao	2025	10	15	24	78	138	138	25
Mindanao	2025	10	16	1	75	138	138	25
Mindanao	2025	10	16	2	72	138	138	25
Mindanao	2025	10	16	3	71	138	138	25
Mindanao	2025	10	16	4	70	138	138	25
Mindanao	2025	10	16	5	73	138	138	25
Mindanao	2025	10	16	6	76	138	138	25
Mindanao	2025	10	16	7	69	138	138	25
Mindanao	2025	10	16	8	77	138	138	25
Mindanao	2025	10	16	9	91	138	138	25
Mindanao	2025	10	16	10	98	138	138	25
Mindanao	2025	10	16	11	102	138	138	25
Mindanao	2025	10	16	12	102	138	138	25
Mindanao	2025	10	16	13	103	138	138	25
Mindanao	2025	10	16	14	106	138	138	25
Mindanao	2025	10	16	15	105	138	138	25
Mindanao	2025	10	16	16	101	138	138	25
Mindanao	2025	10	16	17	98	138	138	25
Mindanao	2025	10	16	18	102	138	138	25
Mindanao	2025	10	16	19	98	138	138	25
Mindanao	2025	10	16	20	97	138	138	25
Mindanao	2025	10	16	21	94	138	138	25
Mindanao	2025	10	16	22	89	138	138	25
Mindanao	2025	10	16	23	83	138	138	25
Mindanao	2025	10	16	24	77	138	138	25
Mindanao	2025	10	17	1	75	138	138	25
Mindanao	2025	10	17	2	72	138	138	25
Mindanao	2025	10	17	3	69	138	138	25
Mindanao	2025	10	17	4	68	138	138	25
Mindanao	2025	10	17	5	71	138	138	25
Mindanao	2025	10	17	6	74	138	138	25
Mindanao	2025	10	17	7	71	138	138	25
Mindanao	2025	10	17	8	80	138	138	25
Mindanao	2025	10	17	9	90	138	138	25
Mindanao	2025	10	17	10	98	138	138	25
Mindanao	2025	10	17	11	102	138	138	25
Mindanao	2025	10	17	12	102	138	138	25
Mindanao	2025	10	17	13	104	138	138	25
Mindanao	2025	10	17	14	108	138	138	25
Mindanao	2025	10	17	15	107	138	138	25
Mindanao	2025	10	17	16	103	138	138	25
Mindanao	2025	10	17	17	98	138	138	25
Mindanao	2025	10	17	18	103	138	138	25
Mindanao	2025	10	17	19	98	138	138	25
Mindanao	2025	10	17	20	96	138	138	25
Mindanao	2025	10	17	21	95	138	138	25
Mindanao	2025	10	17	22	88	138	138	25
Mindanao	2025	10	17	23	83	138	138	25
Mindanao	2025	10	17	24	79	138	138	25
Mindanao	2025	10	18	1	75	138	138	25
Mindanao	2025	10	18	2	73	138	138	25
Mindanao	2025	10	18	3	71	138	138	25
Mindanao	2025	10	18	4	70	138	138	25
Mindanao	2025	10	18	5	70	138	138	25
Mindanao	2025	10	18	6	70	138	138	25
Mindanao	2025	10	18	7	69	138	138	25
Mindanao	2025	10	18	8	76	138	138	25
Mindanao	2025	10	18	9	85	138	138	25
Mindanao	2025	10	18	10	91	138	138	25
Mindanao	2025	10	18	11	95	138	138	25
Mindanao	2025	10	18	12	96	138	138	25
Mindanao	2025	10	18	13	97	138	138	25
Mindanao	2025	10	18	14	99	138	138	25
Mindanao	2025	10	18	15	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	18	16	92	138	138	25
Mindanao	2025	10	18	17	92	138	138	25
Mindanao	2025	10	18	18	100	138	138	25
Mindanao	2025	10	18	19	95	138	138	25
Mindanao	2025	10	18	20	92	138	138	25
Mindanao	2025	10	18	21	88	138	138	25
Mindanao	2025	10	18	22	84	138	138	25
Mindanao	2025	10	18	23	81	138	138	25
Mindanao	2025	10	18	24	78	138	138	25
Mindanao	2025	10	19	1	73	138	138	25
Mindanao	2025	10	19	2	71	138	138	25
Mindanao	2025	10	19	3	68	138	138	25
Mindanao	2025	10	19	4	68	138	138	25
Mindanao	2025	10	19	5	69	138	138	25
Mindanao	2025	10	19	6	68	138	138	25
Mindanao	2025	10	19	7	66	138	138	25
Mindanao	2025	10	19	8	67	138	138	25
Mindanao	2025	10	19	9	71	138	138	25
Mindanao	2025	10	19	10	76	138	138	25
Mindanao	2025	10	19	11	78	138	138	25
Mindanao	2025	10	19	12	82	138	138	25
Mindanao	2025	10	19	13	83	138	138	25
Mindanao	2025	10	19	14	84	138	138	25
Mindanao	2025	10	19	15	83	138	138	25
Mindanao	2025	10	19	16	80	138	138	25
Mindanao	2025	10	19	17	81	138	138	25
Mindanao	2025	10	19	18	92	138	138	25
Mindanao	2025	10	19	19	90	138	138	25
Mindanao	2025	10	19	20	87	138	138	25
Mindanao	2025	10	19	21	85	138	138	25
Mindanao	2025	10	19	22	81	138	138	25
Mindanao	2025	10	19	23	78	138	138	25
Mindanao	2025	10	19	24	72	138	138	25
Mindanao	2025	10	20	1	70	138	138	25
Mindanao	2025	10	20	2	67	138	138	25
Mindanao	2025	10	20	3	67	138	138	25
Mindanao	2025	10	20	4	66	138	138	25
Mindanao	2025	10	20	5	71	138	138	25
Mindanao	2025	10	20	6	72	138	138	25
Mindanao	2025	10	20	7	65	138	138	25
Mindanao	2025	10	20	8	76	138	138	25
Mindanao	2025	10	20	9	88	138	138	25
Mindanao	2025	10	20	10	96	138	138	25
Mindanao	2025	10	20	11	100	138	138	25
Mindanao	2025	10	20	12	99	138	138	25
Mindanao	2025	10	20	13	100	138	138	25
Mindanao	2025	10	20	14	105	138	138	25
Mindanao	2025	10	20	15	103	138	138	25
Mindanao	2025	10	20	16	101	138	138	25
Mindanao	2025	10	20	17	96	138	138	25
Mindanao	2025	10	20	18	101	138	138	25
Mindanao	2025	10	20	19	97	138	138	25
Mindanao	2025	10	20	20	95	138	138	25
Mindanao	2025	10	20	21	90	138	138	25
Mindanao	2025	10	20	22	85	138	138	25
Mindanao	2025	10	20	23	78	138	138	25
Mindanao	2025	10	20	24	75	138	138	25
Mindanao	2025	10	21	1	72	138	138	25
Mindanao	2025	10	21	2	70	138	138	25
Mindanao	2025	10	21	3	68	138	138	25
Mindanao	2025	10	21	4	68	138	138	25
Mindanao	2025	10	21	5	72	138	138	25
Mindanao	2025	10	21	6	74	138	138	25
Mindanao	2025	10	21	7	68	138	138	25
Mindanao	2025	10	21	8	79	138	138	25
Mindanao	2025	10	21	9	90	138	138	25
Mindanao	2025	10	21	10	97	138	138	25
Mindanao	2025	10	21	11	102	138	138	25
Mindanao	2025	10	21	12	100	138	138	25
Mindanao	2025	10	21	13	102	138	138	25
Mindanao	2025	10	21	14	106	138	138	25
Mindanao	2025	10	21	15	104	138	138	25
Mindanao	2025	10	21	16	102	138	138	25
Mindanao	2025	10	21	17	98	138	138	25
Mindanao	2025	10	21	18	103	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	21	19	101	138	138	25
Mindanao	2025	10	21	20	100	138	138	25
Mindanao	2025	10	21	21	96	138	138	25
Mindanao	2025	10	21	22	91	138	138	25
Mindanao	2025	10	21	23	84	138	138	25
Mindanao	2025	10	21	24	79	138	138	25
Mindanao	2025	10	22	1	77	138	138	25
Mindanao	2025	10	22	2	75	138	138	25
Mindanao	2025	10	22	3	73	138	138	25
Mindanao	2025	10	22	4	70	138	138	25
Mindanao	2025	10	22	5	75	138	138	25
Mindanao	2025	10	22	6	78	138	138	25
Mindanao	2025	10	22	7	70	138	138	25
Mindanao	2025	10	22	8	80	138	138	25
Mindanao	2025	10	22	9	91	138	138	25
Mindanao	2025	10	22	10	98	138	138	25
Mindanao	2025	10	22	11	103	138	138	25
Mindanao	2025	10	22	12	102	138	138	25
Mindanao	2025	10	22	13	104	138	138	25
Mindanao	2025	10	22	14	107	138	138	25
Mindanao	2025	10	22	15	105	138	138	25
Mindanao	2025	10	22	16	102	138	138	25
Mindanao	2025	10	22	17	97	138	138	25
Mindanao	2025	10	22	18	101	138	138	25
Mindanao	2025	10	22	19	97	138	138	25
Mindanao	2025	10	22	20	95	138	138	25
Mindanao	2025	10	22	21	92	138	138	25
Mindanao	2025	10	22	22	86	138	138	25
Mindanao	2025	10	22	23	82	138	138	25
Mindanao	2025	10	22	24	78	138	138	25
Mindanao	2025	10	23	1	74	138	138	25
Mindanao	2025	10	23	2	73	138	138	25
Mindanao	2025	10	23	3	71	138	138	25
Mindanao	2025	10	23	4	69	138	138	25
Mindanao	2025	10	23	5	74	138	138	25
Mindanao	2025	10	23	6	77	138	138	25
Mindanao	2025	10	23	7	70	138	138	25
Mindanao	2025	10	23	8	77	138	138	25
Mindanao	2025	10	23	9	87	138	138	25
Mindanao	2025	10	23	10	91	138	138	25
Mindanao	2025	10	23	11	96	138	138	25
Mindanao	2025	10	23	12	94	138	138	25
Mindanao	2025	10	23	13	96	138	138	25
Mindanao	2025	10	23	14	97	138	138	25
Mindanao	2025	10	23	15	96	138	138	25
Mindanao	2025	10	23	16	95	138	138	25
Mindanao	2025	10	23	17	94	138	138	25
Mindanao	2025	10	23	18	101	138	138	25
Mindanao	2025	10	23	19	96	138	138	25
Mindanao	2025	10	23	20	94	138	138	25
Mindanao	2025	10	23	21	91	138	138	25
Mindanao	2025	10	23	22	85	138	138	25
Mindanao	2025	10	23	23	81	138	138	25
Mindanao	2025	10	23	24	75	138	138	25
Mindanao	2025	10	24	1	74	138	138	25
Mindanao	2025	10	24	2	70	138	138	25
Mindanao	2025	10	24	3	68	138	138	25
Mindanao	2025	10	24	4	68	138	138	25
Mindanao	2025	10	24	5	73	138	138	25
Mindanao	2025	10	24	6	75	138	138	25
Mindanao	2025	10	24	7	69	138	138	25
Mindanao	2025	10	24	8	76	138	138	25
Mindanao	2025	10	24	9	90	138	138	25
Mindanao	2025	10	24	10	95	138	138	25
Mindanao	2025	10	24	11	99	138	138	25
Mindanao	2025	10	24	12	98	138	138	25
Mindanao	2025	10	24	13	100	138	138	25
Mindanao	2025	10	24	14	104	138	138	25
Mindanao	2025	10	24	15	102	138	138	25
Mindanao	2025	10	24	16	99	138	138	25
Mindanao	2025	10	24	17	95	138	138	25
Mindanao	2025	10	24	18	100	138	138	25
Mindanao	2025	10	24	19	94	138	138	25
Mindanao	2025	10	24	20	92	138	138	25
Mindanao	2025	10	24	21	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	24	22	83	138	138	25
Mindanao	2025	10	24	23	79	138	138	25
Mindanao	2025	10	24	24	74	138	138	25
Mindanao	2025	10	25	1	71	138	138	25
Mindanao	2025	10	25	2	70	138	138	25
Mindanao	2025	10	25	3	68	138	138	25
Mindanao	2025	10	25	4	67	138	138	25
Mindanao	2025	10	25	5	69	138	138	25
Mindanao	2025	10	25	6	69	138	138	25
Mindanao	2025	10	25	7	68	138	138	25
Mindanao	2025	10	25	8	74	138	138	25
Mindanao	2025	10	25	9	81	138	138	25
Mindanao	2025	10	25	10	86	138	138	25
Mindanao	2025	10	25	11	91	138	138	25
Mindanao	2025	10	25	12	91	138	138	25
Mindanao	2025	10	25	13	93	138	138	25
Mindanao	2025	10	25	14	96	138	138	25
Mindanao	2025	10	25	15	95	138	138	25
Mindanao	2025	10	25	16	92	138	138	25
Mindanao	2025	10	25	17	90	138	138	25
Mindanao	2025	10	25	18	99	138	138	25
Mindanao	2025	10	25	19	96	138	138	25
Mindanao	2025	10	25	20	93	138	138	25
Mindanao	2025	10	25	21	91	138	138	25
Mindanao	2025	10	25	22	89	138	138	25
Mindanao	2025	10	25	23	84	138	138	25
Mindanao	2025	10	25	24	80	138	138	25
Mindanao	2025	10	26	1	77	138	138	25
Mindanao	2025	10	26	2	74	138	138	25
Mindanao	2025	10	26	3	72	138	138	25
Mindanao	2025	10	26	4	69	138	138	25
Mindanao	2025	10	26	5	70	138	138	25
Mindanao	2025	10	26	6	70	138	138	25
Mindanao	2025	10	26	7	68	138	138	25
Mindanao	2025	10	26	8	69	138	138	25
Mindanao	2025	10	26	9	74	138	138	25
Mindanao	2025	10	26	10	79	138	138	25
Mindanao	2025	10	26	11	82	138	138	25
Mindanao	2025	10	26	12	84	138	138	25
Mindanao	2025	10	26	13	85	138	138	25
Mindanao	2025	10	26	14	86	138	138	25
Mindanao	2025	10	26	15	84	138	138	25
Mindanao	2025	10	26	16	83	138	138	25
Mindanao	2025	10	26	17	83	138	138	25
Mindanao	2025	10	26	18	93	138	138	25
Mindanao	2025	10	26	19	89	138	138	25
Mindanao	2025	10	26	20	87	138	138	25
Mindanao	2025	10	26	21	86	138	138	25
Mindanao	2025	10	26	22	82	138	138	25
Mindanao	2025	10	26	23	78	138	138	25
Mindanao	2025	10	26	24	75	138	138	25
Mindanao	2025	10	27	1	71	138	138	25
Mindanao	2025	10	27	2	68	138	138	25
Mindanao	2025	10	27	3	66	138	138	25
Mindanao	2025	10	27	4	65	138	138	25
Mindanao	2025	10	27	5	66	138	138	25
Mindanao	2025	10	27	6	66	138	138	25
Mindanao	2025	10	27	7	63	138	138	25
Mindanao	2025	10	27	8	62	138	138	25
Mindanao	2025	10	27	9	67	138	138	25
Mindanao	2025	10	27	10	70	138	138	25
Mindanao	2025	10	27	11	73	138	138	25
Mindanao	2025	10	27	12	77	138	138	25
Mindanao	2025	10	27	13	79	138	138	25
Mindanao	2025	10	27	14	79	138	138	25
Mindanao	2025	10	27	15	78	138	138	25
Mindanao	2025	10	27	16	77	138	138	25
Mindanao	2025	10	27	17	80	138	138	25
Mindanao	2025	10	27	18	88	138	138	25
Mindanao	2025	10	27	19	83	138	138	25
Mindanao	2025	10	27	20	82	138	138	25
Mindanao	2025	10	27	21	79	138	138	25
Mindanao	2025	10	27	22	77	138	138	25
Mindanao	2025	10	27	23	72	138	138	25
Mindanao	2025	10	27	24	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	28	1	67	138	138	25
Mindanao	2025	10	28	2	63	138	138	25
Mindanao	2025	10	28	3	63	138	138	25
Mindanao	2025	10	28	4	61	138	138	25
Mindanao	2025	10	28	5	61	138	138	25
Mindanao	2025	10	28	6	62	138	138	25
Mindanao	2025	10	28	7	63	138	138	25
Mindanao	2025	10	28	8	68	138	138	25
Mindanao	2025	10	28	9	78	138	138	25
Mindanao	2025	10	28	10	85	138	138	25
Mindanao	2025	10	28	11	89	138	138	25
Mindanao	2025	10	28	12	90	138	138	25
Mindanao	2025	10	28	13	92	138	138	25
Mindanao	2025	10	28	14	95	138	138	25
Mindanao	2025	10	28	15	93	138	138	25
Mindanao	2025	10	28	16	91	138	138	25
Mindanao	2025	10	28	17	87	138	138	25
Mindanao	2025	10	28	18	95	138	138	25
Mindanao	2025	10	28	19	91	138	138	25
Mindanao	2025	10	28	20	89	138	138	25
Mindanao	2025	10	28	21	86	138	138	25
Mindanao	2025	10	28	22	82	138	138	25
Mindanao	2025	10	28	23	78	138	138	25
Mindanao	2025	10	28	24	74	138	138	25
Mindanao	2025	10	29	1	77	138	138	25
Mindanao	2025	10	29	2	75	138	138	25
Mindanao	2025	10	29	3	73	138	138	25
Mindanao	2025	10	29	4	70	138	138	25
Mindanao	2025	10	29	5	75	138	138	25
Mindanao	2025	10	29	6	78	138	138	25
Mindanao	2025	10	29	7	70	138	138	25
Mindanao	2025	10	29	8	80	138	138	25
Mindanao	2025	10	29	9	91	138	138	25
Mindanao	2025	10	29	10	98	138	138	25
Mindanao	2025	10	29	11	103	138	138	25
Mindanao	2025	10	29	12	102	138	138	25
Mindanao	2025	10	29	13	104	138	138	25
Mindanao	2025	10	29	14	107	138	138	25
Mindanao	2025	10	29	15	105	138	138	25
Mindanao	2025	10	29	16	102	138	138	25
Mindanao	2025	10	29	17	97	138	138	25
Mindanao	2025	10	29	18	101	138	138	25
Mindanao	2025	10	29	19	97	138	138	25
Mindanao	2025	10	29	20	95	138	138	25
Mindanao	2025	10	29	21	92	138	138	25
Mindanao	2025	10	29	22	86	138	138	25
Mindanao	2025	10	29	23	82	138	138	25
Mindanao	2025	10	29	24	78	138	138	25
Mindanao	2025	10	30	1	66	138	138	25
Mindanao	2025	10	30	2	65	138	138	25
Mindanao	2025	10	30	3	63	138	138	25
Mindanao	2025	10	30	4	61	138	138	25
Mindanao	2025	10	30	5	61	138	138	25
Mindanao	2025	10	30	6	60	138	138	25
Mindanao	2025	10	30	7	62	138	138	25
Mindanao	2025	10	30	8	65	138	138	25
Mindanao	2025	10	30	9	69	138	138	25
Mindanao	2025	10	30	10	76	138	138	25
Mindanao	2025	10	30	11	79	138	138	25
Mindanao	2025	10	30	12	81	138	138	25
Mindanao	2025	10	30	13	82	138	138	25
Mindanao	2025	10	30	14	84	138	138	25
Mindanao	2025	10	30	15	84	138	138	25
Mindanao	2025	10	30	16	83	138	138	25
Mindanao	2025	10	30	17	79	138	138	25
Mindanao	2025	10	30	18	89	138	138	25
Mindanao	2025	10	30	19	84	138	138	25
Mindanao	2025	10	30	20	84	138	138	25
Mindanao	2025	10	30	21	81	138	138	25
Mindanao	2025	10	30	22	79	138	138	25
Mindanao	2025	10	30	23	75	138	138	25
Mindanao	2025	10	30	24	73	138	138	25
Mindanao	2025	10	31	1	69	138	138	25
Mindanao	2025	10	31	2	66	138	138	25
Mindanao	2025	10	31	3	65	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	10	31	4	64	138	138	25
Mindanao	2025	10	31	5	63	138	138	25
Mindanao	2025	10	31	6	64	138	138	25
Mindanao	2025	10	31	7	66	138	138	25
Mindanao	2025	10	31	8	76	138	138	25
Mindanao	2025	10	31	9	86	138	138	25
Mindanao	2025	10	31	10	93	138	138	25
Mindanao	2025	10	31	11	99	138	138	25
Mindanao	2025	10	31	12	102	138	138	25
Mindanao	2025	10	31	13	100	138	138	25
Mindanao	2025	10	31	14	104	138	138	25
Mindanao	2025	10	31	15	103	138	138	25
Mindanao	2025	10	31	16	98	138	138	25
Mindanao	2025	10	31	17	93	138	138	25
Mindanao	2025	10	31	18	97	138	138	25
Mindanao	2025	10	31	19	95	138	138	25
Mindanao	2025	10	31	20	93	138	138	25
Mindanao	2025	10	31	21	91	138	138	25
Mindanao	2025	10	31	22	86	138	138	25
Mindanao	2025	10	31	23	82	138	138	25
Mindanao	2025	10	31	24	78	138	138	25
Mindanao	2025	11	1	1	72	138	138	25
Mindanao	2025	11	1	2	69	138	138	25
Mindanao	2025	11	1	3	66	138	138	25
Mindanao	2025	11	1	4	65	138	138	25
Mindanao	2025	11	1	5	65	138	138	25
Mindanao	2025	11	1	6	64	138	138	25
Mindanao	2025	11	1	7	62	138	138	25
Mindanao	2025	11	1	8	65	138	138	25
Mindanao	2025	11	1	9	72	138	138	25
Mindanao	2025	11	1	10	77	138	138	25
Mindanao	2025	11	1	11	80	138	138	25
Mindanao	2025	11	1	12	82	138	138	25
Mindanao	2025	11	1	13	84	138	138	25
Mindanao	2025	11	1	14	86	138	138	25
Mindanao	2025	11	1	15	86	138	138	25
Mindanao	2025	11	1	16	84	138	138	25
Mindanao	2025	11	1	17	80	138	138	25
Mindanao	2025	11	1	18	89	138	138	25
Mindanao	2025	11	1	19	85	138	138	25
Mindanao	2025	11	1	20	84	138	138	25
Mindanao	2025	11	1	21	82	138	138	25
Mindanao	2025	11	1	22	79	138	138	25
Mindanao	2025	11	1	23	74	138	138	25
Mindanao	2025	11	1	24	71	138	138	25
Mindanao	2025	11	2	1	70	138	138	25
Mindanao	2025	11	2	2	68	138	138	25
Mindanao	2025	11	2	3	66	138	138	25
Mindanao	2025	11	2	4	65	138	138	25
Mindanao	2025	11	2	5	64	138	138	25
Mindanao	2025	11	2	6	64	138	138	25
Mindanao	2025	11	2	7	65	138	138	25
Mindanao	2025	11	2	8	68	138	138	25
Mindanao	2025	11	2	9	74	138	138	25
Mindanao	2025	11	2	10	79	138	138	25
Mindanao	2025	11	2	11	83	138	138	25
Mindanao	2025	11	2	12	85	138	138	25
Mindanao	2025	11	2	13	88	138	138	25
Mindanao	2025	11	2	14	90	138	138	25
Mindanao	2025	11	2	15	87	138	138	25
Mindanao	2025	11	2	16	86	138	138	25
Mindanao	2025	11	2	17	88	138	138	25
Mindanao	2025	11	2	18	96	138	138	25
Mindanao	2025	11	2	19	93	138	138	25
Mindanao	2025	11	2	20	91	138	138	25
Mindanao	2025	11	2	21	87	138	138	25
Mindanao	2025	11	2	22	83	138	138	25
Mindanao	2025	11	2	23	78	138	138	25
Mindanao	2025	11	2	24	74	138	138	25
Mindanao	2025	11	3	1	71	138	138	25
Mindanao	2025	11	3	2	69	138	138	25
Mindanao	2025	11	3	3	66	138	138	25
Mindanao	2025	11	3	4	66	138	138	25
Mindanao	2025	11	3	5	70	138	138	25
Mindanao	2025	11	3	6	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	3	7	65	138	138	25
Mindanao	2025	11	3	8	77	138	138	25
Mindanao	2025	11	3	9	91	138	138	25
Mindanao	2025	11	3	10	97	138	138	25
Mindanao	2025	11	3	11	102	138	138	25
Mindanao	2025	11	3	12	101	138	138	25
Mindanao	2025	11	3	13	103	138	138	25
Mindanao	2025	11	3	14	108	138	138	25
Mindanao	2025	11	3	15	107	138	138	25
Mindanao	2025	11	3	16	104	138	138	25
Mindanao	2025	11	3	17	98	138	138	25
Mindanao	2025	11	3	18	105	138	138	25
Mindanao	2025	11	3	19	100	138	138	25
Mindanao	2025	11	3	20	98	138	138	25
Mindanao	2025	11	3	21	94	138	138	25
Mindanao	2025	11	3	22	88	138	138	25
Mindanao	2025	11	3	23	85	138	138	25
Mindanao	2025	11	3	24	81	138	138	25
Mindanao	2025	11	4	1	76	138	138	25
Mindanao	2025	11	4	2	74	138	138	25
Mindanao	2025	11	4	3	72	138	138	25
Mindanao	2025	11	4	4	72	138	138	25
Mindanao	2025	11	4	5	74	138	138	25
Mindanao	2025	11	4	6	76	138	138	25
Mindanao	2025	11	4	7	69	138	138	25
Mindanao	2025	11	4	8	81	138	138	25
Mindanao	2025	11	4	9	93	138	138	25
Mindanao	2025	11	4	10	99	138	138	25
Mindanao	2025	11	4	11	105	138	138	25
Mindanao	2025	11	4	12	102	138	138	25
Mindanao	2025	11	4	13	105	138	138	25
Mindanao	2025	11	4	14	107	138	138	25
Mindanao	2025	11	4	15	105	138	138	25
Mindanao	2025	11	4	16	103	138	138	25
Mindanao	2025	11	4	17	96	138	138	25
Mindanao	2025	11	4	18	102	138	138	25
Mindanao	2025	11	4	19	98	138	138	25
Mindanao	2025	11	4	20	95	138	138	25
Mindanao	2025	11	4	21	89	138	138	25
Mindanao	2025	11	4	22	85	138	138	25
Mindanao	2025	11	4	23	80	138	138	25
Mindanao	2025	11	4	24	76	138	138	25
Mindanao	2025	11	5	1	73	138	138	25
Mindanao	2025	11	5	2	71	138	138	25
Mindanao	2025	11	5	3	69	138	138	25
Mindanao	2025	11	5	4	68	138	138	25
Mindanao	2025	11	5	5	70	138	138	25
Mindanao	2025	11	5	6	74	138	138	25
Mindanao	2025	11	5	7	69	138	138	25
Mindanao	2025	11	5	8	77	138	138	25
Mindanao	2025	11	5	9	86	138	138	25
Mindanao	2025	11	5	10	92	138	138	25
Mindanao	2025	11	5	11	97	138	138	25
Mindanao	2025	11	5	12	96	138	138	25
Mindanao	2025	11	5	13	99	138	138	25
Mindanao	2025	11	5	14	103	138	138	25
Mindanao	2025	11	5	15	102	138	138	25
Mindanao	2025	11	5	16	99	138	138	25
Mindanao	2025	11	5	17	97	138	138	25
Mindanao	2025	11	5	18	102	138	138	25
Mindanao	2025	11	5	19	98	138	138	25
Mindanao	2025	11	5	20	96	138	138	25
Mindanao	2025	11	5	21	92	138	138	25
Mindanao	2025	11	5	22	87	138	138	25
Mindanao	2025	11	5	23	83	138	138	25
Mindanao	2025	11	5	24	78	138	138	25
Mindanao	2025	11	6	1	74	138	138	25
Mindanao	2025	11	6	2	73	138	138	25
Mindanao	2025	11	6	3	70	138	138	25
Mindanao	2025	11	6	4	69	138	138	25
Mindanao	2025	11	6	5	73	138	138	25
Mindanao	2025	11	6	6	74	138	138	25
Mindanao	2025	11	6	7	68	138	138	25
Mindanao	2025	11	6	8	79	138	138	25
Mindanao	2025	11	6	9	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	6	10	98	138	138	25
Mindanao	2025	11	6	11	103	138	138	25
Mindanao	2025	11	6	12	102	138	138	25
Mindanao	2025	11	6	13	103	138	138	25
Mindanao	2025	11	6	14	108	138	138	25
Mindanao	2025	11	6	15	108	138	138	25
Mindanao	2025	11	6	16	102	138	138	25
Mindanao	2025	11	6	17	97	138	138	25
Mindanao	2025	11	6	18	104	138	138	25
Mindanao	2025	11	6	19	100	138	138	25
Mindanao	2025	11	6	20	98	138	138	25
Mindanao	2025	11	6	21	96	138	138	25
Mindanao	2025	11	6	22	88	138	138	25
Mindanao	2025	11	6	23	84	138	138	25
Mindanao	2025	11	6	24	79	138	138	25
Mindanao	2025	11	7	1	76	138	138	25
Mindanao	2025	11	7	2	74	138	138	25
Mindanao	2025	11	7	3	71	138	138	25
Mindanao	2025	11	7	4	71	138	138	25
Mindanao	2025	11	7	5	72	138	138	25
Mindanao	2025	11	7	6	73	138	138	25
Mindanao	2025	11	7	7	68	138	138	25
Mindanao	2025	11	7	8	78	138	138	25
Mindanao	2025	11	7	9	89	138	138	25
Mindanao	2025	11	7	10	97	138	138	25
Mindanao	2025	11	7	11	103	138	138	25
Mindanao	2025	11	7	12	101	138	138	25
Mindanao	2025	11	7	13	103	138	138	25
Mindanao	2025	11	7	14	108	138	138	25
Mindanao	2025	11	7	15	105	138	138	25
Mindanao	2025	11	7	16	103	138	138	25
Mindanao	2025	11	7	17	98	138	138	25
Mindanao	2025	11	7	18	103	138	138	25
Mindanao	2025	11	7	19	99	138	138	25
Mindanao	2025	11	7	20	96	138	138	25
Mindanao	2025	11	7	21	95	138	138	25
Mindanao	2025	11	7	22	89	138	138	25
Mindanao	2025	11	7	23	84	138	138	25
Mindanao	2025	11	7	24	80	138	138	25
Mindanao	2025	11	8	1	77	138	138	25
Mindanao	2025	11	8	2	74	138	138	25
Mindanao	2025	11	8	3	71	138	138	25
Mindanao	2025	11	8	4	70	138	138	25
Mindanao	2025	11	8	5	70	138	138	25
Mindanao	2025	11	8	6	69	138	138	25
Mindanao	2025	11	8	7	69	138	138	25
Mindanao	2025	11	8	8	75	138	138	25
Mindanao	2025	11	8	9	85	138	138	25
Mindanao	2025	11	8	10	94	138	138	25
Mindanao	2025	11	8	11	97	138	138	25
Mindanao	2025	11	8	12	96	138	138	25
Mindanao	2025	11	8	13	99	138	138	25
Mindanao	2025	11	8	14	102	138	138	25
Mindanao	2025	11	8	15	101	138	138	25
Mindanao	2025	11	8	16	97	138	138	25
Mindanao	2025	11	8	17	95	138	138	25
Mindanao	2025	11	8	18	100	138	138	25
Mindanao	2025	11	8	19	96	138	138	25
Mindanao	2025	11	8	20	95	138	138	25
Mindanao	2025	11	8	21	91	138	138	25
Mindanao	2025	11	8	22	88	138	138	25
Mindanao	2025	11	8	23	82	138	138	25
Mindanao	2025	11	8	24	78	138	138	25
Mindanao	2025	11	9	1	73	138	138	25
Mindanao	2025	11	9	2	71	138	138	25
Mindanao	2025	11	9	3	70	138	138	25
Mindanao	2025	11	9	4	68	138	138	25
Mindanao	2025	11	9	5	67	138	138	25
Mindanao	2025	11	9	6	66	138	138	25
Mindanao	2025	11	9	7	60	138	138	25
Mindanao	2025	11	9	8	66	138	138	25
Mindanao	2025	11	9	9	71	138	138	25
Mindanao	2025	11	9	10	77	138	138	25
Mindanao	2025	11	9	11	80	138	138	25
Mindanao	2025	11	9	12	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	9	13	83	138	138	25
Mindanao	2025	11	9	14	85	138	138	25
Mindanao	2025	11	9	15	84	138	138	25
Mindanao	2025	11	9	16	84	138	138	25
Mindanao	2025	11	9	17	82	138	138	25
Mindanao	2025	11	9	18	93	138	138	25
Mindanao	2025	11	9	19	93	138	138	25
Mindanao	2025	11	9	20	94	138	138	25
Mindanao	2025	11	9	21	92	138	138	25
Mindanao	2025	11	9	22	86	138	138	25
Mindanao	2025	11	9	23	82	138	138	25
Mindanao	2025	11	9	24	77	138	138	25
Mindanao	2025	11	10	1	75	138	138	25
Mindanao	2025	11	10	2	71	138	138	25
Mindanao	2025	11	10	3	69	138	138	25
Mindanao	2025	11	10	4	68	138	138	25
Mindanao	2025	11	10	5	72	138	138	25
Mindanao	2025	11	10	6	74	138	138	25
Mindanao	2025	11	10	7	66	138	138	25
Mindanao	2025	11	10	8	78	138	138	25
Mindanao	2025	11	10	9	92	138	138	25
Mindanao	2025	11	10	10	99	138	138	25
Mindanao	2025	11	10	11	103	138	138	25
Mindanao	2025	11	10	12	104	138	138	25
Mindanao	2025	11	10	13	105	138	138	25
Mindanao	2025	11	10	14	109	138	138	25
Mindanao	2025	11	10	15	109	138	138	25
Mindanao	2025	11	10	16	105	138	138	25
Mindanao	2025	11	10	17	100	138	138	25
Mindanao	2025	11	10	18	106	138	138	25
Mindanao	2025	11	10	19	100	138	138	25
Mindanao	2025	11	10	20	100	138	138	25
Mindanao	2025	11	10	21	96	138	138	25
Mindanao	2025	11	10	22	90	138	138	25
Mindanao	2025	11	10	23	86	138	138	25
Mindanao	2025	11	10	24	80	138	138	25
Mindanao	2025	11	11	1	76	138	138	25
Mindanao	2025	11	11	2	74	138	138	25
Mindanao	2025	11	11	3	72	138	138	25
Mindanao	2025	11	11	4	72	138	138	25
Mindanao	2025	11	11	5	73	138	138	25
Mindanao	2025	11	11	6	73	138	138	25
Mindanao	2025	11	11	7	69	138	138	25
Mindanao	2025	11	11	8	80	138	138	25
Mindanao	2025	11	11	9	92	138	138	25
Mindanao	2025	11	11	10	101	138	138	25
Mindanao	2025	11	11	11	104	138	138	25
Mindanao	2025	11	11	12	104	138	138	25
Mindanao	2025	11	11	13	106	138	138	25
Mindanao	2025	11	11	14	109	138	138	25
Mindanao	2025	11	11	15	108	138	138	25
Mindanao	2025	11	11	16	107	138	138	25
Mindanao	2025	11	11	17	100	138	138	25
Mindanao	2025	11	11	18	107	138	138	25
Mindanao	2025	11	11	19	103	138	138	25
Mindanao	2025	11	11	20	102	138	138	25
Mindanao	2025	11	11	21	99	138	138	25
Mindanao	2025	11	11	22	93	138	138	25
Mindanao	2025	11	11	23	88	138	138	25
Mindanao	2025	11	11	24	83	138	138	25
Mindanao	2025	11	12	1	79	138	138	25
Mindanao	2025	11	12	2	78	138	138	25
Mindanao	2025	11	12	3	75	138	138	25
Mindanao	2025	11	12	4	75	138	138	25
Mindanao	2025	11	12	5	77	138	138	25
Mindanao	2025	11	12	6	77	138	138	25
Mindanao	2025	11	12	7	73	138	138	25
Mindanao	2025	11	12	8	81	138	138	25
Mindanao	2025	11	12	9	91	138	138	25
Mindanao	2025	11	12	10	99	138	138	25
Mindanao	2025	11	12	11	103	138	138	25
Mindanao	2025	11	12	12	102	138	138	25
Mindanao	2025	11	12	13	103	138	138	25
Mindanao	2025	11	12	14	107	138	138	25
Mindanao	2025	11	12	15	105	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	12	16	101	138	138	25
Mindanao	2025	11	12	17	98	138	138	25
Mindanao	2025	11	12	18	105	138	138	25
Mindanao	2025	11	12	19	99	138	138	25
Mindanao	2025	11	12	20	96	138	138	25
Mindanao	2025	11	12	21	95	138	138	25
Mindanao	2025	11	12	22	89	138	138	25
Mindanao	2025	11	12	23	84	138	138	25
Mindanao	2025	11	12	24	80	138	138	25
Mindanao	2025	11	13	1	78	138	138	25
Mindanao	2025	11	13	2	74	138	138	25
Mindanao	2025	11	13	3	71	138	138	25
Mindanao	2025	11	13	4	70	138	138	25
Mindanao	2025	11	13	5	74	138	138	25
Mindanao	2025	11	13	6	76	138	138	25
Mindanao	2025	11	13	7	70	138	138	25
Mindanao	2025	11	13	8	79	138	138	25
Mindanao	2025	11	13	9	91	138	138	25
Mindanao	2025	11	13	10	94	138	138	25
Mindanao	2025	11	13	11	98	138	138	25
Mindanao	2025	11	13	12	92	138	138	25
Mindanao	2025	11	13	13	92	138	138	25
Mindanao	2025	11	13	14	96	138	138	25
Mindanao	2025	11	13	15	94	138	138	25
Mindanao	2025	11	13	16	93	138	138	25
Mindanao	2025	11	13	17	93	138	138	25
Mindanao	2025	11	13	18	99	138	138	25
Mindanao	2025	11	13	19	94	138	138	25
Mindanao	2025	11	13	20	92	138	138	25
Mindanao	2025	11	13	21	88	138	138	25
Mindanao	2025	11	13	22	83	138	138	25
Mindanao	2025	11	13	23	78	138	138	25
Mindanao	2025	11	13	24	75	138	138	25
Mindanao	2025	11	14	1	73	138	138	25
Mindanao	2025	11	14	2	70	138	138	25
Mindanao	2025	11	14	3	68	138	138	25
Mindanao	2025	11	14	4	68	138	138	25
Mindanao	2025	11	14	5	70	138	138	25
Mindanao	2025	11	14	6	72	138	138	25
Mindanao	2025	11	14	7	69	138	138	25
Mindanao	2025	11	14	8	76	138	138	25
Mindanao	2025	11	14	9	87	138	138	25
Mindanao	2025	11	14	10	93	138	138	25
Mindanao	2025	11	14	11	96	138	138	25
Mindanao	2025	11	14	12	94	138	138	25
Mindanao	2025	11	14	13	94	138	138	25
Mindanao	2025	11	14	14	98	138	138	25
Mindanao	2025	11	14	15	97	138	138	25
Mindanao	2025	11	14	16	95	138	138	25
Mindanao	2025	11	14	17	81	138	138	25
Mindanao	2025	11	14	18	88	138	138	25
Mindanao	2025	11	14	19	86	138	138	25
Mindanao	2025	11	14	20	87	138	138	25
Mindanao	2025	11	14	21	87	138	138	25
Mindanao	2025	11	14	22	81	138	138	25
Mindanao	2025	11	14	23	78	138	138	25
Mindanao	2025	11	14	24	74	138	138	25
Mindanao	2025	11	15	1	73	138	138	25
Mindanao	2025	11	15	2	70	138	138	25
Mindanao	2025	11	15	3	70	138	138	25
Mindanao	2025	11	15	4	67	138	138	25
Mindanao	2025	11	15	5	67	138	138	25
Mindanao	2025	11	15	6	68	138	138	25
Mindanao	2025	11	15	7	64	138	138	25
Mindanao	2025	11	15	8	72	138	138	25
Mindanao	2025	11	15	9	80	138	138	25
Mindanao	2025	11	15	10	83	138	138	25
Mindanao	2025	11	15	11	86	138	138	25
Mindanao	2025	11	15	12	86	138	138	25
Mindanao	2025	11	15	13	88	138	138	25
Mindanao	2025	11	15	14	90	138	138	25
Mindanao	2025	11	15	15	89	138	138	25
Mindanao	2025	11	15	16	88	138	138	25
Mindanao	2025	11	15	17	87	138	138	25
Mindanao	2025	11	15	18	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	15	19	89	138	138	25
Mindanao	2025	11	15	20	87	138	138	25
Mindanao	2025	11	15	21	85	138	138	25
Mindanao	2025	11	15	22	80	138	138	25
Mindanao	2025	11	15	23	76	138	138	25
Mindanao	2025	11	15	24	73	138	138	25
Mindanao	2025	11	16	1	71	138	138	25
Mindanao	2025	11	16	2	69	138	138	25
Mindanao	2025	11	16	3	70	138	138	25
Mindanao	2025	11	16	4	66	138	138	25
Mindanao	2025	11	16	5	67	138	138	25
Mindanao	2025	11	16	6	67	138	138	25
Mindanao	2025	11	16	7	64	138	138	25
Mindanao	2025	11	16	8	66	138	138	25
Mindanao	2025	11	16	9	71	138	138	25
Mindanao	2025	11	16	10	74	138	138	25
Mindanao	2025	11	16	11	76	138	138	25
Mindanao	2025	11	16	12	78	138	138	25
Mindanao	2025	11	16	13	78	138	138	25
Mindanao	2025	11	16	14	79	138	138	25
Mindanao	2025	11	16	15	78	138	138	25
Mindanao	2025	11	16	16	79	138	138	25
Mindanao	2025	11	16	17	80	138	138	25
Mindanao	2025	11	16	18	92	138	138	25
Mindanao	2025	11	16	19	88	138	138	25
Mindanao	2025	11	16	20	86	138	138	25
Mindanao	2025	11	16	21	83	138	138	25
Mindanao	2025	11	16	22	81	138	138	25
Mindanao	2025	11	16	23	76	138	138	25
Mindanao	2025	11	16	24	72	138	138	25
Mindanao	2025	11	17	1	71	138	138	25
Mindanao	2025	11	17	2	68	138	138	25
Mindanao	2025	11	17	3	66	138	138	25
Mindanao	2025	11	17	4	67	138	138	25
Mindanao	2025	11	17	5	68	138	138	25
Mindanao	2025	11	17	6	71	138	138	25
Mindanao	2025	11	17	7	65	138	138	25
Mindanao	2025	11	17	8	76	138	138	25
Mindanao	2025	11	17	9	88	138	138	25
Mindanao	2025	11	17	10	96	138	138	25
Mindanao	2025	11	17	11	100	138	138	25
Mindanao	2025	11	17	12	99	138	138	25
Mindanao	2025	11	17	13	100	138	138	25
Mindanao	2025	11	17	14	104	138	138	25
Mindanao	2025	11	17	15	101	138	138	25
Mindanao	2025	11	17	16	97	138	138	25
Mindanao	2025	11	17	17	95	138	138	25
Mindanao	2025	11	17	18	101	138	138	25
Mindanao	2025	11	17	19	96	138	138	25
Mindanao	2025	11	17	20	93	138	138	25
Mindanao	2025	11	17	21	89	138	138	25
Mindanao	2025	11	17	22	84	138	138	25
Mindanao	2025	11	17	23	79	138	138	25
Mindanao	2025	11	17	24	75	138	138	25
Mindanao	2025	11	18	1	73	138	138	25
Mindanao	2025	11	18	2	70	138	138	25
Mindanao	2025	11	18	3	68	138	138	25
Mindanao	2025	11	18	4	69	138	138	25
Mindanao	2025	11	18	5	71	138	138	25
Mindanao	2025	11	18	6	73	138	138	25
Mindanao	2025	11	18	7	69	138	138	25
Mindanao	2025	11	18	8	78	138	138	25
Mindanao	2025	11	18	9	89	138	138	25
Mindanao	2025	11	18	10	99	138	138	25
Mindanao	2025	11	18	11	100	138	138	25
Mindanao	2025	11	18	12	100	138	138	25
Mindanao	2025	11	18	13	101	138	138	25
Mindanao	2025	11	18	14	105	138	138	25
Mindanao	2025	11	18	15	103	138	138	25
Mindanao	2025	11	18	16	100	138	138	25
Mindanao	2025	11	18	17	100	138	138	25
Mindanao	2025	11	18	18	104	138	138	25
Mindanao	2025	11	18	19	97	138	138	25
Mindanao	2025	11	18	20	97	138	138	25
Mindanao	2025	11	18	21	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	18	22	86	138	138	25
Mindanao	2025	11	18	23	82	138	138	25
Mindanao	2025	11	18	24	77	138	138	25
Mindanao	2025	11	19	1	73	138	138	25
Mindanao	2025	11	19	2	71	138	138	25
Mindanao	2025	11	19	3	69	138	138	25
Mindanao	2025	11	19	4	69	138	138	25
Mindanao	2025	11	19	5	72	138	138	25
Mindanao	2025	11	19	6	75	138	138	25
Mindanao	2025	11	19	7	68	138	138	25
Mindanao	2025	11	19	8	80	138	138	25
Mindanao	2025	11	19	9	94	138	138	25
Mindanao	2025	11	19	10	100	138	138	25
Mindanao	2025	11	19	11	105	138	138	25
Mindanao	2025	11	19	12	103	138	138	25
Mindanao	2025	11	19	13	105	138	138	25
Mindanao	2025	11	19	14	109	138	138	25
Mindanao	2025	11	19	15	107	138	138	25
Mindanao	2025	11	19	16	96	138	138	25
Mindanao	2025	11	19	17	99	138	138	25
Mindanao	2025	11	19	18	104	138	138	25
Mindanao	2025	11	19	19	101	138	138	25
Mindanao	2025	11	19	20	100	138	138	25
Mindanao	2025	11	19	21	96	138	138	25
Mindanao	2025	11	19	22	91	138	138	25
Mindanao	2025	11	19	23	85	138	138	25
Mindanao	2025	11	19	24	81	138	138	25
Mindanao	2025	11	20	1	76	138	138	25
Mindanao	2025	11	20	2	73	138	138	25
Mindanao	2025	11	20	3	71	138	138	25
Mindanao	2025	11	20	4	70	138	138	25
Mindanao	2025	11	20	5	74	138	138	25
Mindanao	2025	11	20	6	74	138	138	25
Mindanao	2025	11	20	7	70	138	138	25
Mindanao	2025	11	20	8	81	138	138	25
Mindanao	2025	11	20	9	92	138	138	25
Mindanao	2025	11	20	10	100	138	138	25
Mindanao	2025	11	20	11	105	138	138	25
Mindanao	2025	11	20	12	104	138	138	25
Mindanao	2025	11	20	13	107	138	138	25
Mindanao	2025	11	20	14	108	138	138	25
Mindanao	2025	11	20	15	106	138	138	25
Mindanao	2025	11	20	16	102	138	138	25
Mindanao	2025	11	20	17	99	138	138	25
Mindanao	2025	11	20	18	103	138	138	25
Mindanao	2025	11	20	19	99	138	138	25
Mindanao	2025	11	20	20	98	138	138	25
Mindanao	2025	11	20	21	94	138	138	25
Mindanao	2025	11	20	22	88	138	138	25
Mindanao	2025	11	20	23	82	138	138	25
Mindanao	2025	11	20	24	76	138	138	25
Mindanao	2025	11	21	1	73	138	138	25
Mindanao	2025	11	21	2	72	138	138	25
Mindanao	2025	11	21	3	70	138	138	25
Mindanao	2025	11	21	4	70	138	138	25
Mindanao	2025	11	21	5	71	138	138	25
Mindanao	2025	11	21	6	75	138	138	25
Mindanao	2025	11	21	7	71	138	138	25
Mindanao	2025	11	21	8	79	138	138	25
Mindanao	2025	11	21	9	91	138	138	25
Mindanao	2025	11	21	10	96	138	138	25
Mindanao	2025	11	21	11	100	138	138	25
Mindanao	2025	11	21	12	99	138	138	25
Mindanao	2025	11	21	13	101	138	138	25
Mindanao	2025	11	21	14	103	138	138	25
Mindanao	2025	11	21	15	102	138	138	25
Mindanao	2025	11	21	16	102	138	138	25
Mindanao	2025	11	21	17	99	138	138	25
Mindanao	2025	11	21	18	104	138	138	25
Mindanao	2025	11	21	19	100	138	138	25
Mindanao	2025	11	21	20	98	138	138	25
Mindanao	2025	11	21	21	94	138	138	25
Mindanao	2025	11	21	22	89	138	138	25
Mindanao	2025	11	21	23	84	138	138	25
Mindanao	2025	11	21	24	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	22	1	75	138	138	25
Mindanao	2025	11	22	2	73	138	138	25
Mindanao	2025	11	22	3	70	138	138	25
Mindanao	2025	11	22	4	68	138	138	25
Mindanao	2025	11	22	5	67	138	138	25
Mindanao	2025	11	22	6	70	138	138	25
Mindanao	2025	11	22	7	68	138	138	25
Mindanao	2025	11	22	8	74	138	138	25
Mindanao	2025	11	22	9	82	138	138	25
Mindanao	2025	11	22	10	89	138	138	25
Mindanao	2025	11	22	11	93	138	138	25
Mindanao	2025	11	22	12	93	138	138	25
Mindanao	2025	11	22	13	94	138	138	25
Mindanao	2025	11	22	14	98	138	138	25
Mindanao	2025	11	22	15	98	138	138	25
Mindanao	2025	11	22	16	93	138	138	25
Mindanao	2025	11	22	17	91	138	138	25
Mindanao	2025	11	22	18	100	138	138	25
Mindanao	2025	11	22	19	96	138	138	25
Mindanao	2025	11	22	20	93	138	138	25
Mindanao	2025	11	22	21	92	138	138	25
Mindanao	2025	11	22	22	86	138	138	25
Mindanao	2025	11	22	23	81	138	138	25
Mindanao	2025	11	22	24	76	138	138	25
Mindanao	2025	11	23	1	70	138	138	25
Mindanao	2025	11	23	2	71	138	138	25
Mindanao	2025	11	23	3	65	138	138	25
Mindanao	2025	11	23	4	65	138	138	25
Mindanao	2025	11	23	5	64	138	138	25
Mindanao	2025	11	23	6	64	138	138	25
Mindanao	2025	11	23	7	62	138	138	25
Mindanao	2025	11	23	8	64	138	138	25
Mindanao	2025	11	23	9	70	138	138	25
Mindanao	2025	11	23	10	78	138	138	25
Mindanao	2025	11	23	11	74	138	138	25
Mindanao	2025	11	23	12	79	138	138	25
Mindanao	2025	11	23	13	77	138	138	25
Mindanao	2025	11	23	14	85	138	138	25
Mindanao	2025	11	23	15	85	138	138	25
Mindanao	2025	11	23	16	81	138	138	25
Mindanao	2025	11	23	17	81	138	138	25
Mindanao	2025	11	23	18	90	138	138	25
Mindanao	2025	11	23	19	92	138	138	25
Mindanao	2025	11	23	20	89	138	138	25
Mindanao	2025	11	23	21	88	138	138	25
Mindanao	2025	11	23	22	86	138	138	25
Mindanao	2025	11	23	23	81	138	138	25
Mindanao	2025	11	23	24	78	138	138	25
Mindanao	2025	11	24	1	71	138	138	25
Mindanao	2025	11	24	2	68	138	138	25
Mindanao	2025	11	24	3	66	138	138	25
Mindanao	2025	11	24	4	67	138	138	25
Mindanao	2025	11	24	5	68	138	138	25
Mindanao	2025	11	24	6	71	138	138	25
Mindanao	2025	11	24	7	65	138	138	25
Mindanao	2025	11	24	8	76	138	138	25
Mindanao	2025	11	24	9	88	138	138	25
Mindanao	2025	11	24	10	96	138	138	25
Mindanao	2025	11	24	11	100	138	138	25
Mindanao	2025	11	24	12	99	138	138	25
Mindanao	2025	11	24	13	100	138	138	25
Mindanao	2025	11	24	14	104	138	138	25
Mindanao	2025	11	24	15	101	138	138	25
Mindanao	2025	11	24	16	97	138	138	25
Mindanao	2025	11	24	17	95	138	138	25
Mindanao	2025	11	24	18	101	138	138	25
Mindanao	2025	11	24	19	96	138	138	25
Mindanao	2025	11	24	20	93	138	138	25
Mindanao	2025	11	24	21	89	138	138	25
Mindanao	2025	11	24	22	84	138	138	25
Mindanao	2025	11	24	23	79	138	138	25
Mindanao	2025	11	24	24	75	138	138	25
Mindanao	2025	11	25	1	76	138	138	25
Mindanao	2025	11	25	2	72	138	138	25
Mindanao	2025	11	25	3	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	25	4	69	138	138	25
Mindanao	2025	11	25	5	72	138	138	25
Mindanao	2025	11	25	6	75	138	138	25
Mindanao	2025	11	25	7	70	138	138	25
Mindanao	2025	11	25	8	80	138	138	25
Mindanao	2025	11	25	9	89	138	138	25
Mindanao	2025	11	25	10	101	138	138	25
Mindanao	2025	11	25	11	104	138	138	25
Mindanao	2025	11	25	12	103	138	138	25
Mindanao	2025	11	25	13	106	138	138	25
Mindanao	2025	11	25	14	110	138	138	25
Mindanao	2025	11	25	15	108	138	138	25
Mindanao	2025	11	25	16	106	138	138	25
Mindanao	2025	11	25	17	101	138	138	25
Mindanao	2025	11	25	18	107	138	138	25
Mindanao	2025	11	25	19	101	138	138	25
Mindanao	2025	11	25	20	100	138	138	25
Mindanao	2025	11	25	21	99	138	138	25
Mindanao	2025	11	25	22	91	138	138	25
Mindanao	2025	11	25	23	85	138	138	25
Mindanao	2025	11	25	24	83	138	138	25
Mindanao	2025	11	26	1	78	138	138	25
Mindanao	2025	11	26	2	76	138	138	25
Mindanao	2025	11	26	3	73	138	138	25
Mindanao	2025	11	26	4	73	138	138	25
Mindanao	2025	11	26	5	75	138	138	25
Mindanao	2025	11	26	6	77	138	138	25
Mindanao	2025	11	26	7	71	138	138	25
Mindanao	2025	11	26	8	81	138	138	25
Mindanao	2025	11	26	9	93	138	138	25
Mindanao	2025	11	26	10	99	138	138	25
Mindanao	2025	11	26	11	103	138	138	25
Mindanao	2025	11	26	12	102	138	138	25
Mindanao	2025	11	26	13	102	138	138	25
Mindanao	2025	11	26	14	105	138	138	25
Mindanao	2025	11	26	15	102	138	138	25
Mindanao	2025	11	26	16	99	138	138	25
Mindanao	2025	11	26	17	97	138	138	25
Mindanao	2025	11	26	18	102	138	138	25
Mindanao	2025	11	26	19	97	138	138	25
Mindanao	2025	11	26	20	95	138	138	25
Mindanao	2025	11	26	21	91	138	138	25
Mindanao	2025	11	26	22	87	138	138	25
Mindanao	2025	11	26	23	80	138	138	25
Mindanao	2025	11	26	24	76	138	138	25
Mindanao	2025	11	27	1	73	138	138	25
Mindanao	2025	11	27	2	71	138	138	25
Mindanao	2025	11	27	3	69	138	138	25
Mindanao	2025	11	27	4	69	138	138	25
Mindanao	2025	11	27	5	71	138	138	25
Mindanao	2025	11	27	6	73	138	138	25
Mindanao	2025	11	27	7	70	138	138	25
Mindanao	2025	11	27	8	74	138	138	25
Mindanao	2025	11	27	9	87	138	138	25
Mindanao	2025	11	27	10	92	138	138	25
Mindanao	2025	11	27	11	96	138	138	25
Mindanao	2025	11	27	12	97	138	138	25
Mindanao	2025	11	27	13	97	138	138	25
Mindanao	2025	11	27	14	101	138	138	25
Mindanao	2025	11	27	15	100	138	138	25
Mindanao	2025	11	27	16	95	138	138	25
Mindanao	2025	11	27	17	96	138	138	25
Mindanao	2025	11	27	18	101	138	138	25
Mindanao	2025	11	27	19	96	138	138	25
Mindanao	2025	11	27	20	94	138	138	25
Mindanao	2025	11	27	21	91	138	138	25
Mindanao	2025	11	27	22	85	138	138	25
Mindanao	2025	11	27	23	80	138	138	25
Mindanao	2025	11	27	24	76	138	138	25
Mindanao	2025	11	28	1	72	138	138	25
Mindanao	2025	11	28	2	71	138	138	25
Mindanao	2025	11	28	3	70	138	138	25
Mindanao	2025	11	28	4	67	138	138	25
Mindanao	2025	11	28	5	69	138	138	25
Mindanao	2025	11	28	6	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	11	28	7	67	138	138	25
Mindanao	2025	11	28	8	78	138	138	25
Mindanao	2025	11	28	9	91	138	138	25
Mindanao	2025	11	28	10	96	138	138	25
Mindanao	2025	11	28	11	102	138	138	25
Mindanao	2025	11	28	12	101	138	138	25
Mindanao	2025	11	28	13	100	138	138	25
Mindanao	2025	11	28	14	106	138	138	25
Mindanao	2025	11	28	15	106	138	138	25
Mindanao	2025	11	28	16	101	138	138	25
Mindanao	2025	11	28	17	97	138	138	25
Mindanao	2025	11	28	18	104	138	138	25
Mindanao	2025	11	28	19	100	138	138	25
Mindanao	2025	11	28	20	96	138	138	25
Mindanao	2025	11	28	21	94	138	138	25
Mindanao	2025	11	28	22	88	138	138	25
Mindanao	2025	11	28	23	80	138	138	25
Mindanao	2025	11	28	24	76	138	138	25
Mindanao	2025	11	29	1	74	138	138	25
Mindanao	2025	11	29	2	66	138	138	25
Mindanao	2025	11	29	3	67	138	138	25
Mindanao	2025	11	29	4	64	138	138	25
Mindanao	2025	11	29	5	66	138	138	25
Mindanao	2025	11	29	6	66	138	138	25
Mindanao	2025	11	29	7	67	138	138	25
Mindanao	2025	11	29	8	74	138	138	25
Mindanao	2025	11	29	9	82	138	138	25
Mindanao	2025	11	29	10	91	138	138	25
Mindanao	2025	11	29	11	93	138	138	25
Mindanao	2025	11	29	12	93	138	138	25
Mindanao	2025	11	29	13	93	138	138	25
Mindanao	2025	11	29	14	97	138	138	25
Mindanao	2025	11	29	15	97	138	138	25
Mindanao	2025	11	29	16	93	138	138	25
Mindanao	2025	11	29	17	92	138	138	25
Mindanao	2025	11	29	18	100	138	138	25
Mindanao	2025	11	29	19	97	138	138	25
Mindanao	2025	11	29	20	93	138	138	25
Mindanao	2025	11	29	21	91	138	138	25
Mindanao	2025	11	29	22	85	138	138	25
Mindanao	2025	11	29	23	67	138	138	25
Mindanao	2025	11	29	24	68	138	138	25
Mindanao	2025	11	30	1	76	138	138	25
Mindanao	2025	11	30	2	72	138	138	25
Mindanao	2025	11	30	3	69	138	138	25
Mindanao	2025	11	30	4	70	138	138	25
Mindanao	2025	11	30	5	70	138	138	25
Mindanao	2025	11	30	6	69	138	138	25
Mindanao	2025	11	30	7	70	138	138	25
Mindanao	2025	11	30	8	74	138	138	25
Mindanao	2025	11	30	9	81	138	138	25
Mindanao	2025	11	30	10	88	138	138	25
Mindanao	2025	11	30	11	91	138	138	25
Mindanao	2025	11	30	12	91	138	138	25
Mindanao	2025	11	30	13	93	138	138	25
Mindanao	2025	11	30	14	96	138	138	25
Mindanao	2025	11	30	15	95	138	138	25
Mindanao	2025	11	30	16	93	138	138	25
Mindanao	2025	11	30	17	95	138	138	25
Mindanao	2025	11	30	18	100	138	138	25
Mindanao	2025	11	30	19	97	138	138	25
Mindanao	2025	11	30	20	94	138	138	25
Mindanao	2025	11	30	21	94	138	138	25
Mindanao	2025	11	30	22	88	138	138	25
Mindanao	2025	11	30	23	82	138	138	25
Mindanao	2025	11	30	24	77	138	138	25
Mindanao	2025	12	1	1	68	138	138	25
Mindanao	2025	12	1	2	64	138	138	25
Mindanao	2025	12	1	3	66	138	138	25
Mindanao	2025	12	1	4	61	138	138	25
Mindanao	2025	12	1	5	67	138	138	25
Mindanao	2025	12	1	6	69	138	138	25
Mindanao	2025	12	1	7	65	138	138	25
Mindanao	2025	12	1	8	74	138	138	25
Mindanao	2025	12	1	9	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	1	10	93	138	138	25
Mindanao	2025	12	1	11	99	138	138	25
Mindanao	2025	12	1	12	97	138	138	25
Mindanao	2025	12	1	13	99	138	138	25
Mindanao	2025	12	1	14	102	138	138	25
Mindanao	2025	12	1	15	105	138	138	25
Mindanao	2025	12	1	16	102	138	138	25
Mindanao	2025	12	1	17	98	138	138	25
Mindanao	2025	12	1	18	103	138	138	25
Mindanao	2025	12	1	19	102	138	138	25
Mindanao	2025	12	1	20	99	138	138	25
Mindanao	2025	12	1	21	95	138	138	25
Mindanao	2025	12	1	22	92	138	138	25
Mindanao	2025	12	1	23	85	138	138	25
Mindanao	2025	12	1	24	79	138	138	25
Mindanao	2025	12	2	1	76	138	138	25
Mindanao	2025	12	2	2	73	138	138	25
Mindanao	2025	12	2	3	70	138	138	25
Mindanao	2025	12	2	4	67	138	138	25
Mindanao	2025	12	2	5	73	138	138	25
Mindanao	2025	12	2	6	76	138	138	25
Mindanao	2025	12	2	7	70	138	138	25
Mindanao	2025	12	2	8	78	138	138	25
Mindanao	2025	12	2	9	92	138	138	25
Mindanao	2025	12	2	10	98	138	138	25
Mindanao	2025	12	2	11	103	138	138	25
Mindanao	2025	12	2	12	102	138	138	25
Mindanao	2025	12	2	13	104	138	138	25
Mindanao	2025	12	2	14	109	138	138	25
Mindanao	2025	12	2	15	105	138	138	25
Mindanao	2025	12	2	16	103	138	138	25
Mindanao	2025	12	2	17	101	138	138	25
Mindanao	2025	12	2	18	109	138	138	25
Mindanao	2025	12	2	19	99	138	138	25
Mindanao	2025	12	2	20	99	138	138	25
Mindanao	2025	12	2	21	93	138	138	25
Mindanao	2025	12	2	22	87	138	138	25
Mindanao	2025	12	2	23	81	138	138	25
Mindanao	2025	12	2	24	78	138	138	25
Mindanao	2025	12	3	1	75	138	138	25
Mindanao	2025	12	3	2	72	138	138	25
Mindanao	2025	12	3	3	69	138	138	25
Mindanao	2025	12	3	4	70	138	138	25
Mindanao	2025	12	3	5	69	138	138	25
Mindanao	2025	12	3	6	74	138	138	25
Mindanao	2025	12	3	7	72	138	138	25
Mindanao	2025	12	3	8	81	138	138	25
Mindanao	2025	12	3	9	91	138	138	25
Mindanao	2025	12	3	10	96	138	138	25
Mindanao	2025	12	3	11	100	138	138	25
Mindanao	2025	12	3	12	97	138	138	25
Mindanao	2025	12	3	13	99	138	138	25
Mindanao	2025	12	3	14	101	138	138	25
Mindanao	2025	12	3	15	98	138	138	25
Mindanao	2025	12	3	16	97	138	138	25
Mindanao	2025	12	3	17	96	138	138	25
Mindanao	2025	12	3	18	101	138	138	25
Mindanao	2025	12	3	19	96	138	138	25
Mindanao	2025	12	3	20	93	138	138	25
Mindanao	2025	12	3	21	90	138	138	25
Mindanao	2025	12	3	22	83	138	138	25
Mindanao	2025	12	3	23	77	138	138	25
Mindanao	2025	12	3	24	74	138	138	25
Mindanao	2025	12	4	1	71	138	138	25
Mindanao	2025	12	4	2	68	138	138	25
Mindanao	2025	12	4	3	67	138	138	25
Mindanao	2025	12	4	4	67	138	138	25
Mindanao	2025	12	4	5	67	138	138	25
Mindanao	2025	12	4	6	71	138	138	25
Mindanao	2025	12	4	7	68	138	138	25
Mindanao	2025	12	4	8	75	138	138	25
Mindanao	2025	12	4	9	87	138	138	25
Mindanao	2025	12	4	10	93	138	138	25
Mindanao	2025	12	4	11	98	138	138	25
Mindanao	2025	12	4	12	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	4	13	98	138	138	25
Mindanao	2025	12	4	14	102	138	138	25
Mindanao	2025	12	4	15	101	138	138	25
Mindanao	2025	12	4	16	98	138	138	25
Mindanao	2025	12	4	17	98	138	138	25
Mindanao	2025	12	4	18	102	138	138	25
Mindanao	2025	12	4	19	97	138	138	25
Mindanao	2025	12	4	20	95	138	138	25
Mindanao	2025	12	4	21	91	138	138	25
Mindanao	2025	12	4	22	86	138	138	25
Mindanao	2025	12	4	23	81	138	138	25
Mindanao	2025	12	4	24	77	138	138	25
Mindanao	2025	12	5	1	72	138	138	25
Mindanao	2025	12	5	2	71	138	138	25
Mindanao	2025	12	5	3	70	138	138	25
Mindanao	2025	12	5	4	67	138	138	25
Mindanao	2025	12	5	5	69	138	138	25
Mindanao	2025	12	5	6	72	138	138	25
Mindanao	2025	12	5	7	67	138	138	25
Mindanao	2025	12	5	8	78	138	138	25
Mindanao	2025	12	5	9	91	138	138	25
Mindanao	2025	12	5	10	96	138	138	25
Mindanao	2025	12	5	11	102	138	138	25
Mindanao	2025	12	5	12	101	138	138	25
Mindanao	2025	12	5	13	100	138	138	25
Mindanao	2025	12	5	14	106	138	138	25
Mindanao	2025	12	5	15	106	138	138	25
Mindanao	2025	12	5	16	101	138	138	25
Mindanao	2025	12	5	17	97	138	138	25
Mindanao	2025	12	5	18	104	138	138	25
Mindanao	2025	12	5	19	100	138	138	25
Mindanao	2025	12	5	20	96	138	138	25
Mindanao	2025	12	5	21	94	138	138	25
Mindanao	2025	12	5	22	88	138	138	25
Mindanao	2025	12	5	23	80	138	138	25
Mindanao	2025	12	5	24	76	138	138	25
Mindanao	2025	12	6	1	77	138	138	25
Mindanao	2025	12	6	2	73	138	138	25
Mindanao	2025	12	6	3	72	138	138	25
Mindanao	2025	12	6	4	73	138	138	25
Mindanao	2025	12	6	5	72	138	138	25
Mindanao	2025	12	6	6	72	138	138	25
Mindanao	2025	12	6	7	73	138	138	25
Mindanao	2025	12	6	8	75	138	138	25
Mindanao	2025	12	6	9	84	138	138	25
Mindanao	2025	12	6	10	89	138	138	25
Mindanao	2025	12	6	11	94	138	138	25
Mindanao	2025	12	6	12	92	138	138	25
Mindanao	2025	12	6	13	94	138	138	25
Mindanao	2025	12	6	14	99	138	138	25
Mindanao	2025	12	6	15	99	138	138	25
Mindanao	2025	12	6	16	96	138	138	25
Mindanao	2025	12	6	17	94	138	138	25
Mindanao	2025	12	6	18	101	138	138	25
Mindanao	2025	12	6	19	97	138	138	25
Mindanao	2025	12	6	20	93	138	138	25
Mindanao	2025	12	6	21	92	138	138	25
Mindanao	2025	12	6	22	86	138	138	25
Mindanao	2025	12	6	23	81	138	138	25
Mindanao	2025	12	6	24	76	138	138	25
Mindanao	2025	12	7	1	72	138	138	25
Mindanao	2025	12	7	2	71	138	138	25
Mindanao	2025	12	7	3	68	138	138	25
Mindanao	2025	12	7	4	66	138	138	25
Mindanao	2025	12	7	5	65	138	138	25
Mindanao	2025	12	7	6	66	138	138	25
Mindanao	2025	12	7	7	65	138	138	25
Mindanao	2025	12	7	8	69	138	138	25
Mindanao	2025	12	7	9	70	138	138	25
Mindanao	2025	12	7	10	75	138	138	25
Mindanao	2025	12	7	11	80	138	138	25
Mindanao	2025	12	7	12	81	138	138	25
Mindanao	2025	12	7	13	85	138	138	25
Mindanao	2025	12	7	14	84	138	138	25
Mindanao	2025	12	7	15	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	7	16	84	138	138	25
Mindanao	2025	12	7	17	84	138	138	25
Mindanao	2025	12	7	18	97	138	138	25
Mindanao	2025	12	7	19	96	138	138	25
Mindanao	2025	12	7	20	92	138	138	25
Mindanao	2025	12	7	21	92	138	138	25
Mindanao	2025	12	7	22	87	138	138	25
Mindanao	2025	12	7	23	81	138	138	25
Mindanao	2025	12	7	24	77	138	138	25
Mindanao	2025	12	8	1	73	138	138	25
Mindanao	2025	12	8	2	69	138	138	25
Mindanao	2025	12	8	3	70	138	138	25
Mindanao	2025	12	8	4	70	138	138	25
Mindanao	2025	12	8	5	67	138	138	25
Mindanao	2025	12	8	6	67	138	138	25
Mindanao	2025	12	8	7	68	138	138	25
Mindanao	2025	12	8	8	72	138	138	25
Mindanao	2025	12	8	9	83	138	138	25
Mindanao	2025	12	8	10	90	138	138	25
Mindanao	2025	12	8	11	92	138	138	25
Mindanao	2025	12	8	12	92	138	138	25
Mindanao	2025	12	8	13	94	138	138	25
Mindanao	2025	12	8	14	99	138	138	25
Mindanao	2025	12	8	15	97	138	138	25
Mindanao	2025	12	8	16	95	138	138	25
Mindanao	2025	12	8	17	94	138	138	25
Mindanao	2025	12	8	18	102	138	138	25
Mindanao	2025	12	8	19	98	138	138	25
Mindanao	2025	12	8	20	96	138	138	25
Mindanao	2025	12	8	21	97	138	138	25
Mindanao	2025	12	8	22	91	138	138	25
Mindanao	2025	12	8	23	84	138	138	25
Mindanao	2025	12	8	24	79	138	138	25
Mindanao	2025	12	9	1	75	138	138	25
Mindanao	2025	12	9	2	70	138	138	25
Mindanao	2025	12	9	3	71	138	138	25
Mindanao	2025	12	9	4	70	138	138	25
Mindanao	2025	12	9	5	67	138	138	25
Mindanao	2025	12	9	6	75	138	138	25
Mindanao	2025	12	9	7	69	138	138	25
Mindanao	2025	12	9	8	77	138	138	25
Mindanao	2025	12	9	9	91	138	138	25
Mindanao	2025	12	9	10	98	138	138	25
Mindanao	2025	12	9	11	101	138	138	25
Mindanao	2025	12	9	12	101	138	138	25
Mindanao	2025	12	9	13	104	138	138	25
Mindanao	2025	12	9	14	107	138	138	25
Mindanao	2025	12	9	15	108	138	138	25
Mindanao	2025	12	9	16	106	138	138	25
Mindanao	2025	12	9	17	103	138	138	25
Mindanao	2025	12	9	18	107	138	138	25
Mindanao	2025	12	9	19	103	138	138	25
Mindanao	2025	12	9	20	102	138	138	25
Mindanao	2025	12	9	21	100	138	138	25
Mindanao	2025	12	9	22	93	138	138	25
Mindanao	2025	12	9	23	88	138	138	25
Mindanao	2025	12	9	24	85	138	138	25
Mindanao	2025	12	10	1	80	138	138	25
Mindanao	2025	12	10	2	75	138	138	25
Mindanao	2025	12	10	3	73	138	138	25
Mindanao	2025	12	10	4	73	138	138	25
Mindanao	2025	12	10	5	74	138	138	25
Mindanao	2025	12	10	6	76	138	138	25
Mindanao	2025	12	10	7	74	138	138	25
Mindanao	2025	12	10	8	83	138	138	25
Mindanao	2025	12	10	9	95	138	138	25
Mindanao	2025	12	10	10	100	138	138	25
Mindanao	2025	12	10	11	100	138	138	25
Mindanao	2025	12	10	12	100	138	138	25
Mindanao	2025	12	10	13	100	138	138	25
Mindanao	2025	12	10	14	105	138	138	25
Mindanao	2025	12	10	15	104	138	138	25
Mindanao	2025	12	10	16	100	138	138	25
Mindanao	2025	12	10	17	99	138	138	25
Mindanao	2025	12	10	18	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	10	19	99	138	138	25
Mindanao	2025	12	10	20	97	138	138	25
Mindanao	2025	12	10	21	94	138	138	25
Mindanao	2025	12	10	22	88	138	138	25
Mindanao	2025	12	10	23	83	138	138	25
Mindanao	2025	12	10	24	80	138	138	25
Mindanao	2025	12	11	1	76	138	138	25
Mindanao	2025	12	11	2	73	138	138	25
Mindanao	2025	12	11	3	71	138	138	25
Mindanao	2025	12	11	4	70	138	138	25
Mindanao	2025	12	11	5	71	138	138	25
Mindanao	2025	12	11	6	73	138	138	25
Mindanao	2025	12	11	7	72	138	138	25
Mindanao	2025	12	11	8	82	138	138	25
Mindanao	2025	12	11	9	92	138	138	25
Mindanao	2025	12	11	10	99	138	138	25
Mindanao	2025	12	11	11	103	138	138	25
Mindanao	2025	12	11	12	100	138	138	25
Mindanao	2025	12	11	13	104	138	138	25
Mindanao	2025	12	11	14	112	138	138	25
Mindanao	2025	12	11	15	108	138	138	25
Mindanao	2025	12	11	16	104	138	138	25
Mindanao	2025	12	11	17	102	138	138	25
Mindanao	2025	12	11	18	105	138	138	25
Mindanao	2025	12	11	19	102	138	138	25
Mindanao	2025	12	11	20	99	138	138	25
Mindanao	2025	12	11	21	98	138	138	25
Mindanao	2025	12	11	22	91	138	138	25
Mindanao	2025	12	11	23	86	138	138	25
Mindanao	2025	12	11	24	81	138	138	25
Mindanao	2025	12	12	1	77	138	138	25
Mindanao	2025	12	12	2	74	138	138	25
Mindanao	2025	12	12	3	71	138	138	25
Mindanao	2025	12	12	4	68	138	138	25
Mindanao	2025	12	12	5	72	138	138	25
Mindanao	2025	12	12	6	72	138	138	25
Mindanao	2025	12	12	7	72	138	138	25
Mindanao	2025	12	12	8	80	138	138	25
Mindanao	2025	12	12	9	92	138	138	25
Mindanao	2025	12	12	10	97	138	138	25
Mindanao	2025	12	12	11	101	138	138	25
Mindanao	2025	12	12	12	100	138	138	25
Mindanao	2025	12	12	13	106	138	138	25
Mindanao	2025	12	12	14	108	138	138	25
Mindanao	2025	12	12	15	104	138	138	25
Mindanao	2025	12	12	16	102	138	138	25
Mindanao	2025	12	12	17	99	138	138	25
Mindanao	2025	12	12	18	105	138	138	25
Mindanao	2025	12	12	19	102	138	138	25
Mindanao	2025	12	12	20	99	138	138	25
Mindanao	2025	12	12	21	96	138	138	25
Mindanao	2025	12	12	22	90	138	138	25
Mindanao	2025	12	12	23	84	138	138	25
Mindanao	2025	12	12	24	79	138	138	25
Mindanao	2025	12	13	1	76	138	138	25
Mindanao	2025	12	13	2	74	138	138	25
Mindanao	2025	12	13	3	73	138	138	25
Mindanao	2025	12	13	4	71	138	138	25
Mindanao	2025	12	13	5	69	138	138	25
Mindanao	2025	12	13	6	70	138	138	25
Mindanao	2025	12	13	7	71	138	138	25
Mindanao	2025	12	13	8	79	138	138	25
Mindanao	2025	12	13	9	85	138	138	25
Mindanao	2025	12	13	10	89	138	138	25
Mindanao	2025	12	13	11	93	138	138	25
Mindanao	2025	12	13	12	93	138	138	25
Mindanao	2025	12	13	13	95	138	138	25
Mindanao	2025	12	13	14	97	138	138	25
Mindanao	2025	12	13	15	99	138	138	25
Mindanao	2025	12	13	16	97	138	138	25
Mindanao	2025	12	13	17	94	138	138	25
Mindanao	2025	12	13	18	102	138	138	25
Mindanao	2025	12	13	19	99	138	138	25
Mindanao	2025	12	13	20	96	138	138	25
Mindanao	2025	12	13	21	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	13	22	90	138	138	25
Mindanao	2025	12	13	23	84	138	138	25
Mindanao	2025	12	13	24	78	138	138	25
Mindanao	2025	12	14	1	76	138	138	25
Mindanao	2025	12	14	2	72	138	138	25
Mindanao	2025	12	14	3	67	138	138	25
Mindanao	2025	12	14	4	66	138	138	25
Mindanao	2025	12	14	5	64	138	138	25
Mindanao	2025	12	14	6	64	138	138	25
Mindanao	2025	12	14	7	65	138	138	25
Mindanao	2025	12	14	8	66	138	138	25
Mindanao	2025	12	14	9	74	138	138	25
Mindanao	2025	12	14	10	79	138	138	25
Mindanao	2025	12	14	11	79	138	138	25
Mindanao	2025	12	14	12	79	138	138	25
Mindanao	2025	12	14	13	78	138	138	25
Mindanao	2025	12	14	14	81	138	138	25
Mindanao	2025	12	14	15	81	138	138	25
Mindanao	2025	12	14	16	80	138	138	25
Mindanao	2025	12	14	17	82	138	138	25
Mindanao	2025	12	14	18	89	138	138	25
Mindanao	2025	12	14	19	89	138	138	25
Mindanao	2025	12	14	20	87	138	138	25
Mindanao	2025	12	14	21	84	138	138	25
Mindanao	2025	12	14	22	82	138	138	25
Mindanao	2025	12	14	23	76	138	138	25
Mindanao	2025	12	14	24	71	138	138	25
Mindanao	2025	12	15	1	69	138	138	25
Mindanao	2025	12	15	2	67	138	138	25
Mindanao	2025	12	15	3	66	138	138	25
Mindanao	2025	12	15	4	65	138	138	25
Mindanao	2025	12	15	5	67	138	138	25
Mindanao	2025	12	15	6	66	138	138	25
Mindanao	2025	12	15	7	66	138	138	25
Mindanao	2025	12	15	8	75	138	138	25
Mindanao	2025	12	15	9	83	138	138	25
Mindanao	2025	12	15	10	88	138	138	25
Mindanao	2025	12	15	11	92	138	138	25
Mindanao	2025	12	15	12	88	138	138	25
Mindanao	2025	12	15	13	87	138	138	25
Mindanao	2025	12	15	14	85	138	138	25
Mindanao	2025	12	15	15	87	138	138	25
Mindanao	2025	12	15	16	87	138	138	25
Mindanao	2025	12	15	17	89	138	138	25
Mindanao	2025	12	15	18	93	138	138	25
Mindanao	2025	12	15	19	87	138	138	25
Mindanao	2025	12	15	20	84	138	138	25
Mindanao	2025	12	15	21	82	138	138	25
Mindanao	2025	12	15	22	78	138	138	25
Mindanao	2025	12	15	23	71	138	138	25
Mindanao	2025	12	15	24	68	138	138	25
Mindanao	2025	12	16	1	70	138	138	25
Mindanao	2025	12	16	2	66	138	138	25
Mindanao	2025	12	16	3	64	138	138	25
Mindanao	2025	12	16	4	63	138	138	25
Mindanao	2025	12	16	5	64	138	138	25
Mindanao	2025	12	16	6	66	138	138	25
Mindanao	2025	12	16	7	68	138	138	25
Mindanao	2025	12	16	8	72	138	138	25
Mindanao	2025	12	16	9	82	138	138	25
Mindanao	2025	12	16	10	90	138	138	25
Mindanao	2025	12	16	11	91	138	138	25
Mindanao	2025	12	16	12	92	138	138	25
Mindanao	2025	12	16	13	94	138	138	25
Mindanao	2025	12	16	14	95	138	138	25
Mindanao	2025	12	16	15	93	138	138	25
Mindanao	2025	12	16	16	94	138	138	25
Mindanao	2025	12	16	17	92	138	138	25
Mindanao	2025	12	16	18	98	138	138	25
Mindanao	2025	12	16	19	95	138	138	25
Mindanao	2025	12	16	20	90	138	138	25
Mindanao	2025	12	16	21	88	138	138	25
Mindanao	2025	12	16	22	83	138	138	25
Mindanao	2025	12	16	23	77	138	138	25
Mindanao	2025	12	16	24	74	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	17	1	71	138	138	25
Mindanao	2025	12	17	2	68	138	138	25
Mindanao	2025	12	17	3	65	138	138	25
Mindanao	2025	12	17	4	66	138	138	25
Mindanao	2025	12	17	5	66	138	138	25
Mindanao	2025	12	17	6	68	138	138	25
Mindanao	2025	12	17	7	70	138	138	25
Mindanao	2025	12	17	8	78	138	138	25
Mindanao	2025	12	17	9	88	138	138	25
Mindanao	2025	12	17	10	94	138	138	25
Mindanao	2025	12	17	11	99	138	138	25
Mindanao	2025	12	17	12	101	138	138	25
Mindanao	2025	12	17	13	100	138	138	25
Mindanao	2025	12	17	14	103	138	138	25
Mindanao	2025	12	17	15	105	138	138	25
Mindanao	2025	12	17	16	103	138	138	25
Mindanao	2025	12	17	17	99	138	138	25
Mindanao	2025	12	17	18	100	138	138	25
Mindanao	2025	12	17	19	99	138	138	25
Mindanao	2025	12	17	20	95	138	138	25
Mindanao	2025	12	17	21	93	138	138	25
Mindanao	2025	12	17	22	86	138	138	25
Mindanao	2025	12	17	23	79	138	138	25
Mindanao	2025	12	17	24	75	138	138	25
Mindanao	2025	12	18	1	71	138	138	25
Mindanao	2025	12	18	2	68	138	138	25
Mindanao	2025	12	18	3	67	138	138	25
Mindanao	2025	12	18	4	65	138	138	25
Mindanao	2025	12	18	5	66	138	138	25
Mindanao	2025	12	18	6	66	138	138	25
Mindanao	2025	12	18	7	67	138	138	25
Mindanao	2025	12	18	8	74	138	138	25
Mindanao	2025	12	18	9	87	138	138	25
Mindanao	2025	12	18	10	95	138	138	25
Mindanao	2025	12	18	11	100	138	138	25
Mindanao	2025	12	18	12	98	138	138	25
Mindanao	2025	12	18	13	98	138	138	25
Mindanao	2025	12	18	14	104	138	138	25
Mindanao	2025	12	18	15	104	138	138	25
Mindanao	2025	12	18	16	102	138	138	25
Mindanao	2025	12	18	17	96	138	138	25
Mindanao	2025	12	18	18	101	138	138	25
Mindanao	2025	12	18	19	98	138	138	25
Mindanao	2025	12	18	20	95	138	138	25
Mindanao	2025	12	18	21	92	138	138	25
Mindanao	2025	12	18	22	87	138	138	25
Mindanao	2025	12	18	23	81	138	138	25
Mindanao	2025	12	18	24	76	138	138	25
Mindanao	2025	12	19	1	73	138	138	25
Mindanao	2025	12	19	2	71	138	138	25
Mindanao	2025	12	19	3	68	138	138	25
Mindanao	2025	12	19	4	68	138	138	25
Mindanao	2025	12	19	5	68	138	138	25
Mindanao	2025	12	19	6	68	138	138	25
Mindanao	2025	12	19	7	70	138	138	25
Mindanao	2025	12	19	8	75	138	138	25
Mindanao	2025	12	19	9	87	138	138	25
Mindanao	2025	12	19	10	94	138	138	25
Mindanao	2025	12	19	11	98	138	138	25
Mindanao	2025	12	19	12	99	138	138	25
Mindanao	2025	12	19	13	102	138	138	25
Mindanao	2025	12	19	14	103	138	138	25
Mindanao	2025	12	19	15	102	138	138	25
Mindanao	2025	12	19	16	100	138	138	25
Mindanao	2025	12	19	17	96	138	138	25
Mindanao	2025	12	19	18	100	138	138	25
Mindanao	2025	12	19	19	97	138	138	25
Mindanao	2025	12	19	20	95	138	138	25
Mindanao	2025	12	19	21	92	138	138	25
Mindanao	2025	12	19	22	86	138	138	25
Mindanao	2025	12	19	23	84	138	138	25
Mindanao	2025	12	19	24	81	138	138	25
Mindanao	2025	12	20	1	76	138	138	25
Mindanao	2025	12	20	2	73	138	138	25
Mindanao	2025	12	20	3	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	20	4	71	138	138	25
Mindanao	2025	12	20	5	69	138	138	25
Mindanao	2025	12	20	6	69	138	138	25
Mindanao	2025	12	20	7	72	138	138	25
Mindanao	2025	12	20	8	74	138	138	25
Mindanao	2025	12	20	9	82	138	138	25
Mindanao	2025	12	20	10	86	138	138	25
Mindanao	2025	12	20	11	88	138	138	25
Mindanao	2025	12	20	12	89	138	138	25
Mindanao	2025	12	20	13	90	138	138	25
Mindanao	2025	12	20	14	96	138	138	25
Mindanao	2025	12	20	15	93	138	138	25
Mindanao	2025	12	20	16	91	138	138	25
Mindanao	2025	12	20	17	88	138	138	25
Mindanao	2025	12	20	18	96	138	138	25
Mindanao	2025	12	20	19	95	138	138	25
Mindanao	2025	12	20	20	91	138	138	25
Mindanao	2025	12	20	21	92	138	138	25
Mindanao	2025	12	20	22	86	138	138	25
Mindanao	2025	12	20	23	80	138	138	25
Mindanao	2025	12	20	24	77	138	138	25
Mindanao	2025	12	21	1	73	138	138	25
Mindanao	2025	12	21	2	71	138	138	25
Mindanao	2025	12	21	3	68	138	138	25
Mindanao	2025	12	21	4	66	138	138	25
Mindanao	2025	12	21	5	65	138	138	25
Mindanao	2025	12	21	6	66	138	138	25
Mindanao	2025	12	21	7	66	138	138	25
Mindanao	2025	12	21	8	70	138	138	25
Mindanao	2025	12	21	9	74	138	138	25
Mindanao	2025	12	21	10	78	138	138	25
Mindanao	2025	12	21	11	79	138	138	25
Mindanao	2025	12	21	12	81	138	138	25
Mindanao	2025	12	21	13	82	138	138	25
Mindanao	2025	12	21	14	83	138	138	25
Mindanao	2025	12	21	15	82	138	138	25
Mindanao	2025	12	21	16	81	138	138	25
Mindanao	2025	12	21	17	81	138	138	25
Mindanao	2025	12	21	18	88	138	138	25
Mindanao	2025	12	21	19	85	138	138	25
Mindanao	2025	12	21	20	79	138	138	25
Mindanao	2025	12	21	21	77	138	138	25
Mindanao	2025	12	21	22	76	138	138	25
Mindanao	2025	12	21	23	76	138	138	25
Mindanao	2025	12	21	24	73	138	138	25
Mindanao	2025	12	22	1	69	138	138	25
Mindanao	2025	12	22	2	67	138	138	25
Mindanao	2025	12	22	3	66	138	138	25
Mindanao	2025	12	22	4	65	138	138	25
Mindanao	2025	12	22	5	67	138	138	25
Mindanao	2025	12	22	6	66	138	138	25
Mindanao	2025	12	22	7	66	138	138	25
Mindanao	2025	12	22	8	75	138	138	25
Mindanao	2025	12	22	9	83	138	138	25
Mindanao	2025	12	22	10	88	138	138	25
Mindanao	2025	12	22	11	92	138	138	25
Mindanao	2025	12	22	12	88	138	138	25
Mindanao	2025	12	22	13	87	138	138	25
Mindanao	2025	12	22	14	85	138	138	25
Mindanao	2025	12	22	15	87	138	138	25
Mindanao	2025	12	22	16	87	138	138	25
Mindanao	2025	12	22	17	89	138	138	25
Mindanao	2025	12	22	18	93	138	138	25
Mindanao	2025	12	22	19	87	138	138	25
Mindanao	2025	12	22	20	84	138	138	25
Mindanao	2025	12	22	21	82	138	138	25
Mindanao	2025	12	22	22	78	138	138	25
Mindanao	2025	12	22	23	71	138	138	25
Mindanao	2025	12	22	24	68	138	138	25
Mindanao	2025	12	23	1	61	138	138	25
Mindanao	2025	12	23	2	59	138	138	25
Mindanao	2025	12	23	3	57	138	138	25
Mindanao	2025	12	23	4	56	138	138	25
Mindanao	2025	12	23	5	57	138	138	25
Mindanao	2025	12	23	6	60	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	23	7	63	138	138	25
Mindanao	2025	12	23	8	69	138	138	25
Mindanao	2025	12	23	9	76	138	138	25
Mindanao	2025	12	23	10	82	138	138	25
Mindanao	2025	12	23	11	86	138	138	25
Mindanao	2025	12	23	12	89	138	138	25
Mindanao	2025	12	23	13	89	138	138	25
Mindanao	2025	12	23	14	91	138	138	25
Mindanao	2025	12	23	15	91	138	138	25
Mindanao	2025	12	23	16	90	138	138	25
Mindanao	2025	12	23	17	88	138	138	25
Mindanao	2025	12	23	18	96	138	138	25
Mindanao	2025	12	23	19	96	138	138	25
Mindanao	2025	12	23	20	92	138	138	25
Mindanao	2025	12	23	21	91	138	138	25
Mindanao	2025	12	23	22	86	138	138	25
Mindanao	2025	12	23	23	80	138	138	25
Mindanao	2025	12	23	24	76	138	138	25
Mindanao	2025	12	24	1	75	138	138	25
Mindanao	2025	12	24	2	73	138	138	25
Mindanao	2025	12	24	3	69	138	138	25
Mindanao	2025	12	24	4	68	138	138	25
Mindanao	2025	12	24	5	68	138	138	25
Mindanao	2025	12	24	6	71	138	138	25
Mindanao	2025	12	24	7	70	138	138	25
Mindanao	2025	12	24	8	77	138	138	25
Mindanao	2025	12	24	9	89	138	138	25
Mindanao	2025	12	24	10	94	138	138	25
Mindanao	2025	12	24	11	99	138	138	25
Mindanao	2025	12	24	12	100	138	138	25
Mindanao	2025	12	24	13	101	138	138	25
Mindanao	2025	12	24	14	104	138	138	25
Mindanao	2025	12	24	15	102	138	138	25
Mindanao	2025	12	24	16	101	138	138	25
Mindanao	2025	12	24	17	99	138	138	25
Mindanao	2025	12	24	18	99	138	138	25
Mindanao	2025	12	24	19	97	138	138	25
Mindanao	2025	12	24	20	95	138	138	25
Mindanao	2025	12	24	21	92	138	138	25
Mindanao	2025	12	24	22	86	138	138	25
Mindanao	2025	12	24	23	82	138	138	25
Mindanao	2025	12	24	24	75	138	138	25
Mindanao	2025	12	25	1	72	138	138	25
Mindanao	2025	12	25	2	69	138	138	25
Mindanao	2025	12	25	3	67	138	138	25
Mindanao	2025	12	25	4	64	138	138	25
Mindanao	2025	12	25	5	64	138	138	25
Mindanao	2025	12	25	6	62	138	138	25
Mindanao	2025	12	25	7	61	138	138	25
Mindanao	2025	12	25	8	61	138	138	25
Mindanao	2025	12	25	9	63	138	138	25
Mindanao	2025	12	25	10	64	138	138	25
Mindanao	2025	12	25	11	65	138	138	25
Mindanao	2025	12	25	12	67	138	138	25
Mindanao	2025	12	25	13	67	138	138	25
Mindanao	2025	12	25	14	64	138	138	25
Mindanao	2025	12	25	15	67	138	138	25
Mindanao	2025	12	25	16	67	138	138	25
Mindanao	2025	12	25	17	70	138	138	25
Mindanao	2025	12	25	18	79	138	138	25
Mindanao	2025	12	25	19	77	138	138	25
Mindanao	2025	12	25	20	77	138	138	25
Mindanao	2025	12	25	21	73	138	138	25
Mindanao	2025	12	25	22	68	138	138	25
Mindanao	2025	12	25	23	65	138	138	25
Mindanao	2025	12	25	24	63	138	138	25
Mindanao	2025	12	26	1	78	138	138	25
Mindanao	2025	12	26	2	75	138	138	25
Mindanao	2025	12	26	3	71	138	138	25
Mindanao	2025	12	26	4	70	138	138	25
Mindanao	2025	12	26	5	71	138	138	25
Mindanao	2025	12	26	6	71	138	138	25
Mindanao	2025	12	26	7	73	138	138	25
Mindanao	2025	12	26	8	77	138	138	25
Mindanao	2025	12	26	9	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	26	10	95	138	138	25
Mindanao	2025	12	26	11	99	138	138	25
Mindanao	2025	12	26	12	98	138	138	25
Mindanao	2025	12	26	13	100	138	138	25
Mindanao	2025	12	26	14	101	138	138	25
Mindanao	2025	12	26	15	101	138	138	25
Mindanao	2025	12	26	16	100	138	138	25
Mindanao	2025	12	26	17	94	138	138	25
Mindanao	2025	12	26	18	102	138	138	25
Mindanao	2025	12	26	19	99	138	138	25
Mindanao	2025	12	26	20	95	138	138	25
Mindanao	2025	12	26	21	92	138	138	25
Mindanao	2025	12	26	22	88	138	138	25
Mindanao	2025	12	26	23	83	138	138	25
Mindanao	2025	12	26	24	84	138	138	25
Mindanao	2025	12	27	1	76	138	138	25
Mindanao	2025	12	27	2	73	138	138	25
Mindanao	2025	12	27	3	71	138	138	25
Mindanao	2025	12	27	4	71	138	138	25
Mindanao	2025	12	27	5	69	138	138	25
Mindanao	2025	12	27	6	69	138	138	25
Mindanao	2025	12	27	7	72	138	138	25
Mindanao	2025	12	27	8	74	138	138	25
Mindanao	2025	12	27	9	82	138	138	25
Mindanao	2025	12	27	10	86	138	138	25
Mindanao	2025	12	27	11	88	138	138	25
Mindanao	2025	12	27	12	89	138	138	25
Mindanao	2025	12	27	13	90	138	138	25
Mindanao	2025	12	27	14	96	138	138	25
Mindanao	2025	12	27	15	93	138	138	25
Mindanao	2025	12	27	16	91	138	138	25
Mindanao	2025	12	27	17	88	138	138	25
Mindanao	2025	12	27	18	96	138	138	25
Mindanao	2025	12	27	19	95	138	138	25
Mindanao	2025	12	27	20	91	138	138	25
Mindanao	2025	12	27	21	92	138	138	25
Mindanao	2025	12	27	22	86	138	138	25
Mindanao	2025	12	27	23	80	138	138	25
Mindanao	2025	12	27	24	77	138	138	25
Mindanao	2025	12	28	1	73	138	138	25
Mindanao	2025	12	28	2	71	138	138	25
Mindanao	2025	12	28	3	68	138	138	25
Mindanao	2025	12	28	4	66	138	138	25
Mindanao	2025	12	28	5	65	138	138	25
Mindanao	2025	12	28	6	66	138	138	25
Mindanao	2025	12	28	7	66	138	138	25
Mindanao	2025	12	28	8	70	138	138	25
Mindanao	2025	12	28	9	74	138	138	25
Mindanao	2025	12	28	10	78	138	138	25
Mindanao	2025	12	28	11	79	138	138	25
Mindanao	2025	12	28	12	81	138	138	25
Mindanao	2025	12	28	13	82	138	138	25
Mindanao	2025	12	28	14	83	138	138	25
Mindanao	2025	12	28	15	82	138	138	25
Mindanao	2025	12	28	16	81	138	138	25
Mindanao	2025	12	28	17	81	138	138	25
Mindanao	2025	12	28	18	88	138	138	25
Mindanao	2025	12	28	19	85	138	138	25
Mindanao	2025	12	28	20	79	138	138	25
Mindanao	2025	12	28	21	77	138	138	25
Mindanao	2025	12	28	22	76	138	138	25
Mindanao	2025	12	28	23	76	138	138	25
Mindanao	2025	12	28	24	73	138	138	25
Mindanao	2025	12	29	1	69	138	138	25
Mindanao	2025	12	29	2	67	138	138	25
Mindanao	2025	12	29	3	66	138	138	25
Mindanao	2025	12	29	4	65	138	138	25
Mindanao	2025	12	29	5	67	138	138	25
Mindanao	2025	12	29	6	66	138	138	25
Mindanao	2025	12	29	7	66	138	138	25
Mindanao	2025	12	29	8	75	138	138	25
Mindanao	2025	12	29	9	83	138	138	25
Mindanao	2025	12	29	10	88	138	138	25
Mindanao	2025	12	29	11	92	138	138	25
Mindanao	2025	12	29	12	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2025	12	29	13	87	138	138	25
Mindanao	2025	12	29	14	85	138	138	25
Mindanao	2025	12	29	15	87	138	138	25
Mindanao	2025	12	29	16	87	138	138	25
Mindanao	2025	12	29	17	89	138	138	25
Mindanao	2025	12	29	18	93	138	138	25
Mindanao	2025	12	29	19	87	138	138	25
Mindanao	2025	12	29	20	84	138	138	25
Mindanao	2025	12	29	21	82	138	138	25
Mindanao	2025	12	29	22	78	138	138	25
Mindanao	2025	12	29	23	71	138	138	25
Mindanao	2025	12	29	24	68	138	138	25
Mindanao	2025	12	30	1	82	138	138	25
Mindanao	2025	12	30	2	79	138	138	25
Mindanao	2025	12	30	3	75	138	138	25
Mindanao	2025	12	30	4	75	138	138	25
Mindanao	2025	12	30	5	76	138	138	25
Mindanao	2025	12	30	6	76	138	138	25
Mindanao	2025	12	30	7	71	138	138	25
Mindanao	2025	12	30	8	74	138	138	25
Mindanao	2025	12	30	9	77	138	138	25
Mindanao	2025	12	30	10	81	138	138	25
Mindanao	2025	12	30	11	86	138	138	25
Mindanao	2025	12	30	12	86	138	138	25
Mindanao	2025	12	30	13	87	138	138	25
Mindanao	2025	12	30	14	90	138	138	25
Mindanao	2025	12	30	15	88	138	138	25
Mindanao	2025	12	30	16	88	138	138	25
Mindanao	2025	12	30	17	85	138	138	25
Mindanao	2025	12	30	18	97	138	138	25
Mindanao	2025	12	30	19	93	138	138	25
Mindanao	2025	12	30	20	92	138	138	25
Mindanao	2025	12	30	21	89	138	138	25
Mindanao	2025	12	30	22	87	138	138	25
Mindanao	2025	12	30	23	82	138	138	25
Mindanao	2025	12	30	24	76	138	138	25
Mindanao	2025	12	31	1	75	138	138	25
Mindanao	2025	12	31	2	72	138	138	25
Mindanao	2025	12	31	3	69	138	138	25
Mindanao	2025	12	31	4	68	138	138	25
Mindanao	2025	12	31	5	68	138	138	25
Mindanao	2025	12	31	6	67	138	138	25
Mindanao	2025	12	31	7	66	138	138	25
Mindanao	2025	12	31	8	68	138	138	25
Mindanao	2025	12	31	9	72	138	138	25
Mindanao	2025	12	31	10	76	138	138	25
Mindanao	2025	12	31	11	79	138	138	25
Mindanao	2025	12	31	12	81	138	138	25
Mindanao	2025	12	31	13	82	138	138	25
Mindanao	2025	12	31	14	85	138	138	25
Mindanao	2025	12	31	15	85	138	138	25
Mindanao	2025	12	31	16	85	138	138	25
Mindanao	2025	12	31	17	83	138	138	25
Mindanao	2025	12	31	18	89	138	138	25
Mindanao	2025	12	31	19	90	138	138	25
Mindanao	2025	12	31	20	84	138	138	25
Mindanao	2025	12	31	21	84	138	138	25
Mindanao	2025	12	31	22	80	138	138	25
Mindanao	2025	12	31	23	79	138	138	25
Mindanao	2025	12	31	24	77	138	138	25
Mindanao	2026	1	1	1	69	138	138	25
Mindanao	2026	1	1	2	65	138	138	25
Mindanao	2026	1	1	3	62	138	138	25
Mindanao	2026	1	1	4	59	138	138	25
Mindanao	2026	1	1	5	57	138	138	25
Mindanao	2026	1	1	6	55	138	138	25
Mindanao	2026	1	1	7	54	138	138	25
Mindanao	2026	1	1	8	54	138	138	25
Mindanao	2026	1	1	9	55	138	138	25
Mindanao	2026	1	1	10	56	138	138	25
Mindanao	2026	1	1	11	57	138	138	25
Mindanao	2026	1	1	12	59	138	138	25
Mindanao	2026	1	1	13	60	138	138	25
Mindanao	2026	1	1	14	60	138	138	25
Mindanao	2026	1	1	15	60	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	1	16	60	138	138	25
Mindanao	2026	1	1	17	62	138	138	25
Mindanao	2026	1	1	18	72	138	138	25
Mindanao	2026	1	1	19	72	138	138	25
Mindanao	2026	1	1	20	70	138	138	25
Mindanao	2026	1	1	21	67	138	138	25
Mindanao	2026	1	1	22	63	138	138	25
Mindanao	2026	1	1	23	57	138	138	25
Mindanao	2026	1	1	24	57	138	138	25
Mindanao	2026	1	2	1	65	138	138	25
Mindanao	2026	1	2	2	64	138	138	25
Mindanao	2026	1	2	3	62	138	138	25
Mindanao	2026	1	2	4	62	138	138	25
Mindanao	2026	1	2	5	65	138	138	25
Mindanao	2026	1	2	6	68	138	138	25
Mindanao	2026	1	2	7	65	138	138	25
Mindanao	2026	1	2	8	71	138	138	25
Mindanao	2026	1	2	9	82	138	138	25
Mindanao	2026	1	2	10	90	138	138	25
Mindanao	2026	1	2	11	95	138	138	25
Mindanao	2026	1	2	12	94	138	138	25
Mindanao	2026	1	2	13	95	138	138	25
Mindanao	2026	1	2	14	99	138	138	25
Mindanao	2026	1	2	15	99	138	138	25
Mindanao	2026	1	2	16	94	138	138	25
Mindanao	2026	1	2	17	91	138	138	25
Mindanao	2026	1	2	18	96	138	138	25
Mindanao	2026	1	2	19	93	138	138	25
Mindanao	2026	1	2	20	89	138	138	25
Mindanao	2026	1	2	21	85	138	138	25
Mindanao	2026	1	2	22	80	138	138	25
Mindanao	2026	1	2	23	76	138	138	25
Mindanao	2026	1	2	24	70	138	138	25
Mindanao	2026	1	3	1	68	138	138	25
Mindanao	2026	1	3	2	66	138	138	25
Mindanao	2026	1	3	3	63	138	138	25
Mindanao	2026	1	3	4	63	138	138	25
Mindanao	2026	1	3	5	63	138	138	25
Mindanao	2026	1	3	6	66	138	138	25
Mindanao	2026	1	3	7	66	138	138	25
Mindanao	2026	1	3	8	68	138	138	25
Mindanao	2026	1	3	9	73	138	138	25
Mindanao	2026	1	3	10	76	138	138	25
Mindanao	2026	1	3	11	79	138	138	25
Mindanao	2026	1	3	12	78	138	138	25
Mindanao	2026	1	3	13	78	138	138	25
Mindanao	2026	1	3	14	80	138	138	25
Mindanao	2026	1	3	15	80	138	138	25
Mindanao	2026	1	3	16	80	138	138	25
Mindanao	2026	1	3	17	80	138	138	25
Mindanao	2026	1	3	18	89	138	138	25
Mindanao	2026	1	3	19	87	138	138	25
Mindanao	2026	1	3	20	83	138	138	25
Mindanao	2026	1	3	21	79	138	138	25
Mindanao	2026	1	3	22	74	138	138	25
Mindanao	2026	1	3	23	71	138	138	25
Mindanao	2026	1	3	24	67	138	138	25
Mindanao	2026	1	4	1	64	138	138	25
Mindanao	2026	1	4	2	61	138	138	25
Mindanao	2026	1	4	3	60	138	138	25
Mindanao	2026	1	4	4	59	138	138	25
Mindanao	2026	1	4	5	60	138	138	25
Mindanao	2026	1	4	6	62	138	138	25
Mindanao	2026	1	4	7	62	138	138	25
Mindanao	2026	1	4	8	62	138	138	25
Mindanao	2026	1	4	9	64	138	138	25
Mindanao	2026	1	4	10	66	138	138	25
Mindanao	2026	1	4	11	67	138	138	25
Mindanao	2026	1	4	12	67	138	138	25
Mindanao	2026	1	4	13	68	138	138	25
Mindanao	2026	1	4	14	69	138	138	25
Mindanao	2026	1	4	15	69	138	138	25
Mindanao	2026	1	4	16	69	138	138	25
Mindanao	2026	1	4	17	73	138	138	25
Mindanao	2026	1	4	18	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	4	19	82	138	138	25
Mindanao	2026	1	4	20	78	138	138	25
Mindanao	2026	1	4	21	75	138	138	25
Mindanao	2026	1	4	22	70	138	138	25
Mindanao	2026	1	4	23	65	138	138	25
Mindanao	2026	1	4	24	64	138	138	25
Mindanao	2026	1	5	1	55	138	138	25
Mindanao	2026	1	5	2	51	138	138	25
Mindanao	2026	1	5	3	52	138	138	25
Mindanao	2026	1	5	4	49	138	138	25
Mindanao	2026	1	5	5	50	138	138	25
Mindanao	2026	1	5	6	54	138	138	25
Mindanao	2026	1	5	7	56	138	138	25
Mindanao	2026	1	5	8	59	138	138	25
Mindanao	2026	1	5	9	65	138	138	25
Mindanao	2026	1	5	10	70	138	138	25
Mindanao	2026	1	5	11	71	138	138	25
Mindanao	2026	1	5	12	71	138	138	25
Mindanao	2026	1	5	13	71	138	138	25
Mindanao	2026	1	5	14	71	138	138	25
Mindanao	2026	1	5	15	70	138	138	25
Mindanao	2026	1	5	16	72	138	138	25
Mindanao	2026	1	5	17	74	138	138	25
Mindanao	2026	1	5	18	83	138	138	25
Mindanao	2026	1	5	19	78	138	138	25
Mindanao	2026	1	5	20	76	138	138	25
Mindanao	2026	1	5	21	72	138	138	25
Mindanao	2026	1	5	22	66	138	138	25
Mindanao	2026	1	5	23	62	138	138	25
Mindanao	2026	1	5	24	60	138	138	25
Mindanao	2026	1	6	1	59	138	138	25
Mindanao	2026	1	6	2	56	138	138	25
Mindanao	2026	1	6	3	54	138	138	25
Mindanao	2026	1	6	4	54	138	138	25
Mindanao	2026	1	6	5	55	138	138	25
Mindanao	2026	1	6	6	60	138	138	25
Mindanao	2026	1	6	7	60	138	138	25
Mindanao	2026	1	6	8	64	138	138	25
Mindanao	2026	1	6	9	74	138	138	25
Mindanao	2026	1	6	10	80	138	138	25
Mindanao	2026	1	6	11	87	138	138	25
Mindanao	2026	1	6	12	86	138	138	25
Mindanao	2026	1	6	13	87	138	138	25
Mindanao	2026	1	6	14	89	138	138	25
Mindanao	2026	1	6	15	89	138	138	25
Mindanao	2026	1	6	16	87	138	138	25
Mindanao	2026	1	6	17	84	138	138	25
Mindanao	2026	1	6	18	90	138	138	25
Mindanao	2026	1	6	19	86	138	138	25
Mindanao	2026	1	6	20	84	138	138	25
Mindanao	2026	1	6	21	79	138	138	25
Mindanao	2026	1	6	22	73	138	138	25
Mindanao	2026	1	6	23	69	138	138	25
Mindanao	2026	1	6	24	65	138	138	25
Mindanao	2026	1	7	1	62	138	138	25
Mindanao	2026	1	7	2	61	138	138	25
Mindanao	2026	1	7	3	60	138	138	25
Mindanao	2026	1	7	4	58	138	138	25
Mindanao	2026	1	7	5	63	138	138	25
Mindanao	2026	1	7	6	67	138	138	25
Mindanao	2026	1	7	7	62	138	138	25
Mindanao	2026	1	7	8	68	138	138	25
Mindanao	2026	1	7	9	78	138	138	25
Mindanao	2026	1	7	10	82	138	138	25
Mindanao	2026	1	7	11	88	138	138	25
Mindanao	2026	1	7	12	85	138	138	25
Mindanao	2026	1	7	13	86	138	138	25
Mindanao	2026	1	7	14	89	138	138	25
Mindanao	2026	1	7	15	87	138	138	25
Mindanao	2026	1	7	16	86	138	138	25
Mindanao	2026	1	7	17	87	138	138	25
Mindanao	2026	1	7	18	90	138	138	25
Mindanao	2026	1	7	19	86	138	138	25
Mindanao	2026	1	7	20	83	138	138	25
Mindanao	2026	1	7	21	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	7	22	72	138	138	25
Mindanao	2026	1	7	23	68	138	138	25
Mindanao	2026	1	7	24	65	138	138	25
Mindanao	2026	1	8	1	63	138	138	25
Mindanao	2026	1	8	2	61	138	138	25
Mindanao	2026	1	8	3	59	138	138	25
Mindanao	2026	1	8	4	60	138	138	25
Mindanao	2026	1	8	5	63	138	138	25
Mindanao	2026	1	8	6	68	138	138	25
Mindanao	2026	1	8	7	66	138	138	25
Mindanao	2026	1	8	8	70	138	138	25
Mindanao	2026	1	8	9	81	138	138	25
Mindanao	2026	1	8	10	86	138	138	25
Mindanao	2026	1	8	11	91	138	138	25
Mindanao	2026	1	8	12	90	138	138	25
Mindanao	2026	1	8	13	91	138	138	25
Mindanao	2026	1	8	14	96	138	138	25
Mindanao	2026	1	8	15	96	138	138	25
Mindanao	2026	1	8	16	94	138	138	25
Mindanao	2026	1	8	17	92	138	138	25
Mindanao	2026	1	8	18	94	138	138	25
Mindanao	2026	1	8	19	88	138	138	25
Mindanao	2026	1	8	20	85	138	138	25
Mindanao	2026	1	8	21	83	138	138	25
Mindanao	2026	1	8	22	77	138	138	25
Mindanao	2026	1	8	23	71	138	138	25
Mindanao	2026	1	8	24	68	138	138	25
Mindanao	2026	1	9	1	65	138	138	25
Mindanao	2026	1	9	2	64	138	138	25
Mindanao	2026	1	9	3	62	138	138	25
Mindanao	2026	1	9	4	62	138	138	25
Mindanao	2026	1	9	5	65	138	138	25
Mindanao	2026	1	9	6	68	138	138	25
Mindanao	2026	1	9	7	65	138	138	25
Mindanao	2026	1	9	8	71	138	138	25
Mindanao	2026	1	9	9	82	138	138	25
Mindanao	2026	1	9	10	90	138	138	25
Mindanao	2026	1	9	11	95	138	138	25
Mindanao	2026	1	9	12	94	138	138	25
Mindanao	2026	1	9	13	95	138	138	25
Mindanao	2026	1	9	14	99	138	138	25
Mindanao	2026	1	9	15	99	138	138	25
Mindanao	2026	1	9	16	94	138	138	25
Mindanao	2026	1	9	17	91	138	138	25
Mindanao	2026	1	9	18	96	138	138	25
Mindanao	2026	1	9	19	93	138	138	25
Mindanao	2026	1	9	20	89	138	138	25
Mindanao	2026	1	9	21	85	138	138	25
Mindanao	2026	1	9	22	80	138	138	25
Mindanao	2026	1	9	23	76	138	138	25
Mindanao	2026	1	9	24	70	138	138	25
Mindanao	2026	1	10	1	68	138	138	25
Mindanao	2026	1	10	2	66	138	138	25
Mindanao	2026	1	10	3	63	138	138	25
Mindanao	2026	1	10	4	63	138	138	25
Mindanao	2026	1	10	5	63	138	138	25
Mindanao	2026	1	10	6	66	138	138	25
Mindanao	2026	1	10	7	66	138	138	25
Mindanao	2026	1	10	8	68	138	138	25
Mindanao	2026	1	10	9	73	138	138	25
Mindanao	2026	1	10	10	76	138	138	25
Mindanao	2026	1	10	11	79	138	138	25
Mindanao	2026	1	10	12	78	138	138	25
Mindanao	2026	1	10	13	78	138	138	25
Mindanao	2026	1	10	14	80	138	138	25
Mindanao	2026	1	10	15	80	138	138	25
Mindanao	2026	1	10	16	80	138	138	25
Mindanao	2026	1	10	17	80	138	138	25
Mindanao	2026	1	10	18	89	138	138	25
Mindanao	2026	1	10	19	87	138	138	25
Mindanao	2026	1	10	20	83	138	138	25
Mindanao	2026	1	10	21	79	138	138	25
Mindanao	2026	1	10	22	74	138	138	25
Mindanao	2026	1	10	23	71	138	138	25
Mindanao	2026	1	10	24	67	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	11	1	64	138	138	25
Mindanao	2026	1	11	2	61	138	138	25
Mindanao	2026	1	11	3	60	138	138	25
Mindanao	2026	1	11	4	59	138	138	25
Mindanao	2026	1	11	5	60	138	138	25
Mindanao	2026	1	11	6	62	138	138	25
Mindanao	2026	1	11	7	62	138	138	25
Mindanao	2026	1	11	8	62	138	138	25
Mindanao	2026	1	11	9	64	138	138	25
Mindanao	2026	1	11	10	66	138	138	25
Mindanao	2026	1	11	11	67	138	138	25
Mindanao	2026	1	11	12	67	138	138	25
Mindanao	2026	1	11	13	68	138	138	25
Mindanao	2026	1	11	14	69	138	138	25
Mindanao	2026	1	11	15	69	138	138	25
Mindanao	2026	1	11	16	69	138	138	25
Mindanao	2026	1	11	17	73	138	138	25
Mindanao	2026	1	11	18	83	138	138	25
Mindanao	2026	1	11	19	82	138	138	25
Mindanao	2026	1	11	20	78	138	138	25
Mindanao	2026	1	11	21	75	138	138	25
Mindanao	2026	1	11	22	70	138	138	25
Mindanao	2026	1	11	23	65	138	138	25
Mindanao	2026	1	11	24	64	138	138	25
Mindanao	2026	1	12	1	61	138	138	25
Mindanao	2026	1	12	2	60	138	138	25
Mindanao	2026	1	12	3	60	138	138	25
Mindanao	2026	1	12	4	59	138	138	25
Mindanao	2026	1	12	5	64	138	138	25
Mindanao	2026	1	12	6	69	138	138	25
Mindanao	2026	1	12	7	64	138	138	25
Mindanao	2026	1	12	8	70	138	138	25
Mindanao	2026	1	12	9	79	138	138	25
Mindanao	2026	1	12	10	86	138	138	25
Mindanao	2026	1	12	11	90	138	138	25
Mindanao	2026	1	12	12	88	138	138	25
Mindanao	2026	1	12	13	89	138	138	25
Mindanao	2026	1	12	14	92	138	138	25
Mindanao	2026	1	12	15	92	138	138	25
Mindanao	2026	1	12	16	89	138	138	25
Mindanao	2026	1	12	17	87	138	138	25
Mindanao	2026	1	12	18	95	138	138	25
Mindanao	2026	1	12	19	91	138	138	25
Mindanao	2026	1	12	20	87	138	138	25
Mindanao	2026	1	12	21	84	138	138	25
Mindanao	2026	1	12	22	77	138	138	25
Mindanao	2026	1	12	23	72	138	138	25
Mindanao	2026	1	12	24	69	138	138	25
Mindanao	2026	1	13	1	65	138	138	25
Mindanao	2026	1	13	2	63	138	138	25
Mindanao	2026	1	13	3	62	138	138	25
Mindanao	2026	1	13	4	63	138	138	25
Mindanao	2026	1	13	5	66	138	138	25
Mindanao	2026	1	13	6	72	138	138	25
Mindanao	2026	1	13	7	68	138	138	25
Mindanao	2026	1	13	8	70	138	138	25
Mindanao	2026	1	13	9	80	138	138	25
Mindanao	2026	1	13	10	85	138	138	25
Mindanao	2026	1	13	11	88	138	138	25
Mindanao	2026	1	13	12	86	138	138	25
Mindanao	2026	1	13	13	86	138	138	25
Mindanao	2026	1	13	14	91	138	138	25
Mindanao	2026	1	13	15	90	138	138	25
Mindanao	2026	1	13	16	89	138	138	25
Mindanao	2026	1	13	17	86	138	138	25
Mindanao	2026	1	13	18	93	138	138	25
Mindanao	2026	1	13	19	89	138	138	25
Mindanao	2026	1	13	20	84	138	138	25
Mindanao	2026	1	13	21	81	138	138	25
Mindanao	2026	1	13	22	74	138	138	25
Mindanao	2026	1	13	23	70	138	138	25
Mindanao	2026	1	13	24	67	138	138	25
Mindanao	2026	1	14	1	64	138	138	25
Mindanao	2026	1	14	2	62	138	138	25
Mindanao	2026	1	14	3	59	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	14	4	60	138	138	25
Mindanao	2026	1	14	5	64	138	138	25
Mindanao	2026	1	14	6	70	138	138	25
Mindanao	2026	1	14	7	65	138	138	25
Mindanao	2026	1	14	8	71	138	138	25
Mindanao	2026	1	14	9	78	138	138	25
Mindanao	2026	1	14	10	83	138	138	25
Mindanao	2026	1	14	11	86	138	138	25
Mindanao	2026	1	14	12	84	138	138	25
Mindanao	2026	1	14	13	84	138	138	25
Mindanao	2026	1	14	14	86	138	138	25
Mindanao	2026	1	14	15	86	138	138	25
Mindanao	2026	1	14	16	85	138	138	25
Mindanao	2026	1	14	17	85	138	138	25
Mindanao	2026	1	14	18	91	138	138	25
Mindanao	2026	1	14	19	86	138	138	25
Mindanao	2026	1	14	20	81	138	138	25
Mindanao	2026	1	14	21	77	138	138	25
Mindanao	2026	1	14	22	70	138	138	25
Mindanao	2026	1	14	23	67	138	138	25
Mindanao	2026	1	14	24	63	138	138	25
Mindanao	2026	1	15	1	62	138	138	25
Mindanao	2026	1	15	2	58	138	138	25
Mindanao	2026	1	15	3	59	138	138	25
Mindanao	2026	1	15	4	58	138	138	25
Mindanao	2026	1	15	5	60	138	138	25
Mindanao	2026	1	15	6	66	138	138	25
Mindanao	2026	1	15	7	62	138	138	25
Mindanao	2026	1	15	8	67	138	138	25
Mindanao	2026	1	15	9	76	138	138	25
Mindanao	2026	1	15	10	82	138	138	25
Mindanao	2026	1	15	11	86	138	138	25
Mindanao	2026	1	15	12	84	138	138	25
Mindanao	2026	1	15	13	85	138	138	25
Mindanao	2026	1	15	14	90	138	138	25
Mindanao	2026	1	15	15	88	138	138	25
Mindanao	2026	1	15	16	85	138	138	25
Mindanao	2026	1	15	17	88	138	138	25
Mindanao	2026	1	15	18	93	138	138	25
Mindanao	2026	1	15	19	84	138	138	25
Mindanao	2026	1	15	20	84	138	138	25
Mindanao	2026	1	15	21	82	138	138	25
Mindanao	2026	1	15	22	75	138	138	25
Mindanao	2026	1	15	23	71	138	138	25
Mindanao	2026	1	15	24	67	138	138	25
Mindanao	2026	1	16	1	65	138	138	25
Mindanao	2026	1	16	2	63	138	138	25
Mindanao	2026	1	16	3	62	138	138	25
Mindanao	2026	1	16	4	60	138	138	25
Mindanao	2026	1	16	5	65	138	138	25
Mindanao	2026	1	16	6	69	138	138	25
Mindanao	2026	1	16	7	66	138	138	25
Mindanao	2026	1	16	8	72	138	138	25
Mindanao	2026	1	16	9	82	138	138	25
Mindanao	2026	1	16	10	89	138	138	25
Mindanao	2026	1	16	11	92	138	138	25
Mindanao	2026	1	16	12	91	138	138	25
Mindanao	2026	1	16	13	90	138	138	25
Mindanao	2026	1	16	14	93	138	138	25
Mindanao	2026	1	16	15	93	138	138	25
Mindanao	2026	1	16	16	92	138	138	25
Mindanao	2026	1	16	17	90	138	138	25
Mindanao	2026	1	16	18	95	138	138	25
Mindanao	2026	1	16	19	90	138	138	25
Mindanao	2026	1	16	20	87	138	138	25
Mindanao	2026	1	16	21	81	138	138	25
Mindanao	2026	1	16	22	75	138	138	25
Mindanao	2026	1	16	23	72	138	138	25
Mindanao	2026	1	16	24	68	138	138	25
Mindanao	2026	1	17	1	65	138	138	25
Mindanao	2026	1	17	2	64	138	138	25
Mindanao	2026	1	17	3	62	138	138	25
Mindanao	2026	1	17	4	61	138	138	25
Mindanao	2026	1	17	5	61	138	138	25
Mindanao	2026	1	17	6	66	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	17	7	67	138	138	25
Mindanao	2026	1	17	8	68	138	138	25
Mindanao	2026	1	17	9	73	138	138	25
Mindanao	2026	1	17	10	77	138	138	25
Mindanao	2026	1	17	11	80	138	138	25
Mindanao	2026	1	17	12	81	138	138	25
Mindanao	2026	1	17	13	80	138	138	25
Mindanao	2026	1	17	14	80	138	138	25
Mindanao	2026	1	17	15	81	138	138	25
Mindanao	2026	1	17	16	81	138	138	25
Mindanao	2026	1	17	17	83	138	138	25
Mindanao	2026	1	17	18	88	138	138	25
Mindanao	2026	1	17	19	86	138	138	25
Mindanao	2026	1	17	20	82	138	138	25
Mindanao	2026	1	17	21	78	138	138	25
Mindanao	2026	1	17	22	73	138	138	25
Mindanao	2026	1	17	23	70	138	138	25
Mindanao	2026	1	17	24	67	138	138	25
Mindanao	2026	1	18	1	63	138	138	25
Mindanao	2026	1	18	2	62	138	138	25
Mindanao	2026	1	18	3	60	138	138	25
Mindanao	2026	1	18	4	60	138	138	25
Mindanao	2026	1	18	5	61	138	138	25
Mindanao	2026	1	18	6	63	138	138	25
Mindanao	2026	1	18	7	62	138	138	25
Mindanao	2026	1	18	8	63	138	138	25
Mindanao	2026	1	18	9	67	138	138	25
Mindanao	2026	1	18	10	70	138	138	25
Mindanao	2026	1	18	11	73	138	138	25
Mindanao	2026	1	18	12	74	138	138	25
Mindanao	2026	1	18	13	74	138	138	25
Mindanao	2026	1	18	14	76	138	138	25
Mindanao	2026	1	18	15	77	138	138	25
Mindanao	2026	1	18	16	77	138	138	25
Mindanao	2026	1	18	17	77	138	138	25
Mindanao	2026	1	18	18	88	138	138	25
Mindanao	2026	1	18	19	89	138	138	25
Mindanao	2026	1	18	20	86	138	138	25
Mindanao	2026	1	18	21	83	138	138	25
Mindanao	2026	1	18	22	79	138	138	25
Mindanao	2026	1	18	23	74	138	138	25
Mindanao	2026	1	18	24	69	138	138	25
Mindanao	2026	1	19	1	67	138	138	25
Mindanao	2026	1	19	2	65	138	138	25
Mindanao	2026	1	19	3	62	138	138	25
Mindanao	2026	1	19	4	64	138	138	25
Mindanao	2026	1	19	5	67	138	138	25
Mindanao	2026	1	19	6	73	138	138	25
Mindanao	2026	1	19	7	66	138	138	25
Mindanao	2026	1	19	8	72	138	138	25
Mindanao	2026	1	19	9	84	138	138	25
Mindanao	2026	1	19	10	91	138	138	25
Mindanao	2026	1	19	11	95	138	138	25
Mindanao	2026	1	19	12	95	138	138	25
Mindanao	2026	1	19	13	97	138	138	25
Mindanao	2026	1	19	14	100	138	138	25
Mindanao	2026	1	19	15	99	138	138	25
Mindanao	2026	1	19	16	98	138	138	25
Mindanao	2026	1	19	17	93	138	138	25
Mindanao	2026	1	19	18	97	138	138	25
Mindanao	2026	1	19	19	95	138	138	25
Mindanao	2026	1	19	20	91	138	138	25
Mindanao	2026	1	19	21	88	138	138	25
Mindanao	2026	1	19	22	83	138	138	25
Mindanao	2026	1	19	23	77	138	138	25
Mindanao	2026	1	19	24	72	138	138	25
Mindanao	2026	1	20	1	68	138	138	25
Mindanao	2026	1	20	2	66	138	138	25
Mindanao	2026	1	20	3	65	138	138	25
Mindanao	2026	1	20	4	64	138	138	25
Mindanao	2026	1	20	5	69	138	138	25
Mindanao	2026	1	20	6	75	138	138	25
Mindanao	2026	1	20	7	67	138	138	25
Mindanao	2026	1	20	8	73	138	138	25
Mindanao	2026	1	20	9	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	20	10	92	138	138	25
Mindanao	2026	1	20	11	96	138	138	25
Mindanao	2026	1	20	12	94	138	138	25
Mindanao	2026	1	20	13	97	138	138	25
Mindanao	2026	1	20	14	101	138	138	25
Mindanao	2026	1	20	15	99	138	138	25
Mindanao	2026	1	20	16	98	138	138	25
Mindanao	2026	1	20	17	94	138	138	25
Mindanao	2026	1	20	18	99	138	138	25
Mindanao	2026	1	20	19	95	138	138	25
Mindanao	2026	1	20	20	91	138	138	25
Mindanao	2026	1	20	21	89	138	138	25
Mindanao	2026	1	20	22	82	138	138	25
Mindanao	2026	1	20	23	76	138	138	25
Mindanao	2026	1	20	24	72	138	138	25
Mindanao	2026	1	21	1	71	138	138	25
Mindanao	2026	1	21	2	66	138	138	25
Mindanao	2026	1	21	3	65	138	138	25
Mindanao	2026	1	21	4	64	138	138	25
Mindanao	2026	1	21	5	70	138	138	25
Mindanao	2026	1	21	6	74	138	138	25
Mindanao	2026	1	21	7	68	138	138	25
Mindanao	2026	1	21	8	73	138	138	25
Mindanao	2026	1	21	9	84	138	138	25
Mindanao	2026	1	21	10	93	138	138	25
Mindanao	2026	1	21	11	98	138	138	25
Mindanao	2026	1	21	12	96	138	138	25
Mindanao	2026	1	21	13	98	138	138	25
Mindanao	2026	1	21	14	101	138	138	25
Mindanao	2026	1	21	15	99	138	138	25
Mindanao	2026	1	21	16	94	138	138	25
Mindanao	2026	1	21	17	90	138	138	25
Mindanao	2026	1	21	18	96	138	138	25
Mindanao	2026	1	21	19	94	138	138	25
Mindanao	2026	1	21	20	90	138	138	25
Mindanao	2026	1	21	21	88	138	138	25
Mindanao	2026	1	21	22	83	138	138	25
Mindanao	2026	1	21	23	74	138	138	25
Mindanao	2026	1	21	24	71	138	138	25
Mindanao	2026	1	22	1	68	138	138	25
Mindanao	2026	1	22	2	66	138	138	25
Mindanao	2026	1	22	3	65	138	138	25
Mindanao	2026	1	22	4	64	138	138	25
Mindanao	2026	1	22	5	67	138	138	25
Mindanao	2026	1	22	6	75	138	138	25
Mindanao	2026	1	22	7	67	138	138	25
Mindanao	2026	1	22	8	73	138	138	25
Mindanao	2026	1	22	9	86	138	138	25
Mindanao	2026	1	22	10	92	138	138	25
Mindanao	2026	1	22	11	97	138	138	25
Mindanao	2026	1	22	12	96	138	138	25
Mindanao	2026	1	22	13	98	138	138	25
Mindanao	2026	1	22	14	102	138	138	25
Mindanao	2026	1	22	15	99	138	138	25
Mindanao	2026	1	22	16	100	138	138	25
Mindanao	2026	1	22	17	94	138	138	25
Mindanao	2026	1	22	18	100	138	138	25
Mindanao	2026	1	22	19	97	138	138	25
Mindanao	2026	1	22	20	95	138	138	25
Mindanao	2026	1	22	21	91	138	138	25
Mindanao	2026	1	22	22	86	138	138	25
Mindanao	2026	1	22	23	79	138	138	25
Mindanao	2026	1	22	24	76	138	138	25
Mindanao	2026	1	23	1	73	138	138	25
Mindanao	2026	1	23	2	70	138	138	25
Mindanao	2026	1	23	3	68	138	138	25
Mindanao	2026	1	23	4	67	138	138	25
Mindanao	2026	1	23	5	70	138	138	25
Mindanao	2026	1	23	6	76	138	138	25
Mindanao	2026	1	23	7	70	138	138	25
Mindanao	2026	1	23	8	78	138	138	25
Mindanao	2026	1	23	9	88	138	138	25
Mindanao	2026	1	23	10	94	138	138	25
Mindanao	2026	1	23	11	98	138	138	25
Mindanao	2026	1	23	12	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	23	13	97	138	138	25
Mindanao	2026	1	23	14	101	138	138	25
Mindanao	2026	1	23	15	101	138	138	25
Mindanao	2026	1	23	16	98	138	138	25
Mindanao	2026	1	23	17	93	138	138	25
Mindanao	2026	1	23	18	98	138	138	25
Mindanao	2026	1	23	19	96	138	138	25
Mindanao	2026	1	23	20	92	138	138	25
Mindanao	2026	1	23	21	89	138	138	25
Mindanao	2026	1	23	22	83	138	138	25
Mindanao	2026	1	23	23	79	138	138	25
Mindanao	2026	1	23	24	74	138	138	25
Mindanao	2026	1	24	1	70	138	138	25
Mindanao	2026	1	24	2	67	138	138	25
Mindanao	2026	1	24	3	66	138	138	25
Mindanao	2026	1	24	4	64	138	138	25
Mindanao	2026	1	24	5	65	138	138	25
Mindanao	2026	1	24	6	67	138	138	25
Mindanao	2026	1	24	7	68	138	138	25
Mindanao	2026	1	24	8	71	138	138	25
Mindanao	2026	1	24	9	79	138	138	25
Mindanao	2026	1	24	10	82	138	138	25
Mindanao	2026	1	24	11	85	138	138	25
Mindanao	2026	1	24	12	83	138	138	25
Mindanao	2026	1	24	13	83	138	138	25
Mindanao	2026	1	24	14	84	138	138	25
Mindanao	2026	1	24	15	84	138	138	25
Mindanao	2026	1	24	16	82	138	138	25
Mindanao	2026	1	24	17	82	138	138	25
Mindanao	2026	1	24	18	89	138	138	25
Mindanao	2026	1	24	19	85	138	138	25
Mindanao	2026	1	24	20	82	138	138	25
Mindanao	2026	1	24	21	78	138	138	25
Mindanao	2026	1	24	22	73	138	138	25
Mindanao	2026	1	24	23	68	138	138	25
Mindanao	2026	1	24	24	65	138	138	25
Mindanao	2026	1	25	1	62	138	138	25
Mindanao	2026	1	25	2	59	138	138	25
Mindanao	2026	1	25	3	58	138	138	25
Mindanao	2026	1	25	4	57	138	138	25
Mindanao	2026	1	25	5	58	138	138	25
Mindanao	2026	1	25	6	63	138	138	25
Mindanao	2026	1	25	7	62	138	138	25
Mindanao	2026	1	25	8	64	138	138	25
Mindanao	2026	1	25	9	65	138	138	25
Mindanao	2026	1	25	10	70	138	138	25
Mindanao	2026	1	25	11	72	138	138	25
Mindanao	2026	1	25	12	70	138	138	25
Mindanao	2026	1	25	13	69	138	138	25
Mindanao	2026	1	25	14	70	138	138	25
Mindanao	2026	1	25	15	70	138	138	25
Mindanao	2026	1	25	16	70	138	138	25
Mindanao	2026	1	25	17	73	138	138	25
Mindanao	2026	1	25	18	83	138	138	25
Mindanao	2026	1	25	19	82	138	138	25
Mindanao	2026	1	25	20	80	138	138	25
Mindanao	2026	1	25	21	76	138	138	25
Mindanao	2026	1	25	22	72	138	138	25
Mindanao	2026	1	25	23	66	138	138	25
Mindanao	2026	1	25	24	64	138	138	25
Mindanao	2026	1	26	1	61	138	138	25
Mindanao	2026	1	26	2	61	138	138	25
Mindanao	2026	1	26	3	59	138	138	25
Mindanao	2026	1	26	4	58	138	138	25
Mindanao	2026	1	26	5	64	138	138	25
Mindanao	2026	1	26	6	70	138	138	25
Mindanao	2026	1	26	7	66	138	138	25
Mindanao	2026	1	26	8	69	138	138	25
Mindanao	2026	1	26	9	80	138	138	25
Mindanao	2026	1	26	10	85	138	138	25
Mindanao	2026	1	26	11	89	138	138	25
Mindanao	2026	1	26	12	87	138	138	25
Mindanao	2026	1	26	13	86	138	138	25
Mindanao	2026	1	26	14	88	138	138	25
Mindanao	2026	1	26	15	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	26	16	87	138	138	25
Mindanao	2026	1	26	17	88	138	138	25
Mindanao	2026	1	26	18	91	138	138	25
Mindanao	2026	1	26	19	88	138	138	25
Mindanao	2026	1	26	20	83	138	138	25
Mindanao	2026	1	26	21	79	138	138	25
Mindanao	2026	1	26	22	73	138	138	25
Mindanao	2026	1	26	23	69	138	138	25
Mindanao	2026	1	26	24	65	138	138	25
Mindanao	2026	1	27	1	63	138	138	25
Mindanao	2026	1	27	2	62	138	138	25
Mindanao	2026	1	27	3	62	138	138	25
Mindanao	2026	1	27	4	61	138	138	25
Mindanao	2026	1	27	5	66	138	138	25
Mindanao	2026	1	27	6	72	138	138	25
Mindanao	2026	1	27	7	66	138	138	25
Mindanao	2026	1	27	8	70	138	138	25
Mindanao	2026	1	27	9	80	138	138	25
Mindanao	2026	1	27	10	88	138	138	25
Mindanao	2026	1	27	11	92	138	138	25
Mindanao	2026	1	27	12	88	138	138	25
Mindanao	2026	1	27	13	89	138	138	25
Mindanao	2026	1	27	14	93	138	138	25
Mindanao	2026	1	27	15	91	138	138	25
Mindanao	2026	1	27	16	90	138	138	25
Mindanao	2026	1	27	17	87	138	138	25
Mindanao	2026	1	27	18	90	138	138	25
Mindanao	2026	1	27	19	87	138	138	25
Mindanao	2026	1	27	20	81	138	138	25
Mindanao	2026	1	27	21	78	138	138	25
Mindanao	2026	1	27	22	73	138	138	25
Mindanao	2026	1	27	23	69	138	138	25
Mindanao	2026	1	27	24	65	138	138	25
Mindanao	2026	1	28	1	63	138	138	25
Mindanao	2026	1	28	2	61	138	138	25
Mindanao	2026	1	28	3	62	138	138	25
Mindanao	2026	1	28	4	62	138	138	25
Mindanao	2026	1	28	5	66	138	138	25
Mindanao	2026	1	28	6	72	138	138	25
Mindanao	2026	1	28	7	65	138	138	25
Mindanao	2026	1	28	8	69	138	138	25
Mindanao	2026	1	28	9	78	138	138	25
Mindanao	2026	1	28	10	84	138	138	25
Mindanao	2026	1	28	11	84	138	138	25
Mindanao	2026	1	28	12	83	138	138	25
Mindanao	2026	1	28	13	84	138	138	25
Mindanao	2026	1	28	14	88	138	138	25
Mindanao	2026	1	28	15	86	138	138	25
Mindanao	2026	1	28	16	86	138	138	25
Mindanao	2026	1	28	17	84	138	138	25
Mindanao	2026	1	28	18	89	138	138	25
Mindanao	2026	1	28	19	89	138	138	25
Mindanao	2026	1	28	20	86	138	138	25
Mindanao	2026	1	28	21	82	138	138	25
Mindanao	2026	1	28	22	76	138	138	25
Mindanao	2026	1	28	23	71	138	138	25
Mindanao	2026	1	28	24	67	138	138	25
Mindanao	2026	1	29	1	65	138	138	25
Mindanao	2026	1	29	2	64	138	138	25
Mindanao	2026	1	29	3	62	138	138	25
Mindanao	2026	1	29	4	63	138	138	25
Mindanao	2026	1	29	5	67	138	138	25
Mindanao	2026	1	29	6	73	138	138	25
Mindanao	2026	1	29	7	68	138	138	25
Mindanao	2026	1	29	8	70	138	138	25
Mindanao	2026	1	29	9	81	138	138	25
Mindanao	2026	1	29	10	88	138	138	25
Mindanao	2026	1	29	11	91	138	138	25
Mindanao	2026	1	29	12	90	138	138	25
Mindanao	2026	1	29	13	90	138	138	25
Mindanao	2026	1	29	14	94	138	138	25
Mindanao	2026	1	29	15	95	138	138	25
Mindanao	2026	1	29	16	94	138	138	25
Mindanao	2026	1	29	17	91	138	138	25
Mindanao	2026	1	29	18	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	1	29	19	93	138	138	25
Mindanao	2026	1	29	20	91	138	138	25
Mindanao	2026	1	29	21	86	138	138	25
Mindanao	2026	1	29	22	81	138	138	25
Mindanao	2026	1	29	23	76	138	138	25
Mindanao	2026	1	29	24	72	138	138	25
Mindanao	2026	1	30	1	69	138	138	25
Mindanao	2026	1	30	2	68	138	138	25
Mindanao	2026	1	30	3	66	138	138	25
Mindanao	2026	1	30	4	67	138	138	25
Mindanao	2026	1	30	5	69	138	138	25
Mindanao	2026	1	30	6	74	138	138	25
Mindanao	2026	1	30	7	69	138	138	25
Mindanao	2026	1	30	8	76	138	138	25
Mindanao	2026	1	30	9	88	138	138	25
Mindanao	2026	1	30	10	94	138	138	25
Mindanao	2026	1	30	11	98	138	138	25
Mindanao	2026	1	30	12	97	138	138	25
Mindanao	2026	1	30	13	97	138	138	25
Mindanao	2026	1	30	14	101	138	138	25
Mindanao	2026	1	30	15	101	138	138	25
Mindanao	2026	1	30	16	99	138	138	25
Mindanao	2026	1	30	17	93	138	138	25
Mindanao	2026	1	30	18	98	138	138	25
Mindanao	2026	1	30	19	98	138	138	25
Mindanao	2026	1	30	20	94	138	138	25
Mindanao	2026	1	30	21	90	138	138	25
Mindanao	2026	1	30	22	84	138	138	25
Mindanao	2026	1	30	23	78	138	138	25
Mindanao	2026	1	30	24	74	138	138	25
Mindanao	2026	1	31	1	71	138	138	25
Mindanao	2026	1	31	2	70	138	138	25
Mindanao	2026	1	31	3	66	138	138	25
Mindanao	2026	1	31	4	66	138	138	25
Mindanao	2026	1	31	5	66	138	138	25
Mindanao	2026	1	31	6	70	138	138	25
Mindanao	2026	1	31	7	69	138	138	25
Mindanao	2026	1	31	8	71	138	138	25
Mindanao	2026	1	31	9	78	138	138	25
Mindanao	2026	1	31	10	86	138	138	25
Mindanao	2026	1	31	11	90	138	138	25
Mindanao	2026	1	31	12	89	138	138	25
Mindanao	2026	1	31	13	90	138	138	25
Mindanao	2026	1	31	14	94	138	138	25
Mindanao	2026	1	31	15	92	138	138	25
Mindanao	2026	1	31	16	92	138	138	25
Mindanao	2026	1	31	17	88	138	138	25
Mindanao	2026	1	31	18	95	138	138	25
Mindanao	2026	1	31	19	95	138	138	25
Mindanao	2026	1	31	20	94	138	138	25
Mindanao	2026	1	31	21	88	138	138	25
Mindanao	2026	1	31	22	84	138	138	25
Mindanao	2026	1	31	23	80	138	138	25
Mindanao	2026	1	31	24	75	138	138	25
Mindanao	2026	2	1	1	71	138	138	25
Mindanao	2026	2	1	2	69	138	138	25
Mindanao	2026	2	1	3	67	138	138	25
Mindanao	2026	2	1	4	66	138	138	25
Mindanao	2026	2	1	5	66	138	138	25
Mindanao	2026	2	1	6	65	138	138	25
Mindanao	2026	2	1	7	66	138	138	25
Mindanao	2026	2	1	8	67	138	138	25
Mindanao	2026	2	1	9	68	138	138	25
Mindanao	2026	2	1	10	71	138	138	25
Mindanao	2026	2	1	11	75	138	138	25
Mindanao	2026	2	1	12	75	138	138	25
Mindanao	2026	2	1	13	75	138	138	25
Mindanao	2026	2	1	14	74	138	138	25
Mindanao	2026	2	1	15	75	138	138	25
Mindanao	2026	2	1	16	74	138	138	25
Mindanao	2026	2	1	17	76	138	138	25
Mindanao	2026	2	1	18	85	138	138	25
Mindanao	2026	2	1	19	87	138	138	25
Mindanao	2026	2	1	20	84	138	138	25
Mindanao	2026	2	1	21	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	1	22	76	138	138	25
Mindanao	2026	2	1	23	73	138	138	25
Mindanao	2026	2	1	24	68	138	138	25
Mindanao	2026	2	2	1	66	138	138	25
Mindanao	2026	2	2	2	64	138	138	25
Mindanao	2026	2	2	3	63	138	138	25
Mindanao	2026	2	2	4	63	138	138	25
Mindanao	2026	2	2	5	67	138	138	25
Mindanao	2026	2	2	6	72	138	138	25
Mindanao	2026	2	2	7	67	138	138	25
Mindanao	2026	2	2	8	73	138	138	25
Mindanao	2026	2	2	9	85	138	138	25
Mindanao	2026	2	2	10	90	138	138	25
Mindanao	2026	2	2	11	94	138	138	25
Mindanao	2026	2	2	12	93	138	138	25
Mindanao	2026	2	2	13	94	138	138	25
Mindanao	2026	2	2	14	97	138	138	25
Mindanao	2026	2	2	15	96	138	138	25
Mindanao	2026	2	2	16	95	138	138	25
Mindanao	2026	2	2	17	91	138	138	25
Mindanao	2026	2	2	18	96	138	138	25
Mindanao	2026	2	2	19	94	138	138	25
Mindanao	2026	2	2	20	90	138	138	25
Mindanao	2026	2	2	21	86	138	138	25
Mindanao	2026	2	2	22	80	138	138	25
Mindanao	2026	2	2	23	76	138	138	25
Mindanao	2026	2	2	24	72	138	138	25
Mindanao	2026	2	3	1	69	138	138	25
Mindanao	2026	2	3	2	66	138	138	25
Mindanao	2026	2	3	3	64	138	138	25
Mindanao	2026	2	3	4	65	138	138	25
Mindanao	2026	2	3	5	68	138	138	25
Mindanao	2026	2	3	6	75	138	138	25
Mindanao	2026	2	3	7	68	138	138	25
Mindanao	2026	2	3	8	77	138	138	25
Mindanao	2026	2	3	9	84	138	138	25
Mindanao	2026	2	3	10	95	138	138	25
Mindanao	2026	2	3	11	98	138	138	25
Mindanao	2026	2	3	12	96	138	138	25
Mindanao	2026	2	3	13	96	138	138	25
Mindanao	2026	2	3	14	100	138	138	25
Mindanao	2026	2	3	15	100	138	138	25
Mindanao	2026	2	3	16	99	138	138	25
Mindanao	2026	2	3	17	94	138	138	25
Mindanao	2026	2	3	18	99	138	138	25
Mindanao	2026	2	3	19	99	138	138	25
Mindanao	2026	2	3	20	96	138	138	25
Mindanao	2026	2	3	21	92	138	138	25
Mindanao	2026	2	3	22	85	138	138	25
Mindanao	2026	2	3	23	80	138	138	25
Mindanao	2026	2	3	24	75	138	138	25
Mindanao	2026	2	4	1	73	138	138	25
Mindanao	2026	2	4	2	70	138	138	25
Mindanao	2026	2	4	3	67	138	138	25
Mindanao	2026	2	4	4	67	138	138	25
Mindanao	2026	2	4	5	70	138	138	25
Mindanao	2026	2	4	6	76	138	138	25
Mindanao	2026	2	4	7	71	138	138	25
Mindanao	2026	2	4	8	75	138	138	25
Mindanao	2026	2	4	9	86	138	138	25
Mindanao	2026	2	4	10	93	138	138	25
Mindanao	2026	2	4	11	97	138	138	25
Mindanao	2026	2	4	12	95	138	138	25
Mindanao	2026	2	4	13	98	138	138	25
Mindanao	2026	2	4	14	99	138	138	25
Mindanao	2026	2	4	15	101	138	138	25
Mindanao	2026	2	4	16	99	138	138	25
Mindanao	2026	2	4	17	95	138	138	25
Mindanao	2026	2	4	18	99	138	138	25
Mindanao	2026	2	4	19	97	138	138	25
Mindanao	2026	2	4	20	94	138	138	25
Mindanao	2026	2	4	21	92	138	138	25
Mindanao	2026	2	4	22	86	138	138	25
Mindanao	2026	2	4	23	81	138	138	25
Mindanao	2026	2	4	24	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	5	1	74	138	138	25
Mindanao	2026	2	5	2	71	138	138	25
Mindanao	2026	2	5	3	68	138	138	25
Mindanao	2026	2	5	4	67	138	138	25
Mindanao	2026	2	5	5	72	138	138	25
Mindanao	2026	2	5	6	77	138	138	25
Mindanao	2026	2	5	7	69	138	138	25
Mindanao	2026	2	5	8	76	138	138	25
Mindanao	2026	2	5	9	88	138	138	25
Mindanao	2026	2	5	10	95	138	138	25
Mindanao	2026	2	5	11	98	138	138	25
Mindanao	2026	2	5	12	97	138	138	25
Mindanao	2026	2	5	13	100	138	138	25
Mindanao	2026	2	5	14	105	138	138	25
Mindanao	2026	2	5	15	103	138	138	25
Mindanao	2026	2	5	16	102	138	138	25
Mindanao	2026	2	5	17	94	138	138	25
Mindanao	2026	2	5	18	99	138	138	25
Mindanao	2026	2	5	19	99	138	138	25
Mindanao	2026	2	5	20	95	138	138	25
Mindanao	2026	2	5	21	92	138	138	25
Mindanao	2026	2	5	22	86	138	138	25
Mindanao	2026	2	5	23	81	138	138	25
Mindanao	2026	2	5	24	76	138	138	25
Mindanao	2026	2	6	1	72	138	138	25
Mindanao	2026	2	6	2	69	138	138	25
Mindanao	2026	2	6	3	67	138	138	25
Mindanao	2026	2	6	4	67	138	138	25
Mindanao	2026	2	6	5	70	138	138	25
Mindanao	2026	2	6	6	75	138	138	25
Mindanao	2026	2	6	7	69	138	138	25
Mindanao	2026	2	6	8	77	138	138	25
Mindanao	2026	2	6	9	87	138	138	25
Mindanao	2026	2	6	10	94	138	138	25
Mindanao	2026	2	6	11	99	138	138	25
Mindanao	2026	2	6	12	96	138	138	25
Mindanao	2026	2	6	13	99	138	138	25
Mindanao	2026	2	6	14	104	138	138	25
Mindanao	2026	2	6	15	103	138	138	25
Mindanao	2026	2	6	16	102	138	138	25
Mindanao	2026	2	6	17	96	138	138	25
Mindanao	2026	2	6	18	100	138	138	25
Mindanao	2026	2	6	19	99	138	138	25
Mindanao	2026	2	6	20	96	138	138	25
Mindanao	2026	2	6	21	91	138	138	25
Mindanao	2026	2	6	22	87	138	138	25
Mindanao	2026	2	6	23	81	138	138	25
Mindanao	2026	2	6	24	75	138	138	25
Mindanao	2026	2	7	1	72	138	138	25
Mindanao	2026	2	7	2	69	138	138	25
Mindanao	2026	2	7	3	68	138	138	25
Mindanao	2026	2	7	4	65	138	138	25
Mindanao	2026	2	7	5	67	138	138	25
Mindanao	2026	2	7	6	67	138	138	25
Mindanao	2026	2	7	7	69	138	138	25
Mindanao	2026	2	7	8	72	138	138	25
Mindanao	2026	2	7	9	78	138	138	25
Mindanao	2026	2	7	10	85	138	138	25
Mindanao	2026	2	7	11	89	138	138	25
Mindanao	2026	2	7	12	86	138	138	25
Mindanao	2026	2	7	13	89	138	138	25
Mindanao	2026	2	7	14	92	138	138	25
Mindanao	2026	2	7	15	89	138	138	25
Mindanao	2026	2	7	16	87	138	138	25
Mindanao	2026	2	7	17	86	138	138	25
Mindanao	2026	2	7	18	91	138	138	25
Mindanao	2026	2	7	19	91	138	138	25
Mindanao	2026	2	7	20	91	138	138	25
Mindanao	2026	2	7	21	85	138	138	25
Mindanao	2026	2	7	22	82	138	138	25
Mindanao	2026	2	7	23	76	138	138	25
Mindanao	2026	2	7	24	72	138	138	25
Mindanao	2026	2	8	1	68	138	138	25
Mindanao	2026	2	8	2	66	138	138	25
Mindanao	2026	2	8	3	65	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	8	4	64	138	138	25
Mindanao	2026	2	8	5	63	138	138	25
Mindanao	2026	2	8	6	67	138	138	25
Mindanao	2026	2	8	7	64	138	138	25
Mindanao	2026	2	8	8	65	138	138	25
Mindanao	2026	2	8	9	69	138	138	25
Mindanao	2026	2	8	10	74	138	138	25
Mindanao	2026	2	8	11	73	138	138	25
Mindanao	2026	2	8	12	78	138	138	25
Mindanao	2026	2	8	13	80	138	138	25
Mindanao	2026	2	8	14	81	138	138	25
Mindanao	2026	2	8	15	81	138	138	25
Mindanao	2026	2	8	16	80	138	138	25
Mindanao	2026	2	8	17	80	138	138	25
Mindanao	2026	2	8	18	88	138	138	25
Mindanao	2026	2	8	19	90	138	138	25
Mindanao	2026	2	8	20	88	138	138	25
Mindanao	2026	2	8	21	86	138	138	25
Mindanao	2026	2	8	22	80	138	138	25
Mindanao	2026	2	8	23	75	138	138	25
Mindanao	2026	2	8	24	71	138	138	25
Mindanao	2026	2	9	1	67	138	138	25
Mindanao	2026	2	9	2	64	138	138	25
Mindanao	2026	2	9	3	63	138	138	25
Mindanao	2026	2	9	4	63	138	138	25
Mindanao	2026	2	9	5	64	138	138	25
Mindanao	2026	2	9	6	68	138	138	25
Mindanao	2026	2	9	7	68	138	138	25
Mindanao	2026	2	9	8	74	138	138	25
Mindanao	2026	2	9	9	86	138	138	25
Mindanao	2026	2	9	10	93	138	138	25
Mindanao	2026	2	9	11	99	138	138	25
Mindanao	2026	2	9	12	98	138	138	25
Mindanao	2026	2	9	13	100	138	138	25
Mindanao	2026	2	9	14	105	138	138	25
Mindanao	2026	2	9	15	103	138	138	25
Mindanao	2026	2	9	16	102	138	138	25
Mindanao	2026	2	9	17	94	138	138	25
Mindanao	2026	2	9	18	100	138	138	25
Mindanao	2026	2	9	19	99	138	138	25
Mindanao	2026	2	9	20	94	138	138	25
Mindanao	2026	2	9	21	90	138	138	25
Mindanao	2026	2	9	22	85	138	138	25
Mindanao	2026	2	9	23	80	138	138	25
Mindanao	2026	2	9	24	75	138	138	25
Mindanao	2026	2	10	1	71	138	138	25
Mindanao	2026	2	10	2	69	138	138	25
Mindanao	2026	2	10	3	67	138	138	25
Mindanao	2026	2	10	4	68	138	138	25
Mindanao	2026	2	10	5	69	138	138	25
Mindanao	2026	2	10	6	74	138	138	25
Mindanao	2026	2	10	7	70	138	138	25
Mindanao	2026	2	10	8	76	138	138	25
Mindanao	2026	2	10	9	87	138	138	25
Mindanao	2026	2	10	10	94	138	138	25
Mindanao	2026	2	10	11	99	138	138	25
Mindanao	2026	2	10	12	95	138	138	25
Mindanao	2026	2	10	13	97	138	138	25
Mindanao	2026	2	10	14	102	138	138	25
Mindanao	2026	2	10	15	100	138	138	25
Mindanao	2026	2	10	16	97	138	138	25
Mindanao	2026	2	10	17	93	138	138	25
Mindanao	2026	2	10	18	96	138	138	25
Mindanao	2026	2	10	19	96	138	138	25
Mindanao	2026	2	10	20	92	138	138	25
Mindanao	2026	2	10	21	88	138	138	25
Mindanao	2026	2	10	22	83	138	138	25
Mindanao	2026	2	10	23	78	138	138	25
Mindanao	2026	2	10	24	73	138	138	25
Mindanao	2026	2	11	1	70	138	138	25
Mindanao	2026	2	11	2	68	138	138	25
Mindanao	2026	2	11	3	65	138	138	25
Mindanao	2026	2	11	4	65	138	138	25
Mindanao	2026	2	11	5	66	138	138	25
Mindanao	2026	2	11	6	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	11	7	69	138	138	25
Mindanao	2026	2	11	8	76	138	138	25
Mindanao	2026	2	11	9	85	138	138	25
Mindanao	2026	2	11	10	93	138	138	25
Mindanao	2026	2	11	11	97	138	138	25
Mindanao	2026	2	11	12	95	138	138	25
Mindanao	2026	2	11	13	95	138	138	25
Mindanao	2026	2	11	14	99	138	138	25
Mindanao	2026	2	11	15	98	138	138	25
Mindanao	2026	2	11	16	95	138	138	25
Mindanao	2026	2	11	17	92	138	138	25
Mindanao	2026	2	11	18	96	138	138	25
Mindanao	2026	2	11	19	95	138	138	25
Mindanao	2026	2	11	20	92	138	138	25
Mindanao	2026	2	11	21	87	138	138	25
Mindanao	2026	2	11	22	83	138	138	25
Mindanao	2026	2	11	23	77	138	138	25
Mindanao	2026	2	11	24	69	138	138	25
Mindanao	2026	2	12	1	70	138	138	25
Mindanao	2026	2	12	2	68	138	138	25
Mindanao	2026	2	12	3	68	138	138	25
Mindanao	2026	2	12	4	66	138	138	25
Mindanao	2026	2	12	5	67	138	138	25
Mindanao	2026	2	12	6	73	138	138	25
Mindanao	2026	2	12	7	69	138	138	25
Mindanao	2026	2	12	8	76	138	138	25
Mindanao	2026	2	12	9	87	138	138	25
Mindanao	2026	2	12	10	94	138	138	25
Mindanao	2026	2	12	11	97	138	138	25
Mindanao	2026	2	12	12	96	138	138	25
Mindanao	2026	2	12	13	96	138	138	25
Mindanao	2026	2	12	14	97	138	138	25
Mindanao	2026	2	12	15	100	138	138	25
Mindanao	2026	2	12	16	97	138	138	25
Mindanao	2026	2	12	17	92	138	138	25
Mindanao	2026	2	12	18	94	138	138	25
Mindanao	2026	2	12	19	94	138	138	25
Mindanao	2026	2	12	20	92	138	138	25
Mindanao	2026	2	12	21	90	138	138	25
Mindanao	2026	2	12	22	84	138	138	25
Mindanao	2026	2	12	23	79	138	138	25
Mindanao	2026	2	12	24	72	138	138	25
Mindanao	2026	2	13	1	68	138	138	25
Mindanao	2026	2	13	2	68	138	138	25
Mindanao	2026	2	13	3	65	138	138	25
Mindanao	2026	2	13	4	64	138	138	25
Mindanao	2026	2	13	5	66	138	138	25
Mindanao	2026	2	13	6	71	138	138	25
Mindanao	2026	2	13	7	71	138	138	25
Mindanao	2026	2	13	8	77	138	138	25
Mindanao	2026	2	13	9	87	138	138	25
Mindanao	2026	2	13	10	93	138	138	25
Mindanao	2026	2	13	11	98	138	138	25
Mindanao	2026	2	13	12	95	138	138	25
Mindanao	2026	2	13	13	96	138	138	25
Mindanao	2026	2	13	14	103	138	138	25
Mindanao	2026	2	13	15	102	138	138	25
Mindanao	2026	2	13	16	100	138	138	25
Mindanao	2026	2	13	17	94	138	138	25
Mindanao	2026	2	13	18	97	138	138	25
Mindanao	2026	2	13	19	98	138	138	25
Mindanao	2026	2	13	20	95	138	138	25
Mindanao	2026	2	13	21	91	138	138	25
Mindanao	2026	2	13	22	85	138	138	25
Mindanao	2026	2	13	23	80	138	138	25
Mindanao	2026	2	13	24	74	138	138	25
Mindanao	2026	2	14	1	72	138	138	25
Mindanao	2026	2	14	2	69	138	138	25
Mindanao	2026	2	14	3	68	138	138	25
Mindanao	2026	2	14	4	67	138	138	25
Mindanao	2026	2	14	5	66	138	138	25
Mindanao	2026	2	14	6	70	138	138	25
Mindanao	2026	2	14	7	69	138	138	25
Mindanao	2026	2	14	8	70	138	138	25
Mindanao	2026	2	14	9	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	14	10	85	138	138	25
Mindanao	2026	2	14	11	90	138	138	25
Mindanao	2026	2	14	12	90	138	138	25
Mindanao	2026	2	14	13	91	138	138	25
Mindanao	2026	2	14	14	94	138	138	25
Mindanao	2026	2	14	15	95	138	138	25
Mindanao	2026	2	14	16	92	138	138	25
Mindanao	2026	2	14	17	87	138	138	25
Mindanao	2026	2	14	18	92	138	138	25
Mindanao	2026	2	14	19	95	138	138	25
Mindanao	2026	2	14	20	90	138	138	25
Mindanao	2026	2	14	21	88	138	138	25
Mindanao	2026	2	14	22	83	138	138	25
Mindanao	2026	2	14	23	78	138	138	25
Mindanao	2026	2	14	24	75	138	138	25
Mindanao	2026	2	15	1	71	138	138	25
Mindanao	2026	2	15	2	69	138	138	25
Mindanao	2026	2	15	3	67	138	138	25
Mindanao	2026	2	15	4	66	138	138	25
Mindanao	2026	2	15	5	65	138	138	25
Mindanao	2026	2	15	6	67	138	138	25
Mindanao	2026	2	15	7	67	138	138	25
Mindanao	2026	2	15	8	66	138	138	25
Mindanao	2026	2	15	9	70	138	138	25
Mindanao	2026	2	15	10	75	138	138	25
Mindanao	2026	2	15	11	78	138	138	25
Mindanao	2026	2	15	12	78	138	138	25
Mindanao	2026	2	15	13	79	138	138	25
Mindanao	2026	2	15	14	81	138	138	25
Mindanao	2026	2	15	15	80	138	138	25
Mindanao	2026	2	15	16	80	138	138	25
Mindanao	2026	2	15	17	77	138	138	25
Mindanao	2026	2	15	18	85	138	138	25
Mindanao	2026	2	15	19	92	138	138	25
Mindanao	2026	2	15	20	87	138	138	25
Mindanao	2026	2	15	21	87	138	138	25
Mindanao	2026	2	15	22	81	138	138	25
Mindanao	2026	2	15	23	75	138	138	25
Mindanao	2026	2	15	24	73	138	138	25
Mindanao	2026	2	16	1	69	138	138	25
Mindanao	2026	2	16	2	68	138	138	25
Mindanao	2026	2	16	3	65	138	138	25
Mindanao	2026	2	16	4	66	138	138	25
Mindanao	2026	2	16	5	70	138	138	25
Mindanao	2026	2	16	6	77	138	138	25
Mindanao	2026	2	16	7	69	138	138	25
Mindanao	2026	2	16	8	73	138	138	25
Mindanao	2026	2	16	9	86	138	138	25
Mindanao	2026	2	16	10	93	138	138	25
Mindanao	2026	2	16	11	95	138	138	25
Mindanao	2026	2	16	12	95	138	138	25
Mindanao	2026	2	16	13	95	138	138	25
Mindanao	2026	2	16	14	99	138	138	25
Mindanao	2026	2	16	15	98	138	138	25
Mindanao	2026	2	16	16	96	138	138	25
Mindanao	2026	2	16	17	94	138	138	25
Mindanao	2026	2	16	18	97	138	138	25
Mindanao	2026	2	16	19	96	138	138	25
Mindanao	2026	2	16	20	93	138	138	25
Mindanao	2026	2	16	21	89	138	138	25
Mindanao	2026	2	16	22	83	138	138	25
Mindanao	2026	2	16	23	78	138	138	25
Mindanao	2026	2	16	24	74	138	138	25
Mindanao	2026	2	17	1	71	138	138	25
Mindanao	2026	2	17	2	68	138	138	25
Mindanao	2026	2	17	3	67	138	138	25
Mindanao	2026	2	17	4	67	138	138	25
Mindanao	2026	2	17	5	72	138	138	25
Mindanao	2026	2	17	6	77	138	138	25
Mindanao	2026	2	17	7	72	138	138	25
Mindanao	2026	2	17	8	75	138	138	25
Mindanao	2026	2	17	9	83	138	138	25
Mindanao	2026	2	17	10	91	138	138	25
Mindanao	2026	2	17	11	93	138	138	25
Mindanao	2026	2	17	12	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	17	13	89	138	138	25
Mindanao	2026	2	17	14	91	138	138	25
Mindanao	2026	2	17	15	89	138	138	25
Mindanao	2026	2	17	16	87	138	138	25
Mindanao	2026	2	17	17	87	138	138	25
Mindanao	2026	2	17	18	91	138	138	25
Mindanao	2026	2	17	19	90	138	138	25
Mindanao	2026	2	17	20	85	138	138	25
Mindanao	2026	2	17	21	81	138	138	25
Mindanao	2026	2	17	22	75	138	138	25
Mindanao	2026	2	17	23	72	138	138	25
Mindanao	2026	2	17	24	67	138	138	25
Mindanao	2026	2	18	1	65	138	138	25
Mindanao	2026	2	18	2	63	138	138	25
Mindanao	2026	2	18	3	62	138	138	25
Mindanao	2026	2	18	4	61	138	138	25
Mindanao	2026	2	18	5	66	138	138	25
Mindanao	2026	2	18	6	71	138	138	25
Mindanao	2026	2	18	7	69	138	138	25
Mindanao	2026	2	18	8	70	138	138	25
Mindanao	2026	2	18	9	80	138	138	25
Mindanao	2026	2	18	10	88	138	138	25
Mindanao	2026	2	18	11	91	138	138	25
Mindanao	2026	2	18	12	89	138	138	25
Mindanao	2026	2	18	13	88	138	138	25
Mindanao	2026	2	18	14	93	138	138	25
Mindanao	2026	2	18	15	92	138	138	25
Mindanao	2026	2	18	16	93	138	138	25
Mindanao	2026	2	18	17	89	138	138	25
Mindanao	2026	2	18	18	96	138	138	25
Mindanao	2026	2	18	19	95	138	138	25
Mindanao	2026	2	18	20	91	138	138	25
Mindanao	2026	2	18	21	88	138	138	25
Mindanao	2026	2	18	22	82	138	138	25
Mindanao	2026	2	18	23	77	138	138	25
Mindanao	2026	2	18	24	72	138	138	25
Mindanao	2026	2	19	1	69	138	138	25
Mindanao	2026	2	19	2	67	138	138	25
Mindanao	2026	2	19	3	64	138	138	25
Mindanao	2026	2	19	4	63	138	138	25
Mindanao	2026	2	19	5	65	138	138	25
Mindanao	2026	2	19	6	71	138	138	25
Mindanao	2026	2	19	7	65	138	138	25
Mindanao	2026	2	19	8	69	138	138	25
Mindanao	2026	2	19	9	78	138	138	25
Mindanao	2026	2	19	10	82	138	138	25
Mindanao	2026	2	19	11	86	138	138	25
Mindanao	2026	2	19	12	84	138	138	25
Mindanao	2026	2	19	13	84	138	138	25
Mindanao	2026	2	19	14	87	138	138	25
Mindanao	2026	2	19	15	81	138	138	25
Mindanao	2026	2	19	16	82	138	138	25
Mindanao	2026	2	19	17	82	138	138	25
Mindanao	2026	2	19	18	86	138	138	25
Mindanao	2026	2	19	19	86	138	138	25
Mindanao	2026	2	19	20	82	138	138	25
Mindanao	2026	2	19	21	78	138	138	25
Mindanao	2026	2	19	22	72	138	138	25
Mindanao	2026	2	19	23	67	138	138	25
Mindanao	2026	2	19	24	68	138	138	25
Mindanao	2026	2	20	1	66	138	138	25
Mindanao	2026	2	20	2	63	138	138	25
Mindanao	2026	2	20	3	63	138	138	25
Mindanao	2026	2	20	4	63	138	138	25
Mindanao	2026	2	20	5	65	138	138	25
Mindanao	2026	2	20	6	73	138	138	25
Mindanao	2026	2	20	7	69	138	138	25
Mindanao	2026	2	20	8	72	138	138	25
Mindanao	2026	2	20	9	81	138	138	25
Mindanao	2026	2	20	10	86	138	138	25
Mindanao	2026	2	20	11	89	138	138	25
Mindanao	2026	2	20	12	85	138	138	25
Mindanao	2026	2	20	13	85	138	138	25
Mindanao	2026	2	20	14	88	138	138	25
Mindanao	2026	2	20	15	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	20	16	88	138	138	25
Mindanao	2026	2	20	17	88	138	138	25
Mindanao	2026	2	20	18	91	138	138	25
Mindanao	2026	2	20	19	89	138	138	25
Mindanao	2026	2	20	20	85	138	138	25
Mindanao	2026	2	20	21	80	138	138	25
Mindanao	2026	2	20	22	74	138	138	25
Mindanao	2026	2	20	23	71	138	138	25
Mindanao	2026	2	20	24	67	138	138	25
Mindanao	2026	2	21	1	64	138	138	25
Mindanao	2026	2	21	2	63	138	138	25
Mindanao	2026	2	21	3	62	138	138	25
Mindanao	2026	2	21	4	61	138	138	25
Mindanao	2026	2	21	5	61	138	138	25
Mindanao	2026	2	21	6	64	138	138	25
Mindanao	2026	2	21	7	67	138	138	25
Mindanao	2026	2	21	8	68	138	138	25
Mindanao	2026	2	21	9	74	138	138	25
Mindanao	2026	2	21	10	77	138	138	25
Mindanao	2026	2	21	11	79	138	138	25
Mindanao	2026	2	21	12	79	138	138	25
Mindanao	2026	2	21	13	79	138	138	25
Mindanao	2026	2	21	14	82	138	138	25
Mindanao	2026	2	21	15	82	138	138	25
Mindanao	2026	2	21	16	83	138	138	25
Mindanao	2026	2	21	17	81	138	138	25
Mindanao	2026	2	21	18	88	138	138	25
Mindanao	2026	2	21	19	91	138	138	25
Mindanao	2026	2	21	20	87	138	138	25
Mindanao	2026	2	21	21	83	138	138	25
Mindanao	2026	2	21	22	77	138	138	25
Mindanao	2026	2	21	23	73	138	138	25
Mindanao	2026	2	21	24	67	138	138	25
Mindanao	2026	2	22	1	65	138	138	25
Mindanao	2026	2	22	2	64	138	138	25
Mindanao	2026	2	22	3	61	138	138	25
Mindanao	2026	2	22	4	60	138	138	25
Mindanao	2026	2	22	5	62	138	138	25
Mindanao	2026	2	22	6	66	138	138	25
Mindanao	2026	2	22	7	63	138	138	25
Mindanao	2026	2	22	8	65	138	138	25
Mindanao	2026	2	22	9	68	138	138	25
Mindanao	2026	2	22	10	73	138	138	25
Mindanao	2026	2	22	11	76	138	138	25
Mindanao	2026	2	22	12	77	138	138	25
Mindanao	2026	2	22	13	79	138	138	25
Mindanao	2026	2	22	14	80	138	138	25
Mindanao	2026	2	22	15	80	138	138	25
Mindanao	2026	2	22	16	79	138	138	25
Mindanao	2026	2	22	17	78	138	138	25
Mindanao	2026	2	22	18	87	138	138	25
Mindanao	2026	2	22	19	91	138	138	25
Mindanao	2026	2	22	20	88	138	138	25
Mindanao	2026	2	22	21	84	138	138	25
Mindanao	2026	2	22	22	80	138	138	25
Mindanao	2026	2	22	23	78	138	138	25
Mindanao	2026	2	22	24	73	138	138	25
Mindanao	2026	2	23	1	69	138	138	25
Mindanao	2026	2	23	2	67	138	138	25
Mindanao	2026	2	23	3	66	138	138	25
Mindanao	2026	2	23	4	65	138	138	25
Mindanao	2026	2	23	5	70	138	138	25
Mindanao	2026	2	23	6	76	138	138	25
Mindanao	2026	2	23	7	68	138	138	25
Mindanao	2026	2	23	8	76	138	138	25
Mindanao	2026	2	23	9	88	138	138	25
Mindanao	2026	2	23	10	96	138	138	25
Mindanao	2026	2	23	11	100	138	138	25
Mindanao	2026	2	23	12	97	138	138	25
Mindanao	2026	2	23	13	98	138	138	25
Mindanao	2026	2	23	14	100	138	138	25
Mindanao	2026	2	23	15	99	138	138	25
Mindanao	2026	2	23	16	96	138	138	25
Mindanao	2026	2	23	17	93	138	138	25
Mindanao	2026	2	23	18	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	23	19	97	138	138	25
Mindanao	2026	2	23	20	94	138	138	25
Mindanao	2026	2	23	21	90	138	138	25
Mindanao	2026	2	23	22	82	138	138	25
Mindanao	2026	2	23	23	78	138	138	25
Mindanao	2026	2	23	24	73	138	138	25
Mindanao	2026	2	24	1	70	138	138	25
Mindanao	2026	2	24	2	69	138	138	25
Mindanao	2026	2	24	3	67	138	138	25
Mindanao	2026	2	24	4	66	138	138	25
Mindanao	2026	2	24	5	68	138	138	25
Mindanao	2026	2	24	6	77	138	138	25
Mindanao	2026	2	24	7	69	138	138	25
Mindanao	2026	2	24	8	75	138	138	25
Mindanao	2026	2	24	9	86	138	138	25
Mindanao	2026	2	24	10	95	138	138	25
Mindanao	2026	2	24	11	99	138	138	25
Mindanao	2026	2	24	12	96	138	138	25
Mindanao	2026	2	24	13	97	138	138	25
Mindanao	2026	2	24	14	103	138	138	25
Mindanao	2026	2	24	15	102	138	138	25
Mindanao	2026	2	24	16	99	138	138	25
Mindanao	2026	2	24	17	95	138	138	25
Mindanao	2026	2	24	18	97	138	138	25
Mindanao	2026	2	24	19	97	138	138	25
Mindanao	2026	2	24	20	89	138	138	25
Mindanao	2026	2	24	21	88	138	138	25
Mindanao	2026	2	24	22	81	138	138	25
Mindanao	2026	2	24	23	77	138	138	25
Mindanao	2026	2	24	24	73	138	138	25
Mindanao	2026	2	25	1	73	138	138	25
Mindanao	2026	2	25	2	71	138	138	25
Mindanao	2026	2	25	3	70	138	138	25
Mindanao	2026	2	25	4	68	138	138	25
Mindanao	2026	2	25	5	69	138	138	25
Mindanao	2026	2	25	6	73	138	138	25
Mindanao	2026	2	25	7	70	138	138	25
Mindanao	2026	2	25	8	75	138	138	25
Mindanao	2026	2	25	9	84	138	138	25
Mindanao	2026	2	25	10	92	138	138	25
Mindanao	2026	2	25	11	97	138	138	25
Mindanao	2026	2	25	12	96	138	138	25
Mindanao	2026	2	25	13	98	138	138	25
Mindanao	2026	2	25	14	101	138	138	25
Mindanao	2026	2	25	15	99	138	138	25
Mindanao	2026	2	25	16	96	138	138	25
Mindanao	2026	2	25	17	92	138	138	25
Mindanao	2026	2	25	18	95	138	138	25
Mindanao	2026	2	25	19	98	138	138	25
Mindanao	2026	2	25	20	95	138	138	25
Mindanao	2026	2	25	21	93	138	138	25
Mindanao	2026	2	25	22	87	138	138	25
Mindanao	2026	2	25	23	81	138	138	25
Mindanao	2026	2	25	24	78	138	138	25
Mindanao	2026	2	26	1	71	138	138	25
Mindanao	2026	2	26	2	70	138	138	25
Mindanao	2026	2	26	3	67	138	138	25
Mindanao	2026	2	26	4	66	138	138	25
Mindanao	2026	2	26	5	70	138	138	25
Mindanao	2026	2	26	6	77	138	138	25
Mindanao	2026	2	26	7	69	138	138	25
Mindanao	2026	2	26	8	76	138	138	25
Mindanao	2026	2	26	9	88	138	138	25
Mindanao	2026	2	26	10	94	138	138	25
Mindanao	2026	2	26	11	100	138	138	25
Mindanao	2026	2	26	12	96	138	138	25
Mindanao	2026	2	26	13	100	138	138	25
Mindanao	2026	2	26	14	106	138	138	25
Mindanao	2026	2	26	15	105	138	138	25
Mindanao	2026	2	26	16	103	138	138	25
Mindanao	2026	2	26	17	97	138	138	25
Mindanao	2026	2	26	18	99	138	138	25
Mindanao	2026	2	26	19	100	138	138	25
Mindanao	2026	2	26	20	96	138	138	25
Mindanao	2026	2	26	21	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	2	26	22	88	138	138	25
Mindanao	2026	2	26	23	82	138	138	25
Mindanao	2026	2	26	24	77	138	138	25
Mindanao	2026	2	27	1	70	138	138	25
Mindanao	2026	2	27	2	66	138	138	25
Mindanao	2026	2	27	3	66	138	138	25
Mindanao	2026	2	27	4	64	138	138	25
Mindanao	2026	2	27	5	68	138	138	25
Mindanao	2026	2	27	6	73	138	138	25
Mindanao	2026	2	27	7	67	138	138	25
Mindanao	2026	2	27	8	73	138	138	25
Mindanao	2026	2	27	9	83	138	138	25
Mindanao	2026	2	27	10	88	138	138	25
Mindanao	2026	2	27	11	92	138	138	25
Mindanao	2026	2	27	12	92	138	138	25
Mindanao	2026	2	27	13	94	138	138	25
Mindanao	2026	2	27	14	99	138	138	25
Mindanao	2026	2	27	15	98	138	138	25
Mindanao	2026	2	27	16	95	138	138	25
Mindanao	2026	2	27	17	91	138	138	25
Mindanao	2026	2	27	18	94	138	138	25
Mindanao	2026	2	27	19	95	138	138	25
Mindanao	2026	2	27	20	93	138	138	25
Mindanao	2026	2	27	21	89	138	138	25
Mindanao	2026	2	27	22	84	138	138	25
Mindanao	2026	2	27	23	78	138	138	25
Mindanao	2026	2	27	24	74	138	138	25
Mindanao	2026	2	28	1	73	138	138	25
Mindanao	2026	2	28	2	71	138	138	25
Mindanao	2026	2	28	3	68	138	138	25
Mindanao	2026	2	28	4	68	138	138	25
Mindanao	2026	2	28	5	69	138	138	25
Mindanao	2026	2	28	6	71	138	138	25
Mindanao	2026	2	28	7	71	138	138	25
Mindanao	2026	2	28	8	75	138	138	25
Mindanao	2026	2	28	9	77	138	138	25
Mindanao	2026	2	28	10	81	138	138	25
Mindanao	2026	2	28	11	87	138	138	25
Mindanao	2026	2	28	12	87	138	138	25
Mindanao	2026	2	28	13	89	138	138	25
Mindanao	2026	2	28	14	91	138	138	25
Mindanao	2026	2	28	15	88	138	138	25
Mindanao	2026	2	28	16	86	138	138	25
Mindanao	2026	2	28	17	86	138	138	25
Mindanao	2026	2	28	18	94	138	138	25
Mindanao	2026	2	28	19	94	138	138	25
Mindanao	2026	2	28	20	92	138	138	25
Mindanao	2026	2	28	21	87	138	138	25
Mindanao	2026	2	28	22	83	138	138	25
Mindanao	2026	2	28	23	76	138	138	25
Mindanao	2026	2	28	24	72	138	138	25
Mindanao	2026	3	1	1	70	138	138	25
Mindanao	2026	3	1	2	67	138	138	25
Mindanao	2026	3	1	3	65	138	138	25
Mindanao	2026	3	1	4	65	138	138	25
Mindanao	2026	3	1	5	64	138	138	25
Mindanao	2026	3	1	6	65	138	138	25
Mindanao	2026	3	1	7	65	138	138	25
Mindanao	2026	3	1	8	66	138	138	25
Mindanao	2026	3	1	9	68	138	138	25
Mindanao	2026	3	1	10	71	138	138	25
Mindanao	2026	3	1	11	76	138	138	25
Mindanao	2026	3	1	12	75	138	138	25
Mindanao	2026	3	1	13	77	138	138	25
Mindanao	2026	3	1	14	79	138	138	25
Mindanao	2026	3	1	15	79	138	138	25
Mindanao	2026	3	1	16	77	138	138	25
Mindanao	2026	3	1	17	77	138	138	25
Mindanao	2026	3	1	18	86	138	138	25
Mindanao	2026	3	1	19	90	138	138	25
Mindanao	2026	3	1	20	86	138	138	25
Mindanao	2026	3	1	21	84	138	138	25
Mindanao	2026	3	1	22	80	138	138	25
Mindanao	2026	3	1	23	75	138	138	25
Mindanao	2026	3	1	24	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	2	1	68	138	138	25
Mindanao	2026	3	2	2	65	138	138	25
Mindanao	2026	3	2	3	63	138	138	25
Mindanao	2026	3	2	4	63	138	138	25
Mindanao	2026	3	2	5	68	138	138	25
Mindanao	2026	3	2	6	73	138	138	25
Mindanao	2026	3	2	7	67	138	138	25
Mindanao	2026	3	2	8	74	138	138	25
Mindanao	2026	3	2	9	86	138	138	25
Mindanao	2026	3	2	10	91	138	138	25
Mindanao	2026	3	2	11	95	138	138	25
Mindanao	2026	3	2	12	95	138	138	25
Mindanao	2026	3	2	13	95	138	138	25
Mindanao	2026	3	2	14	99	138	138	25
Mindanao	2026	3	2	15	99	138	138	25
Mindanao	2026	3	2	16	98	138	138	25
Mindanao	2026	3	2	17	93	138	138	25
Mindanao	2026	3	2	18	97	138	138	25
Mindanao	2026	3	2	19	98	138	138	25
Mindanao	2026	3	2	20	95	138	138	25
Mindanao	2026	3	2	21	91	138	138	25
Mindanao	2026	3	2	22	85	138	138	25
Mindanao	2026	3	2	23	80	138	138	25
Mindanao	2026	3	2	24	75	138	138	25
Mindanao	2026	3	3	1	70	138	138	25
Mindanao	2026	3	3	2	67	138	138	25
Mindanao	2026	3	3	3	68	138	138	25
Mindanao	2026	3	3	4	66	138	138	25
Mindanao	2026	3	3	5	70	138	138	25
Mindanao	2026	3	3	6	75	138	138	25
Mindanao	2026	3	3	7	70	138	138	25
Mindanao	2026	3	3	8	75	138	138	25
Mindanao	2026	3	3	9	84	138	138	25
Mindanao	2026	3	3	10	95	138	138	25
Mindanao	2026	3	3	11	98	138	138	25
Mindanao	2026	3	3	12	94	138	138	25
Mindanao	2026	3	3	13	98	138	138	25
Mindanao	2026	3	3	14	103	138	138	25
Mindanao	2026	3	3	15	100	138	138	25
Mindanao	2026	3	3	16	100	138	138	25
Mindanao	2026	3	3	17	95	138	138	25
Mindanao	2026	3	3	18	97	138	138	25
Mindanao	2026	3	3	19	98	138	138	25
Mindanao	2026	3	3	20	95	138	138	25
Mindanao	2026	3	3	21	92	138	138	25
Mindanao	2026	3	3	22	85	138	138	25
Mindanao	2026	3	3	23	81	138	138	25
Mindanao	2026	3	3	24	75	138	138	25
Mindanao	2026	3	4	1	72	138	138	25
Mindanao	2026	3	4	2	69	138	138	25
Mindanao	2026	3	4	3	67	138	138	25
Mindanao	2026	3	4	4	68	138	138	25
Mindanao	2026	3	4	5	72	138	138	25
Mindanao	2026	3	4	6	77	138	138	25
Mindanao	2026	3	4	7	68	138	138	25
Mindanao	2026	3	4	8	76	138	138	25
Mindanao	2026	3	4	9	90	138	138	25
Mindanao	2026	3	4	10	97	138	138	25
Mindanao	2026	3	4	11	98	138	138	25
Mindanao	2026	3	4	12	99	138	138	25
Mindanao	2026	3	4	13	101	138	138	25
Mindanao	2026	3	4	14	105	138	138	25
Mindanao	2026	3	4	15	103	138	138	25
Mindanao	2026	3	4	16	100	138	138	25
Mindanao	2026	3	4	17	95	138	138	25
Mindanao	2026	3	4	18	99	138	138	25
Mindanao	2026	3	4	19	99	138	138	25
Mindanao	2026	3	4	20	96	138	138	25
Mindanao	2026	3	4	21	92	138	138	25
Mindanao	2026	3	4	22	87	138	138	25
Mindanao	2026	3	4	23	81	138	138	25
Mindanao	2026	3	4	24	76	138	138	25
Mindanao	2026	3	5	1	73	138	138	25
Mindanao	2026	3	5	2	70	138	138	25
Mindanao	2026	3	5	3	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	5	4	69	138	138	25
Mindanao	2026	3	5	5	71	138	138	25
Mindanao	2026	3	5	6	78	138	138	25
Mindanao	2026	3	5	7	69	138	138	25
Mindanao	2026	3	5	8	75	138	138	25
Mindanao	2026	3	5	9	87	138	138	25
Mindanao	2026	3	5	10	91	138	138	25
Mindanao	2026	3	5	11	93	138	138	25
Mindanao	2026	3	5	12	92	138	138	25
Mindanao	2026	3	5	13	93	138	138	25
Mindanao	2026	3	5	14	98	138	138	25
Mindanao	2026	3	5	15	97	138	138	25
Mindanao	2026	3	5	16	95	138	138	25
Mindanao	2026	3	5	17	91	138	138	25
Mindanao	2026	3	5	18	95	138	138	25
Mindanao	2026	3	5	19	95	138	138	25
Mindanao	2026	3	5	20	91	138	138	25
Mindanao	2026	3	5	21	90	138	138	25
Mindanao	2026	3	5	22	83	138	138	25
Mindanao	2026	3	5	23	77	138	138	25
Mindanao	2026	3	5	24	72	138	138	25
Mindanao	2026	3	6	1	70	138	138	25
Mindanao	2026	3	6	2	66	138	138	25
Mindanao	2026	3	6	3	66	138	138	25
Mindanao	2026	3	6	4	64	138	138	25
Mindanao	2026	3	6	5	68	138	138	25
Mindanao	2026	3	6	6	73	138	138	25
Mindanao	2026	3	6	7	67	138	138	25
Mindanao	2026	3	6	8	73	138	138	25
Mindanao	2026	3	6	9	83	138	138	25
Mindanao	2026	3	6	10	88	138	138	25
Mindanao	2026	3	6	11	92	138	138	25
Mindanao	2026	3	6	12	92	138	138	25
Mindanao	2026	3	6	13	94	138	138	25
Mindanao	2026	3	6	14	99	138	138	25
Mindanao	2026	3	6	15	98	138	138	25
Mindanao	2026	3	6	16	95	138	138	25
Mindanao	2026	3	6	17	91	138	138	25
Mindanao	2026	3	6	18	94	138	138	25
Mindanao	2026	3	6	19	95	138	138	25
Mindanao	2026	3	6	20	93	138	138	25
Mindanao	2026	3	6	21	89	138	138	25
Mindanao	2026	3	6	22	84	138	138	25
Mindanao	2026	3	6	23	78	138	138	25
Mindanao	2026	3	6	24	74	138	138	25
Mindanao	2026	3	7	1	69	138	138	25
Mindanao	2026	3	7	2	67	138	138	25
Mindanao	2026	3	7	3	66	138	138	25
Mindanao	2026	3	7	4	65	138	138	25
Mindanao	2026	3	7	5	66	138	138	25
Mindanao	2026	3	7	6	69	138	138	25
Mindanao	2026	3	7	7	67	138	138	25
Mindanao	2026	3	7	8	70	138	138	25
Mindanao	2026	3	7	9	74	138	138	25
Mindanao	2026	3	7	10	79	138	138	25
Mindanao	2026	3	7	11	82	138	138	25
Mindanao	2026	3	7	12	82	138	138	25
Mindanao	2026	3	7	13	85	138	138	25
Mindanao	2026	3	7	14	88	138	138	25
Mindanao	2026	3	7	15	88	138	138	25
Mindanao	2026	3	7	16	86	138	138	25
Mindanao	2026	3	7	17	83	138	138	25
Mindanao	2026	3	7	18	89	138	138	25
Mindanao	2026	3	7	19	93	138	138	25
Mindanao	2026	3	7	20	90	138	138	25
Mindanao	2026	3	7	21	86	138	138	25
Mindanao	2026	3	7	22	81	138	138	25
Mindanao	2026	3	7	23	75	138	138	25
Mindanao	2026	3	7	24	71	138	138	25
Mindanao	2026	3	8	1	68	138	138	25
Mindanao	2026	3	8	2	65	138	138	25
Mindanao	2026	3	8	3	63	138	138	25
Mindanao	2026	3	8	4	62	138	138	25
Mindanao	2026	3	8	5	62	138	138	25
Mindanao	2026	3	8	6	64	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	8	7	65	138	138	25
Mindanao	2026	3	8	8	64	138	138	25
Mindanao	2026	3	8	9	66	138	138	25
Mindanao	2026	3	8	10	73	138	138	25
Mindanao	2026	3	8	11	76	138	138	25
Mindanao	2026	3	8	12	77	138	138	25
Mindanao	2026	3	8	13	79	138	138	25
Mindanao	2026	3	8	14	80	138	138	25
Mindanao	2026	3	8	15	81	138	138	25
Mindanao	2026	3	8	16	80	138	138	25
Mindanao	2026	3	8	17	78	138	138	25
Mindanao	2026	3	8	18	89	138	138	25
Mindanao	2026	3	8	19	91	138	138	25
Mindanao	2026	3	8	20	89	138	138	25
Mindanao	2026	3	8	21	87	138	138	25
Mindanao	2026	3	8	22	82	138	138	25
Mindanao	2026	3	8	23	77	138	138	25
Mindanao	2026	3	8	24	72	138	138	25
Mindanao	2026	3	9	1	68	138	138	25
Mindanao	2026	3	9	2	66	138	138	25
Mindanao	2026	3	9	3	65	138	138	25
Mindanao	2026	3	9	4	64	138	138	25
Mindanao	2026	3	9	5	68	138	138	25
Mindanao	2026	3	9	6	73	138	138	25
Mindanao	2026	3	9	7	67	138	138	25
Mindanao	2026	3	9	8	74	138	138	25
Mindanao	2026	3	9	9	85	138	138	25
Mindanao	2026	3	9	10	92	138	138	25
Mindanao	2026	3	9	11	97	138	138	25
Mindanao	2026	3	9	12	95	138	138	25
Mindanao	2026	3	9	13	99	138	138	25
Mindanao	2026	3	9	14	103	138	138	25
Mindanao	2026	3	9	15	103	138	138	25
Mindanao	2026	3	9	16	101	138	138	25
Mindanao	2026	3	9	17	95	138	138	25
Mindanao	2026	3	9	18	98	138	138	25
Mindanao	2026	3	9	19	100	138	138	25
Mindanao	2026	3	9	20	96	138	138	25
Mindanao	2026	3	9	21	93	138	138	25
Mindanao	2026	3	9	22	86	138	138	25
Mindanao	2026	3	9	23	81	138	138	25
Mindanao	2026	3	9	24	75	138	138	25
Mindanao	2026	3	10	1	74	138	138	25
Mindanao	2026	3	10	2	71	138	138	25
Mindanao	2026	3	10	3	69	138	138	25
Mindanao	2026	3	10	4	69	138	138	25
Mindanao	2026	3	10	5	72	138	138	25
Mindanao	2026	3	10	6	78	138	138	25
Mindanao	2026	3	10	7	72	138	138	25
Mindanao	2026	3	10	8	79	138	138	25
Mindanao	2026	3	10	9	87	138	138	25
Mindanao	2026	3	10	10	93	138	138	25
Mindanao	2026	3	10	11	97	138	138	25
Mindanao	2026	3	10	12	94	138	138	25
Mindanao	2026	3	10	13	94	138	138	25
Mindanao	2026	3	10	14	99	138	138	25
Mindanao	2026	3	10	15	95	138	138	25
Mindanao	2026	3	10	16	95	138	138	25
Mindanao	2026	3	10	17	89	138	138	25
Mindanao	2026	3	10	18	94	138	138	25
Mindanao	2026	3	10	19	95	138	138	25
Mindanao	2026	3	10	20	93	138	138	25
Mindanao	2026	3	10	21	89	138	138	25
Mindanao	2026	3	10	22	82	138	138	25
Mindanao	2026	3	10	23	78	138	138	25
Mindanao	2026	3	10	24	72	138	138	25
Mindanao	2026	3	11	1	69	138	138	25
Mindanao	2026	3	11	2	67	138	138	25
Mindanao	2026	3	11	3	67	138	138	25
Mindanao	2026	3	11	4	67	138	138	25
Mindanao	2026	3	11	5	70	138	138	25
Mindanao	2026	3	11	6	77	138	138	25
Mindanao	2026	3	11	7	70	138	138	25
Mindanao	2026	3	11	8	77	138	138	25
Mindanao	2026	3	11	9	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	11	10	96	138	138	25
Mindanao	2026	3	11	11	100	138	138	25
Mindanao	2026	3	11	12	98	138	138	25
Mindanao	2026	3	11	13	101	138	138	25
Mindanao	2026	3	11	14	106	138	138	25
Mindanao	2026	3	11	15	106	138	138	25
Mindanao	2026	3	11	16	104	138	138	25
Mindanao	2026	3	11	17	97	138	138	25
Mindanao	2026	3	11	18	100	138	138	25
Mindanao	2026	3	11	19	102	138	138	25
Mindanao	2026	3	11	20	98	138	138	25
Mindanao	2026	3	11	21	94	138	138	25
Mindanao	2026	3	11	22	89	138	138	25
Mindanao	2026	3	11	23	83	138	138	25
Mindanao	2026	3	11	24	78	138	138	25
Mindanao	2026	3	12	1	75	138	138	25
Mindanao	2026	3	12	2	71	138	138	25
Mindanao	2026	3	12	3	70	138	138	25
Mindanao	2026	3	12	4	70	138	138	25
Mindanao	2026	3	12	5	75	138	138	25
Mindanao	2026	3	12	6	78	138	138	25
Mindanao	2026	3	12	7	71	138	138	25
Mindanao	2026	3	12	8	81	138	138	25
Mindanao	2026	3	12	9	91	138	138	25
Mindanao	2026	3	12	10	97	138	138	25
Mindanao	2026	3	12	11	102	138	138	25
Mindanao	2026	3	12	12	101	138	138	25
Mindanao	2026	3	12	13	102	138	138	25
Mindanao	2026	3	12	14	109	138	138	25
Mindanao	2026	3	12	15	107	138	138	25
Mindanao	2026	3	12	16	104	138	138	25
Mindanao	2026	3	12	17	98	138	138	25
Mindanao	2026	3	12	18	100	138	138	25
Mindanao	2026	3	12	19	102	138	138	25
Mindanao	2026	3	12	20	99	138	138	25
Mindanao	2026	3	12	21	95	138	138	25
Mindanao	2026	3	12	22	88	138	138	25
Mindanao	2026	3	12	23	84	138	138	25
Mindanao	2026	3	12	24	79	138	138	25
Mindanao	2026	3	13	1	75	138	138	25
Mindanao	2026	3	13	2	73	138	138	25
Mindanao	2026	3	13	3	70	138	138	25
Mindanao	2026	3	13	4	69	138	138	25
Mindanao	2026	3	13	5	72	138	138	25
Mindanao	2026	3	13	6	78	138	138	25
Mindanao	2026	3	13	7	73	138	138	25
Mindanao	2026	3	13	8	81	138	138	25
Mindanao	2026	3	13	9	92	138	138	25
Mindanao	2026	3	13	10	98	138	138	25
Mindanao	2026	3	13	11	100	138	138	25
Mindanao	2026	3	13	12	99	138	138	25
Mindanao	2026	3	13	13	101	138	138	25
Mindanao	2026	3	13	14	104	138	138	25
Mindanao	2026	3	13	15	103	138	138	25
Mindanao	2026	3	13	16	102	138	138	25
Mindanao	2026	3	13	17	96	138	138	25
Mindanao	2026	3	13	18	98	138	138	25
Mindanao	2026	3	13	19	101	138	138	25
Mindanao	2026	3	13	20	97	138	138	25
Mindanao	2026	3	13	21	93	138	138	25
Mindanao	2026	3	13	22	88	138	138	25
Mindanao	2026	3	13	23	82	138	138	25
Mindanao	2026	3	13	24	77	138	138	25
Mindanao	2026	3	14	1	73	138	138	25
Mindanao	2026	3	14	2	72	138	138	25
Mindanao	2026	3	14	3	68	138	138	25
Mindanao	2026	3	14	4	66	138	138	25
Mindanao	2026	3	14	5	69	138	138	25
Mindanao	2026	3	14	6	71	138	138	25
Mindanao	2026	3	14	7	70	138	138	25
Mindanao	2026	3	14	8	75	138	138	25
Mindanao	2026	3	14	9	81	138	138	25
Mindanao	2026	3	14	10	89	138	138	25
Mindanao	2026	3	14	11	93	138	138	25
Mindanao	2026	3	14	12	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	14	13	93	138	138	25
Mindanao	2026	3	14	14	97	138	138	25
Mindanao	2026	3	14	15	97	138	138	25
Mindanao	2026	3	14	16	96	138	138	25
Mindanao	2026	3	14	17	90	138	138	25
Mindanao	2026	3	14	18	95	138	138	25
Mindanao	2026	3	14	19	97	138	138	25
Mindanao	2026	3	14	20	94	138	138	25
Mindanao	2026	3	14	21	93	138	138	25
Mindanao	2026	3	14	22	87	138	138	25
Mindanao	2026	3	14	23	82	138	138	25
Mindanao	2026	3	14	24	76	138	138	25
Mindanao	2026	3	15	1	72	138	138	25
Mindanao	2026	3	15	2	70	138	138	25
Mindanao	2026	3	15	3	69	138	138	25
Mindanao	2026	3	15	4	68	138	138	25
Mindanao	2026	3	15	5	68	138	138	25
Mindanao	2026	3	15	6	70	138	138	25
Mindanao	2026	3	15	7	68	138	138	25
Mindanao	2026	3	15	8	71	138	138	25
Mindanao	2026	3	15	9	72	138	138	25
Mindanao	2026	3	15	10	77	138	138	25
Mindanao	2026	3	15	11	80	138	138	25
Mindanao	2026	3	15	12	80	138	138	25
Mindanao	2026	3	15	13	82	138	138	25
Mindanao	2026	3	15	14	84	138	138	25
Mindanao	2026	3	15	15	83	138	138	25
Mindanao	2026	3	15	16	79	138	138	25
Mindanao	2026	3	15	17	80	138	138	25
Mindanao	2026	3	15	18	90	138	138	25
Mindanao	2026	3	15	19	93	138	138	25
Mindanao	2026	3	15	20	91	138	138	25
Mindanao	2026	3	15	21	89	138	138	25
Mindanao	2026	3	15	22	83	138	138	25
Mindanao	2026	3	15	23	78	138	138	25
Mindanao	2026	3	15	24	75	138	138	25
Mindanao	2026	3	16	1	71	138	138	25
Mindanao	2026	3	16	2	69	138	138	25
Mindanao	2026	3	16	3	65	138	138	25
Mindanao	2026	3	16	4	66	138	138	25
Mindanao	2026	3	16	5	70	138	138	25
Mindanao	2026	3	16	6	77	138	138	25
Mindanao	2026	3	16	7	68	138	138	25
Mindanao	2026	3	16	8	77	138	138	25
Mindanao	2026	3	16	9	88	138	138	25
Mindanao	2026	3	16	10	97	138	138	25
Mindanao	2026	3	16	11	100	138	138	25
Mindanao	2026	3	16	12	99	138	138	25
Mindanao	2026	3	16	13	99	138	138	25
Mindanao	2026	3	16	14	104	138	138	25
Mindanao	2026	3	16	15	102	138	138	25
Mindanao	2026	3	16	16	99	138	138	25
Mindanao	2026	3	16	17	96	138	138	25
Mindanao	2026	3	16	18	97	138	138	25
Mindanao	2026	3	16	19	97	138	138	25
Mindanao	2026	3	16	20	91	138	138	25
Mindanao	2026	3	16	21	87	138	138	25
Mindanao	2026	3	16	22	81	138	138	25
Mindanao	2026	3	16	23	76	138	138	25
Mindanao	2026	3	16	24	73	138	138	25
Mindanao	2026	3	17	1	69	138	138	25
Mindanao	2026	3	17	2	67	138	138	25
Mindanao	2026	3	17	3	67	138	138	25
Mindanao	2026	3	17	4	66	138	138	25
Mindanao	2026	3	17	5	71	138	138	25
Mindanao	2026	3	17	6	74	138	138	25
Mindanao	2026	3	17	7	72	138	138	25
Mindanao	2026	3	17	8	77	138	138	25
Mindanao	2026	3	17	9	85	138	138	25
Mindanao	2026	3	17	10	90	138	138	25
Mindanao	2026	3	17	11	92	138	138	25
Mindanao	2026	3	17	12	90	138	138	25
Mindanao	2026	3	17	13	91	138	138	25
Mindanao	2026	3	17	14	95	138	138	25
Mindanao	2026	3	17	15	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	17	16	95	138	138	25
Mindanao	2026	3	17	17	90	138	138	25
Mindanao	2026	3	17	18	95	138	138	25
Mindanao	2026	3	17	19	96	138	138	25
Mindanao	2026	3	17	20	93	138	138	25
Mindanao	2026	3	17	21	88	138	138	25
Mindanao	2026	3	17	22	81	138	138	25
Mindanao	2026	3	17	23	77	138	138	25
Mindanao	2026	3	17	24	73	138	138	25
Mindanao	2026	3	18	1	69	138	138	25
Mindanao	2026	3	18	2	67	138	138	25
Mindanao	2026	3	18	3	64	138	138	25
Mindanao	2026	3	18	4	64	138	138	25
Mindanao	2026	3	18	5	70	138	138	25
Mindanao	2026	3	18	6	76	138	138	25
Mindanao	2026	3	18	7	68	138	138	25
Mindanao	2026	3	18	8	74	138	138	25
Mindanao	2026	3	18	9	87	138	138	25
Mindanao	2026	3	18	10	94	138	138	25
Mindanao	2026	3	18	11	98	138	138	25
Mindanao	2026	3	18	12	96	138	138	25
Mindanao	2026	3	18	13	98	138	138	25
Mindanao	2026	3	18	14	103	138	138	25
Mindanao	2026	3	18	15	102	138	138	25
Mindanao	2026	3	18	16	98	138	138	25
Mindanao	2026	3	18	17	92	138	138	25
Mindanao	2026	3	18	18	96	138	138	25
Mindanao	2026	3	18	19	96	138	138	25
Mindanao	2026	3	18	20	93	138	138	25
Mindanao	2026	3	18	21	91	138	138	25
Mindanao	2026	3	18	22	86	138	138	25
Mindanao	2026	3	18	23	79	138	138	25
Mindanao	2026	3	18	24	73	138	138	25
Mindanao	2026	3	19	1	69	138	138	25
Mindanao	2026	3	19	2	66	138	138	25
Mindanao	2026	3	19	3	64	138	138	25
Mindanao	2026	3	19	4	64	138	138	25
Mindanao	2026	3	19	5	69	138	138	25
Mindanao	2026	3	19	6	73	138	138	25
Mindanao	2026	3	19	7	66	138	138	25
Mindanao	2026	3	19	8	75	138	138	25
Mindanao	2026	3	19	9	86	138	138	25
Mindanao	2026	3	19	10	92	138	138	25
Mindanao	2026	3	19	11	96	138	138	25
Mindanao	2026	3	19	12	95	138	138	25
Mindanao	2026	3	19	13	97	138	138	25
Mindanao	2026	3	19	14	101	138	138	25
Mindanao	2026	3	19	15	98	138	138	25
Mindanao	2026	3	19	16	94	138	138	25
Mindanao	2026	3	19	17	88	138	138	25
Mindanao	2026	3	19	18	87	138	138	25
Mindanao	2026	3	19	19	90	138	138	25
Mindanao	2026	3	19	20	89	138	138	25
Mindanao	2026	3	19	21	85	138	138	25
Mindanao	2026	3	19	22	79	138	138	25
Mindanao	2026	3	19	23	75	138	138	25
Mindanao	2026	3	19	24	71	138	138	25
Mindanao	2026	3	20	1	68	138	138	25
Mindanao	2026	3	20	2	64	138	138	25
Mindanao	2026	3	20	3	62	138	138	25
Mindanao	2026	3	20	4	62	138	138	25
Mindanao	2026	3	20	5	65	138	138	25
Mindanao	2026	3	20	6	71	138	138	25
Mindanao	2026	3	20	7	63	138	138	25
Mindanao	2026	3	20	8	73	138	138	25
Mindanao	2026	3	20	9	84	138	138	25
Mindanao	2026	3	20	10	90	138	138	25
Mindanao	2026	3	20	11	94	138	138	25
Mindanao	2026	3	20	12	92	138	138	25
Mindanao	2026	3	20	13	93	138	138	25
Mindanao	2026	3	20	14	98	138	138	25
Mindanao	2026	3	20	15	96	138	138	25
Mindanao	2026	3	20	16	96	138	138	25
Mindanao	2026	3	20	17	88	138	138	25
Mindanao	2026	3	20	18	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	20	19	93	138	138	25
Mindanao	2026	3	20	20	88	138	138	25
Mindanao	2026	3	20	21	83	138	138	25
Mindanao	2026	3	20	22	80	138	138	25
Mindanao	2026	3	20	23	76	138	138	25
Mindanao	2026	3	20	24	71	138	138	25
Mindanao	2026	3	21	1	69	138	138	25
Mindanao	2026	3	21	2	66	138	138	25
Mindanao	2026	3	21	3	64	138	138	25
Mindanao	2026	3	21	4	62	138	138	25
Mindanao	2026	3	21	5	65	138	138	25
Mindanao	2026	3	21	6	66	138	138	25
Mindanao	2026	3	21	7	65	138	138	25
Mindanao	2026	3	21	8	68	138	138	25
Mindanao	2026	3	21	9	76	138	138	25
Mindanao	2026	3	21	10	81	138	138	25
Mindanao	2026	3	21	11	86	138	138	25
Mindanao	2026	3	21	12	84	138	138	25
Mindanao	2026	3	21	13	86	138	138	25
Mindanao	2026	3	21	14	88	138	138	25
Mindanao	2026	3	21	15	85	138	138	25
Mindanao	2026	3	21	16	82	138	138	25
Mindanao	2026	3	21	17	80	138	138	25
Mindanao	2026	3	21	18	86	138	138	25
Mindanao	2026	3	21	19	86	138	138	25
Mindanao	2026	3	21	20	82	138	138	25
Mindanao	2026	3	21	21	81	138	138	25
Mindanao	2026	3	21	22	76	138	138	25
Mindanao	2026	3	21	23	71	138	138	25
Mindanao	2026	3	21	24	66	138	138	25
Mindanao	2026	3	22	1	63	138	138	25
Mindanao	2026	3	22	2	61	138	138	25
Mindanao	2026	3	22	3	59	138	138	25
Mindanao	2026	3	22	4	59	138	138	25
Mindanao	2026	3	22	5	61	138	138	25
Mindanao	2026	3	22	6	63	138	138	25
Mindanao	2026	3	22	7	60	138	138	25
Mindanao	2026	3	22	8	62	138	138	25
Mindanao	2026	3	22	9	67	138	138	25
Mindanao	2026	3	22	10	69	138	138	25
Mindanao	2026	3	22	11	74	138	138	25
Mindanao	2026	3	22	12	77	138	138	25
Mindanao	2026	3	22	13	78	138	138	25
Mindanao	2026	3	22	14	81	138	138	25
Mindanao	2026	3	22	15	80	138	138	25
Mindanao	2026	3	22	16	79	138	138	25
Mindanao	2026	3	22	17	78	138	138	25
Mindanao	2026	3	22	18	85	138	138	25
Mindanao	2026	3	22	19	88	138	138	25
Mindanao	2026	3	22	20	86	138	138	25
Mindanao	2026	3	22	21	82	138	138	25
Mindanao	2026	3	22	22	79	138	138	25
Mindanao	2026	3	22	23	74	138	138	25
Mindanao	2026	3	22	24	68	138	138	25
Mindanao	2026	3	23	1	64	138	138	25
Mindanao	2026	3	23	2	63	138	138	25
Mindanao	2026	3	23	3	61	138	138	25
Mindanao	2026	3	23	4	62	138	138	25
Mindanao	2026	3	23	5	64	138	138	25
Mindanao	2026	3	23	6	69	138	138	25
Mindanao	2026	3	23	7	64	138	138	25
Mindanao	2026	3	23	8	72	138	138	25
Mindanao	2026	3	23	9	84	138	138	25
Mindanao	2026	3	23	10	94	138	138	25
Mindanao	2026	3	23	11	95	138	138	25
Mindanao	2026	3	23	12	93	138	138	25
Mindanao	2026	3	23	13	96	138	138	25
Mindanao	2026	3	23	14	100	138	138	25
Mindanao	2026	3	23	15	100	138	138	25
Mindanao	2026	3	23	16	98	138	138	25
Mindanao	2026	3	23	17	92	138	138	25
Mindanao	2026	3	23	18	94	138	138	25
Mindanao	2026	3	23	19	97	138	138	25
Mindanao	2026	3	23	20	94	138	138	25
Mindanao	2026	3	23	21	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	23	22	85	138	138	25
Mindanao	2026	3	23	23	80	138	138	25
Mindanao	2026	3	23	24	74	138	138	25
Mindanao	2026	3	24	1	71	138	138	25
Mindanao	2026	3	24	2	70	138	138	25
Mindanao	2026	3	24	3	65	138	138	25
Mindanao	2026	3	24	4	65	138	138	25
Mindanao	2026	3	24	5	68	138	138	25
Mindanao	2026	3	24	6	74	138	138	25
Mindanao	2026	3	24	7	66	138	138	25
Mindanao	2026	3	24	8	77	138	138	25
Mindanao	2026	3	24	9	88	138	138	25
Mindanao	2026	3	24	10	94	138	138	25
Mindanao	2026	3	24	11	98	138	138	25
Mindanao	2026	3	24	12	96	138	138	25
Mindanao	2026	3	24	13	99	138	138	25
Mindanao	2026	3	24	14	103	138	138	25
Mindanao	2026	3	24	15	102	138	138	25
Mindanao	2026	3	24	16	101	138	138	25
Mindanao	2026	3	24	17	93	138	138	25
Mindanao	2026	3	24	18	96	138	138	25
Mindanao	2026	3	24	19	96	138	138	25
Mindanao	2026	3	24	20	96	138	138	25
Mindanao	2026	3	24	21	91	138	138	25
Mindanao	2026	3	24	22	85	138	138	25
Mindanao	2026	3	24	23	79	138	138	25
Mindanao	2026	3	24	24	76	138	138	25
Mindanao	2026	3	25	1	71	138	138	25
Mindanao	2026	3	25	2	69	138	138	25
Mindanao	2026	3	25	3	66	138	138	25
Mindanao	2026	3	25	4	66	138	138	25
Mindanao	2026	3	25	5	69	138	138	25
Mindanao	2026	3	25	6	72	138	138	25
Mindanao	2026	3	25	7	66	138	138	25
Mindanao	2026	3	25	8	75	138	138	25
Mindanao	2026	3	25	9	87	138	138	25
Mindanao	2026	3	25	10	93	138	138	25
Mindanao	2026	3	25	11	96	138	138	25
Mindanao	2026	3	25	12	97	138	138	25
Mindanao	2026	3	25	13	98	138	138	25
Mindanao	2026	3	25	14	103	138	138	25
Mindanao	2026	3	25	15	102	138	138	25
Mindanao	2026	3	25	16	98	138	138	25
Mindanao	2026	3	25	17	91	138	138	25
Mindanao	2026	3	25	18	93	138	138	25
Mindanao	2026	3	25	19	95	138	138	25
Mindanao	2026	3	25	20	93	138	138	25
Mindanao	2026	3	25	21	91	138	138	25
Mindanao	2026	3	25	22	85	138	138	25
Mindanao	2026	3	25	23	78	138	138	25
Mindanao	2026	3	25	24	75	138	138	25
Mindanao	2026	3	26	1	71	138	138	25
Mindanao	2026	3	26	2	70	138	138	25
Mindanao	2026	3	26	3	69	138	138	25
Mindanao	2026	3	26	4	66	138	138	25
Mindanao	2026	3	26	5	68	138	138	25
Mindanao	2026	3	26	6	72	138	138	25
Mindanao	2026	3	26	7	65	138	138	25
Mindanao	2026	3	26	8	74	138	138	25
Mindanao	2026	3	26	9	87	138	138	25
Mindanao	2026	3	26	10	95	138	138	25
Mindanao	2026	3	26	11	97	138	138	25
Mindanao	2026	3	26	12	97	138	138	25
Mindanao	2026	3	26	13	99	138	138	25
Mindanao	2026	3	26	14	104	138	138	25
Mindanao	2026	3	26	15	102	138	138	25
Mindanao	2026	3	26	16	101	138	138	25
Mindanao	2026	3	26	17	94	138	138	25
Mindanao	2026	3	26	18	96	138	138	25
Mindanao	2026	3	26	19	96	138	138	25
Mindanao	2026	3	26	20	94	138	138	25
Mindanao	2026	3	26	21	93	138	138	25
Mindanao	2026	3	26	22	87	138	138	25
Mindanao	2026	3	26	23	81	138	138	25
Mindanao	2026	3	26	24	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	27	1	72	138	138	25
Mindanao	2026	3	27	2	70	138	138	25
Mindanao	2026	3	27	3	70	138	138	25
Mindanao	2026	3	27	4	67	138	138	25
Mindanao	2026	3	27	5	70	138	138	25
Mindanao	2026	3	27	6	73	138	138	25
Mindanao	2026	3	27	7	68	138	138	25
Mindanao	2026	3	27	8	76	138	138	25
Mindanao	2026	3	27	9	87	138	138	25
Mindanao	2026	3	27	10	94	138	138	25
Mindanao	2026	3	27	11	97	138	138	25
Mindanao	2026	3	27	12	99	138	138	25
Mindanao	2026	3	27	13	101	138	138	25
Mindanao	2026	3	27	14	106	138	138	25
Mindanao	2026	3	27	15	105	138	138	25
Mindanao	2026	3	27	16	101	138	138	25
Mindanao	2026	3	27	17	95	138	138	25
Mindanao	2026	3	27	18	95	138	138	25
Mindanao	2026	3	27	19	95	138	138	25
Mindanao	2026	3	27	20	91	138	138	25
Mindanao	2026	3	27	21	90	138	138	25
Mindanao	2026	3	27	22	84	138	138	25
Mindanao	2026	3	27	23	77	138	138	25
Mindanao	2026	3	27	24	76	138	138	25
Mindanao	2026	3	28	1	70	138	138	25
Mindanao	2026	3	28	2	70	138	138	25
Mindanao	2026	3	28	3	69	138	138	25
Mindanao	2026	3	28	4	66	138	138	25
Mindanao	2026	3	28	5	68	138	138	25
Mindanao	2026	3	28	6	69	138	138	25
Mindanao	2026	3	28	7	64	138	138	25
Mindanao	2026	3	28	8	70	138	138	25
Mindanao	2026	3	28	9	78	138	138	25
Mindanao	2026	3	28	10	84	138	138	25
Mindanao	2026	3	28	11	87	138	138	25
Mindanao	2026	3	28	12	87	138	138	25
Mindanao	2026	3	28	13	90	138	138	25
Mindanao	2026	3	28	14	95	138	138	25
Mindanao	2026	3	28	15	95	138	138	25
Mindanao	2026	3	28	16	93	138	138	25
Mindanao	2026	3	28	17	89	138	138	25
Mindanao	2026	3	28	18	93	138	138	25
Mindanao	2026	3	28	19	96	138	138	25
Mindanao	2026	3	28	20	92	138	138	25
Mindanao	2026	3	28	21	89	138	138	25
Mindanao	2026	3	28	22	86	138	138	25
Mindanao	2026	3	28	23	81	138	138	25
Mindanao	2026	3	28	24	76	138	138	25
Mindanao	2026	3	29	1	73	138	138	25
Mindanao	2026	3	29	2	71	138	138	25
Mindanao	2026	3	29	3	70	138	138	25
Mindanao	2026	3	29	4	68	138	138	25
Mindanao	2026	3	29	5	67	138	138	25
Mindanao	2026	3	29	6	66	138	138	25
Mindanao	2026	3	29	7	64	138	138	25
Mindanao	2026	3	29	8	66	138	138	25
Mindanao	2026	3	29	9	70	138	138	25
Mindanao	2026	3	29	10	74	138	138	25
Mindanao	2026	3	29	11	78	138	138	25
Mindanao	2026	3	29	12	79	138	138	25
Mindanao	2026	3	29	13	81	138	138	25
Mindanao	2026	3	29	14	83	138	138	25
Mindanao	2026	3	29	15	82	138	138	25
Mindanao	2026	3	29	16	80	138	138	25
Mindanao	2026	3	29	17	80	138	138	25
Mindanao	2026	3	29	18	88	138	138	25
Mindanao	2026	3	29	19	91	138	138	25
Mindanao	2026	3	29	20	89	138	138	25
Mindanao	2026	3	29	21	89	138	138	25
Mindanao	2026	3	29	22	82	138	138	25
Mindanao	2026	3	29	23	77	138	138	25
Mindanao	2026	3	29	24	73	138	138	25
Mindanao	2026	3	30	1	69	138	138	25
Mindanao	2026	3	30	2	67	138	138	25
Mindanao	2026	3	30	3	66	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	3	30	4	64	138	138	25
Mindanao	2026	3	30	5	67	138	138	25
Mindanao	2026	3	30	6	70	138	138	25
Mindanao	2026	3	30	7	65	138	138	25
Mindanao	2026	3	30	8	73	138	138	25
Mindanao	2026	3	30	9	83	138	138	25
Mindanao	2026	3	30	10	92	138	138	25
Mindanao	2026	3	30	11	97	138	138	25
Mindanao	2026	3	30	12	97	138	138	25
Mindanao	2026	3	30	13	98	138	138	25
Mindanao	2026	3	30	14	104	138	138	25
Mindanao	2026	3	30	15	101	138	138	25
Mindanao	2026	3	30	16	99	138	138	25
Mindanao	2026	3	30	17	93	138	138	25
Mindanao	2026	3	30	18	95	138	138	25
Mindanao	2026	3	30	19	96	138	138	25
Mindanao	2026	3	30	20	95	138	138	25
Mindanao	2026	3	30	21	90	138	138	25
Mindanao	2026	3	30	22	85	138	138	25
Mindanao	2026	3	30	23	81	138	138	25
Mindanao	2026	3	30	24	77	138	138	25
Mindanao	2026	3	31	1	71	138	138	25
Mindanao	2026	3	31	2	70	138	138	25
Mindanao	2026	3	31	3	69	138	138	25
Mindanao	2026	3	31	4	67	138	138	25
Mindanao	2026	3	31	5	70	138	138	25
Mindanao	2026	3	31	6	73	138	138	25
Mindanao	2026	3	31	7	66	138	138	25
Mindanao	2026	3	31	8	76	138	138	25
Mindanao	2026	3	31	9	87	138	138	25
Mindanao	2026	3	31	10	94	138	138	25
Mindanao	2026	3	31	11	98	138	138	25
Mindanao	2026	3	31	12	97	138	138	25
Mindanao	2026	3	31	13	99	138	138	25
Mindanao	2026	3	31	14	98	138	138	25
Mindanao	2026	3	31	15	102	138	138	25
Mindanao	2026	3	31	16	98	138	138	25
Mindanao	2026	3	31	17	94	138	138	25
Mindanao	2026	3	31	18	96	138	138	25
Mindanao	2026	3	31	19	95	138	138	25
Mindanao	2026	3	31	20	93	138	138	25
Mindanao	2026	3	31	21	90	138	138	25
Mindanao	2026	3	31	22	84	138	138	25
Mindanao	2026	3	31	23	79	138	138	25
Mindanao	2026	3	31	24	75	138	138	25
Mindanao	2026	4	1	1	72	138	138	25
Mindanao	2026	4	1	2	75	138	138	25
Mindanao	2026	4	1	3	75	138	138	25
Mindanao	2026	4	1	4	73	138	138	25
Mindanao	2026	4	1	5	75	138	138	25
Mindanao	2026	4	1	6	79	138	138	25
Mindanao	2026	4	1	7	73	138	138	25
Mindanao	2026	4	1	8	83	138	138	25
Mindanao	2026	4	1	9	93	138	138	25
Mindanao	2026	4	1	10	100	138	138	25
Mindanao	2026	4	1	11	105	138	138	25
Mindanao	2026	4	1	12	103	138	138	25
Mindanao	2026	4	1	13	104	138	138	25
Mindanao	2026	4	1	14	107	138	138	25
Mindanao	2026	4	1	15	102	138	138	25
Mindanao	2026	4	1	16	101	138	138	25
Mindanao	2026	4	1	17	97	138	138	25
Mindanao	2026	4	1	18	100	138	138	25
Mindanao	2026	4	1	19	98	138	138	25
Mindanao	2026	4	1	20	95	138	138	25
Mindanao	2026	4	1	21	92	138	138	25
Mindanao	2026	4	1	22	87	138	138	25
Mindanao	2026	4	1	23	82	138	138	25
Mindanao	2026	4	1	24	78	138	138	25
Mindanao	2026	4	2	1	71	138	138	25
Mindanao	2026	4	2	2	68	138	138	25
Mindanao	2026	4	2	3	67	138	138	25
Mindanao	2026	4	2	4	64	138	138	25
Mindanao	2026	4	2	5	64	138	138	25
Mindanao	2026	4	2	6	64	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	2	7	63	138	138	25
Mindanao	2026	4	2	8	63	138	138	25
Mindanao	2026	4	2	9	68	138	138	25
Mindanao	2026	4	2	10	72	138	138	25
Mindanao	2026	4	2	11	76	138	138	25
Mindanao	2026	4	2	12	77	138	138	25
Mindanao	2026	4	2	13	78	138	138	25
Mindanao	2026	4	2	14	81	138	138	25
Mindanao	2026	4	2	15	80	138	138	25
Mindanao	2026	4	2	16	78	138	138	25
Mindanao	2026	4	2	17	76	138	138	25
Mindanao	2026	4	2	18	83	138	138	25
Mindanao	2026	4	2	19	83	138	138	25
Mindanao	2026	4	2	20	81	138	138	25
Mindanao	2026	4	2	21	80	138	138	25
Mindanao	2026	4	2	22	75	138	138	25
Mindanao	2026	4	2	23	72	138	138	25
Mindanao	2026	4	2	24	68	138	138	25
Mindanao	2026	4	3	1	64	138	138	25
Mindanao	2026	4	3	2	63	138	138	25
Mindanao	2026	4	3	3	62	138	138	25
Mindanao	2026	4	3	4	59	138	138	25
Mindanao	2026	4	3	5	58	138	138	25
Mindanao	2026	4	3	6	58	138	138	25
Mindanao	2026	4	3	7	57	138	138	25
Mindanao	2026	4	3	8	59	138	138	25
Mindanao	2026	4	3	9	60	138	138	25
Mindanao	2026	4	3	10	61	138	138	25
Mindanao	2026	4	3	11	66	138	138	25
Mindanao	2026	4	3	12	67	138	138	25
Mindanao	2026	4	3	13	69	138	138	25
Mindanao	2026	4	3	14	69	138	138	25
Mindanao	2026	4	3	15	70	138	138	25
Mindanao	2026	4	3	16	68	138	138	25
Mindanao	2026	4	3	17	67	138	138	25
Mindanao	2026	4	3	18	74	138	138	25
Mindanao	2026	4	3	19	78	138	138	25
Mindanao	2026	4	3	20	78	138	138	25
Mindanao	2026	4	3	21	76	138	138	25
Mindanao	2026	4	3	22	74	138	138	25
Mindanao	2026	4	3	23	69	138	138	25
Mindanao	2026	4	3	24	66	138	138	25
Mindanao	2026	4	4	1	76	138	138	25
Mindanao	2026	4	4	2	74	138	138	25
Mindanao	2026	4	4	3	72	138	138	25
Mindanao	2026	4	4	4	71	138	138	25
Mindanao	2026	4	4	5	70	138	138	25
Mindanao	2026	4	4	6	72	138	138	25
Mindanao	2026	4	4	7	72	138	138	25
Mindanao	2026	4	4	8	76	138	138	25
Mindanao	2026	4	4	9	84	138	138	25
Mindanao	2026	4	4	10	89	138	138	25
Mindanao	2026	4	4	11	91	138	138	25
Mindanao	2026	4	4	12	91	138	138	25
Mindanao	2026	4	4	13	92	138	138	25
Mindanao	2026	4	4	14	95	138	138	25
Mindanao	2026	4	4	15	94	138	138	25
Mindanao	2026	4	4	16	93	138	138	25
Mindanao	2026	4	4	17	91	138	138	25
Mindanao	2026	4	4	18	97	138	138	25
Mindanao	2026	4	4	19	95	138	138	25
Mindanao	2026	4	4	20	92	138	138	25
Mindanao	2026	4	4	21	90	138	138	25
Mindanao	2026	4	4	22	83	138	138	25
Mindanao	2026	4	4	23	80	138	138	25
Mindanao	2026	4	4	24	74	138	138	25
Mindanao	2026	4	5	1	71	138	138	25
Mindanao	2026	4	5	2	70	138	138	25
Mindanao	2026	4	5	3	68	138	138	25
Mindanao	2026	4	5	4	65	138	138	25
Mindanao	2026	4	5	5	65	138	138	25
Mindanao	2026	4	5	6	67	138	138	25
Mindanao	2026	4	5	7	64	138	138	25
Mindanao	2026	4	5	8	65	138	138	25
Mindanao	2026	4	5	9	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	5	10	80	138	138	25
Mindanao	2026	4	5	11	81	138	138	25
Mindanao	2026	4	5	12	82	138	138	25
Mindanao	2026	4	5	13	81	138	138	25
Mindanao	2026	4	5	14	83	138	138	25
Mindanao	2026	4	5	15	83	138	138	25
Mindanao	2026	4	5	16	81	138	138	25
Mindanao	2026	4	5	17	79	138	138	25
Mindanao	2026	4	5	18	91	138	138	25
Mindanao	2026	4	5	19	91	138	138	25
Mindanao	2026	4	5	20	91	138	138	25
Mindanao	2026	4	5	21	89	138	138	25
Mindanao	2026	4	5	22	83	138	138	25
Mindanao	2026	4	5	23	77	138	138	25
Mindanao	2026	4	5	24	75	138	138	25
Mindanao	2026	4	6	1	71	138	138	25
Mindanao	2026	4	6	2	69	138	138	25
Mindanao	2026	4	6	3	68	138	138	25
Mindanao	2026	4	6	4	68	138	138	25
Mindanao	2026	4	6	5	70	138	138	25
Mindanao	2026	4	6	6	75	138	138	25
Mindanao	2026	4	6	7	70	138	138	25
Mindanao	2026	4	6	8	78	138	138	25
Mindanao	2026	4	6	9	90	138	138	25
Mindanao	2026	4	6	10	99	138	138	25
Mindanao	2026	4	6	11	104	138	138	25
Mindanao	2026	4	6	12	103	138	138	25
Mindanao	2026	4	6	13	103	138	138	25
Mindanao	2026	4	6	14	108	138	138	25
Mindanao	2026	4	6	15	106	138	138	25
Mindanao	2026	4	6	16	103	138	138	25
Mindanao	2026	4	6	17	99	138	138	25
Mindanao	2026	4	6	18	100	138	138	25
Mindanao	2026	4	6	19	101	138	138	25
Mindanao	2026	4	6	20	97	138	138	25
Mindanao	2026	4	6	21	95	138	138	25
Mindanao	2026	4	6	22	88	138	138	25
Mindanao	2026	4	6	23	82	138	138	25
Mindanao	2026	4	6	24	79	138	138	25
Mindanao	2026	4	7	1	74	138	138	25
Mindanao	2026	4	7	2	72	138	138	25
Mindanao	2026	4	7	3	72	138	138	25
Mindanao	2026	4	7	4	69	138	138	25
Mindanao	2026	4	7	5	71	138	138	25
Mindanao	2026	4	7	6	76	138	138	25
Mindanao	2026	4	7	7	70	138	138	25
Mindanao	2026	4	7	8	79	138	138	25
Mindanao	2026	4	7	9	90	138	138	25
Mindanao	2026	4	7	10	96	138	138	25
Mindanao	2026	4	7	11	101	138	138	25
Mindanao	2026	4	7	12	99	138	138	25
Mindanao	2026	4	7	13	102	138	138	25
Mindanao	2026	4	7	14	108	138	138	25
Mindanao	2026	4	7	15	106	138	138	25
Mindanao	2026	4	7	16	103	138	138	25
Mindanao	2026	4	7	17	97	138	138	25
Mindanao	2026	4	7	18	101	138	138	25
Mindanao	2026	4	7	19	101	138	138	25
Mindanao	2026	4	7	20	97	138	138	25
Mindanao	2026	4	7	21	94	138	138	25
Mindanao	2026	4	7	22	89	138	138	25
Mindanao	2026	4	7	23	83	138	138	25
Mindanao	2026	4	7	24	80	138	138	25
Mindanao	2026	4	8	1	76	138	138	25
Mindanao	2026	4	8	2	73	138	138	25
Mindanao	2026	4	8	3	72	138	138	25
Mindanao	2026	4	8	4	71	138	138	25
Mindanao	2026	4	8	5	72	138	138	25
Mindanao	2026	4	8	6	73	138	138	25
Mindanao	2026	4	8	7	69	138	138	25
Mindanao	2026	4	8	8	78	138	138	25
Mindanao	2026	4	8	9	89	138	138	25
Mindanao	2026	4	8	10	96	138	138	25
Mindanao	2026	4	8	11	100	138	138	25
Mindanao	2026	4	8	12	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	8	13	95	138	138	25
Mindanao	2026	4	8	14	98	138	138	25
Mindanao	2026	4	8	15	97	138	138	25
Mindanao	2026	4	8	16	95	138	138	25
Mindanao	2026	4	8	17	91	138	138	25
Mindanao	2026	4	8	18	97	138	138	25
Mindanao	2026	4	8	19	96	138	138	25
Mindanao	2026	4	8	20	93	138	138	25
Mindanao	2026	4	8	21	89	138	138	25
Mindanao	2026	4	8	22	85	138	138	25
Mindanao	2026	4	8	23	80	138	138	25
Mindanao	2026	4	8	24	75	138	138	25
Mindanao	2026	4	9	1	65	138	138	25
Mindanao	2026	4	9	2	65	138	138	25
Mindanao	2026	4	9	3	65	138	138	25
Mindanao	2026	4	9	4	61	138	138	25
Mindanao	2026	4	9	5	61	138	138	25
Mindanao	2026	4	9	6	64	138	138	25
Mindanao	2026	4	9	7	64	138	138	25
Mindanao	2026	4	9	8	68	138	138	25
Mindanao	2026	4	9	9	74	138	138	25
Mindanao	2026	4	9	10	80	138	138	25
Mindanao	2026	4	9	11	85	138	138	25
Mindanao	2026	4	9	12	84	138	138	25
Mindanao	2026	4	9	13	85	138	138	25
Mindanao	2026	4	9	14	89	138	138	25
Mindanao	2026	4	9	15	88	138	138	25
Mindanao	2026	4	9	16	87	138	138	25
Mindanao	2026	4	9	17	86	138	138	25
Mindanao	2026	4	9	18	92	138	138	25
Mindanao	2026	4	9	19	92	138	138	25
Mindanao	2026	4	9	20	92	138	138	25
Mindanao	2026	4	9	21	88	138	138	25
Mindanao	2026	4	9	22	83	138	138	25
Mindanao	2026	4	9	23	79	138	138	25
Mindanao	2026	4	9	24	74	138	138	25
Mindanao	2026	4	10	1	82	138	138	25
Mindanao	2026	4	10	2	79	138	138	25
Mindanao	2026	4	10	3	78	138	138	25
Mindanao	2026	4	10	4	76	138	138	25
Mindanao	2026	4	10	5	75	138	138	25
Mindanao	2026	4	10	6	81	138	138	25
Mindanao	2026	4	10	7	74	138	138	25
Mindanao	2026	4	10	8	85	138	138	25
Mindanao	2026	4	10	9	98	138	138	25
Mindanao	2026	4	10	10	104	138	138	25
Mindanao	2026	4	10	11	109	138	138	25
Mindanao	2026	4	10	12	108	138	138	25
Mindanao	2026	4	10	13	110	138	138	25
Mindanao	2026	4	10	14	115	138	138	25
Mindanao	2026	4	10	15	115	138	138	25
Mindanao	2026	4	10	16	112	138	138	25
Mindanao	2026	4	10	17	107	138	138	25
Mindanao	2026	4	10	18	106	138	138	25
Mindanao	2026	4	10	19	106	138	138	25
Mindanao	2026	4	10	20	102	138	138	25
Mindanao	2026	4	10	21	99	138	138	25
Mindanao	2026	4	10	22	96	138	138	25
Mindanao	2026	4	10	23	92	138	138	25
Mindanao	2026	4	10	24	87	138	138	25
Mindanao	2026	4	11	1	64	138	138	25
Mindanao	2026	4	11	2	62	138	138	25
Mindanao	2026	4	11	3	60	138	138	25
Mindanao	2026	4	11	4	60	138	138	25
Mindanao	2026	4	11	5	59	138	138	25
Mindanao	2026	4	11	6	60	138	138	25
Mindanao	2026	4	11	7	62	138	138	25
Mindanao	2026	4	11	8	66	138	138	25
Mindanao	2026	4	11	9	71	138	138	25
Mindanao	2026	4	11	10	77	138	138	25
Mindanao	2026	4	11	11	81	138	138	25
Mindanao	2026	4	11	12	81	138	138	25
Mindanao	2026	4	11	13	83	138	138	25
Mindanao	2026	4	11	14	85	138	138	25
Mindanao	2026	4	11	15	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	11	16	85	138	138	25
Mindanao	2026	4	11	17	84	138	138	25
Mindanao	2026	4	11	18	89	138	138	25
Mindanao	2026	4	11	19	90	138	138	25
Mindanao	2026	4	11	20	87	138	138	25
Mindanao	2026	4	11	21	86	138	138	25
Mindanao	2026	4	11	22	81	138	138	25
Mindanao	2026	4	11	23	76	138	138	25
Mindanao	2026	4	11	24	72	138	138	25
Mindanao	2026	4	12	1	70	138	138	25
Mindanao	2026	4	12	2	69	138	138	25
Mindanao	2026	4	12	3	67	138	138	25
Mindanao	2026	4	12	4	66	138	138	25
Mindanao	2026	4	12	5	64	138	138	25
Mindanao	2026	4	12	6	65	138	138	25
Mindanao	2026	4	12	7	67	138	138	25
Mindanao	2026	4	12	8	68	138	138	25
Mindanao	2026	4	12	9	72	138	138	25
Mindanao	2026	4	12	10	77	138	138	25
Mindanao	2026	4	12	11	81	138	138	25
Mindanao	2026	4	12	12	81	138	138	25
Mindanao	2026	4	12	13	81	138	138	25
Mindanao	2026	4	12	14	82	138	138	25
Mindanao	2026	4	12	15	81	138	138	25
Mindanao	2026	4	12	16	81	138	138	25
Mindanao	2026	4	12	17	80	138	138	25
Mindanao	2026	4	12	18	82	138	138	25
Mindanao	2026	4	12	19	85	138	138	25
Mindanao	2026	4	12	20	84	138	138	25
Mindanao	2026	4	12	21	82	138	138	25
Mindanao	2026	4	12	22	76	138	138	25
Mindanao	2026	4	12	23	71	138	138	25
Mindanao	2026	4	12	24	68	138	138	25
Mindanao	2026	4	13	1	76	138	138	25
Mindanao	2026	4	13	2	74	138	138	25
Mindanao	2026	4	13	3	72	138	138	25
Mindanao	2026	4	13	4	71	138	138	25
Mindanao	2026	4	13	5	74	138	138	25
Mindanao	2026	4	13	6	78	138	138	25
Mindanao	2026	4	13	7	71	138	138	25
Mindanao	2026	4	13	8	82	138	138	25
Mindanao	2026	4	13	9	95	138	138	25
Mindanao	2026	4	13	10	102	138	138	25
Mindanao	2026	4	13	11	107	138	138	25
Mindanao	2026	4	13	12	107	138	138	25
Mindanao	2026	4	13	13	109	138	138	25
Mindanao	2026	4	13	14	114	138	138	25
Mindanao	2026	4	13	15	112	138	138	25
Mindanao	2026	4	13	16	109	138	138	25
Mindanao	2026	4	13	17	103	138	138	25
Mindanao	2026	4	13	18	105	138	138	25
Mindanao	2026	4	13	19	105	138	138	25
Mindanao	2026	4	13	20	104	138	138	25
Mindanao	2026	4	13	21	100	138	138	25
Mindanao	2026	4	13	22	95	138	138	25
Mindanao	2026	4	13	23	89	138	138	25
Mindanao	2026	4	13	24	84	138	138	25
Mindanao	2026	4	14	1	71	138	138	25
Mindanao	2026	4	14	2	69	138	138	25
Mindanao	2026	4	14	3	68	138	138	25
Mindanao	2026	4	14	4	66	138	138	25
Mindanao	2026	4	14	5	71	138	138	25
Mindanao	2026	4	14	6	75	138	138	25
Mindanao	2026	4	14	7	67	138	138	25
Mindanao	2026	4	14	8	78	138	138	25
Mindanao	2026	4	14	9	90	138	138	25
Mindanao	2026	4	14	10	98	138	138	25
Mindanao	2026	4	14	11	102	138	138	25
Mindanao	2026	4	14	12	100	138	138	25
Mindanao	2026	4	14	13	103	138	138	25
Mindanao	2026	4	14	14	109	138	138	25
Mindanao	2026	4	14	15	109	138	138	25
Mindanao	2026	4	14	16	106	138	138	25
Mindanao	2026	4	14	17	100	138	138	25
Mindanao	2026	4	14	18	103	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	14	19	102	138	138	25
Mindanao	2026	4	14	20	99	138	138	25
Mindanao	2026	4	14	21	95	138	138	25
Mindanao	2026	4	14	22	89	138	138	25
Mindanao	2026	4	14	23	84	138	138	25
Mindanao	2026	4	14	24	79	138	138	25
Mindanao	2026	4	15	1	76	138	138	25
Mindanao	2026	4	15	2	75	138	138	25
Mindanao	2026	4	15	3	71	138	138	25
Mindanao	2026	4	15	4	70	138	138	25
Mindanao	2026	4	15	5	73	138	138	25
Mindanao	2026	4	15	6	77	138	138	25
Mindanao	2026	4	15	7	70	138	138	25
Mindanao	2026	4	15	8	81	138	138	25
Mindanao	2026	4	15	9	93	138	138	25
Mindanao	2026	4	15	10	101	138	138	25
Mindanao	2026	4	15	11	106	138	138	25
Mindanao	2026	4	15	12	104	138	138	25
Mindanao	2026	4	15	13	106	138	138	25
Mindanao	2026	4	15	14	111	138	138	25
Mindanao	2026	4	15	15	107	138	138	25
Mindanao	2026	4	15	16	107	138	138	25
Mindanao	2026	4	15	17	102	138	138	25
Mindanao	2026	4	15	18	106	138	138	25
Mindanao	2026	4	15	19	107	138	138	25
Mindanao	2026	4	15	20	105	138	138	25
Mindanao	2026	4	15	21	100	138	138	25
Mindanao	2026	4	15	22	94	138	138	25
Mindanao	2026	4	15	23	87	138	138	25
Mindanao	2026	4	15	24	84	138	138	25
Mindanao	2026	4	16	1	79	138	138	25
Mindanao	2026	4	16	2	77	138	138	25
Mindanao	2026	4	16	3	75	138	138	25
Mindanao	2026	4	16	4	73	138	138	25
Mindanao	2026	4	16	5	76	138	138	25
Mindanao	2026	4	16	6	80	138	138	25
Mindanao	2026	4	16	7	72	138	138	25
Mindanao	2026	4	16	8	82	138	138	25
Mindanao	2026	4	16	9	96	138	138	25
Mindanao	2026	4	16	10	103	138	138	25
Mindanao	2026	4	16	11	107	138	138	25
Mindanao	2026	4	16	12	108	138	138	25
Mindanao	2026	4	16	13	110	138	138	25
Mindanao	2026	4	16	14	114	138	138	25
Mindanao	2026	4	16	15	114	138	138	25
Mindanao	2026	4	16	16	111	138	138	25
Mindanao	2026	4	16	17	105	138	138	25
Mindanao	2026	4	16	18	107	138	138	25
Mindanao	2026	4	16	19	108	138	138	25
Mindanao	2026	4	16	20	105	138	138	25
Mindanao	2026	4	16	21	103	138	138	25
Mindanao	2026	4	16	22	97	138	138	25
Mindanao	2026	4	16	23	92	138	138	25
Mindanao	2026	4	16	24	86	138	138	25
Mindanao	2026	4	17	1	82	138	138	25
Mindanao	2026	4	17	2	79	138	138	25
Mindanao	2026	4	17	3	78	138	138	25
Mindanao	2026	4	17	4	76	138	138	25
Mindanao	2026	4	17	5	75	138	138	25
Mindanao	2026	4	17	6	81	138	138	25
Mindanao	2026	4	17	7	74	138	138	25
Mindanao	2026	4	17	8	85	138	138	25
Mindanao	2026	4	17	9	98	138	138	25
Mindanao	2026	4	17	10	104	138	138	25
Mindanao	2026	4	17	11	109	138	138	25
Mindanao	2026	4	17	12	108	138	138	25
Mindanao	2026	4	17	13	110	138	138	25
Mindanao	2026	4	17	14	115	138	138	25
Mindanao	2026	4	17	15	115	138	138	25
Mindanao	2026	4	17	16	112	138	138	25
Mindanao	2026	4	17	17	107	138	138	25
Mindanao	2026	4	17	18	106	138	138	25
Mindanao	2026	4	17	19	106	138	138	25
Mindanao	2026	4	17	20	102	138	138	25
Mindanao	2026	4	17	21	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	17	22	96	138	138	25
Mindanao	2026	4	17	23	92	138	138	25
Mindanao	2026	4	17	24	87	138	138	25
Mindanao	2026	4	18	1	83	138	138	25
Mindanao	2026	4	18	2	80	138	138	25
Mindanao	2026	4	18	3	79	138	138	25
Mindanao	2026	4	18	4	77	138	138	25
Mindanao	2026	4	18	5	78	138	138	25
Mindanao	2026	4	18	6	78	138	138	25
Mindanao	2026	4	18	7	75	138	138	25
Mindanao	2026	4	18	8	83	138	138	25
Mindanao	2026	4	18	9	93	138	138	25
Mindanao	2026	4	18	10	99	138	138	25
Mindanao	2026	4	18	11	105	138	138	25
Mindanao	2026	4	18	12	105	138	138	25
Mindanao	2026	4	18	13	107	138	138	25
Mindanao	2026	4	18	14	109	138	138	25
Mindanao	2026	4	18	15	108	138	138	25
Mindanao	2026	4	18	16	106	138	138	25
Mindanao	2026	4	18	17	101	138	138	25
Mindanao	2026	4	18	18	105	138	138	25
Mindanao	2026	4	18	19	105	138	138	25
Mindanao	2026	4	18	20	101	138	138	25
Mindanao	2026	4	18	21	97	138	138	25
Mindanao	2026	4	18	22	92	138	138	25
Mindanao	2026	4	18	23	87	138	138	25
Mindanao	2026	4	18	24	83	138	138	25
Mindanao	2026	4	19	1	80	138	138	25
Mindanao	2026	4	19	2	78	138	138	25
Mindanao	2026	4	19	3	75	138	138	25
Mindanao	2026	4	19	4	72	138	138	25
Mindanao	2026	4	19	5	71	138	138	25
Mindanao	2026	4	19	6	70	138	138	25
Mindanao	2026	4	19	7	70	138	138	25
Mindanao	2026	4	19	8	73	138	138	25
Mindanao	2026	4	19	9	77	138	138	25
Mindanao	2026	4	19	10	84	138	138	25
Mindanao	2026	4	19	11	89	138	138	25
Mindanao	2026	4	19	12	91	138	138	25
Mindanao	2026	4	19	13	93	138	138	25
Mindanao	2026	4	19	14	93	138	138	25
Mindanao	2026	4	19	15	93	138	138	25
Mindanao	2026	4	19	16	92	138	138	25
Mindanao	2026	4	19	17	90	138	138	25
Mindanao	2026	4	19	18	96	138	138	25
Mindanao	2026	4	19	19	99	138	138	25
Mindanao	2026	4	19	20	99	138	138	25
Mindanao	2026	4	19	21	96	138	138	25
Mindanao	2026	4	19	22	91	138	138	25
Mindanao	2026	4	19	23	87	138	138	25
Mindanao	2026	4	19	24	82	138	138	25
Mindanao	2026	4	20	1	76	138	138	25
Mindanao	2026	4	20	2	74	138	138	25
Mindanao	2026	4	20	3	72	138	138	25
Mindanao	2026	4	20	4	71	138	138	25
Mindanao	2026	4	20	5	74	138	138	25
Mindanao	2026	4	20	6	78	138	138	25
Mindanao	2026	4	20	7	71	138	138	25
Mindanao	2026	4	20	8	82	138	138	25
Mindanao	2026	4	20	9	95	138	138	25
Mindanao	2026	4	20	10	102	138	138	25
Mindanao	2026	4	20	11	107	138	138	25
Mindanao	2026	4	20	12	107	138	138	25
Mindanao	2026	4	20	13	109	138	138	25
Mindanao	2026	4	20	14	114	138	138	25
Mindanao	2026	4	20	15	112	138	138	25
Mindanao	2026	4	20	16	109	138	138	25
Mindanao	2026	4	20	17	103	138	138	25
Mindanao	2026	4	20	18	105	138	138	25
Mindanao	2026	4	20	19	105	138	138	25
Mindanao	2026	4	20	20	104	138	138	25
Mindanao	2026	4	20	21	100	138	138	25
Mindanao	2026	4	20	22	95	138	138	25
Mindanao	2026	4	20	23	89	138	138	25
Mindanao	2026	4	20	24	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	21	1	81	138	138	25
Mindanao	2026	4	21	2	78	138	138	25
Mindanao	2026	4	21	3	77	138	138	25
Mindanao	2026	4	21	4	75	138	138	25
Mindanao	2026	4	21	5	78	138	138	25
Mindanao	2026	4	21	6	80	138	138	25
Mindanao	2026	4	21	7	74	138	138	25
Mindanao	2026	4	21	8	84	138	138	25
Mindanao	2026	4	21	9	98	138	138	25
Mindanao	2026	4	21	10	104	138	138	25
Mindanao	2026	4	21	11	110	138	138	25
Mindanao	2026	4	21	12	109	138	138	25
Mindanao	2026	4	21	13	110	138	138	25
Mindanao	2026	4	21	14	116	138	138	25
Mindanao	2026	4	21	15	113	138	138	25
Mindanao	2026	4	21	16	112	138	138	25
Mindanao	2026	4	21	17	107	138	138	25
Mindanao	2026	4	21	18	109	138	138	25
Mindanao	2026	4	21	19	110	138	138	25
Mindanao	2026	4	21	20	108	138	138	25
Mindanao	2026	4	21	21	105	138	138	25
Mindanao	2026	4	21	22	99	138	138	25
Mindanao	2026	4	21	23	93	138	138	25
Mindanao	2026	4	21	24	87	138	138	25
Mindanao	2026	4	22	1	84	138	138	25
Mindanao	2026	4	22	2	81	138	138	25
Mindanao	2026	4	22	3	79	138	138	25
Mindanao	2026	4	22	4	78	138	138	25
Mindanao	2026	4	22	5	79	138	138	25
Mindanao	2026	4	22	6	81	138	138	25
Mindanao	2026	4	22	7	76	138	138	25
Mindanao	2026	4	22	8	87	138	138	25
Mindanao	2026	4	22	9	99	138	138	25
Mindanao	2026	4	22	10	107	138	138	25
Mindanao	2026	4	22	11	111	138	138	25
Mindanao	2026	4	22	12	109	138	138	25
Mindanao	2026	4	22	13	113	138	138	25
Mindanao	2026	4	22	14	118	138	138	25
Mindanao	2026	4	22	15	116	138	138	25
Mindanao	2026	4	22	16	114	138	138	25
Mindanao	2026	4	22	17	109	138	138	25
Mindanao	2026	4	22	18	109	138	138	25
Mindanao	2026	4	22	19	110	138	138	25
Mindanao	2026	4	22	20	108	138	138	25
Mindanao	2026	4	22	21	106	138	138	25
Mindanao	2026	4	22	22	99	138	138	25
Mindanao	2026	4	22	23	95	138	138	25
Mindanao	2026	4	22	24	90	138	138	25
Mindanao	2026	4	23	1	86	138	138	25
Mindanao	2026	4	23	2	84	138	138	25
Mindanao	2026	4	23	3	81	138	138	25
Mindanao	2026	4	23	4	79	138	138	25
Mindanao	2026	4	23	5	81	138	138	25
Mindanao	2026	4	23	6	83	138	138	25
Mindanao	2026	4	23	7	77	138	138	25
Mindanao	2026	4	23	8	87	138	138	25
Mindanao	2026	4	23	9	101	138	138	25
Mindanao	2026	4	23	10	108	138	138	25
Mindanao	2026	4	23	11	113	138	138	25
Mindanao	2026	4	23	12	113	138	138	25
Mindanao	2026	4	23	13	113	138	138	25
Mindanao	2026	4	23	14	115	138	138	25
Mindanao	2026	4	23	15	116	138	138	25
Mindanao	2026	4	23	16	113	138	138	25
Mindanao	2026	4	23	17	106	138	138	25
Mindanao	2026	4	23	18	108	138	138	25
Mindanao	2026	4	23	19	108	138	138	25
Mindanao	2026	4	23	20	106	138	138	25
Mindanao	2026	4	23	21	104	138	138	25
Mindanao	2026	4	23	22	99	138	138	25
Mindanao	2026	4	23	23	93	138	138	25
Mindanao	2026	4	23	24	90	138	138	25
Mindanao	2026	4	24	1	85	138	138	25
Mindanao	2026	4	24	2	83	138	138	25
Mindanao	2026	4	24	3	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	24	4	78	138	138	25
Mindanao	2026	4	24	5	77	138	138	25
Mindanao	2026	4	24	6	77	138	138	25
Mindanao	2026	4	24	7	75	138	138	25
Mindanao	2026	4	24	8	81	138	138	25
Mindanao	2026	4	24	9	90	138	138	25
Mindanao	2026	4	24	10	97	138	138	25
Mindanao	2026	4	24	11	102	138	138	25
Mindanao	2026	4	24	12	100	138	138	25
Mindanao	2026	4	24	13	102	138	138	25
Mindanao	2026	4	24	14	104	138	138	25
Mindanao	2026	4	24	15	103	138	138	25
Mindanao	2026	4	24	16	100	138	138	25
Mindanao	2026	4	24	17	93	138	138	25
Mindanao	2026	4	24	18	98	138	138	25
Mindanao	2026	4	24	19	100	138	138	25
Mindanao	2026	4	24	20	97	138	138	25
Mindanao	2026	4	24	21	95	138	138	25
Mindanao	2026	4	24	22	92	138	138	25
Mindanao	2026	4	24	23	86	138	138	25
Mindanao	2026	4	24	24	83	138	138	25
Mindanao	2026	4	25	1	78	138	138	25
Mindanao	2026	4	25	2	75	138	138	25
Mindanao	2026	4	25	3	75	138	138	25
Mindanao	2026	4	25	4	72	138	138	25
Mindanao	2026	4	25	5	74	138	138	25
Mindanao	2026	4	25	6	73	138	138	25
Mindanao	2026	4	25	7	72	138	138	25
Mindanao	2026	4	25	8	77	138	138	25
Mindanao	2026	4	25	9	87	138	138	25
Mindanao	2026	4	25	10	95	138	138	25
Mindanao	2026	4	25	11	99	138	138	25
Mindanao	2026	4	25	12	99	138	138	25
Mindanao	2026	4	25	13	102	138	138	25
Mindanao	2026	4	25	14	104	138	138	25
Mindanao	2026	4	25	15	103	138	138	25
Mindanao	2026	4	25	16	98	138	138	25
Mindanao	2026	4	25	17	96	138	138	25
Mindanao	2026	4	25	18	101	138	138	25
Mindanao	2026	4	25	19	102	138	138	25
Mindanao	2026	4	25	20	100	138	138	25
Mindanao	2026	4	25	21	97	138	138	25
Mindanao	2026	4	25	22	91	138	138	25
Mindanao	2026	4	25	23	87	138	138	25
Mindanao	2026	4	25	24	82	138	138	25
Mindanao	2026	4	26	1	79	138	138	25
Mindanao	2026	4	26	2	76	138	138	25
Mindanao	2026	4	26	3	73	138	138	25
Mindanao	2026	4	26	4	72	138	138	25
Mindanao	2026	4	26	5	72	138	138	25
Mindanao	2026	4	26	6	73	138	138	25
Mindanao	2026	4	26	7	71	138	138	25
Mindanao	2026	4	26	8	73	138	138	25
Mindanao	2026	4	26	9	76	138	138	25
Mindanao	2026	4	26	10	81	138	138	25
Mindanao	2026	4	26	11	88	138	138	25
Mindanao	2026	4	26	12	90	138	138	25
Mindanao	2026	4	26	13	93	138	138	25
Mindanao	2026	4	26	14	94	138	138	25
Mindanao	2026	4	26	15	93	138	138	25
Mindanao	2026	4	26	16	90	138	138	25
Mindanao	2026	4	26	17	88	138	138	25
Mindanao	2026	4	26	18	97	138	138	25
Mindanao	2026	4	26	19	101	138	138	25
Mindanao	2026	4	26	20	99	138	138	25
Mindanao	2026	4	26	21	97	138	138	25
Mindanao	2026	4	26	22	92	138	138	25
Mindanao	2026	4	26	23	86	138	138	25
Mindanao	2026	4	26	24	82	138	138	25
Mindanao	2026	4	27	1	77	138	138	25
Mindanao	2026	4	27	2	76	138	138	25
Mindanao	2026	4	27	3	73	138	138	25
Mindanao	2026	4	27	4	72	138	138	25
Mindanao	2026	4	27	5	76	138	138	25
Mindanao	2026	4	27	6	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	27	7	74	138	138	25
Mindanao	2026	4	27	8	86	138	138	25
Mindanao	2026	4	27	9	98	138	138	25
Mindanao	2026	4	27	10	105	138	138	25
Mindanao	2026	4	27	11	109	138	138	25
Mindanao	2026	4	27	12	110	138	138	25
Mindanao	2026	4	27	13	112	138	138	25
Mindanao	2026	4	27	14	117	138	138	25
Mindanao	2026	4	27	15	115	138	138	25
Mindanao	2026	4	27	16	114	138	138	25
Mindanao	2026	4	27	17	106	138	138	25
Mindanao	2026	4	27	18	108	138	138	25
Mindanao	2026	4	27	19	109	138	138	25
Mindanao	2026	4	27	20	104	138	138	25
Mindanao	2026	4	27	21	102	138	138	25
Mindanao	2026	4	27	22	96	138	138	25
Mindanao	2026	4	27	23	90	138	138	25
Mindanao	2026	4	27	24	85	138	138	25
Mindanao	2026	4	28	1	80	138	138	25
Mindanao	2026	4	28	2	77	138	138	25
Mindanao	2026	4	28	3	75	138	138	25
Mindanao	2026	4	28	4	73	138	138	25
Mindanao	2026	4	28	5	78	138	138	25
Mindanao	2026	4	28	6	78	138	138	25
Mindanao	2026	4	28	7	74	138	138	25
Mindanao	2026	4	28	8	83	138	138	25
Mindanao	2026	4	28	9	95	138	138	25
Mindanao	2026	4	28	10	104	138	138	25
Mindanao	2026	4	28	11	108	138	138	25
Mindanao	2026	4	28	12	108	138	138	25
Mindanao	2026	4	28	13	111	138	138	25
Mindanao	2026	4	28	14	114	138	138	25
Mindanao	2026	4	28	15	111	138	138	25
Mindanao	2026	4	28	16	108	138	138	25
Mindanao	2026	4	28	17	105	138	138	25
Mindanao	2026	4	28	18	107	138	138	25
Mindanao	2026	4	28	19	110	138	138	25
Mindanao	2026	4	28	20	105	138	138	25
Mindanao	2026	4	28	21	103	138	138	25
Mindanao	2026	4	28	22	96	138	138	25
Mindanao	2026	4	28	23	92	138	138	25
Mindanao	2026	4	28	24	88	138	138	25
Mindanao	2026	4	29	1	83	138	138	25
Mindanao	2026	4	29	2	78	138	138	25
Mindanao	2026	4	29	3	77	138	138	25
Mindanao	2026	4	29	4	76	138	138	25
Mindanao	2026	4	29	5	78	138	138	25
Mindanao	2026	4	29	6	79	138	138	25
Mindanao	2026	4	29	7	74	138	138	25
Mindanao	2026	4	29	8	85	138	138	25
Mindanao	2026	4	29	9	98	138	138	25
Mindanao	2026	4	29	10	102	138	138	25
Mindanao	2026	4	29	11	106	138	138	25
Mindanao	2026	4	29	12	105	138	138	25
Mindanao	2026	4	29	13	105	138	138	25
Mindanao	2026	4	29	14	110	138	138	25
Mindanao	2026	4	29	15	109	138	138	25
Mindanao	2026	4	29	16	112	138	138	25
Mindanao	2026	4	29	17	106	138	138	25
Mindanao	2026	4	29	18	110	138	138	25
Mindanao	2026	4	29	19	112	138	138	25
Mindanao	2026	4	29	20	108	138	138	25
Mindanao	2026	4	29	21	107	138	138	25
Mindanao	2026	4	29	22	100	138	138	25
Mindanao	2026	4	29	23	95	138	138	25
Mindanao	2026	4	29	24	90	138	138	25
Mindanao	2026	4	30	1	85	138	138	25
Mindanao	2026	4	30	2	82	138	138	25
Mindanao	2026	4	30	3	79	138	138	25
Mindanao	2026	4	30	4	76	138	138	25
Mindanao	2026	4	30	5	79	138	138	25
Mindanao	2026	4	30	6	80	138	138	25
Mindanao	2026	4	30	7	75	138	138	25
Mindanao	2026	4	30	8	86	138	138	25
Mindanao	2026	4	30	9	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	4	30	10	106	138	138	25
Mindanao	2026	4	30	11	111	138	138	25
Mindanao	2026	4	30	12	109	138	138	25
Mindanao	2026	4	30	13	111	138	138	25
Mindanao	2026	4	30	14	114	138	138	25
Mindanao	2026	4	30	15	113	138	138	25
Mindanao	2026	4	30	16	111	138	138	25
Mindanao	2026	4	30	17	104	138	138	25
Mindanao	2026	4	30	18	107	138	138	25
Mindanao	2026	4	30	19	109	138	138	25
Mindanao	2026	4	30	20	106	138	138	25
Mindanao	2026	4	30	21	105	138	138	25
Mindanao	2026	4	30	22	98	138	138	25
Mindanao	2026	4	30	23	92	138	138	25
Mindanao	2026	4	30	24	88	138	138	25
Mindanao	2026	5	1	1	73	138	138	25
Mindanao	2026	5	1	2	70	138	138	25
Mindanao	2026	5	1	3	69	138	138	25
Mindanao	2026	5	1	4	67	138	138	25
Mindanao	2026	5	1	5	68	138	138	25
Mindanao	2026	5	1	6	67	138	138	25
Mindanao	2026	5	1	7	66	138	138	25
Mindanao	2026	5	1	8	70	138	138	25
Mindanao	2026	5	1	9	77	138	138	25
Mindanao	2026	5	1	10	83	138	138	25
Mindanao	2026	5	1	11	86	138	138	25
Mindanao	2026	5	1	12	87	138	138	25
Mindanao	2026	5	1	13	89	138	138	25
Mindanao	2026	5	1	14	92	138	138	25
Mindanao	2026	5	1	15	90	138	138	25
Mindanao	2026	5	1	16	87	138	138	25
Mindanao	2026	5	1	17	86	138	138	25
Mindanao	2026	5	1	18	93	138	138	25
Mindanao	2026	5	1	19	96	138	138	25
Mindanao	2026	5	1	20	95	138	138	25
Mindanao	2026	5	1	21	92	138	138	25
Mindanao	2026	5	1	22	86	138	138	25
Mindanao	2026	5	1	23	82	138	138	25
Mindanao	2026	5	1	24	79	138	138	25
Mindanao	2026	5	2	1	81	138	138	25
Mindanao	2026	5	2	2	80	138	138	25
Mindanao	2026	5	2	3	78	138	138	25
Mindanao	2026	5	2	4	76	138	138	25
Mindanao	2026	5	2	5	77	138	138	25
Mindanao	2026	5	2	6	75	138	138	25
Mindanao	2026	5	2	7	75	138	138	25
Mindanao	2026	5	2	8	81	138	138	25
Mindanao	2026	5	2	9	91	138	138	25
Mindanao	2026	5	2	10	97	138	138	25
Mindanao	2026	5	2	11	102	138	138	25
Mindanao	2026	5	2	12	102	138	138	25
Mindanao	2026	5	2	13	104	138	138	25
Mindanao	2026	5	2	14	106	138	138	25
Mindanao	2026	5	2	15	105	138	138	25
Mindanao	2026	5	2	16	99	138	138	25
Mindanao	2026	5	2	17	97	138	138	25
Mindanao	2026	5	2	18	98	138	138	25
Mindanao	2026	5	2	19	98	138	138	25
Mindanao	2026	5	2	20	95	138	138	25
Mindanao	2026	5	2	21	92	138	138	25
Mindanao	2026	5	2	22	88	138	138	25
Mindanao	2026	5	2	23	84	138	138	25
Mindanao	2026	5	2	24	79	138	138	25
Mindanao	2026	5	3	1	75	138	138	25
Mindanao	2026	5	3	2	73	138	138	25
Mindanao	2026	5	3	3	70	138	138	25
Mindanao	2026	5	3	4	68	138	138	25
Mindanao	2026	5	3	5	69	138	138	25
Mindanao	2026	5	3	6	67	138	138	25
Mindanao	2026	5	3	7	64	138	138	25
Mindanao	2026	5	3	8	64	138	138	25
Mindanao	2026	5	3	9	68	138	138	25
Mindanao	2026	5	3	10	74	138	138	25
Mindanao	2026	5	3	11	75	138	138	25
Mindanao	2026	5	3	12	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	3	13	79	138	138	25
Mindanao	2026	5	3	14	82	138	138	25
Mindanao	2026	5	3	15	80	138	138	25
Mindanao	2026	5	3	16	78	138	138	25
Mindanao	2026	5	3	17	81	138	138	25
Mindanao	2026	5	3	18	89	138	138	25
Mindanao	2026	5	3	19	91	138	138	25
Mindanao	2026	5	3	20	91	138	138	25
Mindanao	2026	5	3	21	90	138	138	25
Mindanao	2026	5	3	22	85	138	138	25
Mindanao	2026	5	3	23	80	138	138	25
Mindanao	2026	5	3	24	76	138	138	25
Mindanao	2026	5	4	1	80	138	138	25
Mindanao	2026	5	4	2	77	138	138	25
Mindanao	2026	5	4	3	74	138	138	25
Mindanao	2026	5	4	4	73	138	138	25
Mindanao	2026	5	4	5	79	138	138	25
Mindanao	2026	5	4	6	80	138	138	25
Mindanao	2026	5	4	7	74	138	138	25
Mindanao	2026	5	4	8	86	138	138	25
Mindanao	2026	5	4	9	101	138	138	25
Mindanao	2026	5	4	10	107	138	138	25
Mindanao	2026	5	4	11	112	138	138	25
Mindanao	2026	5	4	12	112	138	138	25
Mindanao	2026	5	4	13	113	138	138	25
Mindanao	2026	5	4	14	117	138	138	25
Mindanao	2026	5	4	15	116	138	138	25
Mindanao	2026	5	4	16	115	138	138	25
Mindanao	2026	5	4	17	107	138	138	25
Mindanao	2026	5	4	18	106	138	138	25
Mindanao	2026	5	4	19	111	138	138	25
Mindanao	2026	5	4	20	109	138	138	25
Mindanao	2026	5	4	21	105	138	138	25
Mindanao	2026	5	4	22	100	138	138	25
Mindanao	2026	5	4	23	94	138	138	25
Mindanao	2026	5	4	24	89	138	138	25
Mindanao	2026	5	5	1	76	138	138	25
Mindanao	2026	5	5	2	72	138	138	25
Mindanao	2026	5	5	3	71	138	138	25
Mindanao	2026	5	5	4	70	138	138	25
Mindanao	2026	5	5	5	74	138	138	25
Mindanao	2026	5	5	6	75	138	138	25
Mindanao	2026	5	5	7	70	138	138	25
Mindanao	2026	5	5	8	81	138	138	25
Mindanao	2026	5	5	9	95	138	138	25
Mindanao	2026	5	5	10	103	138	138	25
Mindanao	2026	5	5	11	107	138	138	25
Mindanao	2026	5	5	12	106	138	138	25
Mindanao	2026	5	5	13	106	138	138	25
Mindanao	2026	5	5	14	106	138	138	25
Mindanao	2026	5	5	15	104	138	138	25
Mindanao	2026	5	5	16	102	138	138	25
Mindanao	2026	5	5	17	99	138	138	25
Mindanao	2026	5	5	18	98	138	138	25
Mindanao	2026	5	5	19	99	138	138	25
Mindanao	2026	5	5	20	96	138	138	25
Mindanao	2026	5	5	21	94	138	138	25
Mindanao	2026	5	5	22	88	138	138	25
Mindanao	2026	5	5	23	85	138	138	25
Mindanao	2026	5	5	24	80	138	138	25
Mindanao	2026	5	6	1	77	138	138	25
Mindanao	2026	5	6	2	75	138	138	25
Mindanao	2026	5	6	3	72	138	138	25
Mindanao	2026	5	6	4	72	138	138	25
Mindanao	2026	5	6	5	76	138	138	25
Mindanao	2026	5	6	6	79	138	138	25
Mindanao	2026	5	6	7	72	138	138	25
Mindanao	2026	5	6	8	82	138	138	25
Mindanao	2026	5	6	9	93	138	138	25
Mindanao	2026	5	6	10	100	138	138	25
Mindanao	2026	5	6	11	104	138	138	25
Mindanao	2026	5	6	12	101	138	138	25
Mindanao	2026	5	6	13	102	138	138	25
Mindanao	2026	5	6	14	104	138	138	25
Mindanao	2026	5	6	15	103	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	6	16	101	138	138	25
Mindanao	2026	5	6	17	99	138	138	25
Mindanao	2026	5	6	18	104	138	138	25
Mindanao	2026	5	6	19	103	138	138	25
Mindanao	2026	5	6	20	101	138	138	25
Mindanao	2026	5	6	21	99	138	138	25
Mindanao	2026	5	6	22	90	138	138	25
Mindanao	2026	5	6	23	86	138	138	25
Mindanao	2026	5	6	24	81	138	138	25
Mindanao	2026	5	7	1	77	138	138	25
Mindanao	2026	5	7	2	74	138	138	25
Mindanao	2026	5	7	3	71	138	138	25
Mindanao	2026	5	7	4	71	138	138	25
Mindanao	2026	5	7	5	76	138	138	25
Mindanao	2026	5	7	6	76	138	138	25
Mindanao	2026	5	7	7	70	138	138	25
Mindanao	2026	5	7	8	80	138	138	25
Mindanao	2026	5	7	9	93	138	138	25
Mindanao	2026	5	7	10	101	138	138	25
Mindanao	2026	5	7	11	105	138	138	25
Mindanao	2026	5	7	12	105	138	138	25
Mindanao	2026	5	7	13	105	138	138	25
Mindanao	2026	5	7	14	109	138	138	25
Mindanao	2026	5	7	15	110	138	138	25
Mindanao	2026	5	7	16	106	138	138	25
Mindanao	2026	5	7	17	101	138	138	25
Mindanao	2026	5	7	18	103	138	138	25
Mindanao	2026	5	7	19	105	138	138	25
Mindanao	2026	5	7	20	103	138	138	25
Mindanao	2026	5	7	21	101	138	138	25
Mindanao	2026	5	7	22	93	138	138	25
Mindanao	2026	5	7	23	90	138	138	25
Mindanao	2026	5	7	24	83	138	138	25
Mindanao	2026	5	8	1	81	138	138	25
Mindanao	2026	5	8	2	78	138	138	25
Mindanao	2026	5	8	3	75	138	138	25
Mindanao	2026	5	8	4	74	138	138	25
Mindanao	2026	5	8	5	78	138	138	25
Mindanao	2026	5	8	6	78	138	138	25
Mindanao	2026	5	8	7	74	138	138	25
Mindanao	2026	5	8	8	85	138	138	25
Mindanao	2026	5	8	9	98	138	138	25
Mindanao	2026	5	8	10	105	138	138	25
Mindanao	2026	5	8	11	108	138	138	25
Mindanao	2026	5	8	12	108	138	138	25
Mindanao	2026	5	8	13	108	138	138	25
Mindanao	2026	5	8	14	110	138	138	25
Mindanao	2026	5	8	15	109	138	138	25
Mindanao	2026	5	8	16	104	138	138	25
Mindanao	2026	5	8	17	100	138	138	25
Mindanao	2026	5	8	18	103	138	138	25
Mindanao	2026	5	8	19	102	138	138	25
Mindanao	2026	5	8	20	101	138	138	25
Mindanao	2026	5	8	21	99	138	138	25
Mindanao	2026	5	8	22	93	138	138	25
Mindanao	2026	5	8	23	87	138	138	25
Mindanao	2026	5	8	24	83	138	138	25
Mindanao	2026	5	9	1	79	138	138	25
Mindanao	2026	5	9	2	77	138	138	25
Mindanao	2026	5	9	3	75	138	138	25
Mindanao	2026	5	9	4	72	138	138	25
Mindanao	2026	5	9	5	75	138	138	25
Mindanao	2026	5	9	6	75	138	138	25
Mindanao	2026	5	9	7	72	138	138	25
Mindanao	2026	5	9	8	78	138	138	25
Mindanao	2026	5	9	9	88	138	138	25
Mindanao	2026	5	9	10	92	138	138	25
Mindanao	2026	5	9	11	98	138	138	25
Mindanao	2026	5	9	12	99	138	138	25
Mindanao	2026	5	9	13	101	138	138	25
Mindanao	2026	5	9	14	105	138	138	25
Mindanao	2026	5	9	15	102	138	138	25
Mindanao	2026	5	9	16	99	138	138	25
Mindanao	2026	5	9	17	97	138	138	25
Mindanao	2026	5	9	18	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	9	19	104	138	138	25
Mindanao	2026	5	9	20	102	138	138	25
Mindanao	2026	5	9	21	99	138	138	25
Mindanao	2026	5	9	22	94	138	138	25
Mindanao	2026	5	9	23	88	138	138	25
Mindanao	2026	5	9	24	84	138	138	25
Mindanao	2026	5	10	1	79	138	138	25
Mindanao	2026	5	10	2	77	138	138	25
Mindanao	2026	5	10	3	74	138	138	25
Mindanao	2026	5	10	4	72	138	138	25
Mindanao	2026	5	10	5	73	138	138	25
Mindanao	2026	5	10	6	72	138	138	25
Mindanao	2026	5	10	7	69	138	138	25
Mindanao	2026	5	10	8	72	138	138	25
Mindanao	2026	5	10	9	78	138	138	25
Mindanao	2026	5	10	10	84	138	138	25
Mindanao	2026	5	10	11	88	138	138	25
Mindanao	2026	5	10	12	90	138	138	25
Mindanao	2026	5	10	13	91	138	138	25
Mindanao	2026	5	10	14	92	138	138	25
Mindanao	2026	5	10	15	91	138	138	25
Mindanao	2026	5	10	16	88	138	138	25
Mindanao	2026	5	10	17	87	138	138	25
Mindanao	2026	5	10	18	95	138	138	25
Mindanao	2026	5	10	19	100	138	138	25
Mindanao	2026	5	10	20	100	138	138	25
Mindanao	2026	5	10	21	98	138	138	25
Mindanao	2026	5	10	22	93	138	138	25
Mindanao	2026	5	10	23	87	138	138	25
Mindanao	2026	5	10	24	84	138	138	25
Mindanao	2026	5	11	1	80	138	138	25
Mindanao	2026	5	11	2	77	138	138	25
Mindanao	2026	5	11	3	74	138	138	25
Mindanao	2026	5	11	4	73	138	138	25
Mindanao	2026	5	11	5	79	138	138	25
Mindanao	2026	5	11	6	80	138	138	25
Mindanao	2026	5	11	7	74	138	138	25
Mindanao	2026	5	11	8	86	138	138	25
Mindanao	2026	5	11	9	101	138	138	25
Mindanao	2026	5	11	10	107	138	138	25
Mindanao	2026	5	11	11	112	138	138	25
Mindanao	2026	5	11	12	112	138	138	25
Mindanao	2026	5	11	13	113	138	138	25
Mindanao	2026	5	11	14	117	138	138	25
Mindanao	2026	5	11	15	116	138	138	25
Mindanao	2026	5	11	16	115	138	138	25
Mindanao	2026	5	11	17	107	138	138	25
Mindanao	2026	5	11	18	106	138	138	25
Mindanao	2026	5	11	19	111	138	138	25
Mindanao	2026	5	11	20	109	138	138	25
Mindanao	2026	5	11	21	105	138	138	25
Mindanao	2026	5	11	22	100	138	138	25
Mindanao	2026	5	11	23	94	138	138	25
Mindanao	2026	5	11	24	89	138	138	25
Mindanao	2026	5	12	1	84	138	138	25
Mindanao	2026	5	12	2	81	138	138	25
Mindanao	2026	5	12	3	78	138	138	25
Mindanao	2026	5	12	4	77	138	138	25
Mindanao	2026	5	12	5	79	138	138	25
Mindanao	2026	5	12	6	82	138	138	25
Mindanao	2026	5	12	7	77	138	138	25
Mindanao	2026	5	12	8	86	138	138	25
Mindanao	2026	5	12	9	102	138	138	25
Mindanao	2026	5	12	10	108	138	138	25
Mindanao	2026	5	12	11	113	138	138	25
Mindanao	2026	5	12	12	113	138	138	25
Mindanao	2026	5	12	13	114	138	138	25
Mindanao	2026	5	12	14	120	138	138	25
Mindanao	2026	5	12	15	117	138	138	25
Mindanao	2026	5	12	16	115	138	138	25
Mindanao	2026	5	12	17	108	138	138	25
Mindanao	2026	5	12	18	109	138	138	25
Mindanao	2026	5	12	19	112	138	138	25
Mindanao	2026	5	12	20	108	138	138	25
Mindanao	2026	5	12	21	107	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	12	22	100	138	138	25
Mindanao	2026	5	12	23	93	138	138	25
Mindanao	2026	5	12	24	88	138	138	25
Mindanao	2026	5	13	1	84	138	138	25
Mindanao	2026	5	13	2	81	138	138	25
Mindanao	2026	5	13	3	78	138	138	25
Mindanao	2026	5	13	4	77	138	138	25
Mindanao	2026	5	13	5	81	138	138	25
Mindanao	2026	5	13	6	80	138	138	25
Mindanao	2026	5	13	7	74	138	138	25
Mindanao	2026	5	13	8	86	138	138	25
Mindanao	2026	5	13	9	102	138	138	25
Mindanao	2026	5	13	10	109	138	138	25
Mindanao	2026	5	13	11	114	138	138	25
Mindanao	2026	5	13	12	113	138	138	25
Mindanao	2026	5	13	13	114	138	138	25
Mindanao	2026	5	13	14	117	138	138	25
Mindanao	2026	5	13	15	117	138	138	25
Mindanao	2026	5	13	16	115	138	138	25
Mindanao	2026	5	13	17	108	138	138	25
Mindanao	2026	5	13	18	110	138	138	25
Mindanao	2026	5	13	19	111	138	138	25
Mindanao	2026	5	13	20	108	138	138	25
Mindanao	2026	5	13	21	106	138	138	25
Mindanao	2026	5	13	22	100	138	138	25
Mindanao	2026	5	13	23	93	138	138	25
Mindanao	2026	5	13	24	88	138	138	25
Mindanao	2026	5	14	1	84	138	138	25
Mindanao	2026	5	14	2	80	138	138	25
Mindanao	2026	5	14	3	78	138	138	25
Mindanao	2026	5	14	4	76	138	138	25
Mindanao	2026	5	14	5	79	138	138	25
Mindanao	2026	5	14	6	80	138	138	25
Mindanao	2026	5	14	7	76	138	138	25
Mindanao	2026	5	14	8	88	138	138	25
Mindanao	2026	5	14	9	99	138	138	25
Mindanao	2026	5	14	10	109	138	138	25
Mindanao	2026	5	14	11	113	138	138	25
Mindanao	2026	5	14	12	112	138	138	25
Mindanao	2026	5	14	13	114	138	138	25
Mindanao	2026	5	14	14	115	138	138	25
Mindanao	2026	5	14	15	115	138	138	25
Mindanao	2026	5	14	16	114	138	138	25
Mindanao	2026	5	14	17	106	138	138	25
Mindanao	2026	5	14	18	108	138	138	25
Mindanao	2026	5	14	19	111	138	138	25
Mindanao	2026	5	14	20	108	138	138	25
Mindanao	2026	5	14	21	106	138	138	25
Mindanao	2026	5	14	22	99	138	138	25
Mindanao	2026	5	14	23	93	138	138	25
Mindanao	2026	5	14	24	88	138	138	25
Mindanao	2026	5	15	1	83	138	138	25
Mindanao	2026	5	15	2	80	138	138	25
Mindanao	2026	5	15	3	76	138	138	25
Mindanao	2026	5	15	4	75	138	138	25
Mindanao	2026	5	15	5	79	138	138	25
Mindanao	2026	5	15	6	80	138	138	25
Mindanao	2026	5	15	7	77	138	138	25
Mindanao	2026	5	15	8	86	138	138	25
Mindanao	2026	5	15	9	99	138	138	25
Mindanao	2026	5	15	10	106	138	138	25
Mindanao	2026	5	15	11	112	138	138	25
Mindanao	2026	5	15	12	112	138	138	25
Mindanao	2026	5	15	13	114	138	138	25
Mindanao	2026	5	15	14	119	138	138	25
Mindanao	2026	5	15	15	117	138	138	25
Mindanao	2026	5	15	16	112	138	138	25
Mindanao	2026	5	15	17	106	138	138	25
Mindanao	2026	5	15	18	107	138	138	25
Mindanao	2026	5	15	19	108	138	138	25
Mindanao	2026	5	15	20	106	138	138	25
Mindanao	2026	5	15	21	104	138	138	25
Mindanao	2026	5	15	22	100	138	138	25
Mindanao	2026	5	15	23	93	138	138	25
Mindanao	2026	5	15	24	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	16	1	85	138	138	25
Mindanao	2026	5	16	2	82	138	138	25
Mindanao	2026	5	16	3	78	138	138	25
Mindanao	2026	5	16	4	75	138	138	25
Mindanao	2026	5	16	5	75	138	138	25
Mindanao	2026	5	16	6	76	138	138	25
Mindanao	2026	5	16	7	75	138	138	25
Mindanao	2026	5	16	8	80	138	138	25
Mindanao	2026	5	16	9	89	138	138	25
Mindanao	2026	5	16	10	95	138	138	25
Mindanao	2026	5	16	11	102	138	138	25
Mindanao	2026	5	16	12	102	138	138	25
Mindanao	2026	5	16	13	105	138	138	25
Mindanao	2026	5	16	14	109	138	138	25
Mindanao	2026	5	16	15	105	138	138	25
Mindanao	2026	5	16	16	102	138	138	25
Mindanao	2026	5	16	17	100	138	138	25
Mindanao	2026	5	16	18	105	138	138	25
Mindanao	2026	5	16	19	108	138	138	25
Mindanao	2026	5	16	20	106	138	138	25
Mindanao	2026	5	16	21	105	138	138	25
Mindanao	2026	5	16	22	98	138	138	25
Mindanao	2026	5	16	23	93	138	138	25
Mindanao	2026	5	16	24	88	138	138	25
Mindanao	2026	5	17	1	84	138	138	25
Mindanao	2026	5	17	2	80	138	138	25
Mindanao	2026	5	17	3	78	138	138	25
Mindanao	2026	5	17	4	76	138	138	25
Mindanao	2026	5	17	5	77	138	138	25
Mindanao	2026	5	17	6	74	138	138	25
Mindanao	2026	5	17	7	74	138	138	25
Mindanao	2026	5	17	8	76	138	138	25
Mindanao	2026	5	17	9	81	138	138	25
Mindanao	2026	5	17	10	84	138	138	25
Mindanao	2026	5	17	11	91	138	138	25
Mindanao	2026	5	17	12	91	138	138	25
Mindanao	2026	5	17	13	94	138	138	25
Mindanao	2026	5	17	14	95	138	138	25
Mindanao	2026	5	17	15	94	138	138	25
Mindanao	2026	5	17	16	92	138	138	25
Mindanao	2026	5	17	17	90	138	138	25
Mindanao	2026	5	17	18	97	138	138	25
Mindanao	2026	5	17	19	100	138	138	25
Mindanao	2026	5	17	20	97	138	138	25
Mindanao	2026	5	17	21	95	138	138	25
Mindanao	2026	5	17	22	91	138	138	25
Mindanao	2026	5	17	23	85	138	138	25
Mindanao	2026	5	17	24	80	138	138	25
Mindanao	2026	5	18	1	77	138	138	25
Mindanao	2026	5	18	2	74	138	138	25
Mindanao	2026	5	18	3	72	138	138	25
Mindanao	2026	5	18	4	71	138	138	25
Mindanao	2026	5	18	5	75	138	138	25
Mindanao	2026	5	18	6	75	138	138	25
Mindanao	2026	5	18	7	72	138	138	25
Mindanao	2026	5	18	8	83	138	138	25
Mindanao	2026	5	18	9	97	138	138	25
Mindanao	2026	5	18	10	106	138	138	25
Mindanao	2026	5	18	11	108	138	138	25
Mindanao	2026	5	18	12	110	138	138	25
Mindanao	2026	5	18	13	111	138	138	25
Mindanao	2026	5	18	14	116	138	138	25
Mindanao	2026	5	18	15	116	138	138	25
Mindanao	2026	5	18	16	111	138	138	25
Mindanao	2026	5	18	17	105	138	138	25
Mindanao	2026	5	18	18	106	138	138	25
Mindanao	2026	5	18	19	107	138	138	25
Mindanao	2026	5	18	20	102	138	138	25
Mindanao	2026	5	18	21	99	138	138	25
Mindanao	2026	5	18	22	95	138	138	25
Mindanao	2026	5	18	23	89	138	138	25
Mindanao	2026	5	18	24	84	138	138	25
Mindanao	2026	5	19	1	81	138	138	25
Mindanao	2026	5	19	2	77	138	138	25
Mindanao	2026	5	19	3	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	19	4	71	138	138	25
Mindanao	2026	5	19	5	76	138	138	25
Mindanao	2026	5	19	6	78	138	138	25
Mindanao	2026	5	19	7	69	138	138	25
Mindanao	2026	5	19	8	83	138	138	25
Mindanao	2026	5	19	9	98	138	138	25
Mindanao	2026	5	19	10	106	138	138	25
Mindanao	2026	5	19	11	111	138	138	25
Mindanao	2026	5	19	12	112	138	138	25
Mindanao	2026	5	19	13	114	138	138	25
Mindanao	2026	5	19	14	117	138	138	25
Mindanao	2026	5	19	15	116	138	138	25
Mindanao	2026	5	19	16	111	138	138	25
Mindanao	2026	5	19	17	104	138	138	25
Mindanao	2026	5	19	18	106	138	138	25
Mindanao	2026	5	19	19	106	138	138	25
Mindanao	2026	5	19	20	103	138	138	25
Mindanao	2026	5	19	21	101	138	138	25
Mindanao	2026	5	19	22	94	138	138	25
Mindanao	2026	5	19	23	89	138	138	25
Mindanao	2026	5	19	24	83	138	138	25
Mindanao	2026	5	20	1	79	138	138	25
Mindanao	2026	5	20	2	78	138	138	25
Mindanao	2026	5	20	3	75	138	138	25
Mindanao	2026	5	20	4	74	138	138	25
Mindanao	2026	5	20	5	78	138	138	25
Mindanao	2026	5	20	6	78	138	138	25
Mindanao	2026	5	20	7	74	138	138	25
Mindanao	2026	5	20	8	86	138	138	25
Mindanao	2026	5	20	9	99	138	138	25
Mindanao	2026	5	20	10	106	138	138	25
Mindanao	2026	5	20	11	107	138	138	25
Mindanao	2026	5	20	12	108	138	138	25
Mindanao	2026	5	20	13	111	138	138	25
Mindanao	2026	5	20	14	115	138	138	25
Mindanao	2026	5	20	15	113	138	138	25
Mindanao	2026	5	20	16	109	138	138	25
Mindanao	2026	5	20	17	102	138	138	25
Mindanao	2026	5	20	18	104	138	138	25
Mindanao	2026	5	20	19	106	138	138	25
Mindanao	2026	5	20	20	103	138	138	25
Mindanao	2026	5	20	21	100	138	138	25
Mindanao	2026	5	20	22	95	138	138	25
Mindanao	2026	5	20	23	88	138	138	25
Mindanao	2026	5	20	24	85	138	138	25
Mindanao	2026	5	21	1	79	138	138	25
Mindanao	2026	5	21	2	77	138	138	25
Mindanao	2026	5	21	3	75	138	138	25
Mindanao	2026	5	21	4	73	138	138	25
Mindanao	2026	5	21	5	77	138	138	25
Mindanao	2026	5	21	6	79	138	138	25
Mindanao	2026	5	21	7	74	138	138	25
Mindanao	2026	5	21	8	84	138	138	25
Mindanao	2026	5	21	9	95	138	138	25
Mindanao	2026	5	21	10	102	138	138	25
Mindanao	2026	5	21	11	108	138	138	25
Mindanao	2026	5	21	12	108	138	138	25
Mindanao	2026	5	21	13	109	138	138	25
Mindanao	2026	5	21	14	113	138	138	25
Mindanao	2026	5	21	15	107	138	138	25
Mindanao	2026	5	21	16	103	138	138	25
Mindanao	2026	5	21	17	98	138	138	25
Mindanao	2026	5	21	18	100	138	138	25
Mindanao	2026	5	21	19	103	138	138	25
Mindanao	2026	5	21	20	100	138	138	25
Mindanao	2026	5	21	21	99	138	138	25
Mindanao	2026	5	21	22	93	138	138	25
Mindanao	2026	5	21	23	87	138	138	25
Mindanao	2026	5	21	24	83	138	138	25
Mindanao	2026	5	22	1	79	138	138	25
Mindanao	2026	5	22	2	76	138	138	25
Mindanao	2026	5	22	3	74	138	138	25
Mindanao	2026	5	22	4	73	138	138	25
Mindanao	2026	5	22	5	75	138	138	25
Mindanao	2026	5	22	6	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	22	7	76	138	138	25
Mindanao	2026	5	22	8	85	138	138	25
Mindanao	2026	5	22	9	98	138	138	25
Mindanao	2026	5	22	10	104	138	138	25
Mindanao	2026	5	22	11	108	138	138	25
Mindanao	2026	5	22	12	108	138	138	25
Mindanao	2026	5	22	13	108	138	138	25
Mindanao	2026	5	22	14	109	138	138	25
Mindanao	2026	5	22	15	105	138	138	25
Mindanao	2026	5	22	16	101	138	138	25
Mindanao	2026	5	22	17	97	138	138	25
Mindanao	2026	5	22	18	101	138	138	25
Mindanao	2026	5	22	19	102	138	138	25
Mindanao	2026	5	22	20	97	138	138	25
Mindanao	2026	5	22	21	95	138	138	25
Mindanao	2026	5	22	22	90	138	138	25
Mindanao	2026	5	22	23	84	138	138	25
Mindanao	2026	5	22	24	78	138	138	25
Mindanao	2026	5	23	1	76	138	138	25
Mindanao	2026	5	23	2	73	138	138	25
Mindanao	2026	5	23	3	72	138	138	25
Mindanao	2026	5	23	4	70	138	138	25
Mindanao	2026	5	23	5	73	138	138	25
Mindanao	2026	5	23	6	73	138	138	25
Mindanao	2026	5	23	7	72	138	138	25
Mindanao	2026	5	23	8	76	138	138	25
Mindanao	2026	5	23	9	86	138	138	25
Mindanao	2026	5	23	10	93	138	138	25
Mindanao	2026	5	23	11	97	138	138	25
Mindanao	2026	5	23	12	93	138	138	25
Mindanao	2026	5	23	13	95	138	138	25
Mindanao	2026	5	23	14	98	138	138	25
Mindanao	2026	5	23	15	95	138	138	25
Mindanao	2026	5	23	16	93	138	138	25
Mindanao	2026	5	23	17	90	138	138	25
Mindanao	2026	5	23	18	96	138	138	25
Mindanao	2026	5	23	19	98	138	138	25
Mindanao	2026	5	23	20	96	138	138	25
Mindanao	2026	5	23	21	93	138	138	25
Mindanao	2026	5	23	22	89	138	138	25
Mindanao	2026	5	23	23	83	138	138	25
Mindanao	2026	5	23	24	79	138	138	25
Mindanao	2026	5	24	1	75	138	138	25
Mindanao	2026	5	24	2	73	138	138	25
Mindanao	2026	5	24	3	70	138	138	25
Mindanao	2026	5	24	4	69	138	138	25
Mindanao	2026	5	24	5	69	138	138	25
Mindanao	2026	5	24	6	70	138	138	25
Mindanao	2026	5	24	7	70	138	138	25
Mindanao	2026	5	24	8	71	138	138	25
Mindanao	2026	5	24	9	77	138	138	25
Mindanao	2026	5	24	10	81	138	138	25
Mindanao	2026	5	24	11	84	138	138	25
Mindanao	2026	5	24	12	87	138	138	25
Mindanao	2026	5	24	13	87	138	138	25
Mindanao	2026	5	24	14	87	138	138	25
Mindanao	2026	5	24	15	87	138	138	25
Mindanao	2026	5	24	16	84	138	138	25
Mindanao	2026	5	24	17	84	138	138	25
Mindanao	2026	5	24	18	92	138	138	25
Mindanao	2026	5	24	19	96	138	138	25
Mindanao	2026	5	24	20	93	138	138	25
Mindanao	2026	5	24	21	90	138	138	25
Mindanao	2026	5	24	22	90	138	138	25
Mindanao	2026	5	24	23	84	138	138	25
Mindanao	2026	5	24	24	78	138	138	25
Mindanao	2026	5	25	1	75	138	138	25
Mindanao	2026	5	25	2	73	138	138	25
Mindanao	2026	5	25	3	71	138	138	25
Mindanao	2026	5	25	4	68	138	138	25
Mindanao	2026	5	25	5	74	138	138	25
Mindanao	2026	5	25	6	75	138	138	25
Mindanao	2026	5	25	7	70	138	138	25
Mindanao	2026	5	25	8	83	138	138	25
Mindanao	2026	5	25	9	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	25	10	105	138	138	25
Mindanao	2026	5	25	11	109	138	138	25
Mindanao	2026	5	25	12	109	138	138	25
Mindanao	2026	5	25	13	109	138	138	25
Mindanao	2026	5	25	14	115	138	138	25
Mindanao	2026	5	25	15	114	138	138	25
Mindanao	2026	5	25	16	110	138	138	25
Mindanao	2026	5	25	17	103	138	138	25
Mindanao	2026	5	25	18	106	138	138	25
Mindanao	2026	5	25	19	105	138	138	25
Mindanao	2026	5	25	20	101	138	138	25
Mindanao	2026	5	25	21	98	138	138	25
Mindanao	2026	5	25	22	91	138	138	25
Mindanao	2026	5	25	23	87	138	138	25
Mindanao	2026	5	25	24	84	138	138	25
Mindanao	2026	5	26	1	79	138	138	25
Mindanao	2026	5	26	2	77	138	138	25
Mindanao	2026	5	26	3	75	138	138	25
Mindanao	2026	5	26	4	73	138	138	25
Mindanao	2026	5	26	5	77	138	138	25
Mindanao	2026	5	26	6	79	138	138	25
Mindanao	2026	5	26	7	74	138	138	25
Mindanao	2026	5	26	8	85	138	138	25
Mindanao	2026	5	26	9	98	138	138	25
Mindanao	2026	5	26	10	104	138	138	25
Mindanao	2026	5	26	11	109	138	138	25
Mindanao	2026	5	26	12	107	138	138	25
Mindanao	2026	5	26	13	110	138	138	25
Mindanao	2026	5	26	14	114	138	138	25
Mindanao	2026	5	26	15	113	138	138	25
Mindanao	2026	5	26	16	110	138	138	25
Mindanao	2026	5	26	17	105	138	138	25
Mindanao	2026	5	26	18	103	138	138	25
Mindanao	2026	5	26	19	107	138	138	25
Mindanao	2026	5	26	20	103	138	138	25
Mindanao	2026	5	26	21	99	138	138	25
Mindanao	2026	5	26	22	94	138	138	25
Mindanao	2026	5	26	23	89	138	138	25
Mindanao	2026	5	26	24	84	138	138	25
Mindanao	2026	5	27	1	80	138	138	25
Mindanao	2026	5	27	2	78	138	138	25
Mindanao	2026	5	27	3	76	138	138	25
Mindanao	2026	5	27	4	75	138	138	25
Mindanao	2026	5	27	5	77	138	138	25
Mindanao	2026	5	27	6	80	138	138	25
Mindanao	2026	5	27	7	74	138	138	25
Mindanao	2026	5	27	8	83	138	138	25
Mindanao	2026	5	27	9	96	138	138	25
Mindanao	2026	5	27	10	103	138	138	25
Mindanao	2026	5	27	11	106	138	138	25
Mindanao	2026	5	27	12	106	138	138	25
Mindanao	2026	5	27	13	108	138	138	25
Mindanao	2026	5	27	14	111	138	138	25
Mindanao	2026	5	27	15	108	138	138	25
Mindanao	2026	5	27	16	106	138	138	25
Mindanao	2026	5	27	17	101	138	138	25
Mindanao	2026	5	27	18	100	138	138	25
Mindanao	2026	5	27	19	100	138	138	25
Mindanao	2026	5	27	20	101	138	138	25
Mindanao	2026	5	27	21	98	138	138	25
Mindanao	2026	5	27	22	92	138	138	25
Mindanao	2026	5	27	23	85	138	138	25
Mindanao	2026	5	27	24	82	138	138	25
Mindanao	2026	5	28	1	79	138	138	25
Mindanao	2026	5	28	2	76	138	138	25
Mindanao	2026	5	28	3	74	138	138	25
Mindanao	2026	5	28	4	73	138	138	25
Mindanao	2026	5	28	5	77	138	138	25
Mindanao	2026	5	28	6	77	138	138	25
Mindanao	2026	5	28	7	73	138	138	25
Mindanao	2026	5	28	8	84	138	138	25
Mindanao	2026	5	28	9	95	138	138	25
Mindanao	2026	5	28	10	103	138	138	25
Mindanao	2026	5	28	11	106	138	138	25
Mindanao	2026	5	28	12	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	28	13	106	138	138	25
Mindanao	2026	5	28	14	105	138	138	25
Mindanao	2026	5	28	15	103	138	138	25
Mindanao	2026	5	28	16	102	138	138	25
Mindanao	2026	5	28	17	98	138	138	25
Mindanao	2026	5	28	18	101	138	138	25
Mindanao	2026	5	28	19	101	138	138	25
Mindanao	2026	5	28	20	98	138	138	25
Mindanao	2026	5	28	21	96	138	138	25
Mindanao	2026	5	28	22	88	138	138	25
Mindanao	2026	5	28	23	85	138	138	25
Mindanao	2026	5	28	24	79	138	138	25
Mindanao	2026	5	29	1	77	138	138	25
Mindanao	2026	5	29	2	74	138	138	25
Mindanao	2026	5	29	3	73	138	138	25
Mindanao	2026	5	29	4	72	138	138	25
Mindanao	2026	5	29	5	75	138	138	25
Mindanao	2026	5	29	6	77	138	138	25
Mindanao	2026	5	29	7	74	138	138	25
Mindanao	2026	5	29	8	85	138	138	25
Mindanao	2026	5	29	9	97	138	138	25
Mindanao	2026	5	29	10	105	138	138	25
Mindanao	2026	5	29	11	107	138	138	25
Mindanao	2026	5	29	12	107	138	138	25
Mindanao	2026	5	29	13	108	138	138	25
Mindanao	2026	5	29	14	111	138	138	25
Mindanao	2026	5	29	15	110	138	138	25
Mindanao	2026	5	29	16	108	138	138	25
Mindanao	2026	5	29	17	101	138	138	25
Mindanao	2026	5	29	18	104	138	138	25
Mindanao	2026	5	29	19	105	138	138	25
Mindanao	2026	5	29	20	101	138	138	25
Mindanao	2026	5	29	21	98	138	138	25
Mindanao	2026	5	29	22	93	138	138	25
Mindanao	2026	5	29	23	89	138	138	25
Mindanao	2026	5	29	24	83	138	138	25
Mindanao	2026	5	30	1	80	138	138	25
Mindanao	2026	5	30	2	77	138	138	25
Mindanao	2026	5	30	3	73	138	138	25
Mindanao	2026	5	30	4	73	138	138	25
Mindanao	2026	5	30	5	75	138	138	25
Mindanao	2026	5	30	6	74	138	138	25
Mindanao	2026	5	30	7	74	138	138	25
Mindanao	2026	5	30	8	79	138	138	25
Mindanao	2026	5	30	9	87	138	138	25
Mindanao	2026	5	30	10	91	138	138	25
Mindanao	2026	5	30	11	96	138	138	25
Mindanao	2026	5	30	12	90	138	138	25
Mindanao	2026	5	30	13	90	138	138	25
Mindanao	2026	5	30	14	94	138	138	25
Mindanao	2026	5	30	15	92	138	138	25
Mindanao	2026	5	30	16	92	138	138	25
Mindanao	2026	5	30	17	91	138	138	25
Mindanao	2026	5	30	18	95	138	138	25
Mindanao	2026	5	30	19	98	138	138	25
Mindanao	2026	5	30	20	95	138	138	25
Mindanao	2026	5	30	21	93	138	138	25
Mindanao	2026	5	30	22	88	138	138	25
Mindanao	2026	5	30	23	83	138	138	25
Mindanao	2026	5	30	24	78	138	138	25
Mindanao	2026	5	31	1	74	138	138	25
Mindanao	2026	5	31	2	73	138	138	25
Mindanao	2026	5	31	3	69	138	138	25
Mindanao	2026	5	31	4	68	138	138	25
Mindanao	2026	5	31	5	65	138	138	25
Mindanao	2026	5	31	6	67	138	138	25
Mindanao	2026	5	31	7	65	138	138	25
Mindanao	2026	5	31	8	67	138	138	25
Mindanao	2026	5	31	9	71	138	138	25
Mindanao	2026	5	31	10	77	138	138	25
Mindanao	2026	5	31	11	79	138	138	25
Mindanao	2026	5	31	12	78	138	138	25
Mindanao	2026	5	31	13	76	138	138	25
Mindanao	2026	5	31	14	77	138	138	25
Mindanao	2026	5	31	15	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	5	31	16	78	138	138	25
Mindanao	2026	5	31	17	79	138	138	25
Mindanao	2026	5	31	18	87	138	138	25
Mindanao	2026	5	31	19	94	138	138	25
Mindanao	2026	5	31	20	94	138	138	25
Mindanao	2026	5	31	21	92	138	138	25
Mindanao	2026	5	31	22	87	138	138	25
Mindanao	2026	5	31	23	82	138	138	25
Mindanao	2026	5	31	24	78	138	138	25
Mindanao	2026	6	1	1	74	138	138	25
Mindanao	2026	6	1	2	72	138	138	25
Mindanao	2026	6	1	3	70	138	138	25
Mindanao	2026	6	1	4	69	138	138	25
Mindanao	2026	6	1	5	73	138	138	25
Mindanao	2026	6	1	6	75	138	138	25
Mindanao	2026	6	1	7	70	138	138	25
Mindanao	2026	6	1	8	81	138	138	25
Mindanao	2026	6	1	9	94	138	138	25
Mindanao	2026	6	1	10	104	138	138	25
Mindanao	2026	6	1	11	107	138	138	25
Mindanao	2026	6	1	12	106	138	138	25
Mindanao	2026	6	1	13	107	138	138	25
Mindanao	2026	6	1	14	111	138	138	25
Mindanao	2026	6	1	15	111	138	138	25
Mindanao	2026	6	1	16	108	138	138	25
Mindanao	2026	6	1	17	101	138	138	25
Mindanao	2026	6	1	18	103	138	138	25
Mindanao	2026	6	1	19	105	138	138	25
Mindanao	2026	6	1	20	102	138	138	25
Mindanao	2026	6	1	21	98	138	138	25
Mindanao	2026	6	1	22	92	138	138	25
Mindanao	2026	6	1	23	88	138	138	25
Mindanao	2026	6	1	24	82	138	138	25
Mindanao	2026	6	2	1	80	138	138	25
Mindanao	2026	6	2	2	77	138	138	25
Mindanao	2026	6	2	3	73	138	138	25
Mindanao	2026	6	2	4	74	138	138	25
Mindanao	2026	6	2	5	78	138	138	25
Mindanao	2026	6	2	6	79	138	138	25
Mindanao	2026	6	2	7	75	138	138	25
Mindanao	2026	6	2	8	87	138	138	25
Mindanao	2026	6	2	9	98	138	138	25
Mindanao	2026	6	2	10	106	138	138	25
Mindanao	2026	6	2	11	110	138	138	25
Mindanao	2026	6	2	12	110	138	138	25
Mindanao	2026	6	2	13	111	138	138	25
Mindanao	2026	6	2	14	115	138	138	25
Mindanao	2026	6	2	15	115	138	138	25
Mindanao	2026	6	2	16	111	138	138	25
Mindanao	2026	6	2	17	105	138	138	25
Mindanao	2026	6	2	18	106	138	138	25
Mindanao	2026	6	2	19	109	138	138	25
Mindanao	2026	6	2	20	105	138	138	25
Mindanao	2026	6	2	21	101	138	138	25
Mindanao	2026	6	2	22	97	138	138	25
Mindanao	2026	6	2	23	89	138	138	25
Mindanao	2026	6	2	24	85	138	138	25
Mindanao	2026	6	3	1	82	138	138	25
Mindanao	2026	6	3	2	80	138	138	25
Mindanao	2026	6	3	3	77	138	138	25
Mindanao	2026	6	3	4	76	138	138	25
Mindanao	2026	6	3	5	78	138	138	25
Mindanao	2026	6	3	6	79	138	138	25
Mindanao	2026	6	3	7	76	138	138	25
Mindanao	2026	6	3	8	85	138	138	25
Mindanao	2026	6	3	9	99	138	138	25
Mindanao	2026	6	3	10	107	138	138	25
Mindanao	2026	6	3	11	111	138	138	25
Mindanao	2026	6	3	12	109	138	138	25
Mindanao	2026	6	3	13	110	138	138	25
Mindanao	2026	6	3	14	114	138	138	25
Mindanao	2026	6	3	15	111	138	138	25
Mindanao	2026	6	3	16	110	138	138	25
Mindanao	2026	6	3	17	104	138	138	25
Mindanao	2026	6	3	18	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	3	19	107	138	138	25
Mindanao	2026	6	3	20	103	138	138	25
Mindanao	2026	6	3	21	101	138	138	25
Mindanao	2026	6	3	22	95	138	138	25
Mindanao	2026	6	3	23	90	138	138	25
Mindanao	2026	6	3	24	86	138	138	25
Mindanao	2026	6	4	1	82	138	138	25
Mindanao	2026	6	4	2	80	138	138	25
Mindanao	2026	6	4	3	75	138	138	25
Mindanao	2026	6	4	4	75	138	138	25
Mindanao	2026	6	4	5	79	138	138	25
Mindanao	2026	6	4	6	80	138	138	25
Mindanao	2026	6	4	7	76	138	138	25
Mindanao	2026	6	4	8	84	138	138	25
Mindanao	2026	6	4	9	96	138	138	25
Mindanao	2026	6	4	10	105	138	138	25
Mindanao	2026	6	4	11	109	138	138	25
Mindanao	2026	6	4	12	108	138	138	25
Mindanao	2026	6	4	13	110	138	138	25
Mindanao	2026	6	4	14	115	138	138	25
Mindanao	2026	6	4	15	113	138	138	25
Mindanao	2026	6	4	16	111	138	138	25
Mindanao	2026	6	4	17	103	138	138	25
Mindanao	2026	6	4	18	103	138	138	25
Mindanao	2026	6	4	19	106	138	138	25
Mindanao	2026	6	4	20	105	138	138	25
Mindanao	2026	6	4	21	104	138	138	25
Mindanao	2026	6	4	22	96	138	138	25
Mindanao	2026	6	4	23	91	138	138	25
Mindanao	2026	6	4	24	86	138	138	25
Mindanao	2026	6	5	1	82	138	138	25
Mindanao	2026	6	5	2	79	138	138	25
Mindanao	2026	6	5	3	76	138	138	25
Mindanao	2026	6	5	4	75	138	138	25
Mindanao	2026	6	5	5	77	138	138	25
Mindanao	2026	6	5	6	77	138	138	25
Mindanao	2026	6	5	7	72	138	138	25
Mindanao	2026	6	5	8	84	138	138	25
Mindanao	2026	6	5	9	97	138	138	25
Mindanao	2026	6	5	10	105	138	138	25
Mindanao	2026	6	5	11	108	138	138	25
Mindanao	2026	6	5	12	108	138	138	25
Mindanao	2026	6	5	13	109	138	138	25
Mindanao	2026	6	5	14	109	138	138	25
Mindanao	2026	6	5	15	111	138	138	25
Mindanao	2026	6	5	16	108	138	138	25
Mindanao	2026	6	5	17	102	138	138	25
Mindanao	2026	6	5	18	105	138	138	25
Mindanao	2026	6	5	19	105	138	138	25
Mindanao	2026	6	5	20	103	138	138	25
Mindanao	2026	6	5	21	102	138	138	25
Mindanao	2026	6	5	22	95	138	138	25
Mindanao	2026	6	5	23	89	138	138	25
Mindanao	2026	6	5	24	85	138	138	25
Mindanao	2026	6	6	1	80	138	138	25
Mindanao	2026	6	6	2	77	138	138	25
Mindanao	2026	6	6	3	75	138	138	25
Mindanao	2026	6	6	4	73	138	138	25
Mindanao	2026	6	6	5	74	138	138	25
Mindanao	2026	6	6	6	73	138	138	25
Mindanao	2026	6	6	7	68	138	138	25
Mindanao	2026	6	6	8	75	138	138	25
Mindanao	2026	6	6	9	83	138	138	25
Mindanao	2026	6	6	10	91	138	138	25
Mindanao	2026	6	6	11	95	138	138	25
Mindanao	2026	6	6	12	95	138	138	25
Mindanao	2026	6	6	13	97	138	138	25
Mindanao	2026	6	6	14	101	138	138	25
Mindanao	2026	6	6	15	97	138	138	25
Mindanao	2026	6	6	16	93	138	138	25
Mindanao	2026	6	6	17	90	138	138	25
Mindanao	2026	6	6	18	99	138	138	25
Mindanao	2026	6	6	19	101	138	138	25
Mindanao	2026	6	6	20	99	138	138	25
Mindanao	2026	6	6	21	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	6	22	92	138	138	25
Mindanao	2026	6	6	23	87	138	138	25
Mindanao	2026	6	6	24	83	138	138	25
Mindanao	2026	6	7	1	76	138	138	25
Mindanao	2026	6	7	2	75	138	138	25
Mindanao	2026	6	7	3	73	138	138	25
Mindanao	2026	6	7	4	66	138	138	25
Mindanao	2026	6	7	5	67	138	138	25
Mindanao	2026	6	7	6	66	138	138	25
Mindanao	2026	6	7	7	64	138	138	25
Mindanao	2026	6	7	8	68	138	138	25
Mindanao	2026	6	7	9	74	138	138	25
Mindanao	2026	6	7	10	79	138	138	25
Mindanao	2026	6	7	11	84	138	138	25
Mindanao	2026	6	7	12	85	138	138	25
Mindanao	2026	6	7	13	86	138	138	25
Mindanao	2026	6	7	14	87	138	138	25
Mindanao	2026	6	7	15	85	138	138	25
Mindanao	2026	6	7	16	83	138	138	25
Mindanao	2026	6	7	17	85	138	138	25
Mindanao	2026	6	7	18	92	138	138	25
Mindanao	2026	6	7	19	94	138	138	25
Mindanao	2026	6	7	20	94	138	138	25
Mindanao	2026	6	7	21	90	138	138	25
Mindanao	2026	6	7	22	85	138	138	25
Mindanao	2026	6	7	23	77	138	138	25
Mindanao	2026	6	7	24	75	138	138	25
Mindanao	2026	6	8	1	72	138	138	25
Mindanao	2026	6	8	2	69	138	138	25
Mindanao	2026	6	8	3	68	138	138	25
Mindanao	2026	6	8	4	67	138	138	25
Mindanao	2026	6	8	5	70	138	138	25
Mindanao	2026	6	8	6	72	138	138	25
Mindanao	2026	6	8	7	69	138	138	25
Mindanao	2026	6	8	8	77	138	138	25
Mindanao	2026	6	8	9	89	138	138	25
Mindanao	2026	6	8	10	96	138	138	25
Mindanao	2026	6	8	11	102	138	138	25
Mindanao	2026	6	8	12	102	138	138	25
Mindanao	2026	6	8	13	105	138	138	25
Mindanao	2026	6	8	14	109	138	138	25
Mindanao	2026	6	8	15	110	138	138	25
Mindanao	2026	6	8	16	106	138	138	25
Mindanao	2026	6	8	17	100	138	138	25
Mindanao	2026	6	8	18	103	138	138	25
Mindanao	2026	6	8	19	103	138	138	25
Mindanao	2026	6	8	20	101	138	138	25
Mindanao	2026	6	8	21	98	138	138	25
Mindanao	2026	6	8	22	94	138	138	25
Mindanao	2026	6	8	23	89	138	138	25
Mindanao	2026	6	8	24	81	138	138	25
Mindanao	2026	6	9	1	78	138	138	25
Mindanao	2026	6	9	2	76	138	138	25
Mindanao	2026	6	9	3	73	138	138	25
Mindanao	2026	6	9	4	72	138	138	25
Mindanao	2026	6	9	5	76	138	138	25
Mindanao	2026	6	9	6	77	138	138	25
Mindanao	2026	6	9	7	72	138	138	25
Mindanao	2026	6	9	8	78	138	138	25
Mindanao	2026	6	9	9	92	138	138	25
Mindanao	2026	6	9	10	102	138	138	25
Mindanao	2026	6	9	11	106	138	138	25
Mindanao	2026	6	9	12	105	138	138	25
Mindanao	2026	6	9	13	107	138	138	25
Mindanao	2026	6	9	14	111	138	138	25
Mindanao	2026	6	9	15	107	138	138	25
Mindanao	2026	6	9	16	103	138	138	25
Mindanao	2026	6	9	17	96	138	138	25
Mindanao	2026	6	9	18	100	138	138	25
Mindanao	2026	6	9	19	100	138	138	25
Mindanao	2026	6	9	20	97	138	138	25
Mindanao	2026	6	9	21	92	138	138	25
Mindanao	2026	6	9	22	88	138	138	25
Mindanao	2026	6	9	23	83	138	138	25
Mindanao	2026	6	9	24	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	10	1	76	138	138	25
Mindanao	2026	6	10	2	74	138	138	25
Mindanao	2026	6	10	3	72	138	138	25
Mindanao	2026	6	10	4	71	138	138	25
Mindanao	2026	6	10	5	74	138	138	25
Mindanao	2026	6	10	6	77	138	138	25
Mindanao	2026	6	10	7	71	138	138	25
Mindanao	2026	6	10	8	80	138	138	25
Mindanao	2026	6	10	9	92	138	138	25
Mindanao	2026	6	10	10	100	138	138	25
Mindanao	2026	6	10	11	105	138	138	25
Mindanao	2026	6	10	12	104	138	138	25
Mindanao	2026	6	10	13	105	138	138	25
Mindanao	2026	6	10	14	110	138	138	25
Mindanao	2026	6	10	15	107	138	138	25
Mindanao	2026	6	10	16	104	138	138	25
Mindanao	2026	6	10	17	99	138	138	25
Mindanao	2026	6	10	18	99	138	138	25
Mindanao	2026	6	10	19	100	138	138	25
Mindanao	2026	6	10	20	98	138	138	25
Mindanao	2026	6	10	21	96	138	138	25
Mindanao	2026	6	10	22	90	138	138	25
Mindanao	2026	6	10	23	85	138	138	25
Mindanao	2026	6	10	24	81	138	138	25
Mindanao	2026	6	11	1	77	138	138	25
Mindanao	2026	6	11	2	75	138	138	25
Mindanao	2026	6	11	3	72	138	138	25
Mindanao	2026	6	11	4	72	138	138	25
Mindanao	2026	6	11	5	76	138	138	25
Mindanao	2026	6	11	6	78	138	138	25
Mindanao	2026	6	11	7	71	138	138	25
Mindanao	2026	6	11	8	81	138	138	25
Mindanao	2026	6	11	9	94	138	138	25
Mindanao	2026	6	11	10	100	138	138	25
Mindanao	2026	6	11	11	106	138	138	25
Mindanao	2026	6	11	12	104	138	138	25
Mindanao	2026	6	11	13	107	138	138	25
Mindanao	2026	6	11	14	110	138	138	25
Mindanao	2026	6	11	15	108	138	138	25
Mindanao	2026	6	11	16	105	138	138	25
Mindanao	2026	6	11	17	101	138	138	25
Mindanao	2026	6	11	18	103	138	138	25
Mindanao	2026	6	11	19	103	138	138	25
Mindanao	2026	6	11	20	101	138	138	25
Mindanao	2026	6	11	21	99	138	138	25
Mindanao	2026	6	11	22	93	138	138	25
Mindanao	2026	6	11	23	88	138	138	25
Mindanao	2026	6	11	24	84	138	138	25
Mindanao	2026	6	12	1	73	138	138	25
Mindanao	2026	6	12	2	70	138	138	25
Mindanao	2026	6	12	3	68	138	138	25
Mindanao	2026	6	12	4	67	138	138	25
Mindanao	2026	6	12	5	68	138	138	25
Mindanao	2026	6	12	6	68	138	138	25
Mindanao	2026	6	12	7	66	138	138	25
Mindanao	2026	6	12	8	71	138	138	25
Mindanao	2026	6	12	9	79	138	138	25
Mindanao	2026	6	12	10	85	138	138	25
Mindanao	2026	6	12	11	89	138	138	25
Mindanao	2026	6	12	12	90	138	138	25
Mindanao	2026	6	12	13	92	138	138	25
Mindanao	2026	6	12	14	95	138	138	25
Mindanao	2026	6	12	15	96	138	138	25
Mindanao	2026	6	12	16	91	138	138	25
Mindanao	2026	6	12	17	89	138	138	25
Mindanao	2026	6	12	18	95	138	138	25
Mindanao	2026	6	12	19	100	138	138	25
Mindanao	2026	6	12	20	99	138	138	25
Mindanao	2026	6	12	21	98	138	138	25
Mindanao	2026	6	12	22	93	138	138	25
Mindanao	2026	6	12	23	86	138	138	25
Mindanao	2026	6	12	24	81	138	138	25
Mindanao	2026	6	13	1	77	138	138	25
Mindanao	2026	6	13	2	75	138	138	25
Mindanao	2026	6	13	3	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	13	4	72	138	138	25
Mindanao	2026	6	13	5	72	138	138	25
Mindanao	2026	6	13	6	72	138	138	25
Mindanao	2026	6	13	7	69	138	138	25
Mindanao	2026	6	13	8	76	138	138	25
Mindanao	2026	6	13	9	84	138	138	25
Mindanao	2026	6	13	10	90	138	138	25
Mindanao	2026	6	13	11	95	138	138	25
Mindanao	2026	6	13	12	93	138	138	25
Mindanao	2026	6	13	13	95	138	138	25
Mindanao	2026	6	13	14	99	138	138	25
Mindanao	2026	6	13	15	96	138	138	25
Mindanao	2026	6	13	16	93	138	138	25
Mindanao	2026	6	13	17	90	138	138	25
Mindanao	2026	6	13	18	96	138	138	25
Mindanao	2026	6	13	19	99	138	138	25
Mindanao	2026	6	13	20	96	138	138	25
Mindanao	2026	6	13	21	94	138	138	25
Mindanao	2026	6	13	22	89	138	138	25
Mindanao	2026	6	13	23	85	138	138	25
Mindanao	2026	6	13	24	81	138	138	25
Mindanao	2026	6	14	1	75	138	138	25
Mindanao	2026	6	14	2	74	138	138	25
Mindanao	2026	6	14	3	71	138	138	25
Mindanao	2026	6	14	4	68	138	138	25
Mindanao	2026	6	14	5	70	138	138	25
Mindanao	2026	6	14	6	68	138	138	25
Mindanao	2026	6	14	7	67	138	138	25
Mindanao	2026	6	14	8	69	138	138	25
Mindanao	2026	6	14	9	73	138	138	25
Mindanao	2026	6	14	10	78	138	138	25
Mindanao	2026	6	14	11	82	138	138	25
Mindanao	2026	6	14	12	83	138	138	25
Mindanao	2026	6	14	13	85	138	138	25
Mindanao	2026	6	14	14	86	138	138	25
Mindanao	2026	6	14	15	85	138	138	25
Mindanao	2026	6	14	16	83	138	138	25
Mindanao	2026	6	14	17	83	138	138	25
Mindanao	2026	6	14	18	90	138	138	25
Mindanao	2026	6	14	19	92	138	138	25
Mindanao	2026	6	14	20	92	138	138	25
Mindanao	2026	6	14	21	90	138	138	25
Mindanao	2026	6	14	22	86	138	138	25
Mindanao	2026	6	14	23	81	138	138	25
Mindanao	2026	6	14	24	78	138	138	25
Mindanao	2026	6	15	1	69	138	138	25
Mindanao	2026	6	15	2	68	138	138	25
Mindanao	2026	6	15	3	67	138	138	25
Mindanao	2026	6	15	4	66	138	138	25
Mindanao	2026	6	15	5	70	138	138	25
Mindanao	2026	6	15	6	74	138	138	25
Mindanao	2026	6	15	7	71	138	138	25
Mindanao	2026	6	15	8	78	138	138	25
Mindanao	2026	6	15	9	91	138	138	25
Mindanao	2026	6	15	10	99	138	138	25
Mindanao	2026	6	15	11	104	138	138	25
Mindanao	2026	6	15	12	105	138	138	25
Mindanao	2026	6	15	13	105	138	138	25
Mindanao	2026	6	15	14	110	138	138	25
Mindanao	2026	6	15	15	108	138	138	25
Mindanao	2026	6	15	16	106	138	138	25
Mindanao	2026	6	15	17	100	138	138	25
Mindanao	2026	6	15	18	100	138	138	25
Mindanao	2026	6	15	19	100	138	138	25
Mindanao	2026	6	15	20	98	138	138	25
Mindanao	2026	6	15	21	92	138	138	25
Mindanao	2026	6	15	22	87	138	138	25
Mindanao	2026	6	15	23	82	138	138	25
Mindanao	2026	6	15	24	77	138	138	25
Mindanao	2026	6	16	1	77	138	138	25
Mindanao	2026	6	16	2	75	138	138	25
Mindanao	2026	6	16	3	72	138	138	25
Mindanao	2026	6	16	4	71	138	138	25
Mindanao	2026	6	16	5	75	138	138	25
Mindanao	2026	6	16	6	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	16	7	71	138	138	25
Mindanao	2026	6	16	8	83	138	138	25
Mindanao	2026	6	16	9	97	138	138	25
Mindanao	2026	6	16	10	105	138	138	25
Mindanao	2026	6	16	11	108	138	138	25
Mindanao	2026	6	16	12	88	138	138	25
Mindanao	2026	6	16	13	100	138	138	25
Mindanao	2026	6	16	14	111	138	138	25
Mindanao	2026	6	16	15	111	138	138	25
Mindanao	2026	6	16	16	108	138	138	25
Mindanao	2026	6	16	17	101	138	138	25
Mindanao	2026	6	16	18	98	138	138	25
Mindanao	2026	6	16	19	100	138	138	25
Mindanao	2026	6	16	20	99	138	138	25
Mindanao	2026	6	16	21	99	138	138	25
Mindanao	2026	6	16	22	92	138	138	25
Mindanao	2026	6	16	23	87	138	138	25
Mindanao	2026	6	16	24	83	138	138	25
Mindanao	2026	6	17	1	80	138	138	25
Mindanao	2026	6	17	2	77	138	138	25
Mindanao	2026	6	17	3	74	138	138	25
Mindanao	2026	6	17	4	73	138	138	25
Mindanao	2026	6	17	5	76	138	138	25
Mindanao	2026	6	17	6	78	138	138	25
Mindanao	2026	6	17	7	73	138	138	25
Mindanao	2026	6	17	8	81	138	138	25
Mindanao	2026	6	17	9	92	138	138	25
Mindanao	2026	6	17	10	98	138	138	25
Mindanao	2026	6	17	11	103	138	138	25
Mindanao	2026	6	17	12	102	138	138	25
Mindanao	2026	6	17	13	103	138	138	25
Mindanao	2026	6	17	14	107	138	138	25
Mindanao	2026	6	17	15	103	138	138	25
Mindanao	2026	6	17	16	102	138	138	25
Mindanao	2026	6	17	17	98	138	138	25
Mindanao	2026	6	17	18	99	138	138	25
Mindanao	2026	6	17	19	102	138	138	25
Mindanao	2026	6	17	20	97	138	138	25
Mindanao	2026	6	17	21	95	138	138	25
Mindanao	2026	6	17	22	89	138	138	25
Mindanao	2026	6	17	23	83	138	138	25
Mindanao	2026	6	17	24	78	138	138	25
Mindanao	2026	6	18	1	74	138	138	25
Mindanao	2026	6	18	2	72	138	138	25
Mindanao	2026	6	18	3	71	138	138	25
Mindanao	2026	6	18	4	70	138	138	25
Mindanao	2026	6	18	5	74	138	138	25
Mindanao	2026	6	18	6	76	138	138	25
Mindanao	2026	6	18	7	70	138	138	25
Mindanao	2026	6	18	8	77	138	138	25
Mindanao	2026	6	18	9	87	138	138	25
Mindanao	2026	6	18	10	94	138	138	25
Mindanao	2026	6	18	11	99	138	138	25
Mindanao	2026	6	18	12	97	138	138	25
Mindanao	2026	6	18	13	99	138	138	25
Mindanao	2026	6	18	14	104	138	138	25
Mindanao	2026	6	18	15	102	138	138	25
Mindanao	2026	6	18	16	102	138	138	25
Mindanao	2026	6	18	17	97	138	138	25
Mindanao	2026	6	18	18	99	138	138	25
Mindanao	2026	6	18	19	102	138	138	25
Mindanao	2026	6	18	20	100	138	138	25
Mindanao	2026	6	18	21	95	138	138	25
Mindanao	2026	6	18	22	90	138	138	25
Mindanao	2026	6	18	23	85	138	138	25
Mindanao	2026	6	18	24	78	138	138	25
Mindanao	2026	6	19	1	76	138	138	25
Mindanao	2026	6	19	2	73	138	138	25
Mindanao	2026	6	19	3	71	138	138	25
Mindanao	2026	6	19	4	69	138	138	25
Mindanao	2026	6	19	5	73	138	138	25
Mindanao	2026	6	19	6	76	138	138	25
Mindanao	2026	6	19	7	73	138	138	25
Mindanao	2026	6	19	8	77	138	138	25
Mindanao	2026	6	19	9	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	19	10	95	138	138	25
Mindanao	2026	6	19	11	101	138	138	25
Mindanao	2026	6	19	12	100	138	138	25
Mindanao	2026	6	19	13	100	138	138	25
Mindanao	2026	6	19	14	104	138	138	25
Mindanao	2026	6	19	15	104	138	138	25
Mindanao	2026	6	19	16	101	138	138	25
Mindanao	2026	6	19	17	96	138	138	25
Mindanao	2026	6	19	18	97	138	138	25
Mindanao	2026	6	19	19	98	138	138	25
Mindanao	2026	6	19	20	94	138	138	25
Mindanao	2026	6	19	21	92	138	138	25
Mindanao	2026	6	19	22	85	138	138	25
Mindanao	2026	6	19	23	81	138	138	25
Mindanao	2026	6	19	24	77	138	138	25
Mindanao	2026	6	20	1	74	138	138	25
Mindanao	2026	6	20	2	71	138	138	25
Mindanao	2026	6	20	3	69	138	138	25
Mindanao	2026	6	20	4	68	138	138	25
Mindanao	2026	6	20	5	70	138	138	25
Mindanao	2026	6	20	6	71	138	138	25
Mindanao	2026	6	20	7	70	138	138	25
Mindanao	2026	6	20	8	73	138	138	25
Mindanao	2026	6	20	9	81	138	138	25
Mindanao	2026	6	20	10	88	138	138	25
Mindanao	2026	6	20	11	91	138	138	25
Mindanao	2026	6	20	12	91	138	138	25
Mindanao	2026	6	20	13	94	138	138	25
Mindanao	2026	6	20	14	96	138	138	25
Mindanao	2026	6	20	15	95	138	138	25
Mindanao	2026	6	20	16	93	138	138	25
Mindanao	2026	6	20	17	91	138	138	25
Mindanao	2026	6	20	18	95	138	138	25
Mindanao	2026	6	20	19	96	138	138	25
Mindanao	2026	6	20	20	94	138	138	25
Mindanao	2026	6	20	21	91	138	138	25
Mindanao	2026	6	20	22	85	138	138	25
Mindanao	2026	6	20	23	82	138	138	25
Mindanao	2026	6	20	24	77	138	138	25
Mindanao	2026	6	21	1	73	138	138	25
Mindanao	2026	6	21	2	70	138	138	25
Mindanao	2026	6	21	3	68	138	138	25
Mindanao	2026	6	21	4	67	138	138	25
Mindanao	2026	6	21	5	68	138	138	25
Mindanao	2026	6	21	6	68	138	138	25
Mindanao	2026	6	21	7	66	138	138	25
Mindanao	2026	6	21	8	67	138	138	25
Mindanao	2026	6	21	9	72	138	138	25
Mindanao	2026	6	21	10	76	138	138	25
Mindanao	2026	6	21	11	78	138	138	25
Mindanao	2026	6	21	12	82	138	138	25
Mindanao	2026	6	21	13	82	138	138	25
Mindanao	2026	6	21	14	83	138	138	25
Mindanao	2026	6	21	15	84	138	138	25
Mindanao	2026	6	21	16	83	138	138	25
Mindanao	2026	6	21	17	82	138	138	25
Mindanao	2026	6	21	18	88	138	138	25
Mindanao	2026	6	21	19	91	138	138	25
Mindanao	2026	6	21	20	89	138	138	25
Mindanao	2026	6	21	21	85	138	138	25
Mindanao	2026	6	21	22	82	138	138	25
Mindanao	2026	6	21	23	77	138	138	25
Mindanao	2026	6	21	24	74	138	138	25
Mindanao	2026	6	22	1	69	138	138	25
Mindanao	2026	6	22	2	68	138	138	25
Mindanao	2026	6	22	3	67	138	138	25
Mindanao	2026	6	22	4	66	138	138	25
Mindanao	2026	6	22	5	70	138	138	25
Mindanao	2026	6	22	6	74	138	138	25
Mindanao	2026	6	22	7	71	138	138	25
Mindanao	2026	6	22	8	78	138	138	25
Mindanao	2026	6	22	9	91	138	138	25
Mindanao	2026	6	22	10	99	138	138	25
Mindanao	2026	6	22	11	104	138	138	25
Mindanao	2026	6	22	12	105	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	22	13	105	138	138	25
Mindanao	2026	6	22	14	110	138	138	25
Mindanao	2026	6	22	15	108	138	138	25
Mindanao	2026	6	22	16	106	138	138	25
Mindanao	2026	6	22	17	100	138	138	25
Mindanao	2026	6	22	18	100	138	138	25
Mindanao	2026	6	22	19	100	138	138	25
Mindanao	2026	6	22	20	98	138	138	25
Mindanao	2026	6	22	21	92	138	138	25
Mindanao	2026	6	22	22	87	138	138	25
Mindanao	2026	6	22	23	82	138	138	25
Mindanao	2026	6	22	24	77	138	138	25
Mindanao	2026	6	23	1	74	138	138	25
Mindanao	2026	6	23	2	72	138	138	25
Mindanao	2026	6	23	3	70	138	138	25
Mindanao	2026	6	23	4	69	138	138	25
Mindanao	2026	6	23	5	72	138	138	25
Mindanao	2026	6	23	6	77	138	138	25
Mindanao	2026	6	23	7	72	138	138	25
Mindanao	2026	6	23	8	80	138	138	25
Mindanao	2026	6	23	9	91	138	138	25
Mindanao	2026	6	23	10	99	138	138	25
Mindanao	2026	6	23	11	104	138	138	25
Mindanao	2026	6	23	12	102	138	138	25
Mindanao	2026	6	23	13	105	138	138	25
Mindanao	2026	6	23	14	109	138	138	25
Mindanao	2026	6	23	15	111	138	138	25
Mindanao	2026	6	23	16	109	138	138	25
Mindanao	2026	6	23	17	101	138	138	25
Mindanao	2026	6	23	18	100	138	138	25
Mindanao	2026	6	23	19	99	138	138	25
Mindanao	2026	6	23	20	96	138	138	25
Mindanao	2026	6	23	21	94	138	138	25
Mindanao	2026	6	23	22	87	138	138	25
Mindanao	2026	6	23	23	84	138	138	25
Mindanao	2026	6	23	24	79	138	138	25
Mindanao	2026	6	24	1	75	138	138	25
Mindanao	2026	6	24	2	73	138	138	25
Mindanao	2026	6	24	3	71	138	138	25
Mindanao	2026	6	24	4	70	138	138	25
Mindanao	2026	6	24	5	74	138	138	25
Mindanao	2026	6	24	6	77	138	138	25
Mindanao	2026	6	24	7	73	138	138	25
Mindanao	2026	6	24	8	79	138	138	25
Mindanao	2026	6	24	9	90	138	138	25
Mindanao	2026	6	24	10	97	138	138	25
Mindanao	2026	6	24	11	101	138	138	25
Mindanao	2026	6	24	12	96	138	138	25
Mindanao	2026	6	24	13	99	138	138	25
Mindanao	2026	6	24	14	103	138	138	25
Mindanao	2026	6	24	15	102	138	138	25
Mindanao	2026	6	24	16	101	138	138	25
Mindanao	2026	6	24	17	96	138	138	25
Mindanao	2026	6	24	18	96	138	138	25
Mindanao	2026	6	24	19	97	138	138	25
Mindanao	2026	6	24	20	92	138	138	25
Mindanao	2026	6	24	21	91	138	138	25
Mindanao	2026	6	24	22	85	138	138	25
Mindanao	2026	6	24	23	78	138	138	25
Mindanao	2026	6	24	24	76	138	138	25
Mindanao	2026	6	25	1	72	138	138	25
Mindanao	2026	6	25	2	69	138	138	25
Mindanao	2026	6	25	3	67	138	138	25
Mindanao	2026	6	25	4	68	138	138	25
Mindanao	2026	6	25	5	70	138	138	25
Mindanao	2026	6	25	6	74	138	138	25
Mindanao	2026	6	25	7	70	138	138	25
Mindanao	2026	6	25	8	75	138	138	25
Mindanao	2026	6	25	9	84	138	138	25
Mindanao	2026	6	25	10	93	138	138	25
Mindanao	2026	6	25	11	95	138	138	25
Mindanao	2026	6	25	12	94	138	138	25
Mindanao	2026	6	25	13	96	138	138	25
Mindanao	2026	6	25	14	102	138	138	25
Mindanao	2026	6	25	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	25	16	101	138	138	25
Mindanao	2026	6	25	17	96	138	138	25
Mindanao	2026	6	25	18	99	138	138	25
Mindanao	2026	6	25	19	101	138	138	25
Mindanao	2026	6	25	20	98	138	138	25
Mindanao	2026	6	25	21	94	138	138	25
Mindanao	2026	6	25	22	87	138	138	25
Mindanao	2026	6	25	23	84	138	138	25
Mindanao	2026	6	25	24	78	138	138	25
Mindanao	2026	6	26	1	74	138	138	25
Mindanao	2026	6	26	2	72	138	138	25
Mindanao	2026	6	26	3	68	138	138	25
Mindanao	2026	6	26	4	69	138	138	25
Mindanao	2026	6	26	5	72	138	138	25
Mindanao	2026	6	26	6	73	138	138	25
Mindanao	2026	6	26	7	71	138	138	25
Mindanao	2026	6	26	8	80	138	138	25
Mindanao	2026	6	26	9	90	138	138	25
Mindanao	2026	6	26	10	96	138	138	25
Mindanao	2026	6	26	11	101	138	138	25
Mindanao	2026	6	26	12	101	138	138	25
Mindanao	2026	6	26	13	103	138	138	25
Mindanao	2026	6	26	14	107	138	138	25
Mindanao	2026	6	26	15	108	138	138	25
Mindanao	2026	6	26	16	107	138	138	25
Mindanao	2026	6	26	17	102	138	138	25
Mindanao	2026	6	26	18	101	138	138	25
Mindanao	2026	6	26	19	102	138	138	25
Mindanao	2026	6	26	20	99	138	138	25
Mindanao	2026	6	26	21	96	138	138	25
Mindanao	2026	6	26	22	92	138	138	25
Mindanao	2026	6	26	23	87	138	138	25
Mindanao	2026	6	26	24	81	138	138	25
Mindanao	2026	6	27	1	78	138	138	25
Mindanao	2026	6	27	2	75	138	138	25
Mindanao	2026	6	27	3	73	138	138	25
Mindanao	2026	6	27	4	72	138	138	25
Mindanao	2026	6	27	5	73	138	138	25
Mindanao	2026	6	27	6	72	138	138	25
Mindanao	2026	6	27	7	73	138	138	25
Mindanao	2026	6	27	8	75	138	138	25
Mindanao	2026	6	27	9	81	138	138	25
Mindanao	2026	6	27	10	85	138	138	25
Mindanao	2026	6	27	11	90	138	138	25
Mindanao	2026	6	27	12	89	138	138	25
Mindanao	2026	6	27	13	91	138	138	25
Mindanao	2026	6	27	14	95	138	138	25
Mindanao	2026	6	27	15	94	138	138	25
Mindanao	2026	6	27	16	92	138	138	25
Mindanao	2026	6	27	17	91	138	138	25
Mindanao	2026	6	27	18	95	138	138	25
Mindanao	2026	6	27	19	95	138	138	25
Mindanao	2026	6	27	20	93	138	138	25
Mindanao	2026	6	27	21	88	138	138	25
Mindanao	2026	6	27	22	85	138	138	25
Mindanao	2026	6	27	23	81	138	138	25
Mindanao	2026	6	27	24	75	138	138	25
Mindanao	2026	6	28	1	73	138	138	25
Mindanao	2026	6	28	2	71	138	138	25
Mindanao	2026	6	28	3	68	138	138	25
Mindanao	2026	6	28	4	68	138	138	25
Mindanao	2026	6	28	5	68	138	138	25
Mindanao	2026	6	28	6	68	138	138	25
Mindanao	2026	6	28	7	68	138	138	25
Mindanao	2026	6	28	8	69	138	138	25
Mindanao	2026	6	28	9	72	138	138	25
Mindanao	2026	6	28	10	75	138	138	25
Mindanao	2026	6	28	11	79	138	138	25
Mindanao	2026	6	28	12	80	138	138	25
Mindanao	2026	6	28	13	80	138	138	25
Mindanao	2026	6	28	14	79	138	138	25
Mindanao	2026	6	28	15	79	138	138	25
Mindanao	2026	6	28	16	81	138	138	25
Mindanao	2026	6	28	17	82	138	138	25
Mindanao	2026	6	28	18	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	6	28	19	92	138	138	25
Mindanao	2026	6	28	20	90	138	138	25
Mindanao	2026	6	28	21	88	138	138	25
Mindanao	2026	6	28	22	84	138	138	25
Mindanao	2026	6	28	23	79	138	138	25
Mindanao	2026	6	28	24	76	138	138	25
Mindanao	2026	6	29	1	73	138	138	25
Mindanao	2026	6	29	2	69	138	138	25
Mindanao	2026	6	29	3	67	138	138	25
Mindanao	2026	6	29	4	67	138	138	25
Mindanao	2026	6	29	5	70	138	138	25
Mindanao	2026	6	29	6	74	138	138	25
Mindanao	2026	6	29	7	69	138	138	25
Mindanao	2026	6	29	8	78	138	138	25
Mindanao	2026	6	29	9	90	138	138	25
Mindanao	2026	6	29	10	98	138	138	25
Mindanao	2026	6	29	11	102	138	138	25
Mindanao	2026	6	29	12	101	138	138	25
Mindanao	2026	6	29	13	102	138	138	25
Mindanao	2026	6	29	14	107	138	138	25
Mindanao	2026	6	29	15	108	138	138	25
Mindanao	2026	6	29	16	105	138	138	25
Mindanao	2026	6	29	17	98	138	138	25
Mindanao	2026	6	29	18	99	138	138	25
Mindanao	2026	6	29	19	103	138	138	25
Mindanao	2026	6	29	20	100	138	138	25
Mindanao	2026	6	29	21	97	138	138	25
Mindanao	2026	6	29	22	90	138	138	25
Mindanao	2026	6	29	23	86	138	138	25
Mindanao	2026	6	29	24	81	138	138	25
Mindanao	2026	6	30	1	78	138	138	25
Mindanao	2026	6	30	2	75	138	138	25
Mindanao	2026	6	30	3	73	138	138	25
Mindanao	2026	6	30	4	72	138	138	25
Mindanao	2026	6	30	5	74	138	138	25
Mindanao	2026	6	30	6	76	138	138	25
Mindanao	2026	6	30	7	72	138	138	25
Mindanao	2026	6	30	8	80	138	138	25
Mindanao	2026	6	30	9	92	138	138	25
Mindanao	2026	6	30	10	102	138	138	25
Mindanao	2026	6	30	11	107	138	138	25
Mindanao	2026	6	30	12	104	138	138	25
Mindanao	2026	6	30	13	104	138	138	25
Mindanao	2026	6	30	14	110	138	138	25
Mindanao	2026	6	30	15	111	138	138	25
Mindanao	2026	6	30	16	108	138	138	25
Mindanao	2026	6	30	17	102	138	138	25
Mindanao	2026	6	30	18	101	138	138	25
Mindanao	2026	6	30	19	102	138	138	25
Mindanao	2026	6	30	20	101	138	138	25
Mindanao	2026	6	30	21	97	138	138	25
Mindanao	2026	6	30	22	91	138	138	25
Mindanao	2026	6	30	23	86	138	138	25
Mindanao	2026	6	30	24	81	138	138	25
Mindanao	2026	7	1	1	77	138	138	25
Mindanao	2026	7	1	2	74	138	138	25
Mindanao	2026	7	1	3	72	138	138	25
Mindanao	2026	7	1	4	72	138	138	25
Mindanao	2026	7	1	5	72	138	138	25
Mindanao	2026	7	1	6	71	138	138	25
Mindanao	2026	7	1	7	69	138	138	25
Mindanao	2026	7	1	8	74	138	138	25
Mindanao	2026	7	1	9	80	138	138	25
Mindanao	2026	7	1	10	87	138	138	25
Mindanao	2026	7	1	11	92	138	138	25
Mindanao	2026	7	1	12	91	138	138	25
Mindanao	2026	7	1	13	93	138	138	25
Mindanao	2026	7	1	14	98	138	138	25
Mindanao	2026	7	1	15	96	138	138	25
Mindanao	2026	7	1	16	94	138	138	25
Mindanao	2026	7	1	17	93	138	138	25
Mindanao	2026	7	1	18	97	138	138	25
Mindanao	2026	7	1	19	99	138	138	25
Mindanao	2026	7	1	20	97	138	138	25
Mindanao	2026	7	1	21	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	1	22	87	138	138	25
Mindanao	2026	7	1	23	82	138	138	25
Mindanao	2026	7	1	24	76	138	138	25
Mindanao	2026	7	2	1	73	138	138	25
Mindanao	2026	7	2	2	72	138	138	25
Mindanao	2026	7	2	3	71	138	138	25
Mindanao	2026	7	2	4	70	138	138	25
Mindanao	2026	7	2	5	74	138	138	25
Mindanao	2026	7	2	6	77	138	138	25
Mindanao	2026	7	2	7	72	138	138	25
Mindanao	2026	7	2	8	81	138	138	25
Mindanao	2026	7	2	9	93	138	138	25
Mindanao	2026	7	2	10	100	138	138	25
Mindanao	2026	7	2	11	104	138	138	25
Mindanao	2026	7	2	12	103	138	138	25
Mindanao	2026	7	2	13	105	138	138	25
Mindanao	2026	7	2	14	110	138	138	25
Mindanao	2026	7	2	15	111	138	138	25
Mindanao	2026	7	2	16	108	138	138	25
Mindanao	2026	7	2	17	102	138	138	25
Mindanao	2026	7	2	18	103	138	138	25
Mindanao	2026	7	2	19	103	138	138	25
Mindanao	2026	7	2	20	101	138	138	25
Mindanao	2026	7	2	21	96	138	138	25
Mindanao	2026	7	2	22	90	138	138	25
Mindanao	2026	7	2	23	84	138	138	25
Mindanao	2026	7	2	24	81	138	138	25
Mindanao	2026	7	3	1	77	138	138	25
Mindanao	2026	7	3	2	74	138	138	25
Mindanao	2026	7	3	3	72	138	138	25
Mindanao	2026	7	3	4	71	138	138	25
Mindanao	2026	7	3	5	74	138	138	25
Mindanao	2026	7	3	6	75	138	138	25
Mindanao	2026	7	3	7	71	138	138	25
Mindanao	2026	7	3	8	80	138	138	25
Mindanao	2026	7	3	9	91	138	138	25
Mindanao	2026	7	3	10	98	138	138	25
Mindanao	2026	7	3	11	103	138	138	25
Mindanao	2026	7	3	12	102	138	138	25
Mindanao	2026	7	3	13	104	138	138	25
Mindanao	2026	7	3	14	108	138	138	25
Mindanao	2026	7	3	15	108	138	138	25
Mindanao	2026	7	3	16	105	138	138	25
Mindanao	2026	7	3	17	99	138	138	25
Mindanao	2026	7	3	18	100	138	138	25
Mindanao	2026	7	3	19	104	138	138	25
Mindanao	2026	7	3	20	100	138	138	25
Mindanao	2026	7	3	21	98	138	138	25
Mindanao	2026	7	3	22	93	138	138	25
Mindanao	2026	7	3	23	89	138	138	25
Mindanao	2026	7	3	24	83	138	138	25
Mindanao	2026	7	4	1	80	138	138	25
Mindanao	2026	7	4	2	78	138	138	25
Mindanao	2026	7	4	3	74	138	138	25
Mindanao	2026	7	4	4	71	138	138	25
Mindanao	2026	7	4	5	73	138	138	25
Mindanao	2026	7	4	6	75	138	138	25
Mindanao	2026	7	4	7	72	138	138	25
Mindanao	2026	7	4	8	77	138	138	25
Mindanao	2026	7	4	9	85	138	138	25
Mindanao	2026	7	4	10	89	138	138	25
Mindanao	2026	7	4	11	94	138	138	25
Mindanao	2026	7	4	12	94	138	138	25
Mindanao	2026	7	4	13	95	138	138	25
Mindanao	2026	7	4	14	97	138	138	25
Mindanao	2026	7	4	15	95	138	138	25
Mindanao	2026	7	4	16	96	138	138	25
Mindanao	2026	7	4	17	91	138	138	25
Mindanao	2026	7	4	18	95	138	138	25
Mindanao	2026	7	4	19	98	138	138	25
Mindanao	2026	7	4	20	95	138	138	25
Mindanao	2026	7	4	21	93	138	138	25
Mindanao	2026	7	4	22	89	138	138	25
Mindanao	2026	7	4	23	84	138	138	25
Mindanao	2026	7	4	24	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	5	1	76	138	138	25
Mindanao	2026	7	5	2	74	138	138	25
Mindanao	2026	7	5	3	71	138	138	25
Mindanao	2026	7	5	4	68	138	138	25
Mindanao	2026	7	5	5	70	138	138	25
Mindanao	2026	7	5	6	69	138	138	25
Mindanao	2026	7	5	7	65	138	138	25
Mindanao	2026	7	5	8	68	138	138	25
Mindanao	2026	7	5	9	72	138	138	25
Mindanao	2026	7	5	10	77	138	138	25
Mindanao	2026	7	5	11	81	138	138	25
Mindanao	2026	7	5	12	82	138	138	25
Mindanao	2026	7	5	13	83	138	138	25
Mindanao	2026	7	5	14	84	138	138	25
Mindanao	2026	7	5	15	85	138	138	25
Mindanao	2026	7	5	16	84	138	138	25
Mindanao	2026	7	5	17	82	138	138	25
Mindanao	2026	7	5	18	90	138	138	25
Mindanao	2026	7	5	19	96	138	138	25
Mindanao	2026	7	5	20	95	138	138	25
Mindanao	2026	7	5	21	92	138	138	25
Mindanao	2026	7	5	22	88	138	138	25
Mindanao	2026	7	5	23	83	138	138	25
Mindanao	2026	7	5	24	79	138	138	25
Mindanao	2026	7	6	1	74	138	138	25
Mindanao	2026	7	6	2	71	138	138	25
Mindanao	2026	7	6	3	70	138	138	25
Mindanao	2026	7	6	4	68	138	138	25
Mindanao	2026	7	6	5	71	138	138	25
Mindanao	2026	7	6	6	74	138	138	25
Mindanao	2026	7	6	7	72	138	138	25
Mindanao	2026	7	6	8	79	138	138	25
Mindanao	2026	7	6	9	89	138	138	25
Mindanao	2026	7	6	10	95	138	138	25
Mindanao	2026	7	6	11	99	138	138	25
Mindanao	2026	7	6	12	97	138	138	25
Mindanao	2026	7	6	13	98	138	138	25
Mindanao	2026	7	6	14	102	138	138	25
Mindanao	2026	7	6	15	102	138	138	25
Mindanao	2026	7	6	16	102	138	138	25
Mindanao	2026	7	6	17	97	138	138	25
Mindanao	2026	7	6	18	98	138	138	25
Mindanao	2026	7	6	19	100	138	138	25
Mindanao	2026	7	6	20	95	138	138	25
Mindanao	2026	7	6	21	92	138	138	25
Mindanao	2026	7	6	22	88	138	138	25
Mindanao	2026	7	6	23	83	138	138	25
Mindanao	2026	7	6	24	79	138	138	25
Mindanao	2026	7	7	1	76	138	138	25
Mindanao	2026	7	7	2	73	138	138	25
Mindanao	2026	7	7	3	70	138	138	25
Mindanao	2026	7	7	4	70	138	138	25
Mindanao	2026	7	7	5	72	138	138	25
Mindanao	2026	7	7	6	74	138	138	25
Mindanao	2026	7	7	7	73	138	138	25
Mindanao	2026	7	7	8	80	138	138	25
Mindanao	2026	7	7	9	91	138	138	25
Mindanao	2026	7	7	10	96	138	138	25
Mindanao	2026	7	7	11	100	138	138	25
Mindanao	2026	7	7	12	100	138	138	25
Mindanao	2026	7	7	13	101	138	138	25
Mindanao	2026	7	7	14	103	138	138	25
Mindanao	2026	7	7	15	104	138	138	25
Mindanao	2026	7	7	16	101	138	138	25
Mindanao	2026	7	7	17	95	138	138	25
Mindanao	2026	7	7	18	97	138	138	25
Mindanao	2026	7	7	19	97	138	138	25
Mindanao	2026	7	7	20	95	138	138	25
Mindanao	2026	7	7	21	92	138	138	25
Mindanao	2026	7	7	22	86	138	138	25
Mindanao	2026	7	7	23	81	138	138	25
Mindanao	2026	7	7	24	77	138	138	25
Mindanao	2026	7	8	1	73	138	138	25
Mindanao	2026	7	8	2	71	138	138	25
Mindanao	2026	7	8	3	68	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	8	4	67	138	138	25
Mindanao	2026	7	8	5	70	138	138	25
Mindanao	2026	7	8	6	74	138	138	25
Mindanao	2026	7	8	7	71	138	138	25
Mindanao	2026	7	8	8	77	138	138	25
Mindanao	2026	7	8	9	86	138	138	25
Mindanao	2026	7	8	10	95	138	138	25
Mindanao	2026	7	8	11	98	138	138	25
Mindanao	2026	7	8	12	99	138	138	25
Mindanao	2026	7	8	13	102	138	138	25
Mindanao	2026	7	8	14	106	138	138	25
Mindanao	2026	7	8	15	108	138	138	25
Mindanao	2026	7	8	16	106	138	138	25
Mindanao	2026	7	8	17	101	138	138	25
Mindanao	2026	7	8	18	101	138	138	25
Mindanao	2026	7	8	19	105	138	138	25
Mindanao	2026	7	8	20	103	138	138	25
Mindanao	2026	7	8	21	99	138	138	25
Mindanao	2026	7	8	22	94	138	138	25
Mindanao	2026	7	8	23	90	138	138	25
Mindanao	2026	7	8	24	84	138	138	25
Mindanao	2026	7	9	1	80	138	138	25
Mindanao	2026	7	9	2	75	138	138	25
Mindanao	2026	7	9	3	74	138	138	25
Mindanao	2026	7	9	4	73	138	138	25
Mindanao	2026	7	9	5	76	138	138	25
Mindanao	2026	7	9	6	77	138	138	25
Mindanao	2026	7	9	7	75	138	138	25
Mindanao	2026	7	9	8	84	138	138	25
Mindanao	2026	7	9	9	99	138	138	25
Mindanao	2026	7	9	10	105	138	138	25
Mindanao	2026	7	9	11	110	138	138	25
Mindanao	2026	7	9	12	109	138	138	25
Mindanao	2026	7	9	13	111	138	138	25
Mindanao	2026	7	9	14	113	138	138	25
Mindanao	2026	7	9	15	111	138	138	25
Mindanao	2026	7	9	16	109	138	138	25
Mindanao	2026	7	9	17	101	138	138	25
Mindanao	2026	7	9	18	100	138	138	25
Mindanao	2026	7	9	19	101	138	138	25
Mindanao	2026	7	9	20	100	138	138	25
Mindanao	2026	7	9	21	98	138	138	25
Mindanao	2026	7	9	22	92	138	138	25
Mindanao	2026	7	9	23	88	138	138	25
Mindanao	2026	7	9	24	82	138	138	25
Mindanao	2026	7	10	1	78	138	138	25
Mindanao	2026	7	10	2	77	138	138	25
Mindanao	2026	7	10	3	74	138	138	25
Mindanao	2026	7	10	4	72	138	138	25
Mindanao	2026	7	10	5	75	138	138	25
Mindanao	2026	7	10	6	78	138	138	25
Mindanao	2026	7	10	7	76	138	138	25
Mindanao	2026	7	10	8	85	138	138	25
Mindanao	2026	7	10	9	97	138	138	25
Mindanao	2026	7	10	10	104	138	138	25
Mindanao	2026	7	10	11	109	138	138	25
Mindanao	2026	7	10	12	107	138	138	25
Mindanao	2026	7	10	13	108	138	138	25
Mindanao	2026	7	10	14	113	138	138	25
Mindanao	2026	7	10	15	112	138	138	25
Mindanao	2026	7	10	16	110	138	138	25
Mindanao	2026	7	10	17	101	138	138	25
Mindanao	2026	7	10	18	99	138	138	25
Mindanao	2026	7	10	19	104	138	138	25
Mindanao	2026	7	10	20	102	138	138	25
Mindanao	2026	7	10	21	98	138	138	25
Mindanao	2026	7	10	22	95	138	138	25
Mindanao	2026	7	10	23	89	138	138	25
Mindanao	2026	7	10	24	85	138	138	25
Mindanao	2026	7	11	1	81	138	138	25
Mindanao	2026	7	11	2	78	138	138	25
Mindanao	2026	7	11	3	75	138	138	25
Mindanao	2026	7	11	4	74	138	138	25
Mindanao	2026	7	11	5	74	138	138	25
Mindanao	2026	7	11	6	75	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	11	7	71	138	138	25
Mindanao	2026	7	11	8	78	138	138	25
Mindanao	2026	7	11	9	85	138	138	25
Mindanao	2026	7	11	10	92	138	138	25
Mindanao	2026	7	11	11	95	138	138	25
Mindanao	2026	7	11	12	94	138	138	25
Mindanao	2026	7	11	13	95	138	138	25
Mindanao	2026	7	11	14	98	138	138	25
Mindanao	2026	7	11	15	95	138	138	25
Mindanao	2026	7	11	16	93	138	138	25
Mindanao	2026	7	11	17	91	138	138	25
Mindanao	2026	7	11	18	94	138	138	25
Mindanao	2026	7	11	19	96	138	138	25
Mindanao	2026	7	11	20	94	138	138	25
Mindanao	2026	7	11	21	92	138	138	25
Mindanao	2026	7	11	22	87	138	138	25
Mindanao	2026	7	11	23	81	138	138	25
Mindanao	2026	7	11	24	77	138	138	25
Mindanao	2026	7	12	1	74	138	138	25
Mindanao	2026	7	12	2	73	138	138	25
Mindanao	2026	7	12	3	70	138	138	25
Mindanao	2026	7	12	4	69	138	138	25
Mindanao	2026	7	12	5	69	138	138	25
Mindanao	2026	7	12	6	71	138	138	25
Mindanao	2026	7	12	7	67	138	138	25
Mindanao	2026	7	12	8	68	138	138	25
Mindanao	2026	7	12	9	74	138	138	25
Mindanao	2026	7	12	10	78	138	138	25
Mindanao	2026	7	12	11	83	138	138	25
Mindanao	2026	7	12	12	84	138	138	25
Mindanao	2026	7	12	13	85	138	138	25
Mindanao	2026	7	12	14	86	138	138	25
Mindanao	2026	7	12	15	85	138	138	25
Mindanao	2026	7	12	16	83	138	138	25
Mindanao	2026	7	12	17	84	138	138	25
Mindanao	2026	7	12	18	90	138	138	25
Mindanao	2026	7	12	19	93	138	138	25
Mindanao	2026	7	12	20	89	138	138	25
Mindanao	2026	7	12	21	87	138	138	25
Mindanao	2026	7	12	22	81	138	138	25
Mindanao	2026	7	12	23	77	138	138	25
Mindanao	2026	7	12	24	74	138	138	25
Mindanao	2026	7	13	1	71	138	138	25
Mindanao	2026	7	13	2	69	138	138	25
Mindanao	2026	7	13	3	66	138	138	25
Mindanao	2026	7	13	4	66	138	138	25
Mindanao	2026	7	13	5	67	138	138	25
Mindanao	2026	7	13	6	71	138	138	25
Mindanao	2026	7	13	7	71	138	138	25
Mindanao	2026	7	13	8	78	138	138	25
Mindanao	2026	7	13	9	91	138	138	25
Mindanao	2026	7	13	10	100	138	138	25
Mindanao	2026	7	13	11	105	138	138	25
Mindanao	2026	7	13	12	105	138	138	25
Mindanao	2026	7	13	13	106	138	138	25
Mindanao	2026	7	13	14	110	138	138	25
Mindanao	2026	7	13	15	109	138	138	25
Mindanao	2026	7	13	16	108	138	138	25
Mindanao	2026	7	13	17	102	138	138	25
Mindanao	2026	7	13	18	100	138	138	25
Mindanao	2026	7	13	19	101	138	138	25
Mindanao	2026	7	13	20	99	138	138	25
Mindanao	2026	7	13	21	97	138	138	25
Mindanao	2026	7	13	22	92	138	138	25
Mindanao	2026	7	13	23	88	138	138	25
Mindanao	2026	7	13	24	84	138	138	25
Mindanao	2026	7	14	1	79	138	138	25
Mindanao	2026	7	14	2	78	138	138	25
Mindanao	2026	7	14	3	75	138	138	25
Mindanao	2026	7	14	4	73	138	138	25
Mindanao	2026	7	14	5	75	138	138	25
Mindanao	2026	7	14	6	76	138	138	25
Mindanao	2026	7	14	7	74	138	138	25
Mindanao	2026	7	14	8	84	138	138	25
Mindanao	2026	7	14	9	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	14	10	102	138	138	25
Mindanao	2026	7	14	11	108	138	138	25
Mindanao	2026	7	14	12	106	138	138	25
Mindanao	2026	7	14	13	108	138	138	25
Mindanao	2026	7	14	14	110	138	138	25
Mindanao	2026	7	14	15	109	138	138	25
Mindanao	2026	7	14	16	108	138	138	25
Mindanao	2026	7	14	17	101	138	138	25
Mindanao	2026	7	14	18	99	138	138	25
Mindanao	2026	7	14	19	102	138	138	25
Mindanao	2026	7	14	20	100	138	138	25
Mindanao	2026	7	14	21	97	138	138	25
Mindanao	2026	7	14	22	92	138	138	25
Mindanao	2026	7	14	23	88	138	138	25
Mindanao	2026	7	14	24	83	138	138	25
Mindanao	2026	7	15	1	79	138	138	25
Mindanao	2026	7	15	2	77	138	138	25
Mindanao	2026	7	15	3	75	138	138	25
Mindanao	2026	7	15	4	74	138	138	25
Mindanao	2026	7	15	5	75	138	138	25
Mindanao	2026	7	15	6	76	138	138	25
Mindanao	2026	7	15	7	75	138	138	25
Mindanao	2026	7	15	8	83	138	138	25
Mindanao	2026	7	15	9	93	138	138	25
Mindanao	2026	7	15	10	100	138	138	25
Mindanao	2026	7	15	11	103	138	138	25
Mindanao	2026	7	15	12	103	138	138	25
Mindanao	2026	7	15	13	103	138	138	25
Mindanao	2026	7	15	14	107	138	138	25
Mindanao	2026	7	15	15	105	138	138	25
Mindanao	2026	7	15	16	102	138	138	25
Mindanao	2026	7	15	17	96	138	138	25
Mindanao	2026	7	15	18	96	138	138	25
Mindanao	2026	7	15	19	98	138	138	25
Mindanao	2026	7	15	20	96	138	138	25
Mindanao	2026	7	15	21	92	138	138	25
Mindanao	2026	7	15	22	88	138	138	25
Mindanao	2026	7	15	23	84	138	138	25
Mindanao	2026	7	15	24	79	138	138	25
Mindanao	2026	7	16	1	74	138	138	25
Mindanao	2026	7	16	2	71	138	138	25
Mindanao	2026	7	16	3	67	138	138	25
Mindanao	2026	7	16	4	67	138	138	25
Mindanao	2026	7	16	5	69	138	138	25
Mindanao	2026	7	16	6	71	138	138	25
Mindanao	2026	7	16	7	73	138	138	25
Mindanao	2026	7	16	8	80	138	138	25
Mindanao	2026	7	16	9	92	138	138	25
Mindanao	2026	7	16	10	98	138	138	25
Mindanao	2026	7	16	11	102	138	138	25
Mindanao	2026	7	16	12	100	138	138	25
Mindanao	2026	7	16	13	99	138	138	25
Mindanao	2026	7	16	14	102	138	138	25
Mindanao	2026	7	16	15	98	138	138	25
Mindanao	2026	7	16	16	95	138	138	25
Mindanao	2026	7	16	17	90	138	138	25
Mindanao	2026	7	16	18	92	138	138	25
Mindanao	2026	7	16	19	96	138	138	25
Mindanao	2026	7	16	20	93	138	138	25
Mindanao	2026	7	16	21	92	138	138	25
Mindanao	2026	7	16	22	86	138	138	25
Mindanao	2026	7	16	23	83	138	138	25
Mindanao	2026	7	16	24	78	138	138	25
Mindanao	2026	7	17	1	74	138	138	25
Mindanao	2026	7	17	2	71	138	138	25
Mindanao	2026	7	17	3	70	138	138	25
Mindanao	2026	7	17	4	69	138	138	25
Mindanao	2026	7	17	5	71	138	138	25
Mindanao	2026	7	17	6	73	138	138	25
Mindanao	2026	7	17	7	72	138	138	25
Mindanao	2026	7	17	8	81	138	138	25
Mindanao	2026	7	17	9	92	138	138	25
Mindanao	2026	7	17	10	98	138	138	25
Mindanao	2026	7	17	11	104	138	138	25
Mindanao	2026	7	17	12	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	17	13	103	138	138	25
Mindanao	2026	7	17	14	107	138	138	25
Mindanao	2026	7	17	15	102	138	138	25
Mindanao	2026	7	17	16	102	138	138	25
Mindanao	2026	7	17	17	96	138	138	25
Mindanao	2026	7	17	18	94	138	138	25
Mindanao	2026	7	17	19	95	138	138	25
Mindanao	2026	7	17	20	93	138	138	25
Mindanao	2026	7	17	21	90	138	138	25
Mindanao	2026	7	17	22	86	138	138	25
Mindanao	2026	7	17	23	83	138	138	25
Mindanao	2026	7	17	24	78	138	138	25
Mindanao	2026	7	18	1	74	138	138	25
Mindanao	2026	7	18	2	71	138	138	25
Mindanao	2026	7	18	3	70	138	138	25
Mindanao	2026	7	18	4	68	138	138	25
Mindanao	2026	7	18	5	69	138	138	25
Mindanao	2026	7	18	6	71	138	138	25
Mindanao	2026	7	18	7	70	138	138	25
Mindanao	2026	7	18	8	74	138	138	25
Mindanao	2026	7	18	9	83	138	138	25
Mindanao	2026	7	18	10	89	138	138	25
Mindanao	2026	7	18	11	93	138	138	25
Mindanao	2026	7	18	12	94	138	138	25
Mindanao	2026	7	18	13	96	138	138	25
Mindanao	2026	7	18	14	99	138	138	25
Mindanao	2026	7	18	15	98	138	138	25
Mindanao	2026	7	18	16	96	138	138	25
Mindanao	2026	7	18	17	91	138	138	25
Mindanao	2026	7	18	18	97	138	138	25
Mindanao	2026	7	18	19	99	138	138	25
Mindanao	2026	7	18	20	96	138	138	25
Mindanao	2026	7	18	21	93	138	138	25
Mindanao	2026	7	18	22	88	138	138	25
Mindanao	2026	7	18	23	85	138	138	25
Mindanao	2026	7	18	24	80	138	138	25
Mindanao	2026	7	19	1	76	138	138	25
Mindanao	2026	7	19	2	75	138	138	25
Mindanao	2026	7	19	3	73	138	138	25
Mindanao	2026	7	19	4	72	138	138	25
Mindanao	2026	7	19	5	69	138	138	25
Mindanao	2026	7	19	6	70	138	138	25
Mindanao	2026	7	19	7	71	138	138	25
Mindanao	2026	7	19	8	68	138	138	25
Mindanao	2026	7	19	9	75	138	138	25
Mindanao	2026	7	19	10	77	138	138	25
Mindanao	2026	7	19	11	81	138	138	25
Mindanao	2026	7	19	12	79	138	138	25
Mindanao	2026	7	19	13	81	138	138	25
Mindanao	2026	7	19	14	82	138	138	25
Mindanao	2026	7	19	15	81	138	138	25
Mindanao	2026	7	19	16	80	138	138	25
Mindanao	2026	7	19	17	80	138	138	25
Mindanao	2026	7	19	18	85	138	138	25
Mindanao	2026	7	19	19	91	138	138	25
Mindanao	2026	7	19	20	91	138	138	25
Mindanao	2026	7	19	21	89	138	138	25
Mindanao	2026	7	19	22	84	138	138	25
Mindanao	2026	7	19	23	81	138	138	25
Mindanao	2026	7	19	24	76	138	138	25
Mindanao	2026	7	20	1	73	138	138	25
Mindanao	2026	7	20	2	72	138	138	25
Mindanao	2026	7	20	3	69	138	138	25
Mindanao	2026	7	20	4	67	138	138	25
Mindanao	2026	7	20	5	69	138	138	25
Mindanao	2026	7	20	6	71	138	138	25
Mindanao	2026	7	20	7	73	138	138	25
Mindanao	2026	7	20	8	81	138	138	25
Mindanao	2026	7	20	9	92	138	138	25
Mindanao	2026	7	20	10	99	138	138	25
Mindanao	2026	7	20	11	107	138	138	25
Mindanao	2026	7	20	12	107	138	138	25
Mindanao	2026	7	20	13	108	138	138	25
Mindanao	2026	7	20	14	111	138	138	25
Mindanao	2026	7	20	15	111	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	20	16	108	138	138	25
Mindanao	2026	7	20	17	102	138	138	25
Mindanao	2026	7	20	18	101	138	138	25
Mindanao	2026	7	20	19	104	138	138	25
Mindanao	2026	7	20	20	103	138	138	25
Mindanao	2026	7	20	21	99	138	138	25
Mindanao	2026	7	20	22	95	138	138	25
Mindanao	2026	7	20	23	89	138	138	25
Mindanao	2026	7	20	24	84	138	138	25
Mindanao	2026	7	21	1	80	138	138	25
Mindanao	2026	7	21	2	78	138	138	25
Mindanao	2026	7	21	3	76	138	138	25
Mindanao	2026	7	21	4	75	138	138	25
Mindanao	2026	7	21	5	75	138	138	25
Mindanao	2026	7	21	6	77	138	138	25
Mindanao	2026	7	21	7	77	138	138	25
Mindanao	2026	7	21	8	84	138	138	25
Mindanao	2026	7	21	9	93	138	138	25
Mindanao	2026	7	21	10	97	138	138	25
Mindanao	2026	7	21	11	99	138	138	25
Mindanao	2026	7	21	12	97	138	138	25
Mindanao	2026	7	21	13	100	138	138	25
Mindanao	2026	7	21	14	103	138	138	25
Mindanao	2026	7	21	15	102	138	138	25
Mindanao	2026	7	21	16	100	138	138	25
Mindanao	2026	7	21	17	97	138	138	25
Mindanao	2026	7	21	18	98	138	138	25
Mindanao	2026	7	21	19	98	138	138	25
Mindanao	2026	7	21	20	95	138	138	25
Mindanao	2026	7	21	21	92	138	138	25
Mindanao	2026	7	21	22	84	138	138	25
Mindanao	2026	7	21	23	81	138	138	25
Mindanao	2026	7	21	24	77	138	138	25
Mindanao	2026	7	22	1	75	138	138	25
Mindanao	2026	7	22	2	72	138	138	25
Mindanao	2026	7	22	3	69	138	138	25
Mindanao	2026	7	22	4	69	138	138	25
Mindanao	2026	7	22	5	71	138	138	25
Mindanao	2026	7	22	6	73	138	138	25
Mindanao	2026	7	22	7	74	138	138	25
Mindanao	2026	7	22	8	78	138	138	25
Mindanao	2026	7	22	9	86	138	138	25
Mindanao	2026	7	22	10	94	138	138	25
Mindanao	2026	7	22	11	95	138	138	25
Mindanao	2026	7	22	12	95	138	138	25
Mindanao	2026	7	22	13	96	138	138	25
Mindanao	2026	7	22	14	100	138	138	25
Mindanao	2026	7	22	15	101	138	138	25
Mindanao	2026	7	22	16	100	138	138	25
Mindanao	2026	7	22	17	93	138	138	25
Mindanao	2026	7	22	18	95	138	138	25
Mindanao	2026	7	22	19	99	138	138	25
Mindanao	2026	7	22	20	95	138	138	25
Mindanao	2026	7	22	21	93	138	138	25
Mindanao	2026	7	22	22	88	138	138	25
Mindanao	2026	7	22	23	81	138	138	25
Mindanao	2026	7	22	24	79	138	138	25
Mindanao	2026	7	23	1	76	138	138	25
Mindanao	2026	7	23	2	73	138	138	25
Mindanao	2026	7	23	3	72	138	138	25
Mindanao	2026	7	23	4	70	138	138	25
Mindanao	2026	7	23	5	71	138	138	25
Mindanao	2026	7	23	6	75	138	138	25
Mindanao	2026	7	23	7	75	138	138	25
Mindanao	2026	7	23	8	83	138	138	25
Mindanao	2026	7	23	9	95	138	138	25
Mindanao	2026	7	23	10	102	138	138	25
Mindanao	2026	7	23	11	107	138	138	25
Mindanao	2026	7	23	12	105	138	138	25
Mindanao	2026	7	23	13	107	138	138	25
Mindanao	2026	7	23	14	112	138	138	25
Mindanao	2026	7	23	15	111	138	138	25
Mindanao	2026	7	23	16	109	138	138	25
Mindanao	2026	7	23	17	103	138	138	25
Mindanao	2026	7	23	18	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	23	19	104	138	138	25
Mindanao	2026	7	23	20	103	138	138	25
Mindanao	2026	7	23	21	98	138	138	25
Mindanao	2026	7	23	22	93	138	138	25
Mindanao	2026	7	23	23	88	138	138	25
Mindanao	2026	7	23	24	83	138	138	25
Mindanao	2026	7	24	1	80	138	138	25
Mindanao	2026	7	24	2	77	138	138	25
Mindanao	2026	7	24	3	73	138	138	25
Mindanao	2026	7	24	4	72	138	138	25
Mindanao	2026	7	24	5	74	138	138	25
Mindanao	2026	7	24	6	77	138	138	25
Mindanao	2026	7	24	7	75	138	138	25
Mindanao	2026	7	24	8	84	138	138	25
Mindanao	2026	7	24	9	95	138	138	25
Mindanao	2026	7	24	10	102	138	138	25
Mindanao	2026	7	24	11	106	138	138	25
Mindanao	2026	7	24	12	105	138	138	25
Mindanao	2026	7	24	13	107	138	138	25
Mindanao	2026	7	24	14	112	138	138	25
Mindanao	2026	7	24	15	112	138	138	25
Mindanao	2026	7	24	16	109	138	138	25
Mindanao	2026	7	24	17	102	138	138	25
Mindanao	2026	7	24	18	102	138	138	25
Mindanao	2026	7	24	19	105	138	138	25
Mindanao	2026	7	24	20	102	138	138	25
Mindanao	2026	7	24	21	100	138	138	25
Mindanao	2026	7	24	22	94	138	138	25
Mindanao	2026	7	24	23	89	138	138	25
Mindanao	2026	7	24	24	76	138	138	25
Mindanao	2026	7	25	1	78	138	138	25
Mindanao	2026	7	25	2	76	138	138	25
Mindanao	2026	7	25	3	77	138	138	25
Mindanao	2026	7	25	4	75	138	138	25
Mindanao	2026	7	25	5	74	138	138	25
Mindanao	2026	7	25	6	76	138	138	25
Mindanao	2026	7	25	7	74	138	138	25
Mindanao	2026	7	25	8	77	138	138	25
Mindanao	2026	7	25	9	87	138	138	25
Mindanao	2026	7	25	10	91	138	138	25
Mindanao	2026	7	25	11	95	138	138	25
Mindanao	2026	7	25	12	94	138	138	25
Mindanao	2026	7	25	13	93	138	138	25
Mindanao	2026	7	25	14	90	138	138	25
Mindanao	2026	7	25	15	90	138	138	25
Mindanao	2026	7	25	16	86	138	138	25
Mindanao	2026	7	25	17	84	138	138	25
Mindanao	2026	7	25	18	89	138	138	25
Mindanao	2026	7	25	19	92	138	138	25
Mindanao	2026	7	25	20	90	138	138	25
Mindanao	2026	7	25	21	88	138	138	25
Mindanao	2026	7	25	22	84	138	138	25
Mindanao	2026	7	25	23	80	138	138	25
Mindanao	2026	7	25	24	76	138	138	25
Mindanao	2026	7	26	1	73	138	138	25
Mindanao	2026	7	26	2	71	138	138	25
Mindanao	2026	7	26	3	69	138	138	25
Mindanao	2026	7	26	4	68	138	138	25
Mindanao	2026	7	26	5	69	138	138	25
Mindanao	2026	7	26	6	68	138	138	25
Mindanao	2026	7	26	7	67	138	138	25
Mindanao	2026	7	26	8	69	138	138	25
Mindanao	2026	7	26	9	69	138	138	25
Mindanao	2026	7	26	10	74	138	138	25
Mindanao	2026	7	26	11	77	138	138	25
Mindanao	2026	7	26	12	79	138	138	25
Mindanao	2026	7	26	13	78	138	138	25
Mindanao	2026	7	26	14	80	138	138	25
Mindanao	2026	7	26	15	79	138	138	25
Mindanao	2026	7	26	16	79	138	138	25
Mindanao	2026	7	26	17	80	138	138	25
Mindanao	2026	7	26	18	88	138	138	25
Mindanao	2026	7	26	19	92	138	138	25
Mindanao	2026	7	26	20	91	138	138	25
Mindanao	2026	7	26	21	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	26	22	84	138	138	25
Mindanao	2026	7	26	23	79	138	138	25
Mindanao	2026	7	26	24	76	138	138	25
Mindanao	2026	7	27	1	74	138	138	25
Mindanao	2026	7	27	2	69	138	138	25
Mindanao	2026	7	27	3	68	138	138	25
Mindanao	2026	7	27	4	69	138	138	25
Mindanao	2026	7	27	5	67	138	138	25
Mindanao	2026	7	27	6	72	138	138	25
Mindanao	2026	7	27	7	70	138	138	25
Mindanao	2026	7	27	8	81	138	138	25
Mindanao	2026	7	27	9	93	138	138	25
Mindanao	2026	7	27	10	100	138	138	25
Mindanao	2026	7	27	11	103	138	138	25
Mindanao	2026	7	27	12	102	138	138	25
Mindanao	2026	7	27	13	102	138	138	25
Mindanao	2026	7	27	14	105	138	138	25
Mindanao	2026	7	27	15	103	138	138	25
Mindanao	2026	7	27	16	102	138	138	25
Mindanao	2026	7	27	17	96	138	138	25
Mindanao	2026	7	27	18	97	138	138	25
Mindanao	2026	7	27	19	99	138	138	25
Mindanao	2026	7	27	20	97	138	138	25
Mindanao	2026	7	27	21	90	138	138	25
Mindanao	2026	7	27	22	87	138	138	25
Mindanao	2026	7	27	23	83	138	138	25
Mindanao	2026	7	27	24	78	138	138	25
Mindanao	2026	7	28	1	76	138	138	25
Mindanao	2026	7	28	2	73	138	138	25
Mindanao	2026	7	28	3	71	138	138	25
Mindanao	2026	7	28	4	71	138	138	25
Mindanao	2026	7	28	5	70	138	138	25
Mindanao	2026	7	28	6	73	138	138	25
Mindanao	2026	7	28	7	74	138	138	25
Mindanao	2026	7	28	8	83	138	138	25
Mindanao	2026	7	28	9	95	138	138	25
Mindanao	2026	7	28	10	96	138	138	25
Mindanao	2026	7	28	11	105	138	138	25
Mindanao	2026	7	28	12	105	138	138	25
Mindanao	2026	7	28	13	103	138	138	25
Mindanao	2026	7	28	14	101	138	138	25
Mindanao	2026	7	28	15	97	138	138	25
Mindanao	2026	7	28	16	89	138	138	25
Mindanao	2026	7	28	17	89	138	138	25
Mindanao	2026	7	28	18	91	138	138	25
Mindanao	2026	7	28	19	95	138	138	25
Mindanao	2026	7	28	20	92	138	138	25
Mindanao	2026	7	28	21	91	138	138	25
Mindanao	2026	7	28	22	86	138	138	25
Mindanao	2026	7	28	23	82	138	138	25
Mindanao	2026	7	28	24	79	138	138	25
Mindanao	2026	7	29	1	75	138	138	25
Mindanao	2026	7	29	2	72	138	138	25
Mindanao	2026	7	29	3	71	138	138	25
Mindanao	2026	7	29	4	69	138	138	25
Mindanao	2026	7	29	5	70	138	138	25
Mindanao	2026	7	29	6	74	138	138	25
Mindanao	2026	7	29	7	72	138	138	25
Mindanao	2026	7	29	8	80	138	138	25
Mindanao	2026	7	29	9	94	138	138	25
Mindanao	2026	7	29	10	100	138	138	25
Mindanao	2026	7	29	11	105	138	138	25
Mindanao	2026	7	29	12	104	138	138	25
Mindanao	2026	7	29	13	107	138	138	25
Mindanao	2026	7	29	14	111	138	138	25
Mindanao	2026	7	29	15	112	138	138	25
Mindanao	2026	7	29	16	109	138	138	25
Mindanao	2026	7	29	17	103	138	138	25
Mindanao	2026	7	29	18	102	138	138	25
Mindanao	2026	7	29	19	104	138	138	25
Mindanao	2026	7	29	20	103	138	138	25
Mindanao	2026	7	29	21	99	138	138	25
Mindanao	2026	7	29	22	93	138	138	25
Mindanao	2026	7	29	23	89	138	138	25
Mindanao	2026	7	29	24	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	7	30	1	80	138	138	25
Mindanao	2026	7	30	2	78	138	138	25
Mindanao	2026	7	30	3	76	138	138	25
Mindanao	2026	7	30	4	74	138	138	25
Mindanao	2026	7	30	5	75	138	138	25
Mindanao	2026	7	30	6	79	138	138	25
Mindanao	2026	7	30	7	76	138	138	25
Mindanao	2026	7	30	8	85	138	138	25
Mindanao	2026	7	30	9	96	138	138	25
Mindanao	2026	7	30	10	103	138	138	25
Mindanao	2026	7	30	11	109	138	138	25
Mindanao	2026	7	30	12	107	138	138	25
Mindanao	2026	7	30	13	109	138	138	25
Mindanao	2026	7	30	14	112	138	138	25
Mindanao	2026	7	30	15	112	138	138	25
Mindanao	2026	7	30	16	109	138	138	25
Mindanao	2026	7	30	17	102	138	138	25
Mindanao	2026	7	30	18	102	138	138	25
Mindanao	2026	7	30	19	104	138	138	25
Mindanao	2026	7	30	20	101	138	138	25
Mindanao	2026	7	30	21	98	138	138	25
Mindanao	2026	7	30	22	93	138	138	25
Mindanao	2026	7	30	23	89	138	138	25
Mindanao	2026	7	30	24	85	138	138	25
Mindanao	2026	7	31	1	80	138	138	25
Mindanao	2026	7	31	2	79	138	138	25
Mindanao	2026	7	31	3	74	138	138	25
Mindanao	2026	7	31	4	73	138	138	25
Mindanao	2026	7	31	5	74	138	138	25
Mindanao	2026	7	31	6	77	138	138	25
Mindanao	2026	7	31	7	73	138	138	25
Mindanao	2026	7	31	8	80	138	138	25
Mindanao	2026	7	31	9	93	138	138	25
Mindanao	2026	7	31	10	98	138	138	25
Mindanao	2026	7	31	11	103	138	138	25
Mindanao	2026	7	31	12	101	138	138	25
Mindanao	2026	7	31	13	101	138	138	25
Mindanao	2026	7	31	14	102	138	138	25
Mindanao	2026	7	31	15	100	138	138	25
Mindanao	2026	7	31	16	98	138	138	25
Mindanao	2026	7	31	17	94	138	138	25
Mindanao	2026	7	31	18	96	138	138	25
Mindanao	2026	7	31	19	94	138	138	25
Mindanao	2026	7	31	20	93	138	138	25
Mindanao	2026	7	31	21	92	138	138	25
Mindanao	2026	7	31	22	86	138	138	25
Mindanao	2026	7	31	23	81	138	138	25
Mindanao	2026	7	31	24	78	138	138	25
Mindanao	2026	8	1	1	75	138	138	25
Mindanao	2026	8	1	2	72	138	138	25
Mindanao	2026	8	1	3	72	138	138	25
Mindanao	2026	8	1	4	69	138	138	25
Mindanao	2026	8	1	5	69	138	138	25
Mindanao	2026	8	1	6	72	138	138	25
Mindanao	2026	8	1	7	72	138	138	25
Mindanao	2026	8	1	8	78	138	138	25
Mindanao	2026	8	1	9	85	138	138	25
Mindanao	2026	8	1	10	90	138	138	25
Mindanao	2026	8	1	11	96	138	138	25
Mindanao	2026	8	1	12	96	138	138	25
Mindanao	2026	8	1	13	97	138	138	25
Mindanao	2026	8	1	14	101	138	138	25
Mindanao	2026	8	1	15	100	138	138	25
Mindanao	2026	8	1	16	98	138	138	25
Mindanao	2026	8	1	17	94	138	138	25
Mindanao	2026	8	1	18	99	138	138	25
Mindanao	2026	8	1	19	101	138	138	25
Mindanao	2026	8	1	20	99	138	138	25
Mindanao	2026	8	1	21	97	138	138	25
Mindanao	2026	8	1	22	92	138	138	25
Mindanao	2026	8	1	23	89	138	138	25
Mindanao	2026	8	1	24	83	138	138	25
Mindanao	2026	8	2	1	80	138	138	25
Mindanao	2026	8	2	2	75	138	138	25
Mindanao	2026	8	2	3	73	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	2	4	72	138	138	25
Mindanao	2026	8	2	5	72	138	138	25
Mindanao	2026	8	2	6	72	138	138	25
Mindanao	2026	8	2	7	69	138	138	25
Mindanao	2026	8	2	8	71	138	138	25
Mindanao	2026	8	2	9	75	138	138	25
Mindanao	2026	8	2	10	81	138	138	25
Mindanao	2026	8	2	11	83	138	138	25
Mindanao	2026	8	2	12	84	138	138	25
Mindanao	2026	8	2	13	85	138	138	25
Mindanao	2026	8	2	14	87	138	138	25
Mindanao	2026	8	2	15	88	138	138	25
Mindanao	2026	8	2	16	86	138	138	25
Mindanao	2026	8	2	17	87	138	138	25
Mindanao	2026	8	2	18	91	138	138	25
Mindanao	2026	8	2	19	98	138	138	25
Mindanao	2026	8	2	20	97	138	138	25
Mindanao	2026	8	2	21	96	138	138	25
Mindanao	2026	8	2	22	90	138	138	25
Mindanao	2026	8	2	23	85	138	138	25
Mindanao	2026	8	2	24	81	138	138	25
Mindanao	2026	8	3	1	76	138	138	25
Mindanao	2026	8	3	2	74	138	138	25
Mindanao	2026	8	3	3	70	138	138	25
Mindanao	2026	8	3	4	69	138	138	25
Mindanao	2026	8	3	5	71	138	138	25
Mindanao	2026	8	3	6	72	138	138	25
Mindanao	2026	8	3	7	72	138	138	25
Mindanao	2026	8	3	8	81	138	138	25
Mindanao	2026	8	3	9	96	138	138	25
Mindanao	2026	8	3	10	105	138	138	25
Mindanao	2026	8	3	11	110	138	138	25
Mindanao	2026	8	3	12	110	138	138	25
Mindanao	2026	8	3	13	112	138	138	25
Mindanao	2026	8	3	14	117	138	138	25
Mindanao	2026	8	3	15	115	138	138	25
Mindanao	2026	8	3	16	114	138	138	25
Mindanao	2026	8	3	17	106	138	138	25
Mindanao	2026	8	3	18	102	138	138	25
Mindanao	2026	8	3	19	107	138	138	25
Mindanao	2026	8	3	20	102	138	138	25
Mindanao	2026	8	3	21	101	138	138	25
Mindanao	2026	8	3	22	96	138	138	25
Mindanao	2026	8	3	23	90	138	138	25
Mindanao	2026	8	3	24	86	138	138	25
Mindanao	2026	8	4	1	82	138	138	25
Mindanao	2026	8	4	2	80	138	138	25
Mindanao	2026	8	4	3	77	138	138	25
Mindanao	2026	8	4	4	75	138	138	25
Mindanao	2026	8	4	5	77	138	138	25
Mindanao	2026	8	4	6	78	138	138	25
Mindanao	2026	8	4	7	76	138	138	25
Mindanao	2026	8	4	8	85	138	138	25
Mindanao	2026	8	4	9	97	138	138	25
Mindanao	2026	8	4	10	103	138	138	25
Mindanao	2026	8	4	11	109	138	138	25
Mindanao	2026	8	4	12	108	138	138	25
Mindanao	2026	8	4	13	110	138	138	25
Mindanao	2026	8	4	14	115	138	138	25
Mindanao	2026	8	4	15	114	138	138	25
Mindanao	2026	8	4	16	112	138	138	25
Mindanao	2026	8	4	17	105	138	138	25
Mindanao	2026	8	4	18	101	138	138	25
Mindanao	2026	8	4	19	107	138	138	25
Mindanao	2026	8	4	20	105	138	138	25
Mindanao	2026	8	4	21	102	138	138	25
Mindanao	2026	8	4	22	97	138	138	25
Mindanao	2026	8	4	23	92	138	138	25
Mindanao	2026	8	4	24	87	138	138	25
Mindanao	2026	8	5	1	83	138	138	25
Mindanao	2026	8	5	2	79	138	138	25
Mindanao	2026	8	5	3	76	138	138	25
Mindanao	2026	8	5	4	74	138	138	25
Mindanao	2026	8	5	5	74	138	138	25
Mindanao	2026	8	5	6	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	5	7	75	138	138	25
Mindanao	2026	8	5	8	84	138	138	25
Mindanao	2026	8	5	9	98	138	138	25
Mindanao	2026	8	5	10	105	138	138	25
Mindanao	2026	8	5	11	109	138	138	25
Mindanao	2026	8	5	12	109	138	138	25
Mindanao	2026	8	5	13	111	138	138	25
Mindanao	2026	8	5	14	116	138	138	25
Mindanao	2026	8	5	15	114	138	138	25
Mindanao	2026	8	5	16	113	138	138	25
Mindanao	2026	8	5	17	107	138	138	25
Mindanao	2026	8	5	18	104	138	138	25
Mindanao	2026	8	5	19	109	138	138	25
Mindanao	2026	8	5	20	106	138	138	25
Mindanao	2026	8	5	21	104	138	138	25
Mindanao	2026	8	5	22	99	138	138	25
Mindanao	2026	8	5	23	94	138	138	25
Mindanao	2026	8	5	24	89	138	138	25
Mindanao	2026	8	6	1	84	138	138	25
Mindanao	2026	8	6	2	80	138	138	25
Mindanao	2026	8	6	3	78	138	138	25
Mindanao	2026	8	6	4	76	138	138	25
Mindanao	2026	8	6	5	76	138	138	25
Mindanao	2026	8	6	6	77	138	138	25
Mindanao	2026	8	6	7	75	138	138	25
Mindanao	2026	8	6	8	85	138	138	25
Mindanao	2026	8	6	9	98	138	138	25
Mindanao	2026	8	6	10	105	138	138	25
Mindanao	2026	8	6	11	110	138	138	25
Mindanao	2026	8	6	12	108	138	138	25
Mindanao	2026	8	6	13	111	138	138	25
Mindanao	2026	8	6	14	114	138	138	25
Mindanao	2026	8	6	15	112	138	138	25
Mindanao	2026	8	6	16	111	138	138	25
Mindanao	2026	8	6	17	102	138	138	25
Mindanao	2026	8	6	18	102	138	138	25
Mindanao	2026	8	6	19	106	138	138	25
Mindanao	2026	8	6	20	105	138	138	25
Mindanao	2026	8	6	21	104	138	138	25
Mindanao	2026	8	6	22	97	138	138	25
Mindanao	2026	8	6	23	91	138	138	25
Mindanao	2026	8	6	24	85	138	138	25
Mindanao	2026	8	7	1	82	138	138	25
Mindanao	2026	8	7	2	78	138	138	25
Mindanao	2026	8	7	3	75	138	138	25
Mindanao	2026	8	7	4	75	138	138	25
Mindanao	2026	8	7	5	75	138	138	25
Mindanao	2026	8	7	6	77	138	138	25
Mindanao	2026	8	7	7	74	138	138	25
Mindanao	2026	8	7	8	85	138	138	25
Mindanao	2026	8	7	9	97	138	138	25
Mindanao	2026	8	7	10	105	138	138	25
Mindanao	2026	8	7	11	110	138	138	25
Mindanao	2026	8	7	12	107	138	138	25
Mindanao	2026	8	7	13	108	138	138	25
Mindanao	2026	8	7	14	114	138	138	25
Mindanao	2026	8	7	15	114	138	138	25
Mindanao	2026	8	7	16	109	138	138	25
Mindanao	2026	8	7	17	104	138	138	25
Mindanao	2026	8	7	18	102	138	138	25
Mindanao	2026	8	7	19	102	138	138	25
Mindanao	2026	8	7	20	103	138	138	25
Mindanao	2026	8	7	21	98	138	138	25
Mindanao	2026	8	7	22	94	138	138	25
Mindanao	2026	8	7	23	88	138	138	25
Mindanao	2026	8	7	24	83	138	138	25
Mindanao	2026	8	8	1	81	138	138	25
Mindanao	2026	8	8	2	78	138	138	25
Mindanao	2026	8	8	3	75	138	138	25
Mindanao	2026	8	8	4	73	138	138	25
Mindanao	2026	8	8	5	74	138	138	25
Mindanao	2026	8	8	6	74	138	138	25
Mindanao	2026	8	8	7	71	138	138	25
Mindanao	2026	8	8	8	77	138	138	25
Mindanao	2026	8	8	9	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	8	10	92	138	138	25
Mindanao	2026	8	8	11	97	138	138	25
Mindanao	2026	8	8	12	97	138	138	25
Mindanao	2026	8	8	13	96	138	138	25
Mindanao	2026	8	8	14	103	138	138	25
Mindanao	2026	8	8	15	103	138	138	25
Mindanao	2026	8	8	16	101	138	138	25
Mindanao	2026	8	8	17	97	138	138	25
Mindanao	2026	8	8	18	97	138	138	25
Mindanao	2026	8	8	19	106	138	138	25
Mindanao	2026	8	8	20	102	138	138	25
Mindanao	2026	8	8	21	101	138	138	25
Mindanao	2026	8	8	22	96	138	138	25
Mindanao	2026	8	8	23	90	138	138	25
Mindanao	2026	8	8	24	86	138	138	25
Mindanao	2026	8	9	1	82	138	138	25
Mindanao	2026	8	9	2	80	138	138	25
Mindanao	2026	8	9	3	77	138	138	25
Mindanao	2026	8	9	4	74	138	138	25
Mindanao	2026	8	9	5	73	138	138	25
Mindanao	2026	8	9	6	72	138	138	25
Mindanao	2026	8	9	7	69	138	138	25
Mindanao	2026	8	9	8	71	138	138	25
Mindanao	2026	8	9	9	75	138	138	25
Mindanao	2026	8	9	10	78	138	138	25
Mindanao	2026	8	9	11	83	138	138	25
Mindanao	2026	8	9	12	84	138	138	25
Mindanao	2026	8	9	13	86	138	138	25
Mindanao	2026	8	9	14	88	138	138	25
Mindanao	2026	8	9	15	85	138	138	25
Mindanao	2026	8	9	16	86	138	138	25
Mindanao	2026	8	9	17	86	138	138	25
Mindanao	2026	8	9	18	91	138	138	25
Mindanao	2026	8	9	19	98	138	138	25
Mindanao	2026	8	9	20	95	138	138	25
Mindanao	2026	8	9	21	94	138	138	25
Mindanao	2026	8	9	22	91	138	138	25
Mindanao	2026	8	9	23	87	138	138	25
Mindanao	2026	8	9	24	82	138	138	25
Mindanao	2026	8	10	1	79	138	138	25
Mindanao	2026	8	10	2	74	138	138	25
Mindanao	2026	8	10	3	73	138	138	25
Mindanao	2026	8	10	4	71	138	138	25
Mindanao	2026	8	10	5	72	138	138	25
Mindanao	2026	8	10	6	73	138	138	25
Mindanao	2026	8	10	7	72	138	138	25
Mindanao	2026	8	10	8	82	138	138	25
Mindanao	2026	8	10	9	94	138	138	25
Mindanao	2026	8	10	10	103	138	138	25
Mindanao	2026	8	10	11	107	138	138	25
Mindanao	2026	8	10	12	105	138	138	25
Mindanao	2026	8	10	13	106	138	138	25
Mindanao	2026	8	10	14	105	138	138	25
Mindanao	2026	8	10	15	105	138	138	25
Mindanao	2026	8	10	16	104	138	138	25
Mindanao	2026	8	10	17	102	138	138	25
Mindanao	2026	8	10	18	100	138	138	25
Mindanao	2026	8	10	19	102	138	138	25
Mindanao	2026	8	10	20	100	138	138	25
Mindanao	2026	8	10	21	99	138	138	25
Mindanao	2026	8	10	22	97	138	138	25
Mindanao	2026	8	10	23	91	138	138	25
Mindanao	2026	8	10	24	86	138	138	25
Mindanao	2026	8	11	1	83	138	138	25
Mindanao	2026	8	11	2	79	138	138	25
Mindanao	2026	8	11	3	77	138	138	25
Mindanao	2026	8	11	4	75	138	138	25
Mindanao	2026	8	11	5	76	138	138	25
Mindanao	2026	8	11	6	77	138	138	25
Mindanao	2026	8	11	7	75	138	138	25
Mindanao	2026	8	11	8	85	138	138	25
Mindanao	2026	8	11	9	98	138	138	25
Mindanao	2026	8	11	10	104	138	138	25
Mindanao	2026	8	11	11	109	138	138	25
Mindanao	2026	8	11	12	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	11	13	108	138	138	25
Mindanao	2026	8	11	14	111	138	138	25
Mindanao	2026	8	11	15	109	138	138	25
Mindanao	2026	8	11	16	108	138	138	25
Mindanao	2026	8	11	17	104	138	138	25
Mindanao	2026	8	11	18	103	138	138	25
Mindanao	2026	8	11	19	105	138	138	25
Mindanao	2026	8	11	20	102	138	138	25
Mindanao	2026	8	11	21	101	138	138	25
Mindanao	2026	8	11	22	96	138	138	25
Mindanao	2026	8	11	23	92	138	138	25
Mindanao	2026	8	11	24	86	138	138	25
Mindanao	2026	8	12	1	83	138	138	25
Mindanao	2026	8	12	2	80	138	138	25
Mindanao	2026	8	12	3	77	138	138	25
Mindanao	2026	8	12	4	77	138	138	25
Mindanao	2026	8	12	5	77	138	138	25
Mindanao	2026	8	12	6	78	138	138	25
Mindanao	2026	8	12	7	77	138	138	25
Mindanao	2026	8	12	8	85	138	138	25
Mindanao	2026	8	12	9	93	138	138	25
Mindanao	2026	8	12	10	100	138	138	25
Mindanao	2026	8	12	11	110	138	138	25
Mindanao	2026	8	12	12	109	138	138	25
Mindanao	2026	8	12	13	110	138	138	25
Mindanao	2026	8	12	14	115	138	138	25
Mindanao	2026	8	12	15	114	138	138	25
Mindanao	2026	8	12	16	112	138	138	25
Mindanao	2026	8	12	17	106	138	138	25
Mindanao	2026	8	12	18	105	138	138	25
Mindanao	2026	8	12	19	108	138	138	25
Mindanao	2026	8	12	20	106	138	138	25
Mindanao	2026	8	12	21	102	138	138	25
Mindanao	2026	8	12	22	99	138	138	25
Mindanao	2026	8	12	23	93	138	138	25
Mindanao	2026	8	12	24	87	138	138	25
Mindanao	2026	8	13	1	83	138	138	25
Mindanao	2026	8	13	2	82	138	138	25
Mindanao	2026	8	13	3	81	138	138	25
Mindanao	2026	8	13	4	80	138	138	25
Mindanao	2026	8	13	5	81	138	138	25
Mindanao	2026	8	13	6	81	138	138	25
Mindanao	2026	8	13	7	77	138	138	25
Mindanao	2026	8	13	8	86	138	138	25
Mindanao	2026	8	13	9	96	138	138	25
Mindanao	2026	8	13	10	104	138	138	25
Mindanao	2026	8	13	11	108	138	138	25
Mindanao	2026	8	13	12	104	138	138	25
Mindanao	2026	8	13	13	106	138	138	25
Mindanao	2026	8	13	14	109	138	138	25
Mindanao	2026	8	13	15	107	138	138	25
Mindanao	2026	8	13	16	103	138	138	25
Mindanao	2026	8	13	17	99	138	138	25
Mindanao	2026	8	13	18	101	138	138	25
Mindanao	2026	8	13	19	102	138	138	25
Mindanao	2026	8	13	20	101	138	138	25
Mindanao	2026	8	13	21	97	138	138	25
Mindanao	2026	8	13	22	94	138	138	25
Mindanao	2026	8	13	23	88	138	138	25
Mindanao	2026	8	13	24	84	138	138	25
Mindanao	2026	8	14	1	81	138	138	25
Mindanao	2026	8	14	2	80	138	138	25
Mindanao	2026	8	14	3	77	138	138	25
Mindanao	2026	8	14	4	75	138	138	25
Mindanao	2026	8	14	5	77	138	138	25
Mindanao	2026	8	14	6	79	138	138	25
Mindanao	2026	8	14	7	76	138	138	25
Mindanao	2026	8	14	8	84	138	138	25
Mindanao	2026	8	14	9	96	138	138	25
Mindanao	2026	8	14	10	101	138	138	25
Mindanao	2026	8	14	11	106	138	138	25
Mindanao	2026	8	14	12	102	138	138	25
Mindanao	2026	8	14	13	104	138	138	25
Mindanao	2026	8	14	14	108	138	138	25
Mindanao	2026	8	14	15	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	14	16	103	138	138	25
Mindanao	2026	8	14	17	99	138	138	25
Mindanao	2026	8	14	18	101	138	138	25
Mindanao	2026	8	14	19	102	138	138	25
Mindanao	2026	8	14	20	101	138	138	25
Mindanao	2026	8	14	21	97	138	138	25
Mindanao	2026	8	14	22	93	138	138	25
Mindanao	2026	8	14	23	89	138	138	25
Mindanao	2026	8	14	24	83	138	138	25
Mindanao	2026	8	15	1	80	138	138	25
Mindanao	2026	8	15	2	78	138	138	25
Mindanao	2026	8	15	3	78	138	138	25
Mindanao	2026	8	15	4	76	138	138	25
Mindanao	2026	8	15	5	76	138	138	25
Mindanao	2026	8	15	6	76	138	138	25
Mindanao	2026	8	15	7	74	138	138	25
Mindanao	2026	8	15	8	77	138	138	25
Mindanao	2026	8	15	9	83	138	138	25
Mindanao	2026	8	15	10	88	138	138	25
Mindanao	2026	8	15	11	91	138	138	25
Mindanao	2026	8	15	12	91	138	138	25
Mindanao	2026	8	15	13	91	138	138	25
Mindanao	2026	8	15	14	93	138	138	25
Mindanao	2026	8	15	15	92	138	138	25
Mindanao	2026	8	15	16	90	138	138	25
Mindanao	2026	8	15	17	87	138	138	25
Mindanao	2026	8	15	18	95	138	138	25
Mindanao	2026	8	15	19	98	138	138	25
Mindanao	2026	8	15	20	94	138	138	25
Mindanao	2026	8	15	21	91	138	138	25
Mindanao	2026	8	15	22	86	138	138	25
Mindanao	2026	8	15	23	82	138	138	25
Mindanao	2026	8	15	24	80	138	138	25
Mindanao	2026	8	16	1	78	138	138	25
Mindanao	2026	8	16	2	75	138	138	25
Mindanao	2026	8	16	3	74	138	138	25
Mindanao	2026	8	16	4	72	138	138	25
Mindanao	2026	8	16	5	71	138	138	25
Mindanao	2026	8	16	6	71	138	138	25
Mindanao	2026	8	16	7	70	138	138	25
Mindanao	2026	8	16	8	71	138	138	25
Mindanao	2026	8	16	9	75	138	138	25
Mindanao	2026	8	16	10	79	138	138	25
Mindanao	2026	8	16	11	82	138	138	25
Mindanao	2026	8	16	12	85	138	138	25
Mindanao	2026	8	16	13	85	138	138	25
Mindanao	2026	8	16	14	86	138	138	25
Mindanao	2026	8	16	15	85	138	138	25
Mindanao	2026	8	16	16	84	138	138	25
Mindanao	2026	8	16	17	84	138	138	25
Mindanao	2026	8	16	18	91	138	138	25
Mindanao	2026	8	16	19	94	138	138	25
Mindanao	2026	8	16	20	91	138	138	25
Mindanao	2026	8	16	21	90	138	138	25
Mindanao	2026	8	16	22	85	138	138	25
Mindanao	2026	8	16	23	81	138	138	25
Mindanao	2026	8	16	24	76	138	138	25
Mindanao	2026	8	17	1	74	138	138	25
Mindanao	2026	8	17	2	73	138	138	25
Mindanao	2026	8	17	3	71	138	138	25
Mindanao	2026	8	17	4	69	138	138	25
Mindanao	2026	8	17	5	71	138	138	25
Mindanao	2026	8	17	6	73	138	138	25
Mindanao	2026	8	17	7	73	138	138	25
Mindanao	2026	8	17	8	80	138	138	25
Mindanao	2026	8	17	9	90	138	138	25
Mindanao	2026	8	17	10	98	138	138	25
Mindanao	2026	8	17	11	102	138	138	25
Mindanao	2026	8	17	12	101	138	138	25
Mindanao	2026	8	17	13	103	138	138	25
Mindanao	2026	8	17	14	106	138	138	25
Mindanao	2026	8	17	15	105	138	138	25
Mindanao	2026	8	17	16	101	138	138	25
Mindanao	2026	8	17	17	99	138	138	25
Mindanao	2026	8	17	18	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	17	19	100	138	138	25
Mindanao	2026	8	17	20	97	138	138	25
Mindanao	2026	8	17	21	96	138	138	25
Mindanao	2026	8	17	22	91	138	138	25
Mindanao	2026	8	17	23	85	138	138	25
Mindanao	2026	8	17	24	83	138	138	25
Mindanao	2026	8	18	1	79	138	138	25
Mindanao	2026	8	18	2	76	138	138	25
Mindanao	2026	8	18	3	74	138	138	25
Mindanao	2026	8	18	4	71	138	138	25
Mindanao	2026	8	18	5	74	138	138	25
Mindanao	2026	8	18	6	77	138	138	25
Mindanao	2026	8	18	7	76	138	138	25
Mindanao	2026	8	18	8	82	138	138	25
Mindanao	2026	8	18	9	93	138	138	25
Mindanao	2026	8	18	10	98	138	138	25
Mindanao	2026	8	18	11	103	138	138	25
Mindanao	2026	8	18	12	102	138	138	25
Mindanao	2026	8	18	13	104	138	138	25
Mindanao	2026	8	18	14	106	138	138	25
Mindanao	2026	8	18	15	101	138	138	25
Mindanao	2026	8	18	16	100	138	138	25
Mindanao	2026	8	18	17	98	138	138	25
Mindanao	2026	8	18	18	102	138	138	25
Mindanao	2026	8	18	19	102	138	138	25
Mindanao	2026	8	18	20	99	138	138	25
Mindanao	2026	8	18	21	98	138	138	25
Mindanao	2026	8	18	22	92	138	138	25
Mindanao	2026	8	18	23	88	138	138	25
Mindanao	2026	8	18	24	83	138	138	25
Mindanao	2026	8	19	1	79	138	138	25
Mindanao	2026	8	19	2	77	138	138	25
Mindanao	2026	8	19	3	75	138	138	25
Mindanao	2026	8	19	4	75	138	138	25
Mindanao	2026	8	19	5	76	138	138	25
Mindanao	2026	8	19	6	78	138	138	25
Mindanao	2026	8	19	7	75	138	138	25
Mindanao	2026	8	19	8	82	138	138	25
Mindanao	2026	8	19	9	94	138	138	25
Mindanao	2026	8	19	10	100	138	138	25
Mindanao	2026	8	19	11	103	138	138	25
Mindanao	2026	8	19	12	102	138	138	25
Mindanao	2026	8	19	13	104	138	138	25
Mindanao	2026	8	19	14	106	138	138	25
Mindanao	2026	8	19	15	103	138	138	25
Mindanao	2026	8	19	16	101	138	138	25
Mindanao	2026	8	19	17	95	138	138	25
Mindanao	2026	8	19	18	96	138	138	25
Mindanao	2026	8	19	19	96	138	138	25
Mindanao	2026	8	19	20	91	138	138	25
Mindanao	2026	8	19	21	91	138	138	25
Mindanao	2026	8	19	22	86	138	138	25
Mindanao	2026	8	19	23	82	138	138	25
Mindanao	2026	8	19	24	75	138	138	25
Mindanao	2026	8	20	1	74	138	138	25
Mindanao	2026	8	20	2	71	138	138	25
Mindanao	2026	8	20	3	71	138	138	25
Mindanao	2026	8	20	4	71	138	138	25
Mindanao	2026	8	20	5	71	138	138	25
Mindanao	2026	8	20	6	73	138	138	25
Mindanao	2026	8	20	7	71	138	138	25
Mindanao	2026	8	20	8	78	138	138	25
Mindanao	2026	8	20	9	90	138	138	25
Mindanao	2026	8	20	10	97	138	138	25
Mindanao	2026	8	20	11	101	138	138	25
Mindanao	2026	8	20	12	99	138	138	25
Mindanao	2026	8	20	13	100	138	138	25
Mindanao	2026	8	20	14	105	138	138	25
Mindanao	2026	8	20	15	103	138	138	25
Mindanao	2026	8	20	16	101	138	138	25
Mindanao	2026	8	20	17	97	138	138	25
Mindanao	2026	8	20	18	101	138	138	25
Mindanao	2026	8	20	19	100	138	138	25
Mindanao	2026	8	20	20	97	138	138	25
Mindanao	2026	8	20	21	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	20	22	88	138	138	25
Mindanao	2026	8	20	23	84	138	138	25
Mindanao	2026	8	20	24	79	138	138	25
Mindanao	2026	8	21	1	70	138	138	25
Mindanao	2026	8	21	2	68	138	138	25
Mindanao	2026	8	21	3	66	138	138	25
Mindanao	2026	8	21	4	65	138	138	25
Mindanao	2026	8	21	5	65	138	138	25
Mindanao	2026	8	21	6	67	138	138	25
Mindanao	2026	8	21	7	65	138	138	25
Mindanao	2026	8	21	8	68	138	138	25
Mindanao	2026	8	21	9	76	138	138	25
Mindanao	2026	8	21	10	81	138	138	25
Mindanao	2026	8	21	11	86	138	138	25
Mindanao	2026	8	21	12	86	138	138	25
Mindanao	2026	8	21	13	86	138	138	25
Mindanao	2026	8	21	14	88	138	138	25
Mindanao	2026	8	21	15	87	138	138	25
Mindanao	2026	8	21	16	86	138	138	25
Mindanao	2026	8	21	17	86	138	138	25
Mindanao	2026	8	21	18	93	138	138	25
Mindanao	2026	8	21	19	93	138	138	25
Mindanao	2026	8	21	20	91	138	138	25
Mindanao	2026	8	21	21	89	138	138	25
Mindanao	2026	8	21	22	83	138	138	25
Mindanao	2026	8	21	23	77	138	138	25
Mindanao	2026	8	21	24	73	138	138	25
Mindanao	2026	8	22	1	75	138	138	25
Mindanao	2026	8	22	2	72	138	138	25
Mindanao	2026	8	22	3	71	138	138	25
Mindanao	2026	8	22	4	68	138	138	25
Mindanao	2026	8	22	5	70	138	138	25
Mindanao	2026	8	22	6	72	138	138	25
Mindanao	2026	8	22	7	70	138	138	25
Mindanao	2026	8	22	8	75	138	138	25
Mindanao	2026	8	22	9	82	138	138	25
Mindanao	2026	8	22	10	89	138	138	25
Mindanao	2026	8	22	11	92	138	138	25
Mindanao	2026	8	22	12	93	138	138	25
Mindanao	2026	8	22	13	94	138	138	25
Mindanao	2026	8	22	14	96	138	138	25
Mindanao	2026	8	22	15	94	138	138	25
Mindanao	2026	8	22	16	91	138	138	25
Mindanao	2026	8	22	17	92	138	138	25
Mindanao	2026	8	22	18	95	138	138	25
Mindanao	2026	8	22	19	95	138	138	25
Mindanao	2026	8	22	20	90	138	138	25
Mindanao	2026	8	22	21	91	138	138	25
Mindanao	2026	8	22	22	85	138	138	25
Mindanao	2026	8	22	23	81	138	138	25
Mindanao	2026	8	22	24	75	138	138	25
Mindanao	2026	8	23	1	72	138	138	25
Mindanao	2026	8	23	2	68	138	138	25
Mindanao	2026	8	23	3	68	138	138	25
Mindanao	2026	8	23	4	66	138	138	25
Mindanao	2026	8	23	5	67	138	138	25
Mindanao	2026	8	23	6	67	138	138	25
Mindanao	2026	8	23	7	67	138	138	25
Mindanao	2026	8	23	8	69	138	138	25
Mindanao	2026	8	23	9	73	138	138	25
Mindanao	2026	8	23	10	78	138	138	25
Mindanao	2026	8	23	11	82	138	138	25
Mindanao	2026	8	23	12	84	138	138	25
Mindanao	2026	8	23	13	86	138	138	25
Mindanao	2026	8	23	14	87	138	138	25
Mindanao	2026	8	23	15	86	138	138	25
Mindanao	2026	8	23	16	84	138	138	25
Mindanao	2026	8	23	17	84	138	138	25
Mindanao	2026	8	23	18	90	138	138	25
Mindanao	2026	8	23	19	89	138	138	25
Mindanao	2026	8	23	20	89	138	138	25
Mindanao	2026	8	23	21	85	138	138	25
Mindanao	2026	8	23	22	81	138	138	25
Mindanao	2026	8	23	23	77	138	138	25
Mindanao	2026	8	23	24	73	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	24	1	74	138	138	25
Mindanao	2026	8	24	2	73	138	138	25
Mindanao	2026	8	24	3	71	138	138	25
Mindanao	2026	8	24	4	69	138	138	25
Mindanao	2026	8	24	5	71	138	138	25
Mindanao	2026	8	24	6	73	138	138	25
Mindanao	2026	8	24	7	73	138	138	25
Mindanao	2026	8	24	8	80	138	138	25
Mindanao	2026	8	24	9	90	138	138	25
Mindanao	2026	8	24	10	98	138	138	25
Mindanao	2026	8	24	11	102	138	138	25
Mindanao	2026	8	24	12	101	138	138	25
Mindanao	2026	8	24	13	103	138	138	25
Mindanao	2026	8	24	14	106	138	138	25
Mindanao	2026	8	24	15	105	138	138	25
Mindanao	2026	8	24	16	101	138	138	25
Mindanao	2026	8	24	17	99	138	138	25
Mindanao	2026	8	24	18	100	138	138	25
Mindanao	2026	8	24	19	100	138	138	25
Mindanao	2026	8	24	20	97	138	138	25
Mindanao	2026	8	24	21	96	138	138	25
Mindanao	2026	8	24	22	91	138	138	25
Mindanao	2026	8	24	23	85	138	138	25
Mindanao	2026	8	24	24	83	138	138	25
Mindanao	2026	8	25	1	70	138	138	25
Mindanao	2026	8	25	2	68	138	138	25
Mindanao	2026	8	25	3	66	138	138	25
Mindanao	2026	8	25	4	64	138	138	25
Mindanao	2026	8	25	5	68	138	138	25
Mindanao	2026	8	25	6	71	138	138	25
Mindanao	2026	8	25	7	68	138	138	25
Mindanao	2026	8	25	8	77	138	138	25
Mindanao	2026	8	25	9	89	138	138	25
Mindanao	2026	8	25	10	97	138	138	25
Mindanao	2026	8	25	11	102	138	138	25
Mindanao	2026	8	25	12	101	138	138	25
Mindanao	2026	8	25	13	102	138	138	25
Mindanao	2026	8	25	14	105	138	138	25
Mindanao	2026	8	25	15	104	138	138	25
Mindanao	2026	8	25	16	101	138	138	25
Mindanao	2026	8	25	17	97	138	138	25
Mindanao	2026	8	25	18	98	138	138	25
Mindanao	2026	8	25	19	99	138	138	25
Mindanao	2026	8	25	20	95	138	138	25
Mindanao	2026	8	25	21	92	138	138	25
Mindanao	2026	8	25	22	86	138	138	25
Mindanao	2026	8	25	23	81	138	138	25
Mindanao	2026	8	25	24	77	138	138	25
Mindanao	2026	8	26	1	74	138	138	25
Mindanao	2026	8	26	2	71	138	138	25
Mindanao	2026	8	26	3	69	138	138	25
Mindanao	2026	8	26	4	69	138	138	25
Mindanao	2026	8	26	5	70	138	138	25
Mindanao	2026	8	26	6	73	138	138	25
Mindanao	2026	8	26	7	70	138	138	25
Mindanao	2026	8	26	8	78	138	138	25
Mindanao	2026	8	26	9	90	138	138	25
Mindanao	2026	8	26	10	96	138	138	25
Mindanao	2026	8	26	11	100	138	138	25
Mindanao	2026	8	26	12	98	138	138	25
Mindanao	2026	8	26	13	99	138	138	25
Mindanao	2026	8	26	14	103	138	138	25
Mindanao	2026	8	26	15	103	138	138	25
Mindanao	2026	8	26	16	101	138	138	25
Mindanao	2026	8	26	17	96	138	138	25
Mindanao	2026	8	26	18	99	138	138	25
Mindanao	2026	8	26	19	100	138	138	25
Mindanao	2026	8	26	20	96	138	138	25
Mindanao	2026	8	26	21	93	138	138	25
Mindanao	2026	8	26	22	88	138	138	25
Mindanao	2026	8	26	23	83	138	138	25
Mindanao	2026	8	26	24	78	138	138	25
Mindanao	2026	8	27	1	75	138	138	25
Mindanao	2026	8	27	2	71	138	138	25
Mindanao	2026	8	27	3	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	27	4	69	138	138	25
Mindanao	2026	8	27	5	71	138	138	25
Mindanao	2026	8	27	6	73	138	138	25
Mindanao	2026	8	27	7	70	138	138	25
Mindanao	2026	8	27	8	79	138	138	25
Mindanao	2026	8	27	9	91	138	138	25
Mindanao	2026	8	27	10	99	138	138	25
Mindanao	2026	8	27	11	104	138	138	25
Mindanao	2026	8	27	12	103	138	138	25
Mindanao	2026	8	27	13	105	138	138	25
Mindanao	2026	8	27	14	110	138	138	25
Mindanao	2026	8	27	15	108	138	138	25
Mindanao	2026	8	27	16	105	138	138	25
Mindanao	2026	8	27	17	100	138	138	25
Mindanao	2026	8	27	18	99	138	138	25
Mindanao	2026	8	27	19	99	138	138	25
Mindanao	2026	8	27	20	96	138	138	25
Mindanao	2026	8	27	21	93	138	138	25
Mindanao	2026	8	27	22	89	138	138	25
Mindanao	2026	8	27	23	84	138	138	25
Mindanao	2026	8	27	24	79	138	138	25
Mindanao	2026	8	28	1	74	138	138	25
Mindanao	2026	8	28	2	72	138	138	25
Mindanao	2026	8	28	3	70	138	138	25
Mindanao	2026	8	28	4	69	138	138	25
Mindanao	2026	8	28	5	70	138	138	25
Mindanao	2026	8	28	6	73	138	138	25
Mindanao	2026	8	28	7	70	138	138	25
Mindanao	2026	8	28	8	79	138	138	25
Mindanao	2026	8	28	9	93	138	138	25
Mindanao	2026	8	28	10	100	138	138	25
Mindanao	2026	8	28	11	105	138	138	25
Mindanao	2026	8	28	12	104	138	138	25
Mindanao	2026	8	28	13	106	138	138	25
Mindanao	2026	8	28	14	109	138	138	25
Mindanao	2026	8	28	15	107	138	138	25
Mindanao	2026	8	28	16	103	138	138	25
Mindanao	2026	8	28	17	99	138	138	25
Mindanao	2026	8	28	18	102	138	138	25
Mindanao	2026	8	28	19	101	138	138	25
Mindanao	2026	8	28	20	99	138	138	25
Mindanao	2026	8	28	21	95	138	138	25
Mindanao	2026	8	28	22	92	138	138	25
Mindanao	2026	8	28	23	86	138	138	25
Mindanao	2026	8	28	24	81	138	138	25
Mindanao	2026	8	29	1	75	138	138	25
Mindanao	2026	8	29	2	74	138	138	25
Mindanao	2026	8	29	3	73	138	138	25
Mindanao	2026	8	29	4	72	138	138	25
Mindanao	2026	8	29	5	72	138	138	25
Mindanao	2026	8	29	6	73	138	138	25
Mindanao	2026	8	29	7	71	138	138	25
Mindanao	2026	8	29	8	77	138	138	25
Mindanao	2026	8	29	9	85	138	138	25
Mindanao	2026	8	29	10	92	138	138	25
Mindanao	2026	8	29	11	97	138	138	25
Mindanao	2026	8	29	12	96	138	138	25
Mindanao	2026	8	29	13	97	138	138	25
Mindanao	2026	8	29	14	102	138	138	25
Mindanao	2026	8	29	15	100	138	138	25
Mindanao	2026	8	29	16	96	138	138	25
Mindanao	2026	8	29	17	94	138	138	25
Mindanao	2026	8	29	18	100	138	138	25
Mindanao	2026	8	29	19	98	138	138	25
Mindanao	2026	8	29	20	96	138	138	25
Mindanao	2026	8	29	21	94	138	138	25
Mindanao	2026	8	29	22	89	138	138	25
Mindanao	2026	8	29	23	83	138	138	25
Mindanao	2026	8	29	24	79	138	138	25
Mindanao	2026	8	30	1	75	138	138	25
Mindanao	2026	8	30	2	73	138	138	25
Mindanao	2026	8	30	3	70	138	138	25
Mindanao	2026	8	30	4	69	138	138	25
Mindanao	2026	8	30	5	70	138	138	25
Mindanao	2026	8	30	6	67	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	8	30	7	66	138	138	25
Mindanao	2026	8	30	8	67	138	138	25
Mindanao	2026	8	30	9	71	138	138	25
Mindanao	2026	8	30	10	76	138	138	25
Mindanao	2026	8	30	11	81	138	138	25
Mindanao	2026	8	30	12	82	138	138	25
Mindanao	2026	8	30	13	84	138	138	25
Mindanao	2026	8	30	14	85	138	138	25
Mindanao	2026	8	30	15	83	138	138	25
Mindanao	2026	8	30	16	81	138	138	25
Mindanao	2026	8	30	17	83	138	138	25
Mindanao	2026	8	30	18	90	138	138	25
Mindanao	2026	8	30	19	92	138	138	25
Mindanao	2026	8	30	20	90	138	138	25
Mindanao	2026	8	30	21	90	138	138	25
Mindanao	2026	8	30	22	86	138	138	25
Mindanao	2026	8	30	23	81	138	138	25
Mindanao	2026	8	30	24	76	138	138	25
Mindanao	2026	8	31	1	73	138	138	25
Mindanao	2026	8	31	2	72	138	138	25
Mindanao	2026	8	31	3	69	138	138	25
Mindanao	2026	8	31	4	68	138	138	25
Mindanao	2026	8	31	5	68	138	138	25
Mindanao	2026	8	31	6	68	138	138	25
Mindanao	2026	8	31	7	66	138	138	25
Mindanao	2026	8	31	8	69	138	138	25
Mindanao	2026	8	31	9	76	138	138	25
Mindanao	2026	8	31	10	84	138	138	25
Mindanao	2026	8	31	11	88	138	138	25
Mindanao	2026	8	31	12	86	138	138	25
Mindanao	2026	8	31	13	87	138	138	25
Mindanao	2026	8	31	14	89	138	138	25
Mindanao	2026	8	31	15	88	138	138	25
Mindanao	2026	8	31	16	85	138	138	25
Mindanao	2026	8	31	17	86	138	138	25
Mindanao	2026	8	31	18	93	138	138	25
Mindanao	2026	8	31	19	94	138	138	25
Mindanao	2026	8	31	20	91	138	138	25
Mindanao	2026	8	31	21	91	138	138	25
Mindanao	2026	8	31	22	86	138	138	25
Mindanao	2026	8	31	23	81	138	138	25
Mindanao	2026	8	31	24	76	138	138	25
Mindanao	2026	9	1	1	73	138	138	25
Mindanao	2026	9	1	2	70	138	138	25
Mindanao	2026	9	1	3	67	138	138	25
Mindanao	2026	9	1	4	68	138	138	25
Mindanao	2026	9	1	5	73	138	138	25
Mindanao	2026	9	1	6	75	138	138	25
Mindanao	2026	9	1	7	67	138	138	25
Mindanao	2026	9	1	8	77	138	138	25
Mindanao	2026	9	1	9	91	138	138	25
Mindanao	2026	9	1	10	98	138	138	25
Mindanao	2026	9	1	11	102	138	138	25
Mindanao	2026	9	1	12	101	138	138	25
Mindanao	2026	9	1	13	102	138	138	25
Mindanao	2026	9	1	14	106	138	138	25
Mindanao	2026	9	1	15	104	138	138	25
Mindanao	2026	9	1	16	101	138	138	25
Mindanao	2026	9	1	17	97	138	138	25
Mindanao	2026	9	1	18	102	138	138	25
Mindanao	2026	9	1	19	104	138	138	25
Mindanao	2026	9	1	20	103	138	138	25
Mindanao	2026	9	1	21	100	138	138	25
Mindanao	2026	9	1	22	93	138	138	25
Mindanao	2026	9	1	23	88	138	138	25
Mindanao	2026	9	1	24	83	138	138	25
Mindanao	2026	9	2	1	78	138	138	25
Mindanao	2026	9	2	2	77	138	138	25
Mindanao	2026	9	2	3	73	138	138	25
Mindanao	2026	9	2	4	72	138	138	25
Mindanao	2026	9	2	5	76	138	138	25
Mindanao	2026	9	2	6	77	138	138	25
Mindanao	2026	9	2	7	70	138	138	25
Mindanao	2026	9	2	8	81	138	138	25
Mindanao	2026	9	2	9	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	2	10	101	138	138	25
Mindanao	2026	9	2	11	106	138	138	25
Mindanao	2026	9	2	12	105	138	138	25
Mindanao	2026	9	2	13	107	138	138	25
Mindanao	2026	9	2	14	111	138	138	25
Mindanao	2026	9	2	15	111	138	138	25
Mindanao	2026	9	2	16	109	138	138	25
Mindanao	2026	9	2	17	104	138	138	25
Mindanao	2026	9	2	18	106	138	138	25
Mindanao	2026	9	2	19	108	138	138	25
Mindanao	2026	9	2	20	105	138	138	25
Mindanao	2026	9	2	21	103	138	138	25
Mindanao	2026	9	2	22	97	138	138	25
Mindanao	2026	9	2	23	91	138	138	25
Mindanao	2026	9	2	24	86	138	138	25
Mindanao	2026	9	3	1	82	138	138	25
Mindanao	2026	9	3	2	77	138	138	25
Mindanao	2026	9	3	3	75	138	138	25
Mindanao	2026	9	3	4	75	138	138	25
Mindanao	2026	9	3	5	79	138	138	25
Mindanao	2026	9	3	6	79	138	138	25
Mindanao	2026	9	3	7	73	138	138	25
Mindanao	2026	9	3	8	82	138	138	25
Mindanao	2026	9	3	9	95	138	138	25
Mindanao	2026	9	3	10	102	138	138	25
Mindanao	2026	9	3	11	106	138	138	25
Mindanao	2026	9	3	12	105	138	138	25
Mindanao	2026	9	3	13	107	138	138	25
Mindanao	2026	9	3	14	111	138	138	25
Mindanao	2026	9	3	15	111	138	138	25
Mindanao	2026	9	3	16	109	138	138	25
Mindanao	2026	9	3	17	103	138	138	25
Mindanao	2026	9	3	18	104	138	138	25
Mindanao	2026	9	3	19	106	138	138	25
Mindanao	2026	9	3	20	106	138	138	25
Mindanao	2026	9	3	21	104	138	138	25
Mindanao	2026	9	3	22	98	138	138	25
Mindanao	2026	9	3	23	91	138	138	25
Mindanao	2026	9	3	24	86	138	138	25
Mindanao	2026	9	4	1	82	138	138	25
Mindanao	2026	9	4	2	79	138	138	25
Mindanao	2026	9	4	3	76	138	138	25
Mindanao	2026	9	4	4	75	138	138	25
Mindanao	2026	9	4	5	78	138	138	25
Mindanao	2026	9	4	6	79	138	138	25
Mindanao	2026	9	4	7	73	138	138	25
Mindanao	2026	9	4	8	82	138	138	25
Mindanao	2026	9	4	9	94	138	138	25
Mindanao	2026	9	4	10	101	138	138	25
Mindanao	2026	9	4	11	106	138	138	25
Mindanao	2026	9	4	12	105	138	138	25
Mindanao	2026	9	4	13	106	138	138	25
Mindanao	2026	9	4	14	112	138	138	25
Mindanao	2026	9	4	15	109	138	138	25
Mindanao	2026	9	4	16	107	138	138	25
Mindanao	2026	9	4	17	103	138	138	25
Mindanao	2026	9	4	18	105	138	138	25
Mindanao	2026	9	4	19	107	138	138	25
Mindanao	2026	9	4	20	104	138	138	25
Mindanao	2026	9	4	21	101	138	138	25
Mindanao	2026	9	4	22	97	138	138	25
Mindanao	2026	9	4	23	92	138	138	25
Mindanao	2026	9	4	24	87	138	138	25
Mindanao	2026	9	5	1	82	138	138	25
Mindanao	2026	9	5	2	79	138	138	25
Mindanao	2026	9	5	3	77	138	138	25
Mindanao	2026	9	5	4	73	138	138	25
Mindanao	2026	9	5	5	74	138	138	25
Mindanao	2026	9	5	6	74	138	138	25
Mindanao	2026	9	5	7	73	138	138	25
Mindanao	2026	9	5	8	79	138	138	25
Mindanao	2026	9	5	9	88	138	138	25
Mindanao	2026	9	5	10	94	138	138	25
Mindanao	2026	9	5	11	99	138	138	25
Mindanao	2026	9	5	12	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	5	13	99	138	138	25
Mindanao	2026	9	5	14	104	138	138	25
Mindanao	2026	9	5	15	102	138	138	25
Mindanao	2026	9	5	16	98	138	138	25
Mindanao	2026	9	5	17	96	138	138	25
Mindanao	2026	9	5	18	101	138	138	25
Mindanao	2026	9	5	19	104	138	138	25
Mindanao	2026	9	5	20	101	138	138	25
Mindanao	2026	9	5	21	99	138	138	25
Mindanao	2026	9	5	22	95	138	138	25
Mindanao	2026	9	5	23	88	138	138	25
Mindanao	2026	9	5	24	83	138	138	25
Mindanao	2026	9	6	1	80	138	138	25
Mindanao	2026	9	6	2	77	138	138	25
Mindanao	2026	9	6	3	75	138	138	25
Mindanao	2026	9	6	4	73	138	138	25
Mindanao	2026	9	6	5	72	138	138	25
Mindanao	2026	9	6	6	73	138	138	25
Mindanao	2026	9	6	7	71	138	138	25
Mindanao	2026	9	6	8	70	138	138	25
Mindanao	2026	9	6	9	75	138	138	25
Mindanao	2026	9	6	10	80	138	138	25
Mindanao	2026	9	6	11	84	138	138	25
Mindanao	2026	9	6	12	86	138	138	25
Mindanao	2026	9	6	13	88	138	138	25
Mindanao	2026	9	6	14	89	138	138	25
Mindanao	2026	9	6	15	87	138	138	25
Mindanao	2026	9	6	16	86	138	138	25
Mindanao	2026	9	6	17	86	138	138	25
Mindanao	2026	9	6	18	94	138	138	25
Mindanao	2026	9	6	19	98	138	138	25
Mindanao	2026	9	6	20	96	138	138	25
Mindanao	2026	9	6	21	95	138	138	25
Mindanao	2026	9	6	22	89	138	138	25
Mindanao	2026	9	6	23	85	138	138	25
Mindanao	2026	9	6	24	78	138	138	25
Mindanao	2026	9	7	1	76	138	138	25
Mindanao	2026	9	7	2	73	138	138	25
Mindanao	2026	9	7	3	71	138	138	25
Mindanao	2026	9	7	4	69	138	138	25
Mindanao	2026	9	7	5	75	138	138	25
Mindanao	2026	9	7	6	76	138	138	25
Mindanao	2026	9	7	7	70	138	138	25
Mindanao	2026	9	7	8	81	138	138	25
Mindanao	2026	9	7	9	93	138	138	25
Mindanao	2026	9	7	10	102	138	138	25
Mindanao	2026	9	7	11	106	138	138	25
Mindanao	2026	9	7	12	106	138	138	25
Mindanao	2026	9	7	13	108	138	138	25
Mindanao	2026	9	7	14	112	138	138	25
Mindanao	2026	9	7	15	112	138	138	25
Mindanao	2026	9	7	16	110	138	138	25
Mindanao	2026	9	7	17	106	138	138	25
Mindanao	2026	9	7	18	108	138	138	25
Mindanao	2026	9	7	19	107	138	138	25
Mindanao	2026	9	7	20	106	138	138	25
Mindanao	2026	9	7	21	103	138	138	25
Mindanao	2026	9	7	22	97	138	138	25
Mindanao	2026	9	7	23	91	138	138	25
Mindanao	2026	9	7	24	85	138	138	25
Mindanao	2026	9	8	1	82	138	138	25
Mindanao	2026	9	8	2	79	138	138	25
Mindanao	2026	9	8	3	77	138	138	25
Mindanao	2026	9	8	4	75	138	138	25
Mindanao	2026	9	8	5	79	138	138	25
Mindanao	2026	9	8	6	81	138	138	25
Mindanao	2026	9	8	7	73	138	138	25
Mindanao	2026	9	8	8	84	138	138	25
Mindanao	2026	9	8	9	97	138	138	25
Mindanao	2026	9	8	10	103	138	138	25
Mindanao	2026	9	8	11	109	138	138	25
Mindanao	2026	9	8	12	109	138	138	25
Mindanao	2026	9	8	13	111	138	138	25
Mindanao	2026	9	8	14	113	138	138	25
Mindanao	2026	9	8	15	111	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	8	16	109	138	138	25
Mindanao	2026	9	8	17	104	138	138	25
Mindanao	2026	9	8	18	108	138	138	25
Mindanao	2026	9	8	19	108	138	138	25
Mindanao	2026	9	8	20	107	138	138	25
Mindanao	2026	9	8	21	104	138	138	25
Mindanao	2026	9	8	22	98	138	138	25
Mindanao	2026	9	8	23	93	138	138	25
Mindanao	2026	9	8	24	88	138	138	25
Mindanao	2026	9	9	1	84	138	138	25
Mindanao	2026	9	9	2	81	138	138	25
Mindanao	2026	9	9	3	77	138	138	25
Mindanao	2026	9	9	4	76	138	138	25
Mindanao	2026	9	9	5	79	138	138	25
Mindanao	2026	9	9	6	82	138	138	25
Mindanao	2026	9	9	7	74	138	138	25
Mindanao	2026	9	9	8	81	138	138	25
Mindanao	2026	9	9	9	89	138	138	25
Mindanao	2026	9	9	10	101	138	138	25
Mindanao	2026	9	9	11	106	138	138	25
Mindanao	2026	9	9	12	104	138	138	25
Mindanao	2026	9	9	13	105	138	138	25
Mindanao	2026	9	9	14	108	138	138	25
Mindanao	2026	9	9	15	107	138	138	25
Mindanao	2026	9	9	16	105	138	138	25
Mindanao	2026	9	9	17	102	138	138	25
Mindanao	2026	9	9	18	105	138	138	25
Mindanao	2026	9	9	19	105	138	138	25
Mindanao	2026	9	9	20	102	138	138	25
Mindanao	2026	9	9	21	101	138	138	25
Mindanao	2026	9	9	22	94	138	138	25
Mindanao	2026	9	9	23	87	138	138	25
Mindanao	2026	9	9	24	83	138	138	25
Mindanao	2026	9	10	1	79	138	138	25
Mindanao	2026	9	10	2	77	138	138	25
Mindanao	2026	9	10	3	74	138	138	25
Mindanao	2026	9	10	4	72	138	138	25
Mindanao	2026	9	10	5	77	138	138	25
Mindanao	2026	9	10	6	80	138	138	25
Mindanao	2026	9	10	7	72	138	138	25
Mindanao	2026	9	10	8	81	138	138	25
Mindanao	2026	9	10	9	93	138	138	25
Mindanao	2026	9	10	10	101	138	138	25
Mindanao	2026	9	10	11	106	138	138	25
Mindanao	2026	9	10	12	104	138	138	25
Mindanao	2026	9	10	13	106	138	138	25
Mindanao	2026	9	10	14	110	138	138	25
Mindanao	2026	9	10	15	109	138	138	25
Mindanao	2026	9	10	16	107	138	138	25
Mindanao	2026	9	10	17	103	138	138	25
Mindanao	2026	9	10	18	105	138	138	25
Mindanao	2026	9	10	19	107	138	138	25
Mindanao	2026	9	10	20	103	138	138	25
Mindanao	2026	9	10	21	102	138	138	25
Mindanao	2026	9	10	22	94	138	138	25
Mindanao	2026	9	10	23	90	138	138	25
Mindanao	2026	9	10	24	83	138	138	25
Mindanao	2026	9	11	1	80	138	138	25
Mindanao	2026	9	11	2	77	138	138	25
Mindanao	2026	9	11	3	74	138	138	25
Mindanao	2026	9	11	4	73	138	138	25
Mindanao	2026	9	11	5	78	138	138	25
Mindanao	2026	9	11	6	79	138	138	25
Mindanao	2026	9	11	7	71	138	138	25
Mindanao	2026	9	11	8	81	138	138	25
Mindanao	2026	9	11	9	93	138	138	25
Mindanao	2026	9	11	10	102	138	138	25
Mindanao	2026	9	11	11	106	138	138	25
Mindanao	2026	9	11	12	106	138	138	25
Mindanao	2026	9	11	13	107	138	138	25
Mindanao	2026	9	11	14	110	138	138	25
Mindanao	2026	9	11	15	105	138	138	25
Mindanao	2026	9	11	16	103	138	138	25
Mindanao	2026	9	11	17	99	138	138	25
Mindanao	2026	9	11	18	103	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	11	19	102	138	138	25
Mindanao	2026	9	11	20	98	138	138	25
Mindanao	2026	9	11	21	95	138	138	25
Mindanao	2026	9	11	22	90	138	138	25
Mindanao	2026	9	11	23	84	138	138	25
Mindanao	2026	9	11	24	80	138	138	25
Mindanao	2026	9	12	1	76	138	138	25
Mindanao	2026	9	12	2	73	138	138	25
Mindanao	2026	9	12	3	71	138	138	25
Mindanao	2026	9	12	4	70	138	138	25
Mindanao	2026	9	12	5	70	138	138	25
Mindanao	2026	9	12	6	71	138	138	25
Mindanao	2026	9	12	7	68	138	138	25
Mindanao	2026	9	12	8	71	138	138	25
Mindanao	2026	9	12	9	80	138	138	25
Mindanao	2026	9	12	10	86	138	138	25
Mindanao	2026	9	12	11	91	138	138	25
Mindanao	2026	9	12	12	91	138	138	25
Mindanao	2026	9	12	13	92	138	138	25
Mindanao	2026	9	12	14	95	138	138	25
Mindanao	2026	9	12	15	93	138	138	25
Mindanao	2026	9	12	16	92	138	138	25
Mindanao	2026	9	12	17	89	138	138	25
Mindanao	2026	9	12	18	98	138	138	25
Mindanao	2026	9	12	19	99	138	138	25
Mindanao	2026	9	12	20	96	138	138	25
Mindanao	2026	9	12	21	94	138	138	25
Mindanao	2026	9	12	22	89	138	138	25
Mindanao	2026	9	12	23	83	138	138	25
Mindanao	2026	9	12	24	81	138	138	25
Mindanao	2026	9	13	1	75	138	138	25
Mindanao	2026	9	13	2	73	138	138	25
Mindanao	2026	9	13	3	70	138	138	25
Mindanao	2026	9	13	4	68	138	138	25
Mindanao	2026	9	13	5	69	138	138	25
Mindanao	2026	9	13	6	69	138	138	25
Mindanao	2026	9	13	7	69	138	138	25
Mindanao	2026	9	13	8	68	138	138	25
Mindanao	2026	9	13	9	72	138	138	25
Mindanao	2026	9	13	10	77	138	138	25
Mindanao	2026	9	13	11	80	138	138	25
Mindanao	2026	9	13	12	80	138	138	25
Mindanao	2026	9	13	13	80	138	138	25
Mindanao	2026	9	13	14	81	138	138	25
Mindanao	2026	9	13	15	80	138	138	25
Mindanao	2026	9	13	16	82	138	138	25
Mindanao	2026	9	13	17	83	138	138	25
Mindanao	2026	9	13	18	92	138	138	25
Mindanao	2026	9	13	19	92	138	138	25
Mindanao	2026	9	13	20	91	138	138	25
Mindanao	2026	9	13	21	88	138	138	25
Mindanao	2026	9	13	22	83	138	138	25
Mindanao	2026	9	13	23	79	138	138	25
Mindanao	2026	9	13	24	75	138	138	25
Mindanao	2026	9	14	1	71	138	138	25
Mindanao	2026	9	14	2	69	138	138	25
Mindanao	2026	9	14	3	66	138	138	25
Mindanao	2026	9	14	4	67	138	138	25
Mindanao	2026	9	14	5	73	138	138	25
Mindanao	2026	9	14	6	77	138	138	25
Mindanao	2026	9	14	7	67	138	138	25
Mindanao	2026	9	14	8	78	138	138	25
Mindanao	2026	9	14	9	91	138	138	25
Mindanao	2026	9	14	10	99	138	138	25
Mindanao	2026	9	14	11	105	138	138	25
Mindanao	2026	9	14	12	104	138	138	25
Mindanao	2026	9	14	13	104	138	138	25
Mindanao	2026	9	14	14	109	138	138	25
Mindanao	2026	9	14	15	104	138	138	25
Mindanao	2026	9	14	16	103	138	138	25
Mindanao	2026	9	14	17	100	138	138	25
Mindanao	2026	9	14	18	103	138	138	25
Mindanao	2026	9	14	19	103	138	138	25
Mindanao	2026	9	14	20	100	138	138	25
Mindanao	2026	9	14	21	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	14	22	89	138	138	25
Mindanao	2026	9	14	23	86	138	138	25
Mindanao	2026	9	14	24	80	138	138	25
Mindanao	2026	9	15	1	77	138	138	25
Mindanao	2026	9	15	2	73	138	138	25
Mindanao	2026	9	15	3	73	138	138	25
Mindanao	2026	9	15	4	71	138	138	25
Mindanao	2026	9	15	5	77	138	138	25
Mindanao	2026	9	15	6	79	138	138	25
Mindanao	2026	9	15	7	70	138	138	25
Mindanao	2026	9	15	8	81	138	138	25
Mindanao	2026	9	15	9	93	138	138	25
Mindanao	2026	9	15	10	100	138	138	25
Mindanao	2026	9	15	11	105	138	138	25
Mindanao	2026	9	15	12	104	138	138	25
Mindanao	2026	9	15	13	106	138	138	25
Mindanao	2026	9	15	14	108	138	138	25
Mindanao	2026	9	15	15	107	138	138	25
Mindanao	2026	9	15	16	103	138	138	25
Mindanao	2026	9	15	17	100	138	138	25
Mindanao	2026	9	15	18	105	138	138	25
Mindanao	2026	9	15	19	103	138	138	25
Mindanao	2026	9	15	20	100	138	138	25
Mindanao	2026	9	15	21	96	138	138	25
Mindanao	2026	9	15	22	89	138	138	25
Mindanao	2026	9	15	23	82	138	138	25
Mindanao	2026	9	15	24	77	138	138	25
Mindanao	2026	9	16	1	74	138	138	25
Mindanao	2026	9	16	2	72	138	138	25
Mindanao	2026	9	16	3	70	138	138	25
Mindanao	2026	9	16	4	69	138	138	25
Mindanao	2026	9	16	5	75	138	138	25
Mindanao	2026	9	16	6	79	138	138	25
Mindanao	2026	9	16	7	70	138	138	25
Mindanao	2026	9	16	8	81	138	138	25
Mindanao	2026	9	16	9	92	138	138	25
Mindanao	2026	9	16	10	100	138	138	25
Mindanao	2026	9	16	11	104	138	138	25
Mindanao	2026	9	16	12	102	138	138	25
Mindanao	2026	9	16	13	103	138	138	25
Mindanao	2026	9	16	14	106	138	138	25
Mindanao	2026	9	16	15	104	138	138	25
Mindanao	2026	9	16	16	102	138	138	25
Mindanao	2026	9	16	17	99	138	138	25
Mindanao	2026	9	16	18	103	138	138	25
Mindanao	2026	9	16	19	99	138	138	25
Mindanao	2026	9	16	20	96	138	138	25
Mindanao	2026	9	16	21	93	138	138	25
Mindanao	2026	9	16	22	87	138	138	25
Mindanao	2026	9	16	23	81	138	138	25
Mindanao	2026	9	16	24	78	138	138	25
Mindanao	2026	9	17	1	74	138	138	25
Mindanao	2026	9	17	2	71	138	138	25
Mindanao	2026	9	17	3	70	138	138	25
Mindanao	2026	9	17	4	69	138	138	25
Mindanao	2026	9	17	5	74	138	138	25
Mindanao	2026	9	17	6	79	138	138	25
Mindanao	2026	9	17	7	71	138	138	25
Mindanao	2026	9	17	8	79	138	138	25
Mindanao	2026	9	17	9	91	138	138	25
Mindanao	2026	9	17	10	96	138	138	25
Mindanao	2026	9	17	11	101	138	138	25
Mindanao	2026	9	17	12	100	138	138	25
Mindanao	2026	9	17	13	102	138	138	25
Mindanao	2026	9	17	14	107	138	138	25
Mindanao	2026	9	17	15	105	138	138	25
Mindanao	2026	9	17	16	104	138	138	25
Mindanao	2026	9	17	17	101	138	138	25
Mindanao	2026	9	17	18	105	138	138	25
Mindanao	2026	9	17	19	104	138	138	25
Mindanao	2026	9	17	20	101	138	138	25
Mindanao	2026	9	17	21	97	138	138	25
Mindanao	2026	9	17	22	91	138	138	25
Mindanao	2026	9	17	23	84	138	138	25
Mindanao	2026	9	17	24	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	18	1	75	138	138	25
Mindanao	2026	9	18	2	73	138	138	25
Mindanao	2026	9	18	3	70	138	138	25
Mindanao	2026	9	18	4	71	138	138	25
Mindanao	2026	9	18	5	75	138	138	25
Mindanao	2026	9	18	6	79	138	138	25
Mindanao	2026	9	18	7	70	138	138	25
Mindanao	2026	9	18	8	80	138	138	25
Mindanao	2026	9	18	9	91	138	138	25
Mindanao	2026	9	18	10	97	138	138	25
Mindanao	2026	9	18	11	98	138	138	25
Mindanao	2026	9	18	12	98	138	138	25
Mindanao	2026	9	18	13	99	138	138	25
Mindanao	2026	9	18	14	104	138	138	25
Mindanao	2026	9	18	15	103	138	138	25
Mindanao	2026	9	18	16	104	138	138	25
Mindanao	2026	9	18	17	98	138	138	25
Mindanao	2026	9	18	18	104	138	138	25
Mindanao	2026	9	18	19	103	138	138	25
Mindanao	2026	9	18	20	100	138	138	25
Mindanao	2026	9	18	21	97	138	138	25
Mindanao	2026	9	18	22	90	138	138	25
Mindanao	2026	9	18	23	84	138	138	25
Mindanao	2026	9	18	24	81	138	138	25
Mindanao	2026	9	19	1	76	138	138	25
Mindanao	2026	9	19	2	75	138	138	25
Mindanao	2026	9	19	3	72	138	138	25
Mindanao	2026	9	19	4	70	138	138	25
Mindanao	2026	9	19	5	71	138	138	25
Mindanao	2026	9	19	6	73	138	138	25
Mindanao	2026	9	19	7	72	138	138	25
Mindanao	2026	9	19	8	74	138	138	25
Mindanao	2026	9	19	9	83	138	138	25
Mindanao	2026	9	19	10	90	138	138	25
Mindanao	2026	9	19	11	94	138	138	25
Mindanao	2026	9	19	12	92	138	138	25
Mindanao	2026	9	19	13	93	138	138	25
Mindanao	2026	9	19	14	94	138	138	25
Mindanao	2026	9	19	15	95	138	138	25
Mindanao	2026	9	19	16	91	138	138	25
Mindanao	2026	9	19	17	93	138	138	25
Mindanao	2026	9	19	18	97	138	138	25
Mindanao	2026	9	19	19	95	138	138	25
Mindanao	2026	9	19	20	93	138	138	25
Mindanao	2026	9	19	21	90	138	138	25
Mindanao	2026	9	19	22	84	138	138	25
Mindanao	2026	9	19	23	79	138	138	25
Mindanao	2026	9	19	24	75	138	138	25
Mindanao	2026	9	20	1	72	138	138	25
Mindanao	2026	9	20	2	70	138	138	25
Mindanao	2026	9	20	3	68	138	138	25
Mindanao	2026	9	20	4	67	138	138	25
Mindanao	2026	9	20	5	69	138	138	25
Mindanao	2026	9	20	6	69	138	138	25
Mindanao	2026	9	20	7	66	138	138	25
Mindanao	2026	9	20	8	66	138	138	25
Mindanao	2026	9	20	9	70	138	138	25
Mindanao	2026	9	20	10	76	138	138	25
Mindanao	2026	9	20	11	80	138	138	25
Mindanao	2026	9	20	12	82	138	138	25
Mindanao	2026	9	20	13	82	138	138	25
Mindanao	2026	9	20	14	83	138	138	25
Mindanao	2026	9	20	15	81	138	138	25
Mindanao	2026	9	20	16	80	138	138	25
Mindanao	2026	9	20	17	82	138	138	25
Mindanao	2026	9	20	18	88	138	138	25
Mindanao	2026	9	20	19	91	138	138	25
Mindanao	2026	9	20	20	90	138	138	25
Mindanao	2026	9	20	21	88	138	138	25
Mindanao	2026	9	20	22	81	138	138	25
Mindanao	2026	9	20	23	75	138	138	25
Mindanao	2026	9	20	24	72	138	138	25
Mindanao	2026	9	21	1	69	138	138	25
Mindanao	2026	9	21	2	67	138	138	25
Mindanao	2026	9	21	3	65	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	21	4	64	138	138	25
Mindanao	2026	9	21	5	70	138	138	25
Mindanao	2026	9	21	6	72	138	138	25
Mindanao	2026	9	21	7	66	138	138	25
Mindanao	2026	9	21	8	74	138	138	25
Mindanao	2026	9	21	9	85	138	138	25
Mindanao	2026	9	21	10	93	138	138	25
Mindanao	2026	9	21	11	99	138	138	25
Mindanao	2026	9	21	12	97	138	138	25
Mindanao	2026	9	21	13	98	138	138	25
Mindanao	2026	9	21	14	101	138	138	25
Mindanao	2026	9	21	15	100	138	138	25
Mindanao	2026	9	21	16	98	138	138	25
Mindanao	2026	9	21	17	95	138	138	25
Mindanao	2026	9	21	18	100	138	138	25
Mindanao	2026	9	21	19	97	138	138	25
Mindanao	2026	9	21	20	94	138	138	25
Mindanao	2026	9	21	21	92	138	138	25
Mindanao	2026	9	21	22	83	138	138	25
Mindanao	2026	9	21	23	80	138	138	25
Mindanao	2026	9	21	24	76	138	138	25
Mindanao	2026	9	22	1	73	138	138	25
Mindanao	2026	9	22	2	70	138	138	25
Mindanao	2026	9	22	3	70	138	138	25
Mindanao	2026	9	22	4	70	138	138	25
Mindanao	2026	9	22	5	75	138	138	25
Mindanao	2026	9	22	6	78	138	138	25
Mindanao	2026	9	22	7	71	138	138	25
Mindanao	2026	9	22	8	79	138	138	25
Mindanao	2026	9	22	9	89	138	138	25
Mindanao	2026	9	22	10	96	138	138	25
Mindanao	2026	9	22	11	105	138	138	25
Mindanao	2026	9	22	12	102	138	138	25
Mindanao	2026	9	22	13	104	138	138	25
Mindanao	2026	9	22	14	106	138	138	25
Mindanao	2026	9	22	15	104	138	138	25
Mindanao	2026	9	22	16	102	138	138	25
Mindanao	2026	9	22	17	100	138	138	25
Mindanao	2026	9	22	18	105	138	138	25
Mindanao	2026	9	22	19	103	138	138	25
Mindanao	2026	9	22	20	100	138	138	25
Mindanao	2026	9	22	21	97	138	138	25
Mindanao	2026	9	22	22	91	138	138	25
Mindanao	2026	9	22	23	84	138	138	25
Mindanao	2026	9	22	24	79	138	138	25
Mindanao	2026	9	23	1	77	138	138	25
Mindanao	2026	9	23	2	73	138	138	25
Mindanao	2026	9	23	3	71	138	138	25
Mindanao	2026	9	23	4	71	138	138	25
Mindanao	2026	9	23	5	77	138	138	25
Mindanao	2026	9	23	6	81	138	138	25
Mindanao	2026	9	23	7	73	138	138	25
Mindanao	2026	9	23	8	80	138	138	25
Mindanao	2026	9	23	9	91	138	138	25
Mindanao	2026	9	23	10	98	138	138	25
Mindanao	2026	9	23	11	102	138	138	25
Mindanao	2026	9	23	12	101	138	138	25
Mindanao	2026	9	23	13	101	138	138	25
Mindanao	2026	9	23	14	108	138	138	25
Mindanao	2026	9	23	15	106	138	138	25
Mindanao	2026	9	23	16	104	138	138	25
Mindanao	2026	9	23	17	101	138	138	25
Mindanao	2026	9	23	18	106	138	138	25
Mindanao	2026	9	23	19	104	138	138	25
Mindanao	2026	9	23	20	99	138	138	25
Mindanao	2026	9	23	21	96	138	138	25
Mindanao	2026	9	23	22	89	138	138	25
Mindanao	2026	9	23	23	83	138	138	25
Mindanao	2026	9	23	24	79	138	138	25
Mindanao	2026	9	24	1	74	138	138	25
Mindanao	2026	9	24	2	73	138	138	25
Mindanao	2026	9	24	3	71	138	138	25
Mindanao	2026	9	24	4	70	138	138	25
Mindanao	2026	9	24	5	76	138	138	25
Mindanao	2026	9	24	6	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	24	7	71	138	138	25
Mindanao	2026	9	24	8	78	138	138	25
Mindanao	2026	9	24	9	91	138	138	25
Mindanao	2026	9	24	10	98	138	138	25
Mindanao	2026	9	24	11	102	138	138	25
Mindanao	2026	9	24	12	101	138	138	25
Mindanao	2026	9	24	13	100	138	138	25
Mindanao	2026	9	24	14	105	138	138	25
Mindanao	2026	9	24	15	103	138	138	25
Mindanao	2026	9	24	16	102	138	138	25
Mindanao	2026	9	24	17	98	138	138	25
Mindanao	2026	9	24	18	101	138	138	25
Mindanao	2026	9	24	19	99	138	138	25
Mindanao	2026	9	24	20	96	138	138	25
Mindanao	2026	9	24	21	92	138	138	25
Mindanao	2026	9	24	22	86	138	138	25
Mindanao	2026	9	24	23	80	138	138	25
Mindanao	2026	9	24	24	77	138	138	25
Mindanao	2026	9	25	1	73	138	138	25
Mindanao	2026	9	25	2	72	138	138	25
Mindanao	2026	9	25	3	69	138	138	25
Mindanao	2026	9	25	4	69	138	138	25
Mindanao	2026	9	25	5	73	138	138	25
Mindanao	2026	9	25	6	76	138	138	25
Mindanao	2026	9	25	7	70	138	138	25
Mindanao	2026	9	25	8	79	138	138	25
Mindanao	2026	9	25	9	89	138	138	25
Mindanao	2026	9	25	10	97	138	138	25
Mindanao	2026	9	25	11	102	138	138	25
Mindanao	2026	9	25	12	101	138	138	25
Mindanao	2026	9	25	13	98	138	138	25
Mindanao	2026	9	25	14	103	138	138	25
Mindanao	2026	9	25	15	99	138	138	25
Mindanao	2026	9	25	16	99	138	138	25
Mindanao	2026	9	25	17	97	138	138	25
Mindanao	2026	9	25	18	102	138	138	25
Mindanao	2026	9	25	19	97	138	138	25
Mindanao	2026	9	25	20	95	138	138	25
Mindanao	2026	9	25	21	91	138	138	25
Mindanao	2026	9	25	22	86	138	138	25
Mindanao	2026	9	25	23	80	138	138	25
Mindanao	2026	9	25	24	76	138	138	25
Mindanao	2026	9	26	1	73	138	138	25
Mindanao	2026	9	26	2	71	138	138	25
Mindanao	2026	9	26	3	69	138	138	25
Mindanao	2026	9	26	4	69	138	138	25
Mindanao	2026	9	26	5	70	138	138	25
Mindanao	2026	9	26	6	71	138	138	25
Mindanao	2026	9	26	7	70	138	138	25
Mindanao	2026	9	26	8	74	138	138	25
Mindanao	2026	9	26	9	82	138	138	25
Mindanao	2026	9	26	10	89	138	138	25
Mindanao	2026	9	26	11	94	138	138	25
Mindanao	2026	9	26	12	94	138	138	25
Mindanao	2026	9	26	13	95	138	138	25
Mindanao	2026	9	26	14	99	138	138	25
Mindanao	2026	9	26	15	98	138	138	25
Mindanao	2026	9	26	16	97	138	138	25
Mindanao	2026	9	26	17	94	138	138	25
Mindanao	2026	9	26	18	103	138	138	25
Mindanao	2026	9	26	19	102	138	138	25
Mindanao	2026	9	26	20	99	138	138	25
Mindanao	2026	9	26	21	96	138	138	25
Mindanao	2026	9	26	22	90	138	138	25
Mindanao	2026	9	26	23	85	138	138	25
Mindanao	2026	9	26	24	80	138	138	25
Mindanao	2026	9	27	1	77	138	138	25
Mindanao	2026	9	27	2	73	138	138	25
Mindanao	2026	9	27	3	72	138	138	25
Mindanao	2026	9	27	4	69	138	138	25
Mindanao	2026	9	27	5	70	138	138	25
Mindanao	2026	9	27	6	70	138	138	25
Mindanao	2026	9	27	7	66	138	138	25
Mindanao	2026	9	27	8	68	138	138	25
Mindanao	2026	9	27	9	73	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	27	10	79	138	138	25
Mindanao	2026	9	27	11	83	138	138	25
Mindanao	2026	9	27	12	84	138	138	25
Mindanao	2026	9	27	13	86	138	138	25
Mindanao	2026	9	27	14	88	138	138	25
Mindanao	2026	9	27	15	87	138	138	25
Mindanao	2026	9	27	16	86	138	138	25
Mindanao	2026	9	27	17	86	138	138	25
Mindanao	2026	9	27	18	97	138	138	25
Mindanao	2026	9	27	19	98	138	138	25
Mindanao	2026	9	27	20	97	138	138	25
Mindanao	2026	9	27	21	95	138	138	25
Mindanao	2026	9	27	22	90	138	138	25
Mindanao	2026	9	27	23	85	138	138	25
Mindanao	2026	9	27	24	79	138	138	25
Mindanao	2026	9	28	1	76	138	138	25
Mindanao	2026	9	28	2	74	138	138	25
Mindanao	2026	9	28	3	71	138	138	25
Mindanao	2026	9	28	4	71	138	138	25
Mindanao	2026	9	28	5	75	138	138	25
Mindanao	2026	9	28	6	79	138	138	25
Mindanao	2026	9	28	7	71	138	138	25
Mindanao	2026	9	28	8	81	138	138	25
Mindanao	2026	9	28	9	96	138	138	25
Mindanao	2026	9	28	10	104	138	138	25
Mindanao	2026	9	28	11	109	138	138	25
Mindanao	2026	9	28	12	109	138	138	25
Mindanao	2026	9	28	13	109	138	138	25
Mindanao	2026	9	28	14	115	138	138	25
Mindanao	2026	9	28	15	110	138	138	25
Mindanao	2026	9	28	16	104	138	138	25
Mindanao	2026	9	28	17	102	138	138	25
Mindanao	2026	9	28	18	109	138	138	25
Mindanao	2026	9	28	19	107	138	138	25
Mindanao	2026	9	28	20	103	138	138	25
Mindanao	2026	9	28	21	100	138	138	25
Mindanao	2026	9	28	22	94	138	138	25
Mindanao	2026	9	28	23	88	138	138	25
Mindanao	2026	9	28	24	83	138	138	25
Mindanao	2026	9	29	1	79	138	138	25
Mindanao	2026	9	29	2	77	138	138	25
Mindanao	2026	9	29	3	75	138	138	25
Mindanao	2026	9	29	4	74	138	138	25
Mindanao	2026	9	29	5	78	138	138	25
Mindanao	2026	9	29	6	81	138	138	25
Mindanao	2026	9	29	7	73	138	138	25
Mindanao	2026	9	29	8	83	138	138	25
Mindanao	2026	9	29	9	94	138	138	25
Mindanao	2026	9	29	10	101	138	138	25
Mindanao	2026	9	29	11	104	138	138	25
Mindanao	2026	9	29	12	102	138	138	25
Mindanao	2026	9	29	13	101	138	138	25
Mindanao	2026	9	29	14	107	138	138	25
Mindanao	2026	9	29	15	106	138	138	25
Mindanao	2026	9	29	16	103	138	138	25
Mindanao	2026	9	29	17	98	138	138	25
Mindanao	2026	9	29	18	106	138	138	25
Mindanao	2026	9	29	19	103	138	138	25
Mindanao	2026	9	29	20	100	138	138	25
Mindanao	2026	9	29	21	98	138	138	25
Mindanao	2026	9	29	22	91	138	138	25
Mindanao	2026	9	29	23	85	138	138	25
Mindanao	2026	9	29	24	81	138	138	25
Mindanao	2026	9	30	1	77	138	138	25
Mindanao	2026	9	30	2	74	138	138	25
Mindanao	2026	9	30	3	72	138	138	25
Mindanao	2026	9	30	4	72	138	138	25
Mindanao	2026	9	30	5	75	138	138	25
Mindanao	2026	9	30	6	78	138	138	25
Mindanao	2026	9	30	7	74	138	138	25
Mindanao	2026	9	30	8	82	138	138	25
Mindanao	2026	9	30	9	91	138	138	25
Mindanao	2026	9	30	10	99	138	138	25
Mindanao	2026	9	30	11	104	138	138	25
Mindanao	2026	9	30	12	101	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	9	30	13	102	138	138	25
Mindanao	2026	9	30	14	106	138	138	25
Mindanao	2026	9	30	15	107	138	138	25
Mindanao	2026	9	30	16	104	138	138	25
Mindanao	2026	9	30	17	101	138	138	25
Mindanao	2026	9	30	18	108	138	138	25
Mindanao	2026	9	30	19	103	138	138	25
Mindanao	2026	9	30	20	101	138	138	25
Mindanao	2026	9	30	21	98	138	138	25
Mindanao	2026	9	30	22	88	138	138	25
Mindanao	2026	9	30	23	85	138	138	25
Mindanao	2026	9	30	24	82	138	138	25
Mindanao	2026	10	1	1	78	138	138	25
Mindanao	2026	10	1	2	75	138	138	25
Mindanao	2026	10	1	3	73	138	138	25
Mindanao	2026	10	1	4	73	138	138	25
Mindanao	2026	10	1	5	77	138	138	25
Mindanao	2026	10	1	6	81	138	138	25
Mindanao	2026	10	1	7	73	138	138	25
Mindanao	2026	10	1	8	83	138	138	25
Mindanao	2026	10	1	9	95	138	138	25
Mindanao	2026	10	1	10	102	138	138	25
Mindanao	2026	10	1	11	105	138	138	25
Mindanao	2026	10	1	12	104	138	138	25
Mindanao	2026	10	1	13	105	138	138	25
Mindanao	2026	10	1	14	110	138	138	25
Mindanao	2026	10	1	15	109	138	138	25
Mindanao	2026	10	1	16	106	138	138	25
Mindanao	2026	10	1	17	100	138	138	25
Mindanao	2026	10	1	18	106	138	138	25
Mindanao	2026	10	1	19	102	138	138	25
Mindanao	2026	10	1	20	101	138	138	25
Mindanao	2026	10	1	21	98	138	138	25
Mindanao	2026	10	1	22	91	138	138	25
Mindanao	2026	10	1	23	87	138	138	25
Mindanao	2026	10	1	24	83	138	138	25
Mindanao	2026	10	2	1	77	138	138	25
Mindanao	2026	10	2	2	75	138	138	25
Mindanao	2026	10	2	3	72	138	138	25
Mindanao	2026	10	2	4	72	138	138	25
Mindanao	2026	10	2	5	74	138	138	25
Mindanao	2026	10	2	6	77	138	138	25
Mindanao	2026	10	2	7	72	138	138	25
Mindanao	2026	10	2	8	84	138	138	25
Mindanao	2026	10	2	9	95	138	138	25
Mindanao	2026	10	2	10	103	138	138	25
Mindanao	2026	10	2	11	107	138	138	25
Mindanao	2026	10	2	12	105	138	138	25
Mindanao	2026	10	2	13	106	138	138	25
Mindanao	2026	10	2	14	111	138	138	25
Mindanao	2026	10	2	15	110	138	138	25
Mindanao	2026	10	2	16	107	138	138	25
Mindanao	2026	10	2	17	101	138	138	25
Mindanao	2026	10	2	18	108	138	138	25
Mindanao	2026	10	2	19	103	138	138	25
Mindanao	2026	10	2	20	102	138	138	25
Mindanao	2026	10	2	21	98	138	138	25
Mindanao	2026	10	2	22	93	138	138	25
Mindanao	2026	10	2	23	88	138	138	25
Mindanao	2026	10	2	24	82	138	138	25
Mindanao	2026	10	3	1	79	138	138	25
Mindanao	2026	10	3	2	76	138	138	25
Mindanao	2026	10	3	3	74	138	138	25
Mindanao	2026	10	3	4	73	138	138	25
Mindanao	2026	10	3	5	73	138	138	25
Mindanao	2026	10	3	6	72	138	138	25
Mindanao	2026	10	3	7	71	138	138	25
Mindanao	2026	10	3	8	77	138	138	25
Mindanao	2026	10	3	9	85	138	138	25
Mindanao	2026	10	3	10	93	138	138	25
Mindanao	2026	10	3	11	97	138	138	25
Mindanao	2026	10	3	12	97	138	138	25
Mindanao	2026	10	3	13	99	138	138	25
Mindanao	2026	10	3	14	103	138	138	25
Mindanao	2026	10	3	15	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	3	16	96	138	138	25
Mindanao	2026	10	3	17	96	138	138	25
Mindanao	2026	10	3	18	106	138	138	25
Mindanao	2026	10	3	19	102	138	138	25
Mindanao	2026	10	3	20	101	138	138	25
Mindanao	2026	10	3	21	98	138	138	25
Mindanao	2026	10	3	22	93	138	138	25
Mindanao	2026	10	3	23	88	138	138	25
Mindanao	2026	10	3	24	83	138	138	25
Mindanao	2026	10	4	1	81	138	138	25
Mindanao	2026	10	4	2	75	138	138	25
Mindanao	2026	10	4	3	75	138	138	25
Mindanao	2026	10	4	4	72	138	138	25
Mindanao	2026	10	4	5	73	138	138	25
Mindanao	2026	10	4	6	73	138	138	25
Mindanao	2026	10	4	7	69	138	138	25
Mindanao	2026	10	4	8	73	138	138	25
Mindanao	2026	10	4	9	77	138	138	25
Mindanao	2026	10	4	10	81	138	138	25
Mindanao	2026	10	4	11	82	138	138	25
Mindanao	2026	10	4	12	84	138	138	25
Mindanao	2026	10	4	13	86	138	138	25
Mindanao	2026	10	4	14	86	138	138	25
Mindanao	2026	10	4	15	86	138	138	25
Mindanao	2026	10	4	16	85	138	138	25
Mindanao	2026	10	4	17	85	138	138	25
Mindanao	2026	10	4	18	95	138	138	25
Mindanao	2026	10	4	19	92	138	138	25
Mindanao	2026	10	4	20	88	138	138	25
Mindanao	2026	10	4	21	90	138	138	25
Mindanao	2026	10	4	22	85	138	138	25
Mindanao	2026	10	4	23	81	138	138	25
Mindanao	2026	10	4	24	77	138	138	25
Mindanao	2026	10	5	1	74	138	138	25
Mindanao	2026	10	5	2	72	138	138	25
Mindanao	2026	10	5	3	69	138	138	25
Mindanao	2026	10	5	4	69	138	138	25
Mindanao	2026	10	5	5	74	138	138	25
Mindanao	2026	10	5	6	75	138	138	25
Mindanao	2026	10	5	7	71	138	138	25
Mindanao	2026	10	5	8	82	138	138	25
Mindanao	2026	10	5	9	93	138	138	25
Mindanao	2026	10	5	10	103	138	138	25
Mindanao	2026	10	5	11	107	138	138	25
Mindanao	2026	10	5	12	108	138	138	25
Mindanao	2026	10	5	13	108	138	138	25
Mindanao	2026	10	5	14	113	138	138	25
Mindanao	2026	10	5	15	111	138	138	25
Mindanao	2026	10	5	16	108	138	138	25
Mindanao	2026	10	5	17	102	138	138	25
Mindanao	2026	10	5	18	108	138	138	25
Mindanao	2026	10	5	19	105	138	138	25
Mindanao	2026	10	5	20	103	138	138	25
Mindanao	2026	10	5	21	99	138	138	25
Mindanao	2026	10	5	22	94	138	138	25
Mindanao	2026	10	5	23	88	138	138	25
Mindanao	2026	10	5	24	85	138	138	25
Mindanao	2026	10	6	1	82	138	138	25
Mindanao	2026	10	6	2	78	138	138	25
Mindanao	2026	10	6	3	76	138	138	25
Mindanao	2026	10	6	4	76	138	138	25
Mindanao	2026	10	6	5	80	138	138	25
Mindanao	2026	10	6	6	82	138	138	25
Mindanao	2026	10	6	7	75	138	138	25
Mindanao	2026	10	6	8	84	138	138	25
Mindanao	2026	10	6	9	96	138	138	25
Mindanao	2026	10	6	10	103	138	138	25
Mindanao	2026	10	6	11	108	138	138	25
Mindanao	2026	10	6	12	111	138	138	25
Mindanao	2026	10	6	13	112	138	138	25
Mindanao	2026	10	6	14	116	138	138	25
Mindanao	2026	10	6	15	116	138	138	25
Mindanao	2026	10	6	16	110	138	138	25
Mindanao	2026	10	6	17	102	138	138	25
Mindanao	2026	10	6	18	109	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	6	19	108	138	138	25
Mindanao	2026	10	6	20	107	138	138	25
Mindanao	2026	10	6	21	103	138	138	25
Mindanao	2026	10	6	22	96	138	138	25
Mindanao	2026	10	6	23	91	138	138	25
Mindanao	2026	10	6	24	86	138	138	25
Mindanao	2026	10	7	1	83	138	138	25
Mindanao	2026	10	7	2	80	138	138	25
Mindanao	2026	10	7	3	78	138	138	25
Mindanao	2026	10	7	4	78	138	138	25
Mindanao	2026	10	7	5	81	138	138	25
Mindanao	2026	10	7	6	82	138	138	25
Mindanao	2026	10	7	7	75	138	138	25
Mindanao	2026	10	7	8	87	138	138	25
Mindanao	2026	10	7	9	99	138	138	25
Mindanao	2026	10	7	10	106	138	138	25
Mindanao	2026	10	7	11	112	138	138	25
Mindanao	2026	10	7	12	110	138	138	25
Mindanao	2026	10	7	13	112	138	138	25
Mindanao	2026	10	7	14	116	138	138	25
Mindanao	2026	10	7	15	116	138	138	25
Mindanao	2026	10	7	16	112	138	138	25
Mindanao	2026	10	7	17	106	138	138	25
Mindanao	2026	10	7	18	111	138	138	25
Mindanao	2026	10	7	19	107	138	138	25
Mindanao	2026	10	7	20	103	138	138	25
Mindanao	2026	10	7	21	100	138	138	25
Mindanao	2026	10	7	22	94	138	138	25
Mindanao	2026	10	7	23	90	138	138	25
Mindanao	2026	10	7	24	85	138	138	25
Mindanao	2026	10	8	1	81	138	138	25
Mindanao	2026	10	8	2	80	138	138	25
Mindanao	2026	10	8	3	77	138	138	25
Mindanao	2026	10	8	4	76	138	138	25
Mindanao	2026	10	8	5	79	138	138	25
Mindanao	2026	10	8	6	80	138	138	25
Mindanao	2026	10	8	7	76	138	138	25
Mindanao	2026	10	8	8	87	138	138	25
Mindanao	2026	10	8	9	96	138	138	25
Mindanao	2026	10	8	10	105	138	138	25
Mindanao	2026	10	8	11	110	138	138	25
Mindanao	2026	10	8	12	112	138	138	25
Mindanao	2026	10	8	13	113	138	138	25
Mindanao	2026	10	8	14	117	138	138	25
Mindanao	2026	10	8	15	116	138	138	25
Mindanao	2026	10	8	16	113	138	138	25
Mindanao	2026	10	8	17	107	138	138	25
Mindanao	2026	10	8	18	112	138	138	25
Mindanao	2026	10	8	19	107	138	138	25
Mindanao	2026	10	8	20	108	138	138	25
Mindanao	2026	10	8	21	106	138	138	25
Mindanao	2026	10	8	22	99	138	138	25
Mindanao	2026	10	8	23	92	138	138	25
Mindanao	2026	10	8	24	89	138	138	25
Mindanao	2026	10	9	1	87	138	138	25
Mindanao	2026	10	9	2	83	138	138	25
Mindanao	2026	10	9	3	79	138	138	25
Mindanao	2026	10	9	4	77	138	138	25
Mindanao	2026	10	9	5	80	138	138	25
Mindanao	2026	10	9	6	83	138	138	25
Mindanao	2026	10	9	7	78	138	138	25
Mindanao	2026	10	9	8	88	138	138	25
Mindanao	2026	10	9	9	100	138	138	25
Mindanao	2026	10	9	10	107	138	138	25
Mindanao	2026	10	9	11	113	138	138	25
Mindanao	2026	10	9	12	113	138	138	25
Mindanao	2026	10	9	13	115	138	138	25
Mindanao	2026	10	9	14	119	138	138	25
Mindanao	2026	10	9	15	116	138	138	25
Mindanao	2026	10	9	16	112	138	138	25
Mindanao	2026	10	9	17	103	138	138	25
Mindanao	2026	10	9	18	110	138	138	25
Mindanao	2026	10	9	19	104	138	138	25
Mindanao	2026	10	9	20	104	138	138	25
Mindanao	2026	10	9	21	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	9	22	94	138	138	25
Mindanao	2026	10	9	23	91	138	138	25
Mindanao	2026	10	9	24	86	138	138	25
Mindanao	2026	10	10	1	82	138	138	25
Mindanao	2026	10	10	2	81	138	138	25
Mindanao	2026	10	10	3	79	138	138	25
Mindanao	2026	10	10	4	76	138	138	25
Mindanao	2026	10	10	5	77	138	138	25
Mindanao	2026	10	10	6	79	138	138	25
Mindanao	2026	10	10	7	75	138	138	25
Mindanao	2026	10	10	8	79	138	138	25
Mindanao	2026	10	10	9	80	138	138	25
Mindanao	2026	10	10	10	92	138	138	25
Mindanao	2026	10	10	11	96	138	138	25
Mindanao	2026	10	10	12	95	138	138	25
Mindanao	2026	10	10	13	96	138	138	25
Mindanao	2026	10	10	14	99	138	138	25
Mindanao	2026	10	10	15	97	138	138	25
Mindanao	2026	10	10	16	95	138	138	25
Mindanao	2026	10	10	17	92	138	138	25
Mindanao	2026	10	10	18	95	138	138	25
Mindanao	2026	10	10	19	93	138	138	25
Mindanao	2026	10	10	20	93	138	138	25
Mindanao	2026	10	10	21	93	138	138	25
Mindanao	2026	10	10	22	89	138	138	25
Mindanao	2026	10	10	23	84	138	138	25
Mindanao	2026	10	10	24	81	138	138	25
Mindanao	2026	10	11	1	78	138	138	25
Mindanao	2026	10	11	2	76	138	138	25
Mindanao	2026	10	11	3	73	138	138	25
Mindanao	2026	10	11	4	72	138	138	25
Mindanao	2026	10	11	5	72	138	138	25
Mindanao	2026	10	11	6	71	138	138	25
Mindanao	2026	10	11	7	71	138	138	25
Mindanao	2026	10	11	8	73	138	138	25
Mindanao	2026	10	11	9	78	138	138	25
Mindanao	2026	10	11	10	82	138	138	25
Mindanao	2026	10	11	11	86	138	138	25
Mindanao	2026	10	11	12	87	138	138	25
Mindanao	2026	10	11	13	88	138	138	25
Mindanao	2026	10	11	14	90	138	138	25
Mindanao	2026	10	11	15	87	138	138	25
Mindanao	2026	10	11	16	86	138	138	25
Mindanao	2026	10	11	17	85	138	138	25
Mindanao	2026	10	11	18	97	138	138	25
Mindanao	2026	10	11	19	96	138	138	25
Mindanao	2026	10	11	20	94	138	138	25
Mindanao	2026	10	11	21	92	138	138	25
Mindanao	2026	10	11	22	89	138	138	25
Mindanao	2026	10	11	23	85	138	138	25
Mindanao	2026	10	11	24	80	138	138	25
Mindanao	2026	10	12	1	80	138	138	25
Mindanao	2026	10	12	2	73	138	138	25
Mindanao	2026	10	12	3	71	138	138	25
Mindanao	2026	10	12	4	73	138	138	25
Mindanao	2026	10	12	5	75	138	138	25
Mindanao	2026	10	12	6	81	138	138	25
Mindanao	2026	10	12	7	72	138	138	25
Mindanao	2026	10	12	8	83	138	138	25
Mindanao	2026	10	12	9	95	138	138	25
Mindanao	2026	10	12	10	103	138	138	25
Mindanao	2026	10	12	11	108	138	138	25
Mindanao	2026	10	12	12	107	138	138	25
Mindanao	2026	10	12	13	108	138	138	25
Mindanao	2026	10	12	14	113	138	138	25
Mindanao	2026	10	12	15	112	138	138	25
Mindanao	2026	10	12	16	110	138	138	25
Mindanao	2026	10	12	17	105	138	138	25
Mindanao	2026	10	12	18	108	138	138	25
Mindanao	2026	10	12	19	104	138	138	25
Mindanao	2026	10	12	20	102	138	138	25
Mindanao	2026	10	12	21	97	138	138	25
Mindanao	2026	10	12	22	92	138	138	25
Mindanao	2026	10	12	23	88	138	138	25
Mindanao	2026	10	12	24	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	13	1	83	138	138	25
Mindanao	2026	10	13	2	81	138	138	25
Mindanao	2026	10	13	3	78	138	138	25
Mindanao	2026	10	13	4	78	138	138	25
Mindanao	2026	10	13	5	83	138	138	25
Mindanao	2026	10	13	6	85	138	138	25
Mindanao	2026	10	13	7	76	138	138	25
Mindanao	2026	10	13	8	85	138	138	25
Mindanao	2026	10	13	9	94	138	138	25
Mindanao	2026	10	13	10	104	138	138	25
Mindanao	2026	10	13	11	108	138	138	25
Mindanao	2026	10	13	12	105	138	138	25
Mindanao	2026	10	13	13	104	138	138	25
Mindanao	2026	10	13	14	104	138	138	25
Mindanao	2026	10	13	15	103	138	138	25
Mindanao	2026	10	13	16	102	138	138	25
Mindanao	2026	10	13	17	101	138	138	25
Mindanao	2026	10	13	18	105	138	138	25
Mindanao	2026	10	13	19	100	138	138	25
Mindanao	2026	10	13	20	98	138	138	25
Mindanao	2026	10	13	21	95	138	138	25
Mindanao	2026	10	13	22	89	138	138	25
Mindanao	2026	10	13	23	84	138	138	25
Mindanao	2026	10	13	24	80	138	138	25
Mindanao	2026	10	14	1	78	138	138	25
Mindanao	2026	10	14	2	77	138	138	25
Mindanao	2026	10	14	3	73	138	138	25
Mindanao	2026	10	14	4	74	138	138	25
Mindanao	2026	10	14	5	77	138	138	25
Mindanao	2026	10	14	6	81	138	138	25
Mindanao	2026	10	14	7	74	138	138	25
Mindanao	2026	10	14	8	84	138	138	25
Mindanao	2026	10	14	9	94	138	138	25
Mindanao	2026	10	14	10	100	138	138	25
Mindanao	2026	10	14	11	105	138	138	25
Mindanao	2026	10	14	12	104	138	138	25
Mindanao	2026	10	14	13	106	138	138	25
Mindanao	2026	10	14	14	110	138	138	25
Mindanao	2026	10	14	15	108	138	138	25
Mindanao	2026	10	14	16	104	138	138	25
Mindanao	2026	10	14	17	102	138	138	25
Mindanao	2026	10	14	18	106	138	138	25
Mindanao	2026	10	14	19	102	138	138	25
Mindanao	2026	10	14	20	99	138	138	25
Mindanao	2026	10	14	21	96	138	138	25
Mindanao	2026	10	14	22	92	138	138	25
Mindanao	2026	10	14	23	85	138	138	25
Mindanao	2026	10	14	24	81	138	138	25
Mindanao	2026	10	15	1	79	138	138	25
Mindanao	2026	10	15	2	78	138	138	25
Mindanao	2026	10	15	3	75	138	138	25
Mindanao	2026	10	15	4	74	138	138	25
Mindanao	2026	10	15	5	78	138	138	25
Mindanao	2026	10	15	6	81	138	138	25
Mindanao	2026	10	15	7	73	138	138	25
Mindanao	2026	10	15	8	82	138	138	25
Mindanao	2026	10	15	9	95	138	138	25
Mindanao	2026	10	15	10	102	138	138	25
Mindanao	2026	10	15	11	107	138	138	25
Mindanao	2026	10	15	12	105	138	138	25
Mindanao	2026	10	15	13	104	138	138	25
Mindanao	2026	10	15	14	112	138	138	25
Mindanao	2026	10	15	15	110	138	138	25
Mindanao	2026	10	15	16	107	138	138	25
Mindanao	2026	10	15	17	103	138	138	25
Mindanao	2026	10	15	18	109	138	138	25
Mindanao	2026	10	15	19	105	138	138	25
Mindanao	2026	10	15	20	102	138	138	25
Mindanao	2026	10	15	21	99	138	138	25
Mindanao	2026	10	15	22	93	138	138	25
Mindanao	2026	10	15	23	87	138	138	25
Mindanao	2026	10	15	24	83	138	138	25
Mindanao	2026	10	16	1	82	138	138	25
Mindanao	2026	10	16	2	80	138	138	25
Mindanao	2026	10	16	3	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	16	4	77	138	138	25
Mindanao	2026	10	16	5	79	138	138	25
Mindanao	2026	10	16	6	81	138	138	25
Mindanao	2026	10	16	7	75	138	138	25
Mindanao	2026	10	16	8	84	138	138	25
Mindanao	2026	10	16	9	92	138	138	25
Mindanao	2026	10	16	10	97	138	138	25
Mindanao	2026	10	16	11	101	138	138	25
Mindanao	2026	10	16	12	100	138	138	25
Mindanao	2026	10	16	13	100	138	138	25
Mindanao	2026	10	16	14	104	138	138	25
Mindanao	2026	10	16	15	103	138	138	25
Mindanao	2026	10	16	16	101	138	138	25
Mindanao	2026	10	16	17	98	138	138	25
Mindanao	2026	10	16	18	105	138	138	25
Mindanao	2026	10	16	19	99	138	138	25
Mindanao	2026	10	16	20	98	138	138	25
Mindanao	2026	10	16	21	95	138	138	25
Mindanao	2026	10	16	22	91	138	138	25
Mindanao	2026	10	16	23	87	138	138	25
Mindanao	2026	10	16	24	85	138	138	25
Mindanao	2026	10	17	1	81	138	138	25
Mindanao	2026	10	17	2	78	138	138	25
Mindanao	2026	10	17	3	77	138	138	25
Mindanao	2026	10	17	4	76	138	138	25
Mindanao	2026	10	17	5	76	138	138	25
Mindanao	2026	10	17	6	78	138	138	25
Mindanao	2026	10	17	7	74	138	138	25
Mindanao	2026	10	17	8	80	138	138	25
Mindanao	2026	10	17	9	87	138	138	25
Mindanao	2026	10	17	10	89	138	138	25
Mindanao	2026	10	17	11	93	138	138	25
Mindanao	2026	10	17	12	93	138	138	25
Mindanao	2026	10	17	13	95	138	138	25
Mindanao	2026	10	17	14	99	138	138	25
Mindanao	2026	10	17	15	98	138	138	25
Mindanao	2026	10	17	16	95	138	138	25
Mindanao	2026	10	17	17	93	138	138	25
Mindanao	2026	10	17	18	100	138	138	25
Mindanao	2026	10	17	19	101	138	138	25
Mindanao	2026	10	17	20	99	138	138	25
Mindanao	2026	10	17	21	97	138	138	25
Mindanao	2026	10	17	22	92	138	138	25
Mindanao	2026	10	17	23	87	138	138	25
Mindanao	2026	10	17	24	83	138	138	25
Mindanao	2026	10	18	1	80	138	138	25
Mindanao	2026	10	18	2	78	138	138	25
Mindanao	2026	10	18	3	76	138	138	25
Mindanao	2026	10	18	4	73	138	138	25
Mindanao	2026	10	18	5	73	138	138	25
Mindanao	2026	10	18	6	74	138	138	25
Mindanao	2026	10	18	7	72	138	138	25
Mindanao	2026	10	18	8	73	138	138	25
Mindanao	2026	10	18	9	77	138	138	25
Mindanao	2026	10	18	10	83	138	138	25
Mindanao	2026	10	18	11	85	138	138	25
Mindanao	2026	10	18	12	88	138	138	25
Mindanao	2026	10	18	13	89	138	138	25
Mindanao	2026	10	18	14	92	138	138	25
Mindanao	2026	10	18	15	91	138	138	25
Mindanao	2026	10	18	16	87	138	138	25
Mindanao	2026	10	18	17	88	138	138	25
Mindanao	2026	10	18	18	98	138	138	25
Mindanao	2026	10	18	19	99	138	138	25
Mindanao	2026	10	18	20	97	138	138	25
Mindanao	2026	10	18	21	95	138	138	25
Mindanao	2026	10	18	22	90	138	138	25
Mindanao	2026	10	18	23	85	138	138	25
Mindanao	2026	10	18	24	81	138	138	25
Mindanao	2026	10	19	1	79	138	138	25
Mindanao	2026	10	19	2	75	138	138	25
Mindanao	2026	10	19	3	74	138	138	25
Mindanao	2026	10	19	4	73	138	138	25
Mindanao	2026	10	19	5	77	138	138	25
Mindanao	2026	10	19	6	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	19	7	73	138	138	25
Mindanao	2026	10	19	8	83	138	138	25
Mindanao	2026	10	19	9	96	138	138	25
Mindanao	2026	10	19	10	104	138	138	25
Mindanao	2026	10	19	11	108	138	138	25
Mindanao	2026	10	19	12	107	138	138	25
Mindanao	2026	10	19	13	108	138	138	25
Mindanao	2026	10	19	14	112	138	138	25
Mindanao	2026	10	19	15	107	138	138	25
Mindanao	2026	10	19	16	105	138	138	25
Mindanao	2026	10	19	17	103	138	138	25
Mindanao	2026	10	19	18	106	138	138	25
Mindanao	2026	10	19	19	103	138	138	25
Mindanao	2026	10	19	20	101	138	138	25
Mindanao	2026	10	19	21	96	138	138	25
Mindanao	2026	10	19	22	92	138	138	25
Mindanao	2026	10	19	23	87	138	138	25
Mindanao	2026	10	19	24	82	138	138	25
Mindanao	2026	10	20	1	79	138	138	25
Mindanao	2026	10	20	2	78	138	138	25
Mindanao	2026	10	20	3	74	138	138	25
Mindanao	2026	10	20	4	74	138	138	25
Mindanao	2026	10	20	5	79	138	138	25
Mindanao	2026	10	20	6	82	138	138	25
Mindanao	2026	10	20	7	74	138	138	25
Mindanao	2026	10	20	8	86	138	138	25
Mindanao	2026	10	20	9	98	138	138	25
Mindanao	2026	10	20	10	106	138	138	25
Mindanao	2026	10	20	11	110	138	138	25
Mindanao	2026	10	20	12	110	138	138	25
Mindanao	2026	10	20	13	112	138	138	25
Mindanao	2026	10	20	14	114	138	138	25
Mindanao	2026	10	20	15	112	138	138	25
Mindanao	2026	10	20	16	110	138	138	25
Mindanao	2026	10	20	17	105	138	138	25
Mindanao	2026	10	20	18	109	138	138	25
Mindanao	2026	10	20	19	104	138	138	25
Mindanao	2026	10	20	20	102	138	138	25
Mindanao	2026	10	20	21	98	138	138	25
Mindanao	2026	10	20	22	93	138	138	25
Mindanao	2026	10	20	23	87	138	138	25
Mindanao	2026	10	20	24	83	138	138	25
Mindanao	2026	10	21	1	80	138	138	25
Mindanao	2026	10	21	2	77	138	138	25
Mindanao	2026	10	21	3	75	138	138	25
Mindanao	2026	10	21	4	74	138	138	25
Mindanao	2026	10	21	5	79	138	138	25
Mindanao	2026	10	21	6	82	138	138	25
Mindanao	2026	10	21	7	74	138	138	25
Mindanao	2026	10	21	8	85	138	138	25
Mindanao	2026	10	21	9	97	138	138	25
Mindanao	2026	10	21	10	107	138	138	25
Mindanao	2026	10	21	11	110	138	138	25
Mindanao	2026	10	21	12	110	138	138	25
Mindanao	2026	10	21	13	112	138	138	25
Mindanao	2026	10	21	14	115	138	138	25
Mindanao	2026	10	21	15	113	138	138	25
Mindanao	2026	10	21	16	110	138	138	25
Mindanao	2026	10	21	17	105	138	138	25
Mindanao	2026	10	21	18	110	138	138	25
Mindanao	2026	10	21	19	106	138	138	25
Mindanao	2026	10	21	20	103	138	138	25
Mindanao	2026	10	21	21	101	138	138	25
Mindanao	2026	10	21	22	94	138	138	25
Mindanao	2026	10	21	23	89	138	138	25
Mindanao	2026	10	21	24	85	138	138	25
Mindanao	2026	10	22	1	82	138	138	25
Mindanao	2026	10	22	2	78	138	138	25
Mindanao	2026	10	22	3	77	138	138	25
Mindanao	2026	10	22	4	76	138	138	25
Mindanao	2026	10	22	5	79	138	138	25
Mindanao	2026	10	22	6	82	138	138	25
Mindanao	2026	10	22	7	75	138	138	25
Mindanao	2026	10	22	8	83	138	138	25
Mindanao	2026	10	22	9	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	22	10	106	138	138	25
Mindanao	2026	10	22	11	110	138	138	25
Mindanao	2026	10	22	12	110	138	138	25
Mindanao	2026	10	22	13	111	138	138	25
Mindanao	2026	10	22	14	114	138	138	25
Mindanao	2026	10	22	15	113	138	138	25
Mindanao	2026	10	22	16	109	138	138	25
Mindanao	2026	10	22	17	106	138	138	25
Mindanao	2026	10	22	18	111	138	138	25
Mindanao	2026	10	22	19	106	138	138	25
Mindanao	2026	10	22	20	104	138	138	25
Mindanao	2026	10	22	21	102	138	138	25
Mindanao	2026	10	22	22	96	138	138	25
Mindanao	2026	10	22	23	90	138	138	25
Mindanao	2026	10	22	24	84	138	138	25
Mindanao	2026	10	23	1	81	138	138	25
Mindanao	2026	10	23	2	78	138	138	25
Mindanao	2026	10	23	3	75	138	138	25
Mindanao	2026	10	23	4	74	138	138	25
Mindanao	2026	10	23	5	77	138	138	25
Mindanao	2026	10	23	6	80	138	138	25
Mindanao	2026	10	23	7	77	138	138	25
Mindanao	2026	10	23	8	86	138	138	25
Mindanao	2026	10	23	9	97	138	138	25
Mindanao	2026	10	23	10	106	138	138	25
Mindanao	2026	10	23	11	110	138	138	25
Mindanao	2026	10	23	12	111	138	138	25
Mindanao	2026	10	23	13	112	138	138	25
Mindanao	2026	10	23	14	116	138	138	25
Mindanao	2026	10	23	15	116	138	138	25
Mindanao	2026	10	23	16	111	138	138	25
Mindanao	2026	10	23	17	106	138	138	25
Mindanao	2026	10	23	18	111	138	138	25
Mindanao	2026	10	23	19	105	138	138	25
Mindanao	2026	10	23	20	104	138	138	25
Mindanao	2026	10	23	21	102	138	138	25
Mindanao	2026	10	23	22	96	138	138	25
Mindanao	2026	10	23	23	90	138	138	25
Mindanao	2026	10	23	24	86	138	138	25
Mindanao	2026	10	24	1	82	138	138	25
Mindanao	2026	10	24	2	79	138	138	25
Mindanao	2026	10	24	3	77	138	138	25
Mindanao	2026	10	24	4	76	138	138	25
Mindanao	2026	10	24	5	76	138	138	25
Mindanao	2026	10	24	6	76	138	138	25
Mindanao	2026	10	24	7	75	138	138	25
Mindanao	2026	10	24	8	82	138	138	25
Mindanao	2026	10	24	9	92	138	138	25
Mindanao	2026	10	24	10	98	138	138	25
Mindanao	2026	10	24	11	103	138	138	25
Mindanao	2026	10	24	12	103	138	138	25
Mindanao	2026	10	24	13	105	138	138	25
Mindanao	2026	10	24	14	107	138	138	25
Mindanao	2026	10	24	15	102	138	138	25
Mindanao	2026	10	24	16	100	138	138	25
Mindanao	2026	10	24	17	100	138	138	25
Mindanao	2026	10	24	18	108	138	138	25
Mindanao	2026	10	24	19	102	138	138	25
Mindanao	2026	10	24	20	99	138	138	25
Mindanao	2026	10	24	21	95	138	138	25
Mindanao	2026	10	24	22	91	138	138	25
Mindanao	2026	10	24	23	87	138	138	25
Mindanao	2026	10	24	24	84	138	138	25
Mindanao	2026	10	25	1	79	138	138	25
Mindanao	2026	10	25	2	78	138	138	25
Mindanao	2026	10	25	3	74	138	138	25
Mindanao	2026	10	25	4	74	138	138	25
Mindanao	2026	10	25	5	75	138	138	25
Mindanao	2026	10	25	6	74	138	138	25
Mindanao	2026	10	25	7	72	138	138	25
Mindanao	2026	10	25	8	73	138	138	25
Mindanao	2026	10	25	9	77	138	138	25
Mindanao	2026	10	25	10	83	138	138	25
Mindanao	2026	10	25	11	85	138	138	25
Mindanao	2026	10	25	12	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	25	13	90	138	138	25
Mindanao	2026	10	25	14	91	138	138	25
Mindanao	2026	10	25	15	90	138	138	25
Mindanao	2026	10	25	16	87	138	138	25
Mindanao	2026	10	25	17	88	138	138	25
Mindanao	2026	10	25	18	100	138	138	25
Mindanao	2026	10	25	19	97	138	138	25
Mindanao	2026	10	25	20	94	138	138	25
Mindanao	2026	10	25	21	92	138	138	25
Mindanao	2026	10	25	22	87	138	138	25
Mindanao	2026	10	25	23	84	138	138	25
Mindanao	2026	10	25	24	79	138	138	25
Mindanao	2026	10	26	1	76	138	138	25
Mindanao	2026	10	26	2	73	138	138	25
Mindanao	2026	10	26	3	72	138	138	25
Mindanao	2026	10	26	4	72	138	138	25
Mindanao	2026	10	26	5	77	138	138	25
Mindanao	2026	10	26	6	78	138	138	25
Mindanao	2026	10	26	7	71	138	138	25
Mindanao	2026	10	26	8	82	138	138	25
Mindanao	2026	10	26	9	96	138	138	25
Mindanao	2026	10	26	10	104	138	138	25
Mindanao	2026	10	26	11	108	138	138	25
Mindanao	2026	10	26	12	107	138	138	25
Mindanao	2026	10	26	13	108	138	138	25
Mindanao	2026	10	26	14	113	138	138	25
Mindanao	2026	10	26	15	112	138	138	25
Mindanao	2026	10	26	16	109	138	138	25
Mindanao	2026	10	26	17	104	138	138	25
Mindanao	2026	10	26	18	109	138	138	25
Mindanao	2026	10	26	19	105	138	138	25
Mindanao	2026	10	26	20	103	138	138	25
Mindanao	2026	10	26	21	97	138	138	25
Mindanao	2026	10	26	22	92	138	138	25
Mindanao	2026	10	26	23	85	138	138	25
Mindanao	2026	10	26	24	81	138	138	25
Mindanao	2026	10	27	1	78	138	138	25
Mindanao	2026	10	27	2	76	138	138	25
Mindanao	2026	10	27	3	74	138	138	25
Mindanao	2026	10	27	4	74	138	138	25
Mindanao	2026	10	27	5	79	138	138	25
Mindanao	2026	10	27	6	80	138	138	25
Mindanao	2026	10	27	7	73	138	138	25
Mindanao	2026	10	27	8	85	138	138	25
Mindanao	2026	10	27	9	98	138	138	25
Mindanao	2026	10	27	10	105	138	138	25
Mindanao	2026	10	27	11	110	138	138	25
Mindanao	2026	10	27	12	108	138	138	25
Mindanao	2026	10	27	13	110	138	138	25
Mindanao	2026	10	27	14	114	138	138	25
Mindanao	2026	10	27	15	113	138	138	25
Mindanao	2026	10	27	16	110	138	138	25
Mindanao	2026	10	27	17	106	138	138	25
Mindanao	2026	10	27	18	112	138	138	25
Mindanao	2026	10	27	19	109	138	138	25
Mindanao	2026	10	27	20	108	138	138	25
Mindanao	2026	10	27	21	104	138	138	25
Mindanao	2026	10	27	22	98	138	138	25
Mindanao	2026	10	27	23	91	138	138	25
Mindanao	2026	10	27	24	85	138	138	25
Mindanao	2026	10	28	1	83	138	138	25
Mindanao	2026	10	28	2	82	138	138	25
Mindanao	2026	10	28	3	79	138	138	25
Mindanao	2026	10	28	4	76	138	138	25
Mindanao	2026	10	28	5	81	138	138	25
Mindanao	2026	10	28	6	84	138	138	25
Mindanao	2026	10	28	7	76	138	138	25
Mindanao	2026	10	28	8	87	138	138	25
Mindanao	2026	10	28	9	98	138	138	25
Mindanao	2026	10	28	10	106	138	138	25
Mindanao	2026	10	28	11	111	138	138	25
Mindanao	2026	10	28	12	110	138	138	25
Mindanao	2026	10	28	13	112	138	138	25
Mindanao	2026	10	28	14	115	138	138	25
Mindanao	2026	10	28	15	113	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	28	16	110	138	138	25
Mindanao	2026	10	28	17	105	138	138	25
Mindanao	2026	10	28	18	109	138	138	25
Mindanao	2026	10	28	19	104	138	138	25
Mindanao	2026	10	28	20	103	138	138	25
Mindanao	2026	10	28	21	99	138	138	25
Mindanao	2026	10	28	22	93	138	138	25
Mindanao	2026	10	28	23	88	138	138	25
Mindanao	2026	10	28	24	85	138	138	25
Mindanao	2026	10	29	1	81	138	138	25
Mindanao	2026	10	29	2	79	138	138	25
Mindanao	2026	10	29	3	78	138	138	25
Mindanao	2026	10	29	4	75	138	138	25
Mindanao	2026	10	29	5	80	138	138	25
Mindanao	2026	10	29	6	84	138	138	25
Mindanao	2026	10	29	7	76	138	138	25
Mindanao	2026	10	29	8	83	138	138	25
Mindanao	2026	10	29	9	94	138	138	25
Mindanao	2026	10	29	10	99	138	138	25
Mindanao	2026	10	29	11	103	138	138	25
Mindanao	2026	10	29	12	101	138	138	25
Mindanao	2026	10	29	13	103	138	138	25
Mindanao	2026	10	29	14	105	138	138	25
Mindanao	2026	10	29	15	104	138	138	25
Mindanao	2026	10	29	16	102	138	138	25
Mindanao	2026	10	29	17	102	138	138	25
Mindanao	2026	10	29	18	109	138	138	25
Mindanao	2026	10	29	19	103	138	138	25
Mindanao	2026	10	29	20	102	138	138	25
Mindanao	2026	10	29	21	99	138	138	25
Mindanao	2026	10	29	22	92	138	138	25
Mindanao	2026	10	29	23	87	138	138	25
Mindanao	2026	10	29	24	82	138	138	25
Mindanao	2026	10	30	1	80	138	138	25
Mindanao	2026	10	30	2	76	138	138	25
Mindanao	2026	10	30	3	74	138	138	25
Mindanao	2026	10	30	4	74	138	138	25
Mindanao	2026	10	30	5	79	138	138	25
Mindanao	2026	10	30	6	81	138	138	25
Mindanao	2026	10	30	7	75	138	138	25
Mindanao	2026	10	30	8	83	138	138	25
Mindanao	2026	10	30	9	97	138	138	25
Mindanao	2026	10	30	10	103	138	138	25
Mindanao	2026	10	30	11	107	138	138	25
Mindanao	2026	10	30	12	106	138	138	25
Mindanao	2026	10	30	13	108	138	138	25
Mindanao	2026	10	30	14	112	138	138	25
Mindanao	2026	10	30	15	110	138	138	25
Mindanao	2026	10	30	16	107	138	138	25
Mindanao	2026	10	30	17	103	138	138	25
Mindanao	2026	10	30	18	108	138	138	25
Mindanao	2026	10	30	19	102	138	138	25
Mindanao	2026	10	30	20	99	138	138	25
Mindanao	2026	10	30	21	96	138	138	25
Mindanao	2026	10	30	22	90	138	138	25
Mindanao	2026	10	30	23	85	138	138	25
Mindanao	2026	10	30	24	81	138	138	25
Mindanao	2026	10	31	1	77	138	138	25
Mindanao	2026	10	31	2	76	138	138	25
Mindanao	2026	10	31	3	74	138	138	25
Mindanao	2026	10	31	4	73	138	138	25
Mindanao	2026	10	31	5	74	138	138	25
Mindanao	2026	10	31	6	75	138	138	25
Mindanao	2026	10	31	7	74	138	138	25
Mindanao	2026	10	31	8	81	138	138	25
Mindanao	2026	10	31	9	88	138	138	25
Mindanao	2026	10	31	10	94	138	138	25
Mindanao	2026	10	31	11	98	138	138	25
Mindanao	2026	10	31	12	99	138	138	25
Mindanao	2026	10	31	13	100	138	138	25
Mindanao	2026	10	31	14	103	138	138	25
Mindanao	2026	10	31	15	103	138	138	25
Mindanao	2026	10	31	16	99	138	138	25
Mindanao	2026	10	31	17	98	138	138	25
Mindanao	2026	10	31	18	107	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	10	31	19	103	138	138	25
Mindanao	2026	10	31	20	101	138	138	25
Mindanao	2026	10	31	21	98	138	138	25
Mindanao	2026	10	31	22	96	138	138	25
Mindanao	2026	10	31	23	91	138	138	25
Mindanao	2026	10	31	24	87	138	138	25
Mindanao	2026	11	1	1	78	138	138	25
Mindanao	2026	11	1	2	75	138	138	25
Mindanao	2026	11	1	3	72	138	138	25
Mindanao	2026	11	1	4	71	138	138	25
Mindanao	2026	11	1	5	71	138	138	25
Mindanao	2026	11	1	6	70	138	138	25
Mindanao	2026	11	1	7	68	138	138	25
Mindanao	2026	11	1	8	71	138	138	25
Mindanao	2026	11	1	9	78	138	138	25
Mindanao	2026	11	1	10	83	138	138	25
Mindanao	2026	11	1	11	87	138	138	25
Mindanao	2026	11	1	12	88	138	138	25
Mindanao	2026	11	1	13	91	138	138	25
Mindanao	2026	11	1	14	93	138	138	25
Mindanao	2026	11	1	15	93	138	138	25
Mindanao	2026	11	1	16	90	138	138	25
Mindanao	2026	11	1	17	87	138	138	25
Mindanao	2026	11	1	18	97	138	138	25
Mindanao	2026	11	1	19	93	138	138	25
Mindanao	2026	11	1	20	91	138	138	25
Mindanao	2026	11	1	21	89	138	138	25
Mindanao	2026	11	1	22	86	138	138	25
Mindanao	2026	11	1	23	81	138	138	25
Mindanao	2026	11	1	24	77	138	138	25
Mindanao	2026	11	2	1	77	138	138	25
Mindanao	2026	11	2	2	74	138	138	25
Mindanao	2026	11	2	3	72	138	138	25
Mindanao	2026	11	2	4	71	138	138	25
Mindanao	2026	11	2	5	71	138	138	25
Mindanao	2026	11	2	6	72	138	138	25
Mindanao	2026	11	2	7	68	138	138	25
Mindanao	2026	11	2	8	68	138	138	25
Mindanao	2026	11	2	9	73	138	138	25
Mindanao	2026	11	2	10	76	138	138	25
Mindanao	2026	11	2	11	80	138	138	25
Mindanao	2026	11	2	12	84	138	138	25
Mindanao	2026	11	2	13	86	138	138	25
Mindanao	2026	11	2	14	85	138	138	25
Mindanao	2026	11	2	15	85	138	138	25
Mindanao	2026	11	2	16	84	138	138	25
Mindanao	2026	11	2	17	86	138	138	25
Mindanao	2026	11	2	18	95	138	138	25
Mindanao	2026	11	2	19	90	138	138	25
Mindanao	2026	11	2	20	89	138	138	25
Mindanao	2026	11	2	21	86	138	138	25
Mindanao	2026	11	2	22	83	138	138	25
Mindanao	2026	11	2	23	78	138	138	25
Mindanao	2026	11	2	24	75	138	138	25
Mindanao	2026	11	3	1	72	138	138	25
Mindanao	2026	11	3	2	69	138	138	25
Mindanao	2026	11	3	3	68	138	138	25
Mindanao	2026	11	3	4	66	138	138	25
Mindanao	2026	11	3	5	66	138	138	25
Mindanao	2026	11	3	6	68	138	138	25
Mindanao	2026	11	3	7	68	138	138	25
Mindanao	2026	11	3	8	74	138	138	25
Mindanao	2026	11	3	9	84	138	138	25
Mindanao	2026	11	3	10	92	138	138	25
Mindanao	2026	11	3	11	97	138	138	25
Mindanao	2026	11	3	12	97	138	138	25
Mindanao	2026	11	3	13	100	138	138	25
Mindanao	2026	11	3	14	102	138	138	25
Mindanao	2026	11	3	15	101	138	138	25
Mindanao	2026	11	3	16	98	138	138	25
Mindanao	2026	11	3	17	94	138	138	25
Mindanao	2026	11	3	18	103	138	138	25
Mindanao	2026	11	3	19	99	138	138	25
Mindanao	2026	11	3	20	96	138	138	25
Mindanao	2026	11	3	21	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	3	22	88	138	138	25
Mindanao	2026	11	3	23	85	138	138	25
Mindanao	2026	11	3	24	80	138	138	25
Mindanao	2026	11	4	1	79	138	138	25
Mindanao	2026	11	4	2	77	138	138	25
Mindanao	2026	11	4	3	75	138	138	25
Mindanao	2026	11	4	4	73	138	138	25
Mindanao	2026	11	4	5	76	138	138	25
Mindanao	2026	11	4	6	80	138	138	25
Mindanao	2026	11	4	7	74	138	138	25
Mindanao	2026	11	4	8	84	138	138	25
Mindanao	2026	11	4	9	93	138	138	25
Mindanao	2026	11	4	10	100	138	138	25
Mindanao	2026	11	4	11	105	138	138	25
Mindanao	2026	11	4	12	104	138	138	25
Mindanao	2026	11	4	13	107	138	138	25
Mindanao	2026	11	4	14	111	138	138	25
Mindanao	2026	11	4	15	110	138	138	25
Mindanao	2026	11	4	16	107	138	138	25
Mindanao	2026	11	4	17	105	138	138	25
Mindanao	2026	11	4	18	111	138	138	25
Mindanao	2026	11	4	19	106	138	138	25
Mindanao	2026	11	4	20	104	138	138	25
Mindanao	2026	11	4	21	100	138	138	25
Mindanao	2026	11	4	22	94	138	138	25
Mindanao	2026	11	4	23	90	138	138	25
Mindanao	2026	11	4	24	84	138	138	25
Mindanao	2026	11	5	1	72	138	138	25
Mindanao	2026	11	5	2	70	138	138	25
Mindanao	2026	11	5	3	69	138	138	25
Mindanao	2026	11	5	4	67	138	138	25
Mindanao	2026	11	5	5	66	138	138	25
Mindanao	2026	11	5	6	66	138	138	25
Mindanao	2026	11	5	7	67	138	138	25
Mindanao	2026	11	5	8	70	138	138	25
Mindanao	2026	11	5	9	75	138	138	25
Mindanao	2026	11	5	10	82	138	138	25
Mindanao	2026	11	5	11	86	138	138	25
Mindanao	2026	11	5	12	88	138	138	25
Mindanao	2026	11	5	13	89	138	138	25
Mindanao	2026	11	5	14	91	138	138	25
Mindanao	2026	11	5	15	91	138	138	25
Mindanao	2026	11	5	16	89	138	138	25
Mindanao	2026	11	5	17	85	138	138	25
Mindanao	2026	11	5	18	96	138	138	25
Mindanao	2026	11	5	19	91	138	138	25
Mindanao	2026	11	5	20	91	138	138	25
Mindanao	2026	11	5	21	88	138	138	25
Mindanao	2026	11	5	22	85	138	138	25
Mindanao	2026	11	5	23	82	138	138	25
Mindanao	2026	11	5	24	79	138	138	25
Mindanao	2026	11	6	1	75	138	138	25
Mindanao	2026	11	6	2	72	138	138	25
Mindanao	2026	11	6	3	70	138	138	25
Mindanao	2026	11	6	4	69	138	138	25
Mindanao	2026	11	6	5	68	138	138	25
Mindanao	2026	11	6	6	70	138	138	25
Mindanao	2026	11	6	7	71	138	138	25
Mindanao	2026	11	6	8	82	138	138	25
Mindanao	2026	11	6	9	93	138	138	25
Mindanao	2026	11	6	10	100	138	138	25
Mindanao	2026	11	6	11	107	138	138	25
Mindanao	2026	11	6	12	110	138	138	25
Mindanao	2026	11	6	13	108	138	138	25
Mindanao	2026	11	6	14	113	138	138	25
Mindanao	2026	11	6	15	111	138	138	25
Mindanao	2026	11	6	16	106	138	138	25
Mindanao	2026	11	6	17	101	138	138	25
Mindanao	2026	11	6	18	105	138	138	25
Mindanao	2026	11	6	19	102	138	138	25
Mindanao	2026	11	6	20	101	138	138	25
Mindanao	2026	11	6	21	98	138	138	25
Mindanao	2026	11	6	22	93	138	138	25
Mindanao	2026	11	6	23	88	138	138	25
Mindanao	2026	11	6	24	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	7	1	81	138	138	25
Mindanao	2026	11	7	2	79	138	138	25
Mindanao	2026	11	7	3	76	138	138	25
Mindanao	2026	11	7	4	75	138	138	25
Mindanao	2026	11	7	5	75	138	138	25
Mindanao	2026	11	7	6	74	138	138	25
Mindanao	2026	11	7	7	75	138	138	25
Mindanao	2026	11	7	8	81	138	138	25
Mindanao	2026	11	7	9	90	138	138	25
Mindanao	2026	11	7	10	97	138	138	25
Mindanao	2026	11	7	11	101	138	138	25
Mindanao	2026	11	7	12	100	138	138	25
Mindanao	2026	11	7	13	100	138	138	25
Mindanao	2026	11	7	14	102	138	138	25
Mindanao	2026	11	7	15	99	138	138	25
Mindanao	2026	11	7	16	97	138	138	25
Mindanao	2026	11	7	17	96	138	138	25
Mindanao	2026	11	7	18	102	138	138	25
Mindanao	2026	11	7	19	99	138	138	25
Mindanao	2026	11	7	20	96	138	138	25
Mindanao	2026	11	7	21	93	138	138	25
Mindanao	2026	11	7	22	88	138	138	25
Mindanao	2026	11	7	23	82	138	138	25
Mindanao	2026	11	7	24	79	138	138	25
Mindanao	2026	11	8	1	76	138	138	25
Mindanao	2026	11	8	2	73	138	138	25
Mindanao	2026	11	8	3	72	138	138	25
Mindanao	2026	11	8	4	71	138	138	25
Mindanao	2026	11	8	5	70	138	138	25
Mindanao	2026	11	8	6	70	138	138	25
Mindanao	2026	11	8	7	70	138	138	25
Mindanao	2026	11	8	8	74	138	138	25
Mindanao	2026	11	8	9	80	138	138	25
Mindanao	2026	11	8	10	86	138	138	25
Mindanao	2026	11	8	11	90	138	138	25
Mindanao	2026	11	8	12	92	138	138	25
Mindanao	2026	11	8	13	95	138	138	25
Mindanao	2026	11	8	14	97	138	138	25
Mindanao	2026	11	8	15	95	138	138	25
Mindanao	2026	11	8	16	94	138	138	25
Mindanao	2026	11	8	17	95	138	138	25
Mindanao	2026	11	8	18	104	138	138	25
Mindanao	2026	11	8	19	101	138	138	25
Mindanao	2026	11	8	20	98	138	138	25
Mindanao	2026	11	8	21	95	138	138	25
Mindanao	2026	11	8	22	90	138	138	25
Mindanao	2026	11	8	23	85	138	138	25
Mindanao	2026	11	8	24	80	138	138	25
Mindanao	2026	11	9	1	77	138	138	25
Mindanao	2026	11	9	2	75	138	138	25
Mindanao	2026	11	9	3	71	138	138	25
Mindanao	2026	11	9	4	72	138	138	25
Mindanao	2026	11	9	5	76	138	138	25
Mindanao	2026	11	9	6	78	138	138	25
Mindanao	2026	11	9	7	71	138	138	25
Mindanao	2026	11	9	8	83	138	138	25
Mindanao	2026	11	9	9	98	138	138	25
Mindanao	2026	11	9	10	105	138	138	25
Mindanao	2026	11	9	11	110	138	138	25
Mindanao	2026	11	9	12	109	138	138	25
Mindanao	2026	11	9	13	112	138	138	25
Mindanao	2026	11	9	14	117	138	138	25
Mindanao	2026	11	9	15	116	138	138	25
Mindanao	2026	11	9	16	112	138	138	25
Mindanao	2026	11	9	17	106	138	138	25
Mindanao	2026	11	9	18	113	138	138	25
Mindanao	2026	11	9	19	108	138	138	25
Mindanao	2026	11	9	20	105	138	138	25
Mindanao	2026	11	9	21	102	138	138	25
Mindanao	2026	11	9	22	95	138	138	25
Mindanao	2026	11	9	23	92	138	138	25
Mindanao	2026	11	9	24	87	138	138	25
Mindanao	2026	11	10	1	82	138	138	25
Mindanao	2026	11	10	2	81	138	138	25
Mindanao	2026	11	10	3	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	10	4	78	138	138	25
Mindanao	2026	11	10	5	80	138	138	25
Mindanao	2026	11	10	6	83	138	138	25
Mindanao	2026	11	10	7	75	138	138	25
Mindanao	2026	11	10	8	87	138	138	25
Mindanao	2026	11	10	9	101	138	138	25
Mindanao	2026	11	10	10	107	138	138	25
Mindanao	2026	11	10	11	113	138	138	25
Mindanao	2026	11	10	12	110	138	138	25
Mindanao	2026	11	10	13	113	138	138	25
Mindanao	2026	11	10	14	116	138	138	25
Mindanao	2026	11	10	15	113	138	138	25
Mindanao	2026	11	10	16	112	138	138	25
Mindanao	2026	11	10	17	104	138	138	25
Mindanao	2026	11	10	18	110	138	138	25
Mindanao	2026	11	10	19	106	138	138	25
Mindanao	2026	11	10	20	103	138	138	25
Mindanao	2026	11	10	21	96	138	138	25
Mindanao	2026	11	10	22	92	138	138	25
Mindanao	2026	11	10	23	87	138	138	25
Mindanao	2026	11	10	24	82	138	138	25
Mindanao	2026	11	11	1	79	138	138	25
Mindanao	2026	11	11	2	77	138	138	25
Mindanao	2026	11	11	3	75	138	138	25
Mindanao	2026	11	11	4	73	138	138	25
Mindanao	2026	11	11	5	76	138	138	25
Mindanao	2026	11	11	6	80	138	138	25
Mindanao	2026	11	11	7	74	138	138	25
Mindanao	2026	11	11	8	84	138	138	25
Mindanao	2026	11	11	9	93	138	138	25
Mindanao	2026	11	11	10	100	138	138	25
Mindanao	2026	11	11	11	105	138	138	25
Mindanao	2026	11	11	12	104	138	138	25
Mindanao	2026	11	11	13	107	138	138	25
Mindanao	2026	11	11	14	111	138	138	25
Mindanao	2026	11	11	15	110	138	138	25
Mindanao	2026	11	11	16	107	138	138	25
Mindanao	2026	11	11	17	105	138	138	25
Mindanao	2026	11	11	18	111	138	138	25
Mindanao	2026	11	11	19	106	138	138	25
Mindanao	2026	11	11	20	104	138	138	25
Mindanao	2026	11	11	21	100	138	138	25
Mindanao	2026	11	11	22	94	138	138	25
Mindanao	2026	11	11	23	90	138	138	25
Mindanao	2026	11	11	24	84	138	138	25
Mindanao	2026	11	12	1	81	138	138	25
Mindanao	2026	11	12	2	79	138	138	25
Mindanao	2026	11	12	3	76	138	138	25
Mindanao	2026	11	12	4	75	138	138	25
Mindanao	2026	11	12	5	79	138	138	25
Mindanao	2026	11	12	6	80	138	138	25
Mindanao	2026	11	12	7	74	138	138	25
Mindanao	2026	11	12	8	85	138	138	25
Mindanao	2026	11	12	9	100	138	138	25
Mindanao	2026	11	12	10	106	138	138	25
Mindanao	2026	11	12	11	112	138	138	25
Mindanao	2026	11	12	12	110	138	138	25
Mindanao	2026	11	12	13	111	138	138	25
Mindanao	2026	11	12	14	116	138	138	25
Mindanao	2026	11	12	15	116	138	138	25
Mindanao	2026	11	12	16	110	138	138	25
Mindanao	2026	11	12	17	105	138	138	25
Mindanao	2026	11	12	18	112	138	138	25
Mindanao	2026	11	12	19	108	138	138	25
Mindanao	2026	11	12	20	106	138	138	25
Mindanao	2026	11	12	21	104	138	138	25
Mindanao	2026	11	12	22	95	138	138	25
Mindanao	2026	11	12	23	91	138	138	25
Mindanao	2026	11	12	24	85	138	138	25
Mindanao	2026	11	13	1	83	138	138	25
Mindanao	2026	11	13	2	80	138	138	25
Mindanao	2026	11	13	3	77	138	138	25
Mindanao	2026	11	13	4	77	138	138	25
Mindanao	2026	11	13	5	78	138	138	25
Mindanao	2026	11	13	6	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	13	7	74	138	138	25
Mindanao	2026	11	13	8	84	138	138	25
Mindanao	2026	11	13	9	96	138	138	25
Mindanao	2026	11	13	10	105	138	138	25
Mindanao	2026	11	13	11	111	138	138	25
Mindanao	2026	11	13	12	109	138	138	25
Mindanao	2026	11	13	13	111	138	138	25
Mindanao	2026	11	13	14	117	138	138	25
Mindanao	2026	11	13	15	113	138	138	25
Mindanao	2026	11	13	16	112	138	138	25
Mindanao	2026	11	13	17	106	138	138	25
Mindanao	2026	11	13	18	112	138	138	25
Mindanao	2026	11	13	19	107	138	138	25
Mindanao	2026	11	13	20	104	138	138	25
Mindanao	2026	11	13	21	103	138	138	25
Mindanao	2026	11	13	22	97	138	138	25
Mindanao	2026	11	13	23	91	138	138	25
Mindanao	2026	11	13	24	87	138	138	25
Mindanao	2026	11	14	1	83	138	138	25
Mindanao	2026	11	14	2	80	138	138	25
Mindanao	2026	11	14	3	78	138	138	25
Mindanao	2026	11	14	4	76	138	138	25
Mindanao	2026	11	14	5	76	138	138	25
Mindanao	2026	11	14	6	75	138	138	25
Mindanao	2026	11	14	7	75	138	138	25
Mindanao	2026	11	14	8	82	138	138	25
Mindanao	2026	11	14	9	92	138	138	25
Mindanao	2026	11	14	10	101	138	138	25
Mindanao	2026	11	14	11	105	138	138	25
Mindanao	2026	11	14	12	104	138	138	25
Mindanao	2026	11	14	13	107	138	138	25
Mindanao	2026	11	14	14	111	138	138	25
Mindanao	2026	11	14	15	109	138	138	25
Mindanao	2026	11	14	16	105	138	138	25
Mindanao	2026	11	14	17	103	138	138	25
Mindanao	2026	11	14	18	108	138	138	25
Mindanao	2026	11	14	19	103	138	138	25
Mindanao	2026	11	14	20	103	138	138	25
Mindanao	2026	11	14	21	99	138	138	25
Mindanao	2026	11	14	22	95	138	138	25
Mindanao	2026	11	14	23	89	138	138	25
Mindanao	2026	11	14	24	84	138	138	25
Mindanao	2026	11	15	1	79	138	138	25
Mindanao	2026	11	15	2	77	138	138	25
Mindanao	2026	11	15	3	76	138	138	25
Mindanao	2026	11	15	4	74	138	138	25
Mindanao	2026	11	15	5	73	138	138	25
Mindanao	2026	11	15	6	72	138	138	25
Mindanao	2026	11	15	7	66	138	138	25
Mindanao	2026	11	15	8	72	138	138	25
Mindanao	2026	11	15	9	77	138	138	25
Mindanao	2026	11	15	10	83	138	138	25
Mindanao	2026	11	15	11	87	138	138	25
Mindanao	2026	11	15	12	89	138	138	25
Mindanao	2026	11	15	13	90	138	138	25
Mindanao	2026	11	15	14	92	138	138	25
Mindanao	2026	11	15	15	91	138	138	25
Mindanao	2026	11	15	16	91	138	138	25
Mindanao	2026	11	15	17	89	138	138	25
Mindanao	2026	11	15	18	101	138	138	25
Mindanao	2026	11	15	19	101	138	138	25
Mindanao	2026	11	15	20	101	138	138	25
Mindanao	2026	11	15	21	99	138	138	25
Mindanao	2026	11	15	22	93	138	138	25
Mindanao	2026	11	15	23	89	138	138	25
Mindanao	2026	11	15	24	84	138	138	25
Mindanao	2026	11	16	1	81	138	138	25
Mindanao	2026	11	16	2	77	138	138	25
Mindanao	2026	11	16	3	75	138	138	25
Mindanao	2026	11	16	4	74	138	138	25
Mindanao	2026	11	16	5	78	138	138	25
Mindanao	2026	11	16	6	80	138	138	25
Mindanao	2026	11	16	7	72	138	138	25
Mindanao	2026	11	16	8	84	138	138	25
Mindanao	2026	11	16	9	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	16	10	107	138	138	25
Mindanao	2026	11	16	11	111	138	138	25
Mindanao	2026	11	16	12	113	138	138	25
Mindanao	2026	11	16	13	114	138	138	25
Mindanao	2026	11	16	14	118	138	138	25
Mindanao	2026	11	16	15	118	138	138	25
Mindanao	2026	11	16	16	113	138	138	25
Mindanao	2026	11	16	17	108	138	138	25
Mindanao	2026	11	16	18	114	138	138	25
Mindanao	2026	11	16	19	108	138	138	25
Mindanao	2026	11	16	20	108	138	138	25
Mindanao	2026	11	16	21	104	138	138	25
Mindanao	2026	11	16	22	98	138	138	25
Mindanao	2026	11	16	23	93	138	138	25
Mindanao	2026	11	16	24	87	138	138	25
Mindanao	2026	11	17	1	83	138	138	25
Mindanao	2026	11	17	2	80	138	138	25
Mindanao	2026	11	17	3	78	138	138	25
Mindanao	2026	11	17	4	78	138	138	25
Mindanao	2026	11	17	5	79	138	138	25
Mindanao	2026	11	17	6	80	138	138	25
Mindanao	2026	11	17	7	75	138	138	25
Mindanao	2026	11	17	8	87	138	138	25
Mindanao	2026	11	17	9	99	138	138	25
Mindanao	2026	11	17	10	109	138	138	25
Mindanao	2026	11	17	11	113	138	138	25
Mindanao	2026	11	17	12	113	138	138	25
Mindanao	2026	11	17	13	114	138	138	25
Mindanao	2026	11	17	14	117	138	138	25
Mindanao	2026	11	17	15	117	138	138	25
Mindanao	2026	11	17	16	115	138	138	25
Mindanao	2026	11	17	17	108	138	138	25
Mindanao	2026	11	17	18	115	138	138	25
Mindanao	2026	11	17	19	112	138	138	25
Mindanao	2026	11	17	20	110	138	138	25
Mindanao	2026	11	17	21	107	138	138	25
Mindanao	2026	11	17	22	101	138	138	25
Mindanao	2026	11	17	23	95	138	138	25
Mindanao	2026	11	17	24	90	138	138	25
Mindanao	2026	11	18	1	86	138	138	25
Mindanao	2026	11	18	2	84	138	138	25
Mindanao	2026	11	18	3	81	138	138	25
Mindanao	2026	11	18	4	81	138	138	25
Mindanao	2026	11	18	5	83	138	138	25
Mindanao	2026	11	18	6	84	138	138	25
Mindanao	2026	11	18	7	80	138	138	25
Mindanao	2026	11	18	8	88	138	138	25
Mindanao	2026	11	18	9	99	138	138	25
Mindanao	2026	11	18	10	107	138	138	25
Mindanao	2026	11	18	11	111	138	138	25
Mindanao	2026	11	18	12	110	138	138	25
Mindanao	2026	11	18	13	111	138	138	25
Mindanao	2026	11	18	14	115	138	138	25
Mindanao	2026	11	18	15	114	138	138	25
Mindanao	2026	11	18	16	109	138	138	25
Mindanao	2026	11	18	17	106	138	138	25
Mindanao	2026	11	18	18	114	138	138	25
Mindanao	2026	11	18	19	108	138	138	25
Mindanao	2026	11	18	20	104	138	138	25
Mindanao	2026	11	18	21	103	138	138	25
Mindanao	2026	11	18	22	96	138	138	25
Mindanao	2026	11	18	23	91	138	138	25
Mindanao	2026	11	18	24	86	138	138	25
Mindanao	2026	11	19	1	84	138	138	25
Mindanao	2026	11	19	2	80	138	138	25
Mindanao	2026	11	19	3	78	138	138	25
Mindanao	2026	11	19	4	76	138	138	25
Mindanao	2026	11	19	5	80	138	138	25
Mindanao	2026	11	19	6	82	138	138	25
Mindanao	2026	11	19	7	76	138	138	25
Mindanao	2026	11	19	8	86	138	138	25
Mindanao	2026	11	19	9	98	138	138	25
Mindanao	2026	11	19	10	102	138	138	25
Mindanao	2026	11	19	11	106	138	138	25
Mindanao	2026	11	19	12	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	19	13	99	138	138	25
Mindanao	2026	11	19	14	104	138	138	25
Mindanao	2026	11	19	15	101	138	138	25
Mindanao	2026	11	19	16	101	138	138	25
Mindanao	2026	11	19	17	100	138	138	25
Mindanao	2026	11	19	18	107	138	138	25
Mindanao	2026	11	19	19	101	138	138	25
Mindanao	2026	11	19	20	99	138	138	25
Mindanao	2026	11	19	21	95	138	138	25
Mindanao	2026	11	19	22	90	138	138	25
Mindanao	2026	11	19	23	85	138	138	25
Mindanao	2026	11	19	24	81	138	138	25
Mindanao	2026	11	20	1	79	138	138	25
Mindanao	2026	11	20	2	76	138	138	25
Mindanao	2026	11	20	3	74	138	138	25
Mindanao	2026	11	20	4	74	138	138	25
Mindanao	2026	11	20	5	76	138	138	25
Mindanao	2026	11	20	6	79	138	138	25
Mindanao	2026	11	20	7	75	138	138	25
Mindanao	2026	11	20	8	82	138	138	25
Mindanao	2026	11	20	9	94	138	138	25
Mindanao	2026	11	20	10	100	138	138	25
Mindanao	2026	11	20	11	104	138	138	25
Mindanao	2026	11	20	12	102	138	138	25
Mindanao	2026	11	20	13	102	138	138	25
Mindanao	2026	11	20	14	106	138	138	25
Mindanao	2026	11	20	15	105	138	138	25
Mindanao	2026	11	20	16	103	138	138	25
Mindanao	2026	11	20	17	88	138	138	25
Mindanao	2026	11	20	18	96	138	138	25
Mindanao	2026	11	20	19	94	138	138	25
Mindanao	2026	11	20	20	95	138	138	25
Mindanao	2026	11	20	21	94	138	138	25
Mindanao	2026	11	20	22	88	138	138	25
Mindanao	2026	11	20	23	85	138	138	25
Mindanao	2026	11	20	24	81	138	138	25
Mindanao	2026	11	21	1	79	138	138	25
Mindanao	2026	11	21	2	76	138	138	25
Mindanao	2026	11	21	3	75	138	138	25
Mindanao	2026	11	21	4	73	138	138	25
Mindanao	2026	11	21	5	73	138	138	25
Mindanao	2026	11	21	6	73	138	138	25
Mindanao	2026	11	21	7	70	138	138	25
Mindanao	2026	11	21	8	78	138	138	25
Mindanao	2026	11	21	9	87	138	138	25
Mindanao	2026	11	21	10	90	138	138	25
Mindanao	2026	11	21	11	93	138	138	25
Mindanao	2026	11	21	12	93	138	138	25
Mindanao	2026	11	21	13	95	138	138	25
Mindanao	2026	11	21	14	97	138	138	25
Mindanao	2026	11	21	15	96	138	138	25
Mindanao	2026	11	21	16	95	138	138	25
Mindanao	2026	11	21	17	94	138	138	25
Mindanao	2026	11	21	18	103	138	138	25
Mindanao	2026	11	21	19	97	138	138	25
Mindanao	2026	11	21	20	94	138	138	25
Mindanao	2026	11	21	21	92	138	138	25
Mindanao	2026	11	21	22	86	138	138	25
Mindanao	2026	11	21	23	83	138	138	25
Mindanao	2026	11	21	24	79	138	138	25
Mindanao	2026	11	22	1	77	138	138	25
Mindanao	2026	11	22	2	75	138	138	25
Mindanao	2026	11	22	3	76	138	138	25
Mindanao	2026	11	22	4	71	138	138	25
Mindanao	2026	11	22	5	73	138	138	25
Mindanao	2026	11	22	6	72	138	138	25
Mindanao	2026	11	22	7	70	138	138	25
Mindanao	2026	11	22	8	72	138	138	25
Mindanao	2026	11	22	9	77	138	138	25
Mindanao	2026	11	22	10	80	138	138	25
Mindanao	2026	11	22	11	83	138	138	25
Mindanao	2026	11	22	12	84	138	138	25
Mindanao	2026	11	22	13	84	138	138	25
Mindanao	2026	11	22	14	86	138	138	25
Mindanao	2026	11	22	15	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	22	16	85	138	138	25
Mindanao	2026	11	22	17	87	138	138	25
Mindanao	2026	11	22	18	99	138	138	25
Mindanao	2026	11	22	19	95	138	138	25
Mindanao	2026	11	22	20	93	138	138	25
Mindanao	2026	11	22	21	90	138	138	25
Mindanao	2026	11	22	22	87	138	138	25
Mindanao	2026	11	22	23	82	138	138	25
Mindanao	2026	11	22	24	79	138	138	25
Mindanao	2026	11	23	1	77	138	138	25
Mindanao	2026	11	23	2	74	138	138	25
Mindanao	2026	11	23	3	71	138	138	25
Mindanao	2026	11	23	4	72	138	138	25
Mindanao	2026	11	23	5	74	138	138	25
Mindanao	2026	11	23	6	77	138	138	25
Mindanao	2026	11	23	7	71	138	138	25
Mindanao	2026	11	23	8	82	138	138	25
Mindanao	2026	11	23	9	95	138	138	25
Mindanao	2026	11	23	10	103	138	138	25
Mindanao	2026	11	23	11	108	138	138	25
Mindanao	2026	11	23	12	107	138	138	25
Mindanao	2026	11	23	13	108	138	138	25
Mindanao	2026	11	23	14	112	138	138	25
Mindanao	2026	11	23	15	110	138	138	25
Mindanao	2026	11	23	16	105	138	138	25
Mindanao	2026	11	23	17	103	138	138	25
Mindanao	2026	11	23	18	110	138	138	25
Mindanao	2026	11	23	19	104	138	138	25
Mindanao	2026	11	23	20	100	138	138	25
Mindanao	2026	11	23	21	96	138	138	25
Mindanao	2026	11	23	22	91	138	138	25
Mindanao	2026	11	23	23	86	138	138	25
Mindanao	2026	11	23	24	81	138	138	25
Mindanao	2026	11	24	1	79	138	138	25
Mindanao	2026	11	24	2	76	138	138	25
Mindanao	2026	11	24	3	74	138	138	25
Mindanao	2026	11	24	4	74	138	138	25
Mindanao	2026	11	24	5	77	138	138	25
Mindanao	2026	11	24	6	79	138	138	25
Mindanao	2026	11	24	7	75	138	138	25
Mindanao	2026	11	24	8	84	138	138	25
Mindanao	2026	11	24	9	96	138	138	25
Mindanao	2026	11	24	10	106	138	138	25
Mindanao	2026	11	24	11	108	138	138	25
Mindanao	2026	11	24	12	108	138	138	25
Mindanao	2026	11	24	13	109	138	138	25
Mindanao	2026	11	24	14	114	138	138	25
Mindanao	2026	11	24	15	112	138	138	25
Mindanao	2026	11	24	16	108	138	138	25
Mindanao	2026	11	24	17	108	138	138	25
Mindanao	2026	11	24	18	112	138	138	25
Mindanao	2026	11	24	19	105	138	138	25
Mindanao	2026	11	24	20	104	138	138	25
Mindanao	2026	11	24	21	100	138	138	25
Mindanao	2026	11	24	22	93	138	138	25
Mindanao	2026	11	24	23	89	138	138	25
Mindanao	2026	11	24	24	83	138	138	25
Mindanao	2026	11	25	1	79	138	138	25
Mindanao	2026	11	25	2	77	138	138	25
Mindanao	2026	11	25	3	75	138	138	25
Mindanao	2026	11	25	4	75	138	138	25
Mindanao	2026	11	25	5	78	138	138	25
Mindanao	2026	11	25	6	82	138	138	25
Mindanao	2026	11	25	7	74	138	138	25
Mindanao	2026	11	25	8	87	138	138	25
Mindanao	2026	11	25	9	102	138	138	25
Mindanao	2026	11	25	10	108	138	138	25
Mindanao	2026	11	25	11	113	138	138	25
Mindanao	2026	11	25	12	112	138	138	25
Mindanao	2026	11	25	13	113	138	138	25
Mindanao	2026	11	25	14	117	138	138	25
Mindanao	2026	11	25	15	116	138	138	25
Mindanao	2026	11	25	16	104	138	138	25
Mindanao	2026	11	25	17	107	138	138	25
Mindanao	2026	11	25	18	113	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	25	19	109	138	138	25
Mindanao	2026	11	25	20	108	138	138	25
Mindanao	2026	11	25	21	104	138	138	25
Mindanao	2026	11	25	22	98	138	138	25
Mindanao	2026	11	25	23	93	138	138	25
Mindanao	2026	11	25	24	88	138	138	25
Mindanao	2026	11	26	1	82	138	138	25
Mindanao	2026	11	26	2	79	138	138	25
Mindanao	2026	11	26	3	77	138	138	25
Mindanao	2026	11	26	4	76	138	138	25
Mindanao	2026	11	26	5	80	138	138	25
Mindanao	2026	11	26	6	80	138	138	25
Mindanao	2026	11	26	7	76	138	138	25
Mindanao	2026	11	26	8	87	138	138	25
Mindanao	2026	11	26	9	100	138	138	25
Mindanao	2026	11	26	10	109	138	138	25
Mindanao	2026	11	26	11	114	138	138	25
Mindanao	2026	11	26	12	112	138	138	25
Mindanao	2026	11	26	13	115	138	138	25
Mindanao	2026	11	26	14	117	138	138	25
Mindanao	2026	11	26	15	115	138	138	25
Mindanao	2026	11	26	16	111	138	138	25
Mindanao	2026	11	26	17	107	138	138	25
Mindanao	2026	11	26	18	111	138	138	25
Mindanao	2026	11	26	19	107	138	138	25
Mindanao	2026	11	26	20	106	138	138	25
Mindanao	2026	11	26	21	102	138	138	25
Mindanao	2026	11	26	22	95	138	138	25
Mindanao	2026	11	26	23	89	138	138	25
Mindanao	2026	11	26	24	83	138	138	25
Mindanao	2026	11	27	1	80	138	138	25
Mindanao	2026	11	27	2	78	138	138	25
Mindanao	2026	11	27	3	76	138	138	25
Mindanao	2026	11	27	4	76	138	138	25
Mindanao	2026	11	27	5	77	138	138	25
Mindanao	2026	11	27	6	81	138	138	25
Mindanao	2026	11	27	7	77	138	138	25
Mindanao	2026	11	27	8	85	138	138	25
Mindanao	2026	11	27	9	99	138	138	25
Mindanao	2026	11	27	10	104	138	138	25
Mindanao	2026	11	27	11	108	138	138	25
Mindanao	2026	11	27	12	107	138	138	25
Mindanao	2026	11	27	13	109	138	138	25
Mindanao	2026	11	27	14	111	138	138	25
Mindanao	2026	11	27	15	110	138	138	25
Mindanao	2026	11	27	16	110	138	138	25
Mindanao	2026	11	27	17	107	138	138	25
Mindanao	2026	11	27	18	112	138	138	25
Mindanao	2026	11	27	19	108	138	138	25
Mindanao	2026	11	27	20	106	138	138	25
Mindanao	2026	11	27	21	102	138	138	25
Mindanao	2026	11	27	22	97	138	138	25
Mindanao	2026	11	27	23	91	138	138	25
Mindanao	2026	11	27	24	86	138	138	25
Mindanao	2026	11	28	1	82	138	138	25
Mindanao	2026	11	28	2	79	138	138	25
Mindanao	2026	11	28	3	75	138	138	25
Mindanao	2026	11	28	4	74	138	138	25
Mindanao	2026	11	28	5	73	138	138	25
Mindanao	2026	11	28	6	76	138	138	25
Mindanao	2026	11	28	7	74	138	138	25
Mindanao	2026	11	28	8	80	138	138	25
Mindanao	2026	11	28	9	88	138	138	25
Mindanao	2026	11	28	10	96	138	138	25
Mindanao	2026	11	28	11	101	138	138	25
Mindanao	2026	11	28	12	101	138	138	25
Mindanao	2026	11	28	13	102	138	138	25
Mindanao	2026	11	28	14	106	138	138	25
Mindanao	2026	11	28	15	106	138	138	25
Mindanao	2026	11	28	16	101	138	138	25
Mindanao	2026	11	28	17	98	138	138	25
Mindanao	2026	11	28	18	108	138	138	25
Mindanao	2026	11	28	19	104	138	138	25
Mindanao	2026	11	28	20	101	138	138	25
Mindanao	2026	11	28	21	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	11	28	22	94	138	138	25
Mindanao	2026	11	28	23	87	138	138	25
Mindanao	2026	11	28	24	82	138	138	25
Mindanao	2026	11	29	1	76	138	138	25
Mindanao	2026	11	29	2	77	138	138	25
Mindanao	2026	11	29	3	71	138	138	25
Mindanao	2026	11	29	4	70	138	138	25
Mindanao	2026	11	29	5	69	138	138	25
Mindanao	2026	11	29	6	70	138	138	25
Mindanao	2026	11	29	7	67	138	138	25
Mindanao	2026	11	29	8	69	138	138	25
Mindanao	2026	11	29	9	76	138	138	25
Mindanao	2026	11	29	10	84	138	138	25
Mindanao	2026	11	29	11	81	138	138	25
Mindanao	2026	11	29	12	86	138	138	25
Mindanao	2026	11	29	13	83	138	138	25
Mindanao	2026	11	29	14	92	138	138	25
Mindanao	2026	11	29	15	92	138	138	25
Mindanao	2026	11	29	16	88	138	138	25
Mindanao	2026	11	29	17	88	138	138	25
Mindanao	2026	11	29	18	97	138	138	25
Mindanao	2026	11	29	19	99	138	138	25
Mindanao	2026	11	29	20	96	138	138	25
Mindanao	2026	11	29	21	96	138	138	25
Mindanao	2026	11	29	22	93	138	138	25
Mindanao	2026	11	29	23	88	138	138	25
Mindanao	2026	11	29	24	84	138	138	25
Mindanao	2026	11	30	1	82	138	138	25
Mindanao	2026	11	30	2	78	138	138	25
Mindanao	2026	11	30	3	75	138	138	25
Mindanao	2026	11	30	4	76	138	138	25
Mindanao	2026	11	30	5	76	138	138	25
Mindanao	2026	11	30	6	75	138	138	25
Mindanao	2026	11	30	7	76	138	138	25
Mindanao	2026	11	30	8	80	138	138	25
Mindanao	2026	11	30	9	87	138	138	25
Mindanao	2026	11	30	10	95	138	138	25
Mindanao	2026	11	30	11	99	138	138	25
Mindanao	2026	11	30	12	98	138	138	25
Mindanao	2026	11	30	13	101	138	138	25
Mindanao	2026	11	30	14	104	138	138	25
Mindanao	2026	11	30	15	103	138	138	25
Mindanao	2026	11	30	16	101	138	138	25
Mindanao	2026	11	30	17	102	138	138	25
Mindanao	2026	11	30	18	108	138	138	25
Mindanao	2026	11	30	19	105	138	138	25
Mindanao	2026	11	30	20	101	138	138	25
Mindanao	2026	11	30	21	101	138	138	25
Mindanao	2026	11	30	22	95	138	138	25
Mindanao	2026	11	30	23	89	138	138	25
Mindanao	2026	11	30	24	83	138	138	25
Mindanao	2026	12	1	1	82	138	138	25
Mindanao	2026	12	1	2	78	138	138	25
Mindanao	2026	12	1	3	78	138	138	25
Mindanao	2026	12	1	4	74	138	138	25
Mindanao	2026	12	1	5	78	138	138	25
Mindanao	2026	12	1	6	82	138	138	25
Mindanao	2026	12	1	7	76	138	138	25
Mindanao	2026	12	1	8	87	138	138	25
Mindanao	2026	12	1	9	97	138	138	25
Mindanao	2026	12	1	10	109	138	138	25
Mindanao	2026	12	1	11	113	138	138	25
Mindanao	2026	12	1	12	112	138	138	25
Mindanao	2026	12	1	13	114	138	138	25
Mindanao	2026	12	1	14	118	138	138	25
Mindanao	2026	12	1	15	117	138	138	25
Mindanao	2026	12	1	16	115	138	138	25
Mindanao	2026	12	1	17	109	138	138	25
Mindanao	2026	12	1	18	115	138	138	25
Mindanao	2026	12	1	19	110	138	138	25
Mindanao	2026	12	1	20	108	138	138	25
Mindanao	2026	12	1	21	107	138	138	25
Mindanao	2026	12	1	22	99	138	138	25
Mindanao	2026	12	1	23	92	138	138	25
Mindanao	2026	12	1	24	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	2	1	84	138	138	25
Mindanao	2026	12	2	2	82	138	138	25
Mindanao	2026	12	2	3	79	138	138	25
Mindanao	2026	12	2	4	79	138	138	25
Mindanao	2026	12	2	5	81	138	138	25
Mindanao	2026	12	2	6	84	138	138	25
Mindanao	2026	12	2	7	77	138	138	25
Mindanao	2026	12	2	8	88	138	138	25
Mindanao	2026	12	2	9	101	138	138	25
Mindanao	2026	12	2	10	107	138	138	25
Mindanao	2026	12	2	11	111	138	138	25
Mindanao	2026	12	2	12	110	138	138	25
Mindanao	2026	12	2	13	111	138	138	25
Mindanao	2026	12	2	14	113	138	138	25
Mindanao	2026	12	2	15	110	138	138	25
Mindanao	2026	12	2	16	107	138	138	25
Mindanao	2026	12	2	17	105	138	138	25
Mindanao	2026	12	2	18	110	138	138	25
Mindanao	2026	12	2	19	105	138	138	25
Mindanao	2026	12	2	20	103	138	138	25
Mindanao	2026	12	2	21	99	138	138	25
Mindanao	2026	12	2	22	95	138	138	25
Mindanao	2026	12	2	23	87	138	138	25
Mindanao	2026	12	2	24	83	138	138	25
Mindanao	2026	12	3	1	79	138	138	25
Mindanao	2026	12	3	2	77	138	138	25
Mindanao	2026	12	3	3	75	138	138	25
Mindanao	2026	12	3	4	74	138	138	25
Mindanao	2026	12	3	5	77	138	138	25
Mindanao	2026	12	3	6	80	138	138	25
Mindanao	2026	12	3	7	76	138	138	25
Mindanao	2026	12	3	8	80	138	138	25
Mindanao	2026	12	3	9	94	138	138	25
Mindanao	2026	12	3	10	100	138	138	25
Mindanao	2026	12	3	11	104	138	138	25
Mindanao	2026	12	3	12	105	138	138	25
Mindanao	2026	12	3	13	105	138	138	25
Mindanao	2026	12	3	14	109	138	138	25
Mindanao	2026	12	3	15	108	138	138	25
Mindanao	2026	12	3	16	103	138	138	25
Mindanao	2026	12	3	17	104	138	138	25
Mindanao	2026	12	3	18	110	138	138	25
Mindanao	2026	12	3	19	103	138	138	25
Mindanao	2026	12	3	20	102	138	138	25
Mindanao	2026	12	3	21	98	138	138	25
Mindanao	2026	12	3	22	92	138	138	25
Mindanao	2026	12	3	23	86	138	138	25
Mindanao	2026	12	3	24	82	138	138	25
Mindanao	2026	12	4	1	78	138	138	25
Mindanao	2026	12	4	2	77	138	138	25
Mindanao	2026	12	4	3	76	138	138	25
Mindanao	2026	12	4	4	73	138	138	25
Mindanao	2026	12	4	5	75	138	138	25
Mindanao	2026	12	4	6	78	138	138	25
Mindanao	2026	12	4	7	73	138	138	25
Mindanao	2026	12	4	8	84	138	138	25
Mindanao	2026	12	4	9	98	138	138	25
Mindanao	2026	12	4	10	104	138	138	25
Mindanao	2026	12	4	11	110	138	138	25
Mindanao	2026	12	4	12	109	138	138	25
Mindanao	2026	12	4	13	109	138	138	25
Mindanao	2026	12	4	14	114	138	138	25
Mindanao	2026	12	4	15	114	138	138	25
Mindanao	2026	12	4	16	109	138	138	25
Mindanao	2026	12	4	17	105	138	138	25
Mindanao	2026	12	4	18	112	138	138	25
Mindanao	2026	12	4	19	108	138	138	25
Mindanao	2026	12	4	20	104	138	138	25
Mindanao	2026	12	4	21	102	138	138	25
Mindanao	2026	12	4	22	96	138	138	25
Mindanao	2026	12	4	23	87	138	138	25
Mindanao	2026	12	4	24	83	138	138	25
Mindanao	2026	12	5	1	80	138	138	25
Mindanao	2026	12	5	2	72	138	138	25
Mindanao	2026	12	5	3	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	5	4	69	138	138	25
Mindanao	2026	12	5	5	72	138	138	25
Mindanao	2026	12	5	6	72	138	138	25
Mindanao	2026	12	5	7	73	138	138	25
Mindanao	2026	12	5	8	80	138	138	25
Mindanao	2026	12	5	9	89	138	138	25
Mindanao	2026	12	5	10	98	138	138	25
Mindanao	2026	12	5	11	100	138	138	25
Mindanao	2026	12	5	12	100	138	138	25
Mindanao	2026	12	5	13	101	138	138	25
Mindanao	2026	12	5	14	105	138	138	25
Mindanao	2026	12	5	15	105	138	138	25
Mindanao	2026	12	5	16	101	138	138	25
Mindanao	2026	12	5	17	100	138	138	25
Mindanao	2026	12	5	18	108	138	138	25
Mindanao	2026	12	5	19	105	138	138	25
Mindanao	2026	12	5	20	101	138	138	25
Mindanao	2026	12	5	21	98	138	138	25
Mindanao	2026	12	5	22	93	138	138	25
Mindanao	2026	12	5	23	73	138	138	25
Mindanao	2026	12	5	24	74	138	138	25
Mindanao	2026	12	6	1	72	138	138	25
Mindanao	2026	12	6	2	69	138	138	25
Mindanao	2026	12	6	3	72	138	138	25
Mindanao	2026	12	6	4	70	138	138	25
Mindanao	2026	12	6	5	68	138	138	25
Mindanao	2026	12	6	6	68	138	138	25
Mindanao	2026	12	6	7	69	138	138	25
Mindanao	2026	12	6	8	69	138	138	25
Mindanao	2026	12	6	9	76	138	138	25
Mindanao	2026	12	6	10	82	138	138	25
Mindanao	2026	12	6	11	86	138	138	25
Mindanao	2026	12	6	12	87	138	138	25
Mindanao	2026	12	6	13	87	138	138	25
Mindanao	2026	12	6	14	86	138	138	25
Mindanao	2026	12	6	15	87	138	138	25
Mindanao	2026	12	6	16	86	138	138	25
Mindanao	2026	12	6	17	85	138	138	25
Mindanao	2026	12	6	18	101	138	138	25
Mindanao	2026	12	6	19	94	138	138	25
Mindanao	2026	12	6	20	97	138	138	25
Mindanao	2026	12	6	21	93	138	138	25
Mindanao	2026	12	6	22	88	138	138	25
Mindanao	2026	12	6	23	80	138	138	25
Mindanao	2026	12	6	24	77	138	138	25
Mindanao	2026	12	7	1	74	138	138	25
Mindanao	2026	12	7	2	69	138	138	25
Mindanao	2026	12	7	3	71	138	138	25
Mindanao	2026	12	7	4	67	138	138	25
Mindanao	2026	12	7	5	73	138	138	25
Mindanao	2026	12	7	6	75	138	138	25
Mindanao	2026	12	7	7	70	138	138	25
Mindanao	2026	12	7	8	80	138	138	25
Mindanao	2026	12	7	9	94	138	138	25
Mindanao	2026	12	7	10	100	138	138	25
Mindanao	2026	12	7	11	107	138	138	25
Mindanao	2026	12	7	12	105	138	138	25
Mindanao	2026	12	7	13	107	138	138	25
Mindanao	2026	12	7	14	110	138	138	25
Mindanao	2026	12	7	15	114	138	138	25
Mindanao	2026	12	7	16	110	138	138	25
Mindanao	2026	12	7	17	106	138	138	25
Mindanao	2026	12	7	18	111	138	138	25
Mindanao	2026	12	7	19	110	138	138	25
Mindanao	2026	12	7	20	107	138	138	25
Mindanao	2026	12	7	21	103	138	138	25
Mindanao	2026	12	7	22	100	138	138	25
Mindanao	2026	12	7	23	92	138	138	25
Mindanao	2026	12	7	24	85	138	138	25
Mindanao	2026	12	8	1	79	138	138	25
Mindanao	2026	12	8	2	75	138	138	25
Mindanao	2026	12	8	3	76	138	138	25
Mindanao	2026	12	8	4	76	138	138	25
Mindanao	2026	12	8	5	73	138	138	25
Mindanao	2026	12	8	6	73	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	8	7	74	138	138	25
Mindanao	2026	12	8	8	79	138	138	25
Mindanao	2026	12	8	9	89	138	138	25
Mindanao	2026	12	8	10	97	138	138	25
Mindanao	2026	12	8	11	100	138	138	25
Mindanao	2026	12	8	12	100	138	138	25
Mindanao	2026	12	8	13	101	138	138	25
Mindanao	2026	12	8	14	107	138	138	25
Mindanao	2026	12	8	15	104	138	138	25
Mindanao	2026	12	8	16	103	138	138	25
Mindanao	2026	12	8	17	102	138	138	25
Mindanao	2026	12	8	18	110	138	138	25
Mindanao	2026	12	8	19	106	138	138	25
Mindanao	2026	12	8	20	104	138	138	25
Mindanao	2026	12	8	21	105	138	138	25
Mindanao	2026	12	8	22	98	138	138	25
Mindanao	2026	12	8	23	91	138	138	25
Mindanao	2026	12	8	24	86	138	138	25
Mindanao	2026	12	9	1	82	138	138	25
Mindanao	2026	12	9	2	78	138	138	25
Mindanao	2026	12	9	3	75	138	138	25
Mindanao	2026	12	9	4	76	138	138	25
Mindanao	2026	12	9	5	74	138	138	25
Mindanao	2026	12	9	6	81	138	138	25
Mindanao	2026	12	9	7	78	138	138	25
Mindanao	2026	12	9	8	88	138	138	25
Mindanao	2026	12	9	9	98	138	138	25
Mindanao	2026	12	9	10	104	138	138	25
Mindanao	2026	12	9	11	108	138	138	25
Mindanao	2026	12	9	12	105	138	138	25
Mindanao	2026	12	9	13	107	138	138	25
Mindanao	2026	12	9	14	109	138	138	25
Mindanao	2026	12	9	15	106	138	138	25
Mindanao	2026	12	9	16	105	138	138	25
Mindanao	2026	12	9	17	104	138	138	25
Mindanao	2026	12	9	18	109	138	138	25
Mindanao	2026	12	9	19	103	138	138	25
Mindanao	2026	12	9	20	101	138	138	25
Mindanao	2026	12	9	21	98	138	138	25
Mindanao	2026	12	9	22	90	138	138	25
Mindanao	2026	12	9	23	84	138	138	25
Mindanao	2026	12	9	24	80	138	138	25
Mindanao	2026	12	10	1	77	138	138	25
Mindanao	2026	12	10	2	74	138	138	25
Mindanao	2026	12	10	3	72	138	138	25
Mindanao	2026	12	10	4	72	138	138	25
Mindanao	2026	12	10	5	73	138	138	25
Mindanao	2026	12	10	6	77	138	138	25
Mindanao	2026	12	10	7	74	138	138	25
Mindanao	2026	12	10	8	82	138	138	25
Mindanao	2026	12	10	9	94	138	138	25
Mindanao	2026	12	10	10	101	138	138	25
Mindanao	2026	12	10	11	106	138	138	25
Mindanao	2026	12	10	12	102	138	138	25
Mindanao	2026	12	10	13	106	138	138	25
Mindanao	2026	12	10	14	110	138	138	25
Mindanao	2026	12	10	15	109	138	138	25
Mindanao	2026	12	10	16	106	138	138	25
Mindanao	2026	12	10	17	106	138	138	25
Mindanao	2026	12	10	18	111	138	138	25
Mindanao	2026	12	10	19	105	138	138	25
Mindanao	2026	12	10	20	102	138	138	25
Mindanao	2026	12	10	21	99	138	138	25
Mindanao	2026	12	10	22	93	138	138	25
Mindanao	2026	12	10	23	88	138	138	25
Mindanao	2026	12	10	24	84	138	138	25
Mindanao	2026	12	11	1	84	138	138	25
Mindanao	2026	12	11	2	81	138	138	25
Mindanao	2026	12	11	3	77	138	138	25
Mindanao	2026	12	11	4	74	138	138	25
Mindanao	2026	12	11	5	78	138	138	25
Mindanao	2026	12	11	6	79	138	138	25
Mindanao	2026	12	11	7	78	138	138	25
Mindanao	2026	12	11	8	87	138	138	25
Mindanao	2026	12	11	9	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	11	10	105	138	138	25
Mindanao	2026	12	11	11	109	138	138	25
Mindanao	2026	12	11	12	108	138	138	25
Mindanao	2026	12	11	13	114	138	138	25
Mindanao	2026	12	11	14	117	138	138	25
Mindanao	2026	12	11	15	113	138	138	25
Mindanao	2026	12	11	16	111	138	138	25
Mindanao	2026	12	11	17	107	138	138	25
Mindanao	2026	12	11	18	113	138	138	25
Mindanao	2026	12	11	19	111	138	138	25
Mindanao	2026	12	11	20	107	138	138	25
Mindanao	2026	12	11	21	104	138	138	25
Mindanao	2026	12	11	22	98	138	138	25
Mindanao	2026	12	11	23	91	138	138	25
Mindanao	2026	12	11	24	86	138	138	25
Mindanao	2026	12	12	1	83	138	138	25
Mindanao	2026	12	12	2	79	138	138	25
Mindanao	2026	12	12	3	79	138	138	25
Mindanao	2026	12	12	4	79	138	138	25
Mindanao	2026	12	12	5	78	138	138	25
Mindanao	2026	12	12	6	78	138	138	25
Mindanao	2026	12	12	7	80	138	138	25
Mindanao	2026	12	12	8	81	138	138	25
Mindanao	2026	12	12	9	91	138	138	25
Mindanao	2026	12	12	10	97	138	138	25
Mindanao	2026	12	12	11	102	138	138	25
Mindanao	2026	12	12	12	99	138	138	25
Mindanao	2026	12	12	13	101	138	138	25
Mindanao	2026	12	12	14	107	138	138	25
Mindanao	2026	12	12	15	107	138	138	25
Mindanao	2026	12	12	16	103	138	138	25
Mindanao	2026	12	12	17	101	138	138	25
Mindanao	2026	12	12	18	110	138	138	25
Mindanao	2026	12	12	19	105	138	138	25
Mindanao	2026	12	12	20	101	138	138	25
Mindanao	2026	12	12	21	100	138	138	25
Mindanao	2026	12	12	22	93	138	138	25
Mindanao	2026	12	12	23	88	138	138	25
Mindanao	2026	12	12	24	82	138	138	25
Mindanao	2026	12	13	1	78	138	138	25
Mindanao	2026	12	13	2	77	138	138	25
Mindanao	2026	12	13	3	73	138	138	25
Mindanao	2026	12	13	4	72	138	138	25
Mindanao	2026	12	13	5	71	138	138	25
Mindanao	2026	12	13	6	72	138	138	25
Mindanao	2026	12	13	7	71	138	138	25
Mindanao	2026	12	13	8	75	138	138	25
Mindanao	2026	12	13	9	76	138	138	25
Mindanao	2026	12	13	10	82	138	138	25
Mindanao	2026	12	13	11	86	138	138	25
Mindanao	2026	12	13	12	88	138	138	25
Mindanao	2026	12	13	13	92	138	138	25
Mindanao	2026	12	13	14	91	138	138	25
Mindanao	2026	12	13	15	93	138	138	25
Mindanao	2026	12	13	16	91	138	138	25
Mindanao	2026	12	13	17	91	138	138	25
Mindanao	2026	12	13	18	105	138	138	25
Mindanao	2026	12	13	19	103	138	138	25
Mindanao	2026	12	13	20	100	138	138	25
Mindanao	2026	12	13	21	100	138	138	25
Mindanao	2026	12	13	22	94	138	138	25
Mindanao	2026	12	13	23	88	138	138	25
Mindanao	2026	12	13	24	84	138	138	25
Mindanao	2026	12	14	1	77	138	138	25
Mindanao	2026	12	14	2	74	138	138	25
Mindanao	2026	12	14	3	75	138	138	25
Mindanao	2026	12	14	4	74	138	138	25
Mindanao	2026	12	14	5	75	138	138	25
Mindanao	2026	12	14	6	78	138	138	25
Mindanao	2026	12	14	7	72	138	138	25
Mindanao	2026	12	14	8	87	138	138	25
Mindanao	2026	12	14	9	99	138	138	25
Mindanao	2026	12	14	10	107	138	138	25
Mindanao	2026	12	14	11	112	138	138	25
Mindanao	2026	12	14	12	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	14	13	113	138	138	25
Mindanao	2026	12	14	14	118	138	138	25
Mindanao	2026	12	14	15	116	138	138	25
Mindanao	2026	12	14	16	113	138	138	25
Mindanao	2026	12	14	17	108	138	138	25
Mindanao	2026	12	14	18	113	138	138	25
Mindanao	2026	12	14	19	110	138	138	25
Mindanao	2026	12	14	20	107	138	138	25
Mindanao	2026	12	14	21	102	138	138	25
Mindanao	2026	12	14	22	97	138	138	25
Mindanao	2026	12	14	23	91	138	138	25
Mindanao	2026	12	14	24	86	138	138	25
Mindanao	2026	12	15	1	81	138	138	25
Mindanao	2026	12	15	2	76	138	138	25
Mindanao	2026	12	15	3	77	138	138	25
Mindanao	2026	12	15	4	76	138	138	25
Mindanao	2026	12	15	5	73	138	138	25
Mindanao	2026	12	15	6	81	138	138	25
Mindanao	2026	12	15	7	75	138	138	25
Mindanao	2026	12	15	8	83	138	138	25
Mindanao	2026	12	15	9	99	138	138	25
Mindanao	2026	12	15	10	106	138	138	25
Mindanao	2026	12	15	11	109	138	138	25
Mindanao	2026	12	15	12	109	138	138	25
Mindanao	2026	12	15	13	113	138	138	25
Mindanao	2026	12	15	14	116	138	138	25
Mindanao	2026	12	15	15	117	138	138	25
Mindanao	2026	12	15	16	114	138	138	25
Mindanao	2026	12	15	17	111	138	138	25
Mindanao	2026	12	15	18	116	138	138	25
Mindanao	2026	12	15	19	112	138	138	25
Mindanao	2026	12	15	20	110	138	138	25
Mindanao	2026	12	15	21	108	138	138	25
Mindanao	2026	12	15	22	101	138	138	25
Mindanao	2026	12	15	23	95	138	138	25
Mindanao	2026	12	15	24	92	138	138	25
Mindanao	2026	12	16	1	86	138	138	25
Mindanao	2026	12	16	2	81	138	138	25
Mindanao	2026	12	16	3	79	138	138	25
Mindanao	2026	12	16	4	79	138	138	25
Mindanao	2026	12	16	5	80	138	138	25
Mindanao	2026	12	16	6	82	138	138	25
Mindanao	2026	12	16	7	80	138	138	25
Mindanao	2026	12	16	8	90	138	138	25
Mindanao	2026	12	16	9	102	138	138	25
Mindanao	2026	12	16	10	108	138	138	25
Mindanao	2026	12	16	11	108	138	138	25
Mindanao	2026	12	16	12	108	138	138	25
Mindanao	2026	12	16	13	108	138	138	25
Mindanao	2026	12	16	14	113	138	138	25
Mindanao	2026	12	16	15	113	138	138	25
Mindanao	2026	12	16	16	109	138	138	25
Mindanao	2026	12	16	17	107	138	138	25
Mindanao	2026	12	16	18	113	138	138	25
Mindanao	2026	12	16	19	107	138	138	25
Mindanao	2026	12	16	20	105	138	138	25
Mindanao	2026	12	16	21	102	138	138	25
Mindanao	2026	12	16	22	95	138	138	25
Mindanao	2026	12	16	23	90	138	138	25
Mindanao	2026	12	16	24	87	138	138	25
Mindanao	2026	12	17	1	82	138	138	25
Mindanao	2026	12	17	2	79	138	138	25
Mindanao	2026	12	17	3	77	138	138	25
Mindanao	2026	12	17	4	76	138	138	25
Mindanao	2026	12	17	5	77	138	138	25
Mindanao	2026	12	17	6	80	138	138	25
Mindanao	2026	12	17	7	79	138	138	25
Mindanao	2026	12	17	8	88	138	138	25
Mindanao	2026	12	17	9	100	138	138	25
Mindanao	2026	12	17	10	107	138	138	25
Mindanao	2026	12	17	11	111	138	138	25
Mindanao	2026	12	17	12	108	138	138	25
Mindanao	2026	12	17	13	112	138	138	25
Mindanao	2026	12	17	14	121	138	138	25
Mindanao	2026	12	17	15	117	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	17	16	112	138	138	25
Mindanao	2026	12	17	17	110	138	138	25
Mindanao	2026	12	17	18	114	138	138	25
Mindanao	2026	12	17	19	110	138	138	25
Mindanao	2026	12	17	20	107	138	138	25
Mindanao	2026	12	17	21	106	138	138	25
Mindanao	2026	12	17	22	98	138	138	25
Mindanao	2026	12	17	23	93	138	138	25
Mindanao	2026	12	17	24	87	138	138	25
Mindanao	2026	12	18	1	84	138	138	25
Mindanao	2026	12	18	2	81	138	138	25
Mindanao	2026	12	18	3	77	138	138	25
Mindanao	2026	12	18	4	74	138	138	25
Mindanao	2026	12	18	5	78	138	138	25
Mindanao	2026	12	18	6	79	138	138	25
Mindanao	2026	12	18	7	78	138	138	25
Mindanao	2026	12	18	8	87	138	138	25
Mindanao	2026	12	18	9	99	138	138	25
Mindanao	2026	12	18	10	105	138	138	25
Mindanao	2026	12	18	11	109	138	138	25
Mindanao	2026	12	18	12	108	138	138	25
Mindanao	2026	12	18	13	114	138	138	25
Mindanao	2026	12	18	14	117	138	138	25
Mindanao	2026	12	18	15	113	138	138	25
Mindanao	2026	12	18	16	111	138	138	25
Mindanao	2026	12	18	17	107	138	138	25
Mindanao	2026	12	18	18	113	138	138	25
Mindanao	2026	12	18	19	111	138	138	25
Mindanao	2026	12	18	20	107	138	138	25
Mindanao	2026	12	18	21	104	138	138	25
Mindanao	2026	12	18	22	98	138	138	25
Mindanao	2026	12	18	23	91	138	138	25
Mindanao	2026	12	18	24	86	138	138	25
Mindanao	2026	12	19	1	82	138	138	25
Mindanao	2026	12	19	2	80	138	138	25
Mindanao	2026	12	19	3	79	138	138	25
Mindanao	2026	12	19	4	77	138	138	25
Mindanao	2026	12	19	5	75	138	138	25
Mindanao	2026	12	19	6	76	138	138	25
Mindanao	2026	12	19	7	77	138	138	25
Mindanao	2026	12	19	8	85	138	138	25
Mindanao	2026	12	19	9	92	138	138	25
Mindanao	2026	12	19	10	96	138	138	25
Mindanao	2026	12	19	11	101	138	138	25
Mindanao	2026	12	19	12	101	138	138	25
Mindanao	2026	12	19	13	103	138	138	25
Mindanao	2026	12	19	14	104	138	138	25
Mindanao	2026	12	19	15	107	138	138	25
Mindanao	2026	12	19	16	105	138	138	25
Mindanao	2026	12	19	17	102	138	138	25
Mindanao	2026	12	19	18	110	138	138	25
Mindanao	2026	12	19	19	107	138	138	25
Mindanao	2026	12	19	20	104	138	138	25
Mindanao	2026	12	19	21	101	138	138	25
Mindanao	2026	12	19	22	97	138	138	25
Mindanao	2026	12	19	23	91	138	138	25
Mindanao	2026	12	19	24	85	138	138	25
Mindanao	2026	12	20	1	82	138	138	25
Mindanao	2026	12	20	2	78	138	138	25
Mindanao	2026	12	20	3	73	138	138	25
Mindanao	2026	12	20	4	72	138	138	25
Mindanao	2026	12	20	5	69	138	138	25
Mindanao	2026	12	20	6	70	138	138	25
Mindanao	2026	12	20	7	71	138	138	25
Mindanao	2026	12	20	8	72	138	138	25
Mindanao	2026	12	20	9	80	138	138	25
Mindanao	2026	12	20	10	86	138	138	25
Mindanao	2026	12	20	11	85	138	138	25
Mindanao	2026	12	20	12	85	138	138	25
Mindanao	2026	12	20	13	84	138	138	25
Mindanao	2026	12	20	14	88	138	138	25
Mindanao	2026	12	20	15	88	138	138	25
Mindanao	2026	12	20	16	86	138	138	25
Mindanao	2026	12	20	17	88	138	138	25
Mindanao	2026	12	20	18	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	20	19	96	138	138	25
Mindanao	2026	12	20	20	94	138	138	25
Mindanao	2026	12	20	21	91	138	138	25
Mindanao	2026	12	20	22	89	138	138	25
Mindanao	2026	12	20	23	83	138	138	25
Mindanao	2026	12	20	24	78	138	138	25
Mindanao	2026	12	21	1	75	138	138	25
Mindanao	2026	12	21	2	73	138	138	25
Mindanao	2026	12	21	3	71	138	138	25
Mindanao	2026	12	21	4	71	138	138	25
Mindanao	2026	12	21	5	73	138	138	25
Mindanao	2026	12	21	6	72	138	138	25
Mindanao	2026	12	21	7	72	138	138	25
Mindanao	2026	12	21	8	81	138	138	25
Mindanao	2026	12	21	9	90	138	138	25
Mindanao	2026	12	21	10	95	138	138	25
Mindanao	2026	12	21	11	100	138	138	25
Mindanao	2026	12	21	12	95	138	138	25
Mindanao	2026	12	21	13	94	138	138	25
Mindanao	2026	12	21	14	92	138	138	25
Mindanao	2026	12	21	15	94	138	138	25
Mindanao	2026	12	21	16	94	138	138	25
Mindanao	2026	12	21	17	96	138	138	25
Mindanao	2026	12	21	18	100	138	138	25
Mindanao	2026	12	21	19	94	138	138	25
Mindanao	2026	12	21	20	91	138	138	25
Mindanao	2026	12	21	21	89	138	138	25
Mindanao	2026	12	21	22	84	138	138	25
Mindanao	2026	12	21	23	77	138	138	25
Mindanao	2026	12	21	24	74	138	138	25
Mindanao	2026	12	22	1	75	138	138	25
Mindanao	2026	12	22	2	72	138	138	25
Mindanao	2026	12	22	3	70	138	138	25
Mindanao	2026	12	22	4	69	138	138	25
Mindanao	2026	12	22	5	70	138	138	25
Mindanao	2026	12	22	6	72	138	138	25
Mindanao	2026	12	22	7	74	138	138	25
Mindanao	2026	12	22	8	79	138	138	25
Mindanao	2026	12	22	9	88	138	138	25
Mindanao	2026	12	22	10	97	138	138	25
Mindanao	2026	12	22	11	99	138	138	25
Mindanao	2026	12	22	12	100	138	138	25
Mindanao	2026	12	22	13	102	138	138	25
Mindanao	2026	12	22	14	103	138	138	25
Mindanao	2026	12	22	15	101	138	138	25
Mindanao	2026	12	22	16	102	138	138	25
Mindanao	2026	12	22	17	99	138	138	25
Mindanao	2026	12	22	18	106	138	138	25
Mindanao	2026	12	22	19	103	138	138	25
Mindanao	2026	12	22	20	97	138	138	25
Mindanao	2026	12	22	21	95	138	138	25
Mindanao	2026	12	22	22	90	138	138	25
Mindanao	2026	12	22	23	84	138	138	25
Mindanao	2026	12	22	24	80	138	138	25
Mindanao	2026	12	23	1	77	138	138	25
Mindanao	2026	12	23	2	74	138	138	25
Mindanao	2026	12	23	3	70	138	138	25
Mindanao	2026	12	23	4	71	138	138	25
Mindanao	2026	12	23	5	71	138	138	25
Mindanao	2026	12	23	6	74	138	138	25
Mindanao	2026	12	23	7	76	138	138	25
Mindanao	2026	12	23	8	84	138	138	25
Mindanao	2026	12	23	9	95	138	138	25
Mindanao	2026	12	23	10	101	138	138	25
Mindanao	2026	12	23	11	107	138	138	25
Mindanao	2026	12	23	12	109	138	138	25
Mindanao	2026	12	23	13	108	138	138	25
Mindanao	2026	12	23	14	111	138	138	25
Mindanao	2026	12	23	15	113	138	138	25
Mindanao	2026	12	23	16	111	138	138	25
Mindanao	2026	12	23	17	107	138	138	25
Mindanao	2026	12	23	18	109	138	138	25
Mindanao	2026	12	23	19	107	138	138	25
Mindanao	2026	12	23	20	102	138	138	25
Mindanao	2026	12	23	21	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	23	22	93	138	138	25
Mindanao	2026	12	23	23	86	138	138	25
Mindanao	2026	12	23	24	82	138	138	25
Mindanao	2026	12	24	1	77	138	138	25
Mindanao	2026	12	24	2	74	138	138	25
Mindanao	2026	12	24	3	73	138	138	25
Mindanao	2026	12	24	4	71	138	138	25
Mindanao	2026	12	24	5	72	138	138	25
Mindanao	2026	12	24	6	72	138	138	25
Mindanao	2026	12	24	7	73	138	138	25
Mindanao	2026	12	24	8	80	138	138	25
Mindanao	2026	12	24	9	94	138	138	25
Mindanao	2026	12	24	10	102	138	138	25
Mindanao	2026	12	24	11	109	138	138	25
Mindanao	2026	12	24	12	106	138	138	25
Mindanao	2026	12	24	13	106	138	138	25
Mindanao	2026	12	24	14	112	138	138	25
Mindanao	2026	12	24	15	112	138	138	25
Mindanao	2026	12	24	16	110	138	138	25
Mindanao	2026	12	24	17	103	138	138	25
Mindanao	2026	12	24	18	109	138	138	25
Mindanao	2026	12	24	19	106	138	138	25
Mindanao	2026	12	24	20	103	138	138	25
Mindanao	2026	12	24	21	100	138	138	25
Mindanao	2026	12	24	22	94	138	138	25
Mindanao	2026	12	24	23	88	138	138	25
Mindanao	2026	12	24	24	82	138	138	25
Mindanao	2026	12	25	1	78	138	138	25
Mindanao	2026	12	25	2	75	138	138	25
Mindanao	2026	12	25	3	72	138	138	25
Mindanao	2026	12	25	4	70	138	138	25
Mindanao	2026	12	25	5	69	138	138	25
Mindanao	2026	12	25	6	67	138	138	25
Mindanao	2026	12	25	7	66	138	138	25
Mindanao	2026	12	25	8	66	138	138	25
Mindanao	2026	12	25	9	69	138	138	25
Mindanao	2026	12	25	10	69	138	138	25
Mindanao	2026	12	25	11	71	138	138	25
Mindanao	2026	12	25	12	73	138	138	25
Mindanao	2026	12	25	13	72	138	138	25
Mindanao	2026	12	25	14	70	138	138	25
Mindanao	2026	12	25	15	72	138	138	25
Mindanao	2026	12	25	16	72	138	138	25
Mindanao	2026	12	25	17	76	138	138	25
Mindanao	2026	12	25	18	86	138	138	25
Mindanao	2026	12	25	19	84	138	138	25
Mindanao	2026	12	25	20	83	138	138	25
Mindanao	2026	12	25	21	79	138	138	25
Mindanao	2026	12	25	22	74	138	138	25
Mindanao	2026	12	25	23	71	138	138	25
Mindanao	2026	12	25	24	68	138	138	25
Mindanao	2026	12	26	1	83	138	138	25
Mindanao	2026	12	26	2	80	138	138	25
Mindanao	2026	12	26	3	77	138	138	25
Mindanao	2026	12	26	4	77	138	138	25
Mindanao	2026	12	26	5	75	138	138	25
Mindanao	2026	12	26	6	75	138	138	25
Mindanao	2026	12	26	7	78	138	138	25
Mindanao	2026	12	26	8	80	138	138	25
Mindanao	2026	12	26	9	88	138	138	25
Mindanao	2026	12	26	10	93	138	138	25
Mindanao	2026	12	26	11	95	138	138	25
Mindanao	2026	12	26	12	97	138	138	25
Mindanao	2026	12	26	13	98	138	138	25
Mindanao	2026	12	26	14	104	138	138	25
Mindanao	2026	12	26	15	100	138	138	25
Mindanao	2026	12	26	16	99	138	138	25
Mindanao	2026	12	26	17	96	138	138	25
Mindanao	2026	12	26	18	104	138	138	25
Mindanao	2026	12	26	19	102	138	138	25
Mindanao	2026	12	26	20	99	138	138	25
Mindanao	2026	12	26	21	99	138	138	25
Mindanao	2026	12	26	22	93	138	138	25
Mindanao	2026	12	26	23	87	138	138	25
Mindanao	2026	12	26	24	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	27	1	80	138	138	25
Mindanao	2026	12	27	2	77	138	138	25
Mindanao	2026	12	27	3	74	138	138	25
Mindanao	2026	12	27	4	72	138	138	25
Mindanao	2026	12	27	5	71	138	138	25
Mindanao	2026	12	27	6	71	138	138	25
Mindanao	2026	12	27	7	71	138	138	25
Mindanao	2026	12	27	8	76	138	138	25
Mindanao	2026	12	27	9	80	138	138	25
Mindanao	2026	12	27	10	84	138	138	25
Mindanao	2026	12	27	11	85	138	138	25
Mindanao	2026	12	27	12	88	138	138	25
Mindanao	2026	12	27	13	89	138	138	25
Mindanao	2026	12	27	14	90	138	138	25
Mindanao	2026	12	27	15	88	138	138	25
Mindanao	2026	12	27	16	87	138	138	25
Mindanao	2026	12	27	17	88	138	138	25
Mindanao	2026	12	27	18	95	138	138	25
Mindanao	2026	12	27	19	92	138	138	25
Mindanao	2026	12	27	20	86	138	138	25
Mindanao	2026	12	27	21	83	138	138	25
Mindanao	2026	12	27	22	83	138	138	25
Mindanao	2026	12	27	23	82	138	138	25
Mindanao	2026	12	27	24	80	138	138	25
Mindanao	2026	12	28	1	75	138	138	25
Mindanao	2026	12	28	2	73	138	138	25
Mindanao	2026	12	28	3	71	138	138	25
Mindanao	2026	12	28	4	71	138	138	25
Mindanao	2026	12	28	5	73	138	138	25
Mindanao	2026	12	28	6	72	138	138	25
Mindanao	2026	12	28	7	72	138	138	25
Mindanao	2026	12	28	8	81	138	138	25
Mindanao	2026	12	28	9	90	138	138	25
Mindanao	2026	12	28	10	95	138	138	25
Mindanao	2026	12	28	11	100	138	138	25
Mindanao	2026	12	28	12	95	138	138	25
Mindanao	2026	12	28	13	94	138	138	25
Mindanao	2026	12	28	14	92	138	138	25
Mindanao	2026	12	28	15	94	138	138	25
Mindanao	2026	12	28	16	94	138	138	25
Mindanao	2026	12	28	17	96	138	138	25
Mindanao	2026	12	28	18	100	138	138	25
Mindanao	2026	12	28	19	94	138	138	25
Mindanao	2026	12	28	20	91	138	138	25
Mindanao	2026	12	28	21	89	138	138	25
Mindanao	2026	12	28	22	84	138	138	25
Mindanao	2026	12	28	23	77	138	138	25
Mindanao	2026	12	28	24	74	138	138	25
Mindanao	2026	12	29	1	66	138	138	25
Mindanao	2026	12	29	2	64	138	138	25
Mindanao	2026	12	29	3	62	138	138	25
Mindanao	2026	12	29	4	61	138	138	25
Mindanao	2026	12	29	5	62	138	138	25
Mindanao	2026	12	29	6	66	138	138	25
Mindanao	2026	12	29	7	69	138	138	25
Mindanao	2026	12	29	8	75	138	138	25
Mindanao	2026	12	29	9	83	138	138	25
Mindanao	2026	12	29	10	89	138	138	25
Mindanao	2026	12	29	11	93	138	138	25
Mindanao	2026	12	29	12	97	138	138	25
Mindanao	2026	12	29	13	97	138	138	25
Mindanao	2026	12	29	14	99	138	138	25
Mindanao	2026	12	29	15	99	138	138	25
Mindanao	2026	12	29	16	97	138	138	25
Mindanao	2026	12	29	17	95	138	138	25
Mindanao	2026	12	29	18	104	138	138	25
Mindanao	2026	12	29	19	103	138	138	25
Mindanao	2026	12	29	20	100	138	138	25
Mindanao	2026	12	29	21	98	138	138	25
Mindanao	2026	12	29	22	93	138	138	25
Mindanao	2026	12	29	23	87	138	138	25
Mindanao	2026	12	29	24	83	138	138	25
Mindanao	2026	12	30	1	89	138	138	25
Mindanao	2026	12	30	2	85	138	138	25
Mindanao	2026	12	30	3	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2026	12	30	4	81	138	138	25
Mindanao	2026	12	30	5	83	138	138	25
Mindanao	2026	12	30	6	83	138	138	25
Mindanao	2026	12	30	7	77	138	138	25
Mindanao	2026	12	30	8	81	138	138	25
Mindanao	2026	12	30	9	84	138	138	25
Mindanao	2026	12	30	10	88	138	138	25
Mindanao	2026	12	30	11	93	138	138	25
Mindanao	2026	12	30	12	93	138	138	25
Mindanao	2026	12	30	13	94	138	138	25
Mindanao	2026	12	30	14	98	138	138	25
Mindanao	2026	12	30	15	95	138	138	25
Mindanao	2026	12	30	16	95	138	138	25
Mindanao	2026	12	30	17	92	138	138	25
Mindanao	2026	12	30	18	104	138	138	25
Mindanao	2026	12	30	19	101	138	138	25
Mindanao	2026	12	30	20	99	138	138	25
Mindanao	2026	12	30	21	96	138	138	25
Mindanao	2026	12	30	22	94	138	138	25
Mindanao	2026	12	30	23	89	138	138	25
Mindanao	2026	12	30	24	83	138	138	25
Mindanao	2026	12	31	1	81	138	138	25
Mindanao	2026	12	31	2	78	138	138	25
Mindanao	2026	12	31	3	75	138	138	25
Mindanao	2026	12	31	4	74	138	138	25
Mindanao	2026	12	31	5	74	138	138	25
Mindanao	2026	12	31	6	73	138	138	25
Mindanao	2026	12	31	7	72	138	138	25
Mindanao	2026	12	31	8	74	138	138	25
Mindanao	2026	12	31	9	78	138	138	25
Mindanao	2026	12	31	10	82	138	138	25
Mindanao	2026	12	31	11	85	138	138	25
Mindanao	2026	12	31	12	87	138	138	25
Mindanao	2026	12	31	13	89	138	138	25
Mindanao	2026	12	31	14	92	138	138	25
Mindanao	2026	12	31	15	92	138	138	25
Mindanao	2026	12	31	16	92	138	138	25
Mindanao	2026	12	31	17	90	138	138	25
Mindanao	2026	12	31	18	97	138	138	25
Mindanao	2026	12	31	19	97	138	138	25
Mindanao	2026	12	31	20	91	138	138	25
Mindanao	2026	12	31	21	91	138	138	25
Mindanao	2026	12	31	22	87	138	138	25
Mindanao	2026	12	31	23	85	138	138	25
Mindanao	2026	12	31	24	83	138	138	25
Mindanao	2027	1	1	1	75	138	138	25
Mindanao	2027	1	1	2	70	138	138	25
Mindanao	2027	1	1	3	67	138	138	25
Mindanao	2027	1	1	4	64	138	138	25
Mindanao	2027	1	1	5	62	138	138	25
Mindanao	2027	1	1	6	59	138	138	25
Mindanao	2027	1	1	7	59	138	138	25
Mindanao	2027	1	1	8	59	138	138	25
Mindanao	2027	1	1	9	59	138	138	25
Mindanao	2027	1	1	10	60	138	138	25
Mindanao	2027	1	1	11	61	138	138	25
Mindanao	2027	1	1	12	63	138	138	25
Mindanao	2027	1	1	13	64	138	138	25
Mindanao	2027	1	1	14	65	138	138	25
Mindanao	2027	1	1	15	65	138	138	25
Mindanao	2027	1	1	16	64	138	138	25
Mindanao	2027	1	1	17	67	138	138	25
Mindanao	2027	1	1	18	78	138	138	25
Mindanao	2027	1	1	19	77	138	138	25
Mindanao	2027	1	1	20	75	138	138	25
Mindanao	2027	1	1	21	73	138	138	25
Mindanao	2027	1	1	22	68	138	138	25
Mindanao	2027	1	1	23	62	138	138	25
Mindanao	2027	1	1	24	62	138	138	25
Mindanao	2027	1	2	1	74	138	138	25
Mindanao	2027	1	2	2	71	138	138	25
Mindanao	2027	1	2	3	68	138	138	25
Mindanao	2027	1	2	4	68	138	138	25
Mindanao	2027	1	2	5	68	138	138	25
Mindanao	2027	1	2	6	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	2	7	71	138	138	25
Mindanao	2027	1	2	8	73	138	138	25
Mindanao	2027	1	2	9	79	138	138	25
Mindanao	2027	1	2	10	82	138	138	25
Mindanao	2027	1	2	11	85	138	138	25
Mindanao	2027	1	2	12	84	138	138	25
Mindanao	2027	1	2	13	84	138	138	25
Mindanao	2027	1	2	14	86	138	138	25
Mindanao	2027	1	2	15	86	138	138	25
Mindanao	2027	1	2	16	87	138	138	25
Mindanao	2027	1	2	17	86	138	138	25
Mindanao	2027	1	2	18	96	138	138	25
Mindanao	2027	1	2	19	94	138	138	25
Mindanao	2027	1	2	20	90	138	138	25
Mindanao	2027	1	2	21	86	138	138	25
Mindanao	2027	1	2	22	80	138	138	25
Mindanao	2027	1	2	23	77	138	138	25
Mindanao	2027	1	2	24	73	138	138	25
Mindanao	2027	1	3	1	69	138	138	25
Mindanao	2027	1	3	2	66	138	138	25
Mindanao	2027	1	3	3	65	138	138	25
Mindanao	2027	1	3	4	63	138	138	25
Mindanao	2027	1	3	5	65	138	138	25
Mindanao	2027	1	3	6	67	138	138	25
Mindanao	2027	1	3	7	67	138	138	25
Mindanao	2027	1	3	8	66	138	138	25
Mindanao	2027	1	3	9	69	138	138	25
Mindanao	2027	1	3	10	71	138	138	25
Mindanao	2027	1	3	11	73	138	138	25
Mindanao	2027	1	3	12	73	138	138	25
Mindanao	2027	1	3	13	73	138	138	25
Mindanao	2027	1	3	14	74	138	138	25
Mindanao	2027	1	3	15	75	138	138	25
Mindanao	2027	1	3	16	74	138	138	25
Mindanao	2027	1	3	17	79	138	138	25
Mindanao	2027	1	3	18	90	138	138	25
Mindanao	2027	1	3	19	89	138	138	25
Mindanao	2027	1	3	20	84	138	138	25
Mindanao	2027	1	3	21	81	138	138	25
Mindanao	2027	1	3	22	75	138	138	25
Mindanao	2027	1	3	23	71	138	138	25
Mindanao	2027	1	3	24	69	138	138	25
Mindanao	2027	1	4	1	60	138	138	25
Mindanao	2027	1	4	2	55	138	138	25
Mindanao	2027	1	4	3	56	138	138	25
Mindanao	2027	1	4	4	53	138	138	25
Mindanao	2027	1	4	5	54	138	138	25
Mindanao	2027	1	4	6	59	138	138	25
Mindanao	2027	1	4	7	61	138	138	25
Mindanao	2027	1	4	8	63	138	138	25
Mindanao	2027	1	4	9	70	138	138	25
Mindanao	2027	1	4	10	75	138	138	25
Mindanao	2027	1	4	11	77	138	138	25
Mindanao	2027	1	4	12	76	138	138	25
Mindanao	2027	1	4	13	77	138	138	25
Mindanao	2027	1	4	14	77	138	138	25
Mindanao	2027	1	4	15	75	138	138	25
Mindanao	2027	1	4	16	77	138	138	25
Mindanao	2027	1	4	17	79	138	138	25
Mindanao	2027	1	4	18	90	138	138	25
Mindanao	2027	1	4	19	85	138	138	25
Mindanao	2027	1	4	20	82	138	138	25
Mindanao	2027	1	4	21	77	138	138	25
Mindanao	2027	1	4	22	71	138	138	25
Mindanao	2027	1	4	23	67	138	138	25
Mindanao	2027	1	4	24	64	138	138	25
Mindanao	2027	1	5	1	63	138	138	25
Mindanao	2027	1	5	2	60	138	138	25
Mindanao	2027	1	5	3	59	138	138	25
Mindanao	2027	1	5	4	58	138	138	25
Mindanao	2027	1	5	5	59	138	138	25
Mindanao	2027	1	5	6	65	138	138	25
Mindanao	2027	1	5	7	64	138	138	25
Mindanao	2027	1	5	8	69	138	138	25
Mindanao	2027	1	5	9	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	5	10	87	138	138	25
Mindanao	2027	1	5	11	94	138	138	25
Mindanao	2027	1	5	12	92	138	138	25
Mindanao	2027	1	5	13	94	138	138	25
Mindanao	2027	1	5	14	96	138	138	25
Mindanao	2027	1	5	15	96	138	138	25
Mindanao	2027	1	5	16	94	138	138	25
Mindanao	2027	1	5	17	91	138	138	25
Mindanao	2027	1	5	18	98	138	138	25
Mindanao	2027	1	5	19	93	138	138	25
Mindanao	2027	1	5	20	90	138	138	25
Mindanao	2027	1	5	21	86	138	138	25
Mindanao	2027	1	5	22	78	138	138	25
Mindanao	2027	1	5	23	74	138	138	25
Mindanao	2027	1	5	24	70	138	138	25
Mindanao	2027	1	6	1	67	138	138	25
Mindanao	2027	1	6	2	66	138	138	25
Mindanao	2027	1	6	3	65	138	138	25
Mindanao	2027	1	6	4	63	138	138	25
Mindanao	2027	1	6	5	68	138	138	25
Mindanao	2027	1	6	6	72	138	138	25
Mindanao	2027	1	6	7	67	138	138	25
Mindanao	2027	1	6	8	73	138	138	25
Mindanao	2027	1	6	9	84	138	138	25
Mindanao	2027	1	6	10	89	138	138	25
Mindanao	2027	1	6	11	95	138	138	25
Mindanao	2027	1	6	12	92	138	138	25
Mindanao	2027	1	6	13	93	138	138	25
Mindanao	2027	1	6	14	96	138	138	25
Mindanao	2027	1	6	15	94	138	138	25
Mindanao	2027	1	6	16	93	138	138	25
Mindanao	2027	1	6	17	94	138	138	25
Mindanao	2027	1	6	18	97	138	138	25
Mindanao	2027	1	6	19	93	138	138	25
Mindanao	2027	1	6	20	89	138	138	25
Mindanao	2027	1	6	21	83	138	138	25
Mindanao	2027	1	6	22	77	138	138	25
Mindanao	2027	1	6	23	73	138	138	25
Mindanao	2027	1	6	24	70	138	138	25
Mindanao	2027	1	7	1	68	138	138	25
Mindanao	2027	1	7	2	66	138	138	25
Mindanao	2027	1	7	3	64	138	138	25
Mindanao	2027	1	7	4	64	138	138	25
Mindanao	2027	1	7	5	68	138	138	25
Mindanao	2027	1	7	6	74	138	138	25
Mindanao	2027	1	7	7	71	138	138	25
Mindanao	2027	1	7	8	76	138	138	25
Mindanao	2027	1	7	9	88	138	138	25
Mindanao	2027	1	7	10	93	138	138	25
Mindanao	2027	1	7	11	99	138	138	25
Mindanao	2027	1	7	12	97	138	138	25
Mindanao	2027	1	7	13	99	138	138	25
Mindanao	2027	1	7	14	103	138	138	25
Mindanao	2027	1	7	15	104	138	138	25
Mindanao	2027	1	7	16	102	138	138	25
Mindanao	2027	1	7	17	99	138	138	25
Mindanao	2027	1	7	18	101	138	138	25
Mindanao	2027	1	7	19	95	138	138	25
Mindanao	2027	1	7	20	92	138	138	25
Mindanao	2027	1	7	21	90	138	138	25
Mindanao	2027	1	7	22	83	138	138	25
Mindanao	2027	1	7	23	77	138	138	25
Mindanao	2027	1	7	24	74	138	138	25
Mindanao	2027	1	8	1	71	138	138	25
Mindanao	2027	1	8	2	69	138	138	25
Mindanao	2027	1	8	3	67	138	138	25
Mindanao	2027	1	8	4	67	138	138	25
Mindanao	2027	1	8	5	70	138	138	25
Mindanao	2027	1	8	6	73	138	138	25
Mindanao	2027	1	8	7	70	138	138	25
Mindanao	2027	1	8	8	77	138	138	25
Mindanao	2027	1	8	9	88	138	138	25
Mindanao	2027	1	8	10	97	138	138	25
Mindanao	2027	1	8	11	102	138	138	25
Mindanao	2027	1	8	12	101	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	8	13	103	138	138	25
Mindanao	2027	1	8	14	107	138	138	25
Mindanao	2027	1	8	15	107	138	138	25
Mindanao	2027	1	8	16	101	138	138	25
Mindanao	2027	1	8	17	99	138	138	25
Mindanao	2027	1	8	18	104	138	138	25
Mindanao	2027	1	8	19	101	138	138	25
Mindanao	2027	1	8	20	96	138	138	25
Mindanao	2027	1	8	21	92	138	138	25
Mindanao	2027	1	8	22	86	138	138	25
Mindanao	2027	1	8	23	82	138	138	25
Mindanao	2027	1	8	24	76	138	138	25
Mindanao	2027	1	9	1	74	138	138	25
Mindanao	2027	1	9	2	71	138	138	25
Mindanao	2027	1	9	3	68	138	138	25
Mindanao	2027	1	9	4	68	138	138	25
Mindanao	2027	1	9	5	68	138	138	25
Mindanao	2027	1	9	6	71	138	138	25
Mindanao	2027	1	9	7	71	138	138	25
Mindanao	2027	1	9	8	73	138	138	25
Mindanao	2027	1	9	9	79	138	138	25
Mindanao	2027	1	9	10	82	138	138	25
Mindanao	2027	1	9	11	85	138	138	25
Mindanao	2027	1	9	12	84	138	138	25
Mindanao	2027	1	9	13	84	138	138	25
Mindanao	2027	1	9	14	86	138	138	25
Mindanao	2027	1	9	15	86	138	138	25
Mindanao	2027	1	9	16	87	138	138	25
Mindanao	2027	1	9	17	86	138	138	25
Mindanao	2027	1	9	18	96	138	138	25
Mindanao	2027	1	9	19	94	138	138	25
Mindanao	2027	1	9	20	90	138	138	25
Mindanao	2027	1	9	21	86	138	138	25
Mindanao	2027	1	9	22	80	138	138	25
Mindanao	2027	1	9	23	77	138	138	25
Mindanao	2027	1	9	24	73	138	138	25
Mindanao	2027	1	10	1	69	138	138	25
Mindanao	2027	1	10	2	66	138	138	25
Mindanao	2027	1	10	3	65	138	138	25
Mindanao	2027	1	10	4	63	138	138	25
Mindanao	2027	1	10	5	65	138	138	25
Mindanao	2027	1	10	6	67	138	138	25
Mindanao	2027	1	10	7	67	138	138	25
Mindanao	2027	1	10	8	66	138	138	25
Mindanao	2027	1	10	9	69	138	138	25
Mindanao	2027	1	10	10	71	138	138	25
Mindanao	2027	1	10	11	73	138	138	25
Mindanao	2027	1	10	12	73	138	138	25
Mindanao	2027	1	10	13	73	138	138	25
Mindanao	2027	1	10	14	74	138	138	25
Mindanao	2027	1	10	15	75	138	138	25
Mindanao	2027	1	10	16	74	138	138	25
Mindanao	2027	1	10	17	79	138	138	25
Mindanao	2027	1	10	18	90	138	138	25
Mindanao	2027	1	10	19	89	138	138	25
Mindanao	2027	1	10	20	84	138	138	25
Mindanao	2027	1	10	21	81	138	138	25
Mindanao	2027	1	10	22	75	138	138	25
Mindanao	2027	1	10	23	71	138	138	25
Mindanao	2027	1	10	24	69	138	138	25
Mindanao	2027	1	11	1	66	138	138	25
Mindanao	2027	1	11	2	65	138	138	25
Mindanao	2027	1	11	3	64	138	138	25
Mindanao	2027	1	11	4	64	138	138	25
Mindanao	2027	1	11	5	69	138	138	25
Mindanao	2027	1	11	6	75	138	138	25
Mindanao	2027	1	11	7	69	138	138	25
Mindanao	2027	1	11	8	75	138	138	25
Mindanao	2027	1	11	9	86	138	138	25
Mindanao	2027	1	11	10	93	138	138	25
Mindanao	2027	1	11	11	97	138	138	25
Mindanao	2027	1	11	12	95	138	138	25
Mindanao	2027	1	11	13	96	138	138	25
Mindanao	2027	1	11	14	100	138	138	25
Mindanao	2027	1	11	15	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	11	16	97	138	138	25
Mindanao	2027	1	11	17	94	138	138	25
Mindanao	2027	1	11	18	103	138	138	25
Mindanao	2027	1	11	19	98	138	138	25
Mindanao	2027	1	11	20	94	138	138	25
Mindanao	2027	1	11	21	90	138	138	25
Mindanao	2027	1	11	22	84	138	138	25
Mindanao	2027	1	11	23	78	138	138	25
Mindanao	2027	1	11	24	74	138	138	25
Mindanao	2027	1	12	1	70	138	138	25
Mindanao	2027	1	12	2	68	138	138	25
Mindanao	2027	1	12	3	67	138	138	25
Mindanao	2027	1	12	4	68	138	138	25
Mindanao	2027	1	12	5	71	138	138	25
Mindanao	2027	1	12	6	78	138	138	25
Mindanao	2027	1	12	7	73	138	138	25
Mindanao	2027	1	12	8	76	138	138	25
Mindanao	2027	1	12	9	86	138	138	25
Mindanao	2027	1	12	10	92	138	138	25
Mindanao	2027	1	12	11	95	138	138	25
Mindanao	2027	1	12	12	93	138	138	25
Mindanao	2027	1	12	13	93	138	138	25
Mindanao	2027	1	12	14	98	138	138	25
Mindanao	2027	1	12	15	97	138	138	25
Mindanao	2027	1	12	16	96	138	138	25
Mindanao	2027	1	12	17	93	138	138	25
Mindanao	2027	1	12	18	101	138	138	25
Mindanao	2027	1	12	19	96	138	138	25
Mindanao	2027	1	12	20	90	138	138	25
Mindanao	2027	1	12	21	87	138	138	25
Mindanao	2027	1	12	22	80	138	138	25
Mindanao	2027	1	12	23	75	138	138	25
Mindanao	2027	1	12	24	72	138	138	25
Mindanao	2027	1	13	1	69	138	138	25
Mindanao	2027	1	13	2	67	138	138	25
Mindanao	2027	1	13	3	64	138	138	25
Mindanao	2027	1	13	4	65	138	138	25
Mindanao	2027	1	13	5	69	138	138	25
Mindanao	2027	1	13	6	76	138	138	25
Mindanao	2027	1	13	7	70	138	138	25
Mindanao	2027	1	13	8	77	138	138	25
Mindanao	2027	1	13	9	84	138	138	25
Mindanao	2027	1	13	10	90	138	138	25
Mindanao	2027	1	13	11	93	138	138	25
Mindanao	2027	1	13	12	91	138	138	25
Mindanao	2027	1	13	13	91	138	138	25
Mindanao	2027	1	13	14	93	138	138	25
Mindanao	2027	1	13	15	93	138	138	25
Mindanao	2027	1	13	16	92	138	138	25
Mindanao	2027	1	13	17	92	138	138	25
Mindanao	2027	1	13	18	98	138	138	25
Mindanao	2027	1	13	19	93	138	138	25
Mindanao	2027	1	13	20	88	138	138	25
Mindanao	2027	1	13	21	83	138	138	25
Mindanao	2027	1	13	22	75	138	138	25
Mindanao	2027	1	13	23	72	138	138	25
Mindanao	2027	1	13	24	68	138	138	25
Mindanao	2027	1	14	1	67	138	138	25
Mindanao	2027	1	14	2	63	138	138	25
Mindanao	2027	1	14	3	64	138	138	25
Mindanao	2027	1	14	4	63	138	138	25
Mindanao	2027	1	14	5	65	138	138	25
Mindanao	2027	1	14	6	72	138	138	25
Mindanao	2027	1	14	7	67	138	138	25
Mindanao	2027	1	14	8	72	138	138	25
Mindanao	2027	1	14	9	82	138	138	25
Mindanao	2027	1	14	10	88	138	138	25
Mindanao	2027	1	14	11	93	138	138	25
Mindanao	2027	1	14	12	91	138	138	25
Mindanao	2027	1	14	13	92	138	138	25
Mindanao	2027	1	14	14	97	138	138	25
Mindanao	2027	1	14	15	95	138	138	25
Mindanao	2027	1	14	16	92	138	138	25
Mindanao	2027	1	14	17	95	138	138	25
Mindanao	2027	1	14	18	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	14	19	91	138	138	25
Mindanao	2027	1	14	20	90	138	138	25
Mindanao	2027	1	14	21	88	138	138	25
Mindanao	2027	1	14	22	81	138	138	25
Mindanao	2027	1	14	23	76	138	138	25
Mindanao	2027	1	14	24	72	138	138	25
Mindanao	2027	1	15	1	70	138	138	25
Mindanao	2027	1	15	2	68	138	138	25
Mindanao	2027	1	15	3	67	138	138	25
Mindanao	2027	1	15	4	65	138	138	25
Mindanao	2027	1	15	5	71	138	138	25
Mindanao	2027	1	15	6	75	138	138	25
Mindanao	2027	1	15	7	71	138	138	25
Mindanao	2027	1	15	8	77	138	138	25
Mindanao	2027	1	15	9	88	138	138	25
Mindanao	2027	1	15	10	96	138	138	25
Mindanao	2027	1	15	11	99	138	138	25
Mindanao	2027	1	15	12	98	138	138	25
Mindanao	2027	1	15	13	98	138	138	25
Mindanao	2027	1	15	14	101	138	138	25
Mindanao	2027	1	15	15	100	138	138	25
Mindanao	2027	1	15	16	99	138	138	25
Mindanao	2027	1	15	17	97	138	138	25
Mindanao	2027	1	15	18	103	138	138	25
Mindanao	2027	1	15	19	97	138	138	25
Mindanao	2027	1	15	20	94	138	138	25
Mindanao	2027	1	15	21	88	138	138	25
Mindanao	2027	1	15	22	81	138	138	25
Mindanao	2027	1	15	23	78	138	138	25
Mindanao	2027	1	15	24	74	138	138	25
Mindanao	2027	1	16	1	70	138	138	25
Mindanao	2027	1	16	2	69	138	138	25
Mindanao	2027	1	16	3	67	138	138	25
Mindanao	2027	1	16	4	66	138	138	25
Mindanao	2027	1	16	5	66	138	138	25
Mindanao	2027	1	16	6	71	138	138	25
Mindanao	2027	1	16	7	72	138	138	25
Mindanao	2027	1	16	8	74	138	138	25
Mindanao	2027	1	16	9	79	138	138	25
Mindanao	2027	1	16	10	83	138	138	25
Mindanao	2027	1	16	11	87	138	138	25
Mindanao	2027	1	16	12	87	138	138	25
Mindanao	2027	1	16	13	86	138	138	25
Mindanao	2027	1	16	14	87	138	138	25
Mindanao	2027	1	16	15	87	138	138	25
Mindanao	2027	1	16	16	88	138	138	25
Mindanao	2027	1	16	17	90	138	138	25
Mindanao	2027	1	16	18	95	138	138	25
Mindanao	2027	1	16	19	93	138	138	25
Mindanao	2027	1	16	20	89	138	138	25
Mindanao	2027	1	16	21	84	138	138	25
Mindanao	2027	1	16	22	79	138	138	25
Mindanao	2027	1	16	23	76	138	138	25
Mindanao	2027	1	16	24	73	138	138	25
Mindanao	2027	1	17	1	68	138	138	25
Mindanao	2027	1	17	2	67	138	138	25
Mindanao	2027	1	17	3	65	138	138	25
Mindanao	2027	1	17	4	65	138	138	25
Mindanao	2027	1	17	5	66	138	138	25
Mindanao	2027	1	17	6	68	138	138	25
Mindanao	2027	1	17	7	66	138	138	25
Mindanao	2027	1	17	8	67	138	138	25
Mindanao	2027	1	17	9	72	138	138	25
Mindanao	2027	1	17	10	75	138	138	25
Mindanao	2027	1	17	11	79	138	138	25
Mindanao	2027	1	17	12	80	138	138	25
Mindanao	2027	1	17	13	80	138	138	25
Mindanao	2027	1	17	14	82	138	138	25
Mindanao	2027	1	17	15	83	138	138	25
Mindanao	2027	1	17	16	83	138	138	25
Mindanao	2027	1	17	17	83	138	138	25
Mindanao	2027	1	17	18	95	138	138	25
Mindanao	2027	1	17	19	96	138	138	25
Mindanao	2027	1	17	20	93	138	138	25
Mindanao	2027	1	17	21	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	17	22	85	138	138	25
Mindanao	2027	1	17	23	80	138	138	25
Mindanao	2027	1	17	24	74	138	138	25
Mindanao	2027	1	18	1	72	138	138	25
Mindanao	2027	1	18	2	70	138	138	25
Mindanao	2027	1	18	3	67	138	138	25
Mindanao	2027	1	18	4	69	138	138	25
Mindanao	2027	1	18	5	72	138	138	25
Mindanao	2027	1	18	6	79	138	138	25
Mindanao	2027	1	18	7	71	138	138	25
Mindanao	2027	1	18	8	77	138	138	25
Mindanao	2027	1	18	9	91	138	138	25
Mindanao	2027	1	18	10	99	138	138	25
Mindanao	2027	1	18	11	102	138	138	25
Mindanao	2027	1	18	12	102	138	138	25
Mindanao	2027	1	18	13	104	138	138	25
Mindanao	2027	1	18	14	108	138	138	25
Mindanao	2027	1	18	15	107	138	138	25
Mindanao	2027	1	18	16	106	138	138	25
Mindanao	2027	1	18	17	100	138	138	25
Mindanao	2027	1	18	18	105	138	138	25
Mindanao	2027	1	18	19	102	138	138	25
Mindanao	2027	1	18	20	98	138	138	25
Mindanao	2027	1	18	21	95	138	138	25
Mindanao	2027	1	18	22	89	138	138	25
Mindanao	2027	1	18	23	84	138	138	25
Mindanao	2027	1	18	24	78	138	138	25
Mindanao	2027	1	19	1	73	138	138	25
Mindanao	2027	1	19	2	71	138	138	25
Mindanao	2027	1	19	3	70	138	138	25
Mindanao	2027	1	19	4	69	138	138	25
Mindanao	2027	1	19	5	74	138	138	25
Mindanao	2027	1	19	6	81	138	138	25
Mindanao	2027	1	19	7	72	138	138	25
Mindanao	2027	1	19	8	79	138	138	25
Mindanao	2027	1	19	9	92	138	138	25
Mindanao	2027	1	19	10	99	138	138	25
Mindanao	2027	1	19	11	104	138	138	25
Mindanao	2027	1	19	12	102	138	138	25
Mindanao	2027	1	19	13	105	138	138	25
Mindanao	2027	1	19	14	110	138	138	25
Mindanao	2027	1	19	15	107	138	138	25
Mindanao	2027	1	19	16	106	138	138	25
Mindanao	2027	1	19	17	102	138	138	25
Mindanao	2027	1	19	18	107	138	138	25
Mindanao	2027	1	19	19	102	138	138	25
Mindanao	2027	1	19	20	98	138	138	25
Mindanao	2027	1	19	21	96	138	138	25
Mindanao	2027	1	19	22	89	138	138	25
Mindanao	2027	1	19	23	83	138	138	25
Mindanao	2027	1	19	24	78	138	138	25
Mindanao	2027	1	20	1	76	138	138	25
Mindanao	2027	1	20	2	71	138	138	25
Mindanao	2027	1	20	3	70	138	138	25
Mindanao	2027	1	20	4	69	138	138	25
Mindanao	2027	1	20	5	75	138	138	25
Mindanao	2027	1	20	6	80	138	138	25
Mindanao	2027	1	20	7	73	138	138	25
Mindanao	2027	1	20	8	78	138	138	25
Mindanao	2027	1	20	9	91	138	138	25
Mindanao	2027	1	20	10	101	138	138	25
Mindanao	2027	1	20	11	106	138	138	25
Mindanao	2027	1	20	12	104	138	138	25
Mindanao	2027	1	20	13	106	138	138	25
Mindanao	2027	1	20	14	109	138	138	25
Mindanao	2027	1	20	15	107	138	138	25
Mindanao	2027	1	20	16	101	138	138	25
Mindanao	2027	1	20	17	98	138	138	25
Mindanao	2027	1	20	18	104	138	138	25
Mindanao	2027	1	20	19	101	138	138	25
Mindanao	2027	1	20	20	97	138	138	25
Mindanao	2027	1	20	21	95	138	138	25
Mindanao	2027	1	20	22	89	138	138	25
Mindanao	2027	1	20	23	80	138	138	25
Mindanao	2027	1	20	24	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	21	1	74	138	138	25
Mindanao	2027	1	21	2	71	138	138	25
Mindanao	2027	1	21	3	70	138	138	25
Mindanao	2027	1	21	4	69	138	138	25
Mindanao	2027	1	21	5	72	138	138	25
Mindanao	2027	1	21	6	81	138	138	25
Mindanao	2027	1	21	7	72	138	138	25
Mindanao	2027	1	21	8	79	138	138	25
Mindanao	2027	1	21	9	93	138	138	25
Mindanao	2027	1	21	10	100	138	138	25
Mindanao	2027	1	21	11	105	138	138	25
Mindanao	2027	1	21	12	104	138	138	25
Mindanao	2027	1	21	13	106	138	138	25
Mindanao	2027	1	21	14	110	138	138	25
Mindanao	2027	1	21	15	107	138	138	25
Mindanao	2027	1	21	16	108	138	138	25
Mindanao	2027	1	21	17	102	138	138	25
Mindanao	2027	1	21	18	108	138	138	25
Mindanao	2027	1	21	19	105	138	138	25
Mindanao	2027	1	21	20	103	138	138	25
Mindanao	2027	1	21	21	98	138	138	25
Mindanao	2027	1	21	22	93	138	138	25
Mindanao	2027	1	21	23	86	138	138	25
Mindanao	2027	1	21	24	82	138	138	25
Mindanao	2027	1	22	1	78	138	138	25
Mindanao	2027	1	22	2	76	138	138	25
Mindanao	2027	1	22	3	74	138	138	25
Mindanao	2027	1	22	4	72	138	138	25
Mindanao	2027	1	22	5	76	138	138	25
Mindanao	2027	1	22	6	82	138	138	25
Mindanao	2027	1	22	7	76	138	138	25
Mindanao	2027	1	22	8	84	138	138	25
Mindanao	2027	1	22	9	95	138	138	25
Mindanao	2027	1	22	10	101	138	138	25
Mindanao	2027	1	22	11	106	138	138	25
Mindanao	2027	1	22	12	105	138	138	25
Mindanao	2027	1	22	13	105	138	138	25
Mindanao	2027	1	22	14	109	138	138	25
Mindanao	2027	1	22	15	109	138	138	25
Mindanao	2027	1	22	16	106	138	138	25
Mindanao	2027	1	22	17	101	138	138	25
Mindanao	2027	1	22	18	106	138	138	25
Mindanao	2027	1	22	19	104	138	138	25
Mindanao	2027	1	22	20	99	138	138	25
Mindanao	2027	1	22	21	96	138	138	25
Mindanao	2027	1	22	22	90	138	138	25
Mindanao	2027	1	22	23	86	138	138	25
Mindanao	2027	1	22	24	80	138	138	25
Mindanao	2027	1	23	1	76	138	138	25
Mindanao	2027	1	23	2	73	138	138	25
Mindanao	2027	1	23	3	72	138	138	25
Mindanao	2027	1	23	4	69	138	138	25
Mindanao	2027	1	23	5	70	138	138	25
Mindanao	2027	1	23	6	72	138	138	25
Mindanao	2027	1	23	7	73	138	138	25
Mindanao	2027	1	23	8	76	138	138	25
Mindanao	2027	1	23	9	85	138	138	25
Mindanao	2027	1	23	10	89	138	138	25
Mindanao	2027	1	23	11	92	138	138	25
Mindanao	2027	1	23	12	90	138	138	25
Mindanao	2027	1	23	13	90	138	138	25
Mindanao	2027	1	23	14	91	138	138	25
Mindanao	2027	1	23	15	90	138	138	25
Mindanao	2027	1	23	16	89	138	138	25
Mindanao	2027	1	23	17	89	138	138	25
Mindanao	2027	1	23	18	96	138	138	25
Mindanao	2027	1	23	19	92	138	138	25
Mindanao	2027	1	23	20	88	138	138	25
Mindanao	2027	1	23	21	84	138	138	25
Mindanao	2027	1	23	22	79	138	138	25
Mindanao	2027	1	23	23	73	138	138	25
Mindanao	2027	1	23	24	70	138	138	25
Mindanao	2027	1	24	1	67	138	138	25
Mindanao	2027	1	24	2	64	138	138	25
Mindanao	2027	1	24	3	62	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	24	4	61	138	138	25
Mindanao	2027	1	24	5	62	138	138	25
Mindanao	2027	1	24	6	68	138	138	25
Mindanao	2027	1	24	7	67	138	138	25
Mindanao	2027	1	24	8	68	138	138	25
Mindanao	2027	1	24	9	70	138	138	25
Mindanao	2027	1	24	10	75	138	138	25
Mindanao	2027	1	24	11	77	138	138	25
Mindanao	2027	1	24	12	75	138	138	25
Mindanao	2027	1	24	13	75	138	138	25
Mindanao	2027	1	24	14	76	138	138	25
Mindanao	2027	1	24	15	76	138	138	25
Mindanao	2027	1	24	16	76	138	138	25
Mindanao	2027	1	24	17	79	138	138	25
Mindanao	2027	1	24	18	89	138	138	25
Mindanao	2027	1	24	19	88	138	138	25
Mindanao	2027	1	24	20	86	138	138	25
Mindanao	2027	1	24	21	82	138	138	25
Mindanao	2027	1	24	22	77	138	138	25
Mindanao	2027	1	24	23	71	138	138	25
Mindanao	2027	1	24	24	69	138	138	25
Mindanao	2027	1	25	1	66	138	138	25
Mindanao	2027	1	25	2	66	138	138	25
Mindanao	2027	1	25	3	63	138	138	25
Mindanao	2027	1	25	4	63	138	138	25
Mindanao	2027	1	25	5	69	138	138	25
Mindanao	2027	1	25	6	76	138	138	25
Mindanao	2027	1	25	7	71	138	138	25
Mindanao	2027	1	25	8	75	138	138	25
Mindanao	2027	1	25	9	86	138	138	25
Mindanao	2027	1	25	10	92	138	138	25
Mindanao	2027	1	25	11	96	138	138	25
Mindanao	2027	1	25	12	94	138	138	25
Mindanao	2027	1	25	13	93	138	138	25
Mindanao	2027	1	25	14	95	138	138	25
Mindanao	2027	1	25	15	95	138	138	25
Mindanao	2027	1	25	16	94	138	138	25
Mindanao	2027	1	25	17	95	138	138	25
Mindanao	2027	1	25	18	98	138	138	25
Mindanao	2027	1	25	19	95	138	138	25
Mindanao	2027	1	25	20	89	138	138	25
Mindanao	2027	1	25	21	85	138	138	25
Mindanao	2027	1	25	22	79	138	138	25
Mindanao	2027	1	25	23	74	138	138	25
Mindanao	2027	1	25	24	70	138	138	25
Mindanao	2027	1	26	1	68	138	138	25
Mindanao	2027	1	26	2	67	138	138	25
Mindanao	2027	1	26	3	67	138	138	25
Mindanao	2027	1	26	4	66	138	138	25
Mindanao	2027	1	26	5	71	138	138	25
Mindanao	2027	1	26	6	78	138	138	25
Mindanao	2027	1	26	7	71	138	138	25
Mindanao	2027	1	26	8	75	138	138	25
Mindanao	2027	1	26	9	87	138	138	25
Mindanao	2027	1	26	10	95	138	138	25
Mindanao	2027	1	26	11	100	138	138	25
Mindanao	2027	1	26	12	95	138	138	25
Mindanao	2027	1	26	13	97	138	138	25
Mindanao	2027	1	26	14	101	138	138	25
Mindanao	2027	1	26	15	98	138	138	25
Mindanao	2027	1	26	16	97	138	138	25
Mindanao	2027	1	26	17	94	138	138	25
Mindanao	2027	1	26	18	97	138	138	25
Mindanao	2027	1	26	19	94	138	138	25
Mindanao	2027	1	26	20	87	138	138	25
Mindanao	2027	1	26	21	84	138	138	25
Mindanao	2027	1	26	22	78	138	138	25
Mindanao	2027	1	26	23	75	138	138	25
Mindanao	2027	1	26	24	70	138	138	25
Mindanao	2027	1	27	1	68	138	138	25
Mindanao	2027	1	27	2	66	138	138	25
Mindanao	2027	1	27	3	67	138	138	25
Mindanao	2027	1	27	4	67	138	138	25
Mindanao	2027	1	27	5	71	138	138	25
Mindanao	2027	1	27	6	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	27	7	71	138	138	25
Mindanao	2027	1	27	8	75	138	138	25
Mindanao	2027	1	27	9	84	138	138	25
Mindanao	2027	1	27	10	90	138	138	25
Mindanao	2027	1	27	11	91	138	138	25
Mindanao	2027	1	27	12	90	138	138	25
Mindanao	2027	1	27	13	90	138	138	25
Mindanao	2027	1	27	14	95	138	138	25
Mindanao	2027	1	27	15	93	138	138	25
Mindanao	2027	1	27	16	93	138	138	25
Mindanao	2027	1	27	17	91	138	138	25
Mindanao	2027	1	27	18	96	138	138	25
Mindanao	2027	1	27	19	96	138	138	25
Mindanao	2027	1	27	20	92	138	138	25
Mindanao	2027	1	27	21	89	138	138	25
Mindanao	2027	1	27	22	82	138	138	25
Mindanao	2027	1	27	23	77	138	138	25
Mindanao	2027	1	27	24	72	138	138	25
Mindanao	2027	1	28	1	70	138	138	25
Mindanao	2027	1	28	2	69	138	138	25
Mindanao	2027	1	28	3	67	138	138	25
Mindanao	2027	1	28	4	67	138	138	25
Mindanao	2027	1	28	5	72	138	138	25
Mindanao	2027	1	28	6	79	138	138	25
Mindanao	2027	1	28	7	73	138	138	25
Mindanao	2027	1	28	8	75	138	138	25
Mindanao	2027	1	28	9	88	138	138	25
Mindanao	2027	1	28	10	95	138	138	25
Mindanao	2027	1	28	11	98	138	138	25
Mindanao	2027	1	28	12	97	138	138	25
Mindanao	2027	1	28	13	97	138	138	25
Mindanao	2027	1	28	14	102	138	138	25
Mindanao	2027	1	28	15	102	138	138	25
Mindanao	2027	1	28	16	101	138	138	25
Mindanao	2027	1	28	17	98	138	138	25
Mindanao	2027	1	28	18	103	138	138	25
Mindanao	2027	1	28	19	101	138	138	25
Mindanao	2027	1	28	20	98	138	138	25
Mindanao	2027	1	28	21	93	138	138	25
Mindanao	2027	1	28	22	88	138	138	25
Mindanao	2027	1	28	23	82	138	138	25
Mindanao	2027	1	28	24	77	138	138	25
Mindanao	2027	1	29	1	74	138	138	25
Mindanao	2027	1	29	2	73	138	138	25
Mindanao	2027	1	29	3	71	138	138	25
Mindanao	2027	1	29	4	72	138	138	25
Mindanao	2027	1	29	5	74	138	138	25
Mindanao	2027	1	29	6	80	138	138	25
Mindanao	2027	1	29	7	75	138	138	25
Mindanao	2027	1	29	8	82	138	138	25
Mindanao	2027	1	29	9	95	138	138	25
Mindanao	2027	1	29	10	102	138	138	25
Mindanao	2027	1	29	11	106	138	138	25
Mindanao	2027	1	29	12	104	138	138	25
Mindanao	2027	1	29	13	105	138	138	25
Mindanao	2027	1	29	14	109	138	138	25
Mindanao	2027	1	29	15	109	138	138	25
Mindanao	2027	1	29	16	107	138	138	25
Mindanao	2027	1	29	17	101	138	138	25
Mindanao	2027	1	29	18	106	138	138	25
Mindanao	2027	1	29	19	106	138	138	25
Mindanao	2027	1	29	20	101	138	138	25
Mindanao	2027	1	29	21	97	138	138	25
Mindanao	2027	1	29	22	90	138	138	25
Mindanao	2027	1	29	23	84	138	138	25
Mindanao	2027	1	29	24	79	138	138	25
Mindanao	2027	1	30	1	77	138	138	25
Mindanao	2027	1	30	2	75	138	138	25
Mindanao	2027	1	30	3	72	138	138	25
Mindanao	2027	1	30	4	71	138	138	25
Mindanao	2027	1	30	5	72	138	138	25
Mindanao	2027	1	30	6	76	138	138	25
Mindanao	2027	1	30	7	74	138	138	25
Mindanao	2027	1	30	8	76	138	138	25
Mindanao	2027	1	30	9	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	1	30	10	93	138	138	25
Mindanao	2027	1	30	11	97	138	138	25
Mindanao	2027	1	30	12	96	138	138	25
Mindanao	2027	1	30	13	97	138	138	25
Mindanao	2027	1	30	14	101	138	138	25
Mindanao	2027	1	30	15	100	138	138	25
Mindanao	2027	1	30	16	99	138	138	25
Mindanao	2027	1	30	17	95	138	138	25
Mindanao	2027	1	30	18	103	138	138	25
Mindanao	2027	1	30	19	103	138	138	25
Mindanao	2027	1	30	20	101	138	138	25
Mindanao	2027	1	30	21	95	138	138	25
Mindanao	2027	1	30	22	91	138	138	25
Mindanao	2027	1	30	23	86	138	138	25
Mindanao	2027	1	30	24	81	138	138	25
Mindanao	2027	1	31	1	77	138	138	25
Mindanao	2027	1	31	2	75	138	138	25
Mindanao	2027	1	31	3	72	138	138	25
Mindanao	2027	1	31	4	72	138	138	25
Mindanao	2027	1	31	5	71	138	138	25
Mindanao	2027	1	31	6	71	138	138	25
Mindanao	2027	1	31	7	71	138	138	25
Mindanao	2027	1	31	8	72	138	138	25
Mindanao	2027	1	31	9	74	138	138	25
Mindanao	2027	1	31	10	77	138	138	25
Mindanao	2027	1	31	11	81	138	138	25
Mindanao	2027	1	31	12	81	138	138	25
Mindanao	2027	1	31	13	80	138	138	25
Mindanao	2027	1	31	14	80	138	138	25
Mindanao	2027	1	31	15	81	138	138	25
Mindanao	2027	1	31	16	80	138	138	25
Mindanao	2027	1	31	17	82	138	138	25
Mindanao	2027	1	31	18	92	138	138	25
Mindanao	2027	1	31	19	94	138	138	25
Mindanao	2027	1	31	20	91	138	138	25
Mindanao	2027	1	31	21	89	138	138	25
Mindanao	2027	1	31	22	82	138	138	25
Mindanao	2027	1	31	23	79	138	138	25
Mindanao	2027	1	31	24	74	138	138	25
Mindanao	2027	2	1	1	71	138	138	25
Mindanao	2027	2	1	2	69	138	138	25
Mindanao	2027	2	1	3	68	138	138	25
Mindanao	2027	2	1	4	68	138	138	25
Mindanao	2027	2	1	5	72	138	138	25
Mindanao	2027	2	1	6	78	138	138	25
Mindanao	2027	2	1	7	73	138	138	25
Mindanao	2027	2	1	8	79	138	138	25
Mindanao	2027	2	1	9	92	138	138	25
Mindanao	2027	2	1	10	98	138	138	25
Mindanao	2027	2	1	11	102	138	138	25
Mindanao	2027	2	1	12	100	138	138	25
Mindanao	2027	2	1	13	101	138	138	25
Mindanao	2027	2	1	14	105	138	138	25
Mindanao	2027	2	1	15	103	138	138	25
Mindanao	2027	2	1	16	103	138	138	25
Mindanao	2027	2	1	17	99	138	138	25
Mindanao	2027	2	1	18	104	138	138	25
Mindanao	2027	2	1	19	102	138	138	25
Mindanao	2027	2	1	20	98	138	138	25
Mindanao	2027	2	1	21	93	138	138	25
Mindanao	2027	2	1	22	87	138	138	25
Mindanao	2027	2	1	23	82	138	138	25
Mindanao	2027	2	1	24	77	138	138	25
Mindanao	2027	2	2	1	74	138	138	25
Mindanao	2027	2	2	2	72	138	138	25
Mindanao	2027	2	2	3	69	138	138	25
Mindanao	2027	2	2	4	70	138	138	25
Mindanao	2027	2	2	5	73	138	138	25
Mindanao	2027	2	2	6	80	138	138	25
Mindanao	2027	2	2	7	74	138	138	25
Mindanao	2027	2	2	8	83	138	138	25
Mindanao	2027	2	2	9	91	138	138	25
Mindanao	2027	2	2	10	103	138	138	25
Mindanao	2027	2	2	11	105	138	138	25
Mindanao	2027	2	2	12	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	2	13	104	138	138	25
Mindanao	2027	2	2	14	108	138	138	25
Mindanao	2027	2	2	15	108	138	138	25
Mindanao	2027	2	2	16	107	138	138	25
Mindanao	2027	2	2	17	102	138	138	25
Mindanao	2027	2	2	18	107	138	138	25
Mindanao	2027	2	2	19	107	138	138	25
Mindanao	2027	2	2	20	104	138	138	25
Mindanao	2027	2	2	21	100	138	138	25
Mindanao	2027	2	2	22	92	138	138	25
Mindanao	2027	2	2	23	86	138	138	25
Mindanao	2027	2	2	24	81	138	138	25
Mindanao	2027	2	3	1	79	138	138	25
Mindanao	2027	2	3	2	76	138	138	25
Mindanao	2027	2	3	3	73	138	138	25
Mindanao	2027	2	3	4	73	138	138	25
Mindanao	2027	2	3	5	76	138	138	25
Mindanao	2027	2	3	6	82	138	138	25
Mindanao	2027	2	3	7	76	138	138	25
Mindanao	2027	2	3	8	81	138	138	25
Mindanao	2027	2	3	9	92	138	138	25
Mindanao	2027	2	3	10	100	138	138	25
Mindanao	2027	2	3	11	105	138	138	25
Mindanao	2027	2	3	12	103	138	138	25
Mindanao	2027	2	3	13	105	138	138	25
Mindanao	2027	2	3	14	107	138	138	25
Mindanao	2027	2	3	15	109	138	138	25
Mindanao	2027	2	3	16	107	138	138	25
Mindanao	2027	2	3	17	103	138	138	25
Mindanao	2027	2	3	18	107	138	138	25
Mindanao	2027	2	3	19	105	138	138	25
Mindanao	2027	2	3	20	101	138	138	25
Mindanao	2027	2	3	21	100	138	138	25
Mindanao	2027	2	3	22	93	138	138	25
Mindanao	2027	2	3	23	88	138	138	25
Mindanao	2027	2	3	24	84	138	138	25
Mindanao	2027	2	4	1	79	138	138	25
Mindanao	2027	2	4	2	76	138	138	25
Mindanao	2027	2	4	3	73	138	138	25
Mindanao	2027	2	4	4	72	138	138	25
Mindanao	2027	2	4	5	77	138	138	25
Mindanao	2027	2	4	6	83	138	138	25
Mindanao	2027	2	4	7	75	138	138	25
Mindanao	2027	2	4	8	82	138	138	25
Mindanao	2027	2	4	9	95	138	138	25
Mindanao	2027	2	4	10	103	138	138	25
Mindanao	2027	2	4	11	106	138	138	25
Mindanao	2027	2	4	12	105	138	138	25
Mindanao	2027	2	4	13	108	138	138	25
Mindanao	2027	2	4	14	113	138	138	25
Mindanao	2027	2	4	15	111	138	138	25
Mindanao	2027	2	4	16	110	138	138	25
Mindanao	2027	2	4	17	101	138	138	25
Mindanao	2027	2	4	18	107	138	138	25
Mindanao	2027	2	4	19	107	138	138	25
Mindanao	2027	2	4	20	102	138	138	25
Mindanao	2027	2	4	21	99	138	138	25
Mindanao	2027	2	4	22	93	138	138	25
Mindanao	2027	2	4	23	87	138	138	25
Mindanao	2027	2	4	24	82	138	138	25
Mindanao	2027	2	5	1	78	138	138	25
Mindanao	2027	2	5	2	74	138	138	25
Mindanao	2027	2	5	3	72	138	138	25
Mindanao	2027	2	5	4	73	138	138	25
Mindanao	2027	2	5	5	75	138	138	25
Mindanao	2027	2	5	6	80	138	138	25
Mindanao	2027	2	5	7	74	138	138	25
Mindanao	2027	2	5	8	83	138	138	25
Mindanao	2027	2	5	9	94	138	138	25
Mindanao	2027	2	5	10	101	138	138	25
Mindanao	2027	2	5	11	107	138	138	25
Mindanao	2027	2	5	12	104	138	138	25
Mindanao	2027	2	5	13	106	138	138	25
Mindanao	2027	2	5	14	112	138	138	25
Mindanao	2027	2	5	15	111	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	5	16	110	138	138	25
Mindanao	2027	2	5	17	103	138	138	25
Mindanao	2027	2	5	18	108	138	138	25
Mindanao	2027	2	5	19	107	138	138	25
Mindanao	2027	2	5	20	104	138	138	25
Mindanao	2027	2	5	21	99	138	138	25
Mindanao	2027	2	5	22	94	138	138	25
Mindanao	2027	2	5	23	87	138	138	25
Mindanao	2027	2	5	24	81	138	138	25
Mindanao	2027	2	6	1	77	138	138	25
Mindanao	2027	2	6	2	74	138	138	25
Mindanao	2027	2	6	3	73	138	138	25
Mindanao	2027	2	6	4	71	138	138	25
Mindanao	2027	2	6	5	72	138	138	25
Mindanao	2027	2	6	6	73	138	138	25
Mindanao	2027	2	6	7	74	138	138	25
Mindanao	2027	2	6	8	77	138	138	25
Mindanao	2027	2	6	9	84	138	138	25
Mindanao	2027	2	6	10	92	138	138	25
Mindanao	2027	2	6	11	96	138	138	25
Mindanao	2027	2	6	12	93	138	138	25
Mindanao	2027	2	6	13	96	138	138	25
Mindanao	2027	2	6	14	100	138	138	25
Mindanao	2027	2	6	15	96	138	138	25
Mindanao	2027	2	6	16	94	138	138	25
Mindanao	2027	2	6	17	93	138	138	25
Mindanao	2027	2	6	18	98	138	138	25
Mindanao	2027	2	6	19	98	138	138	25
Mindanao	2027	2	6	20	98	138	138	25
Mindanao	2027	2	6	21	92	138	138	25
Mindanao	2027	2	6	22	89	138	138	25
Mindanao	2027	2	6	23	82	138	138	25
Mindanao	2027	2	6	24	78	138	138	25
Mindanao	2027	2	7	1	74	138	138	25
Mindanao	2027	2	7	2	71	138	138	25
Mindanao	2027	2	7	3	70	138	138	25
Mindanao	2027	2	7	4	69	138	138	25
Mindanao	2027	2	7	5	68	138	138	25
Mindanao	2027	2	7	6	72	138	138	25
Mindanao	2027	2	7	7	69	138	138	25
Mindanao	2027	2	7	8	70	138	138	25
Mindanao	2027	2	7	9	75	138	138	25
Mindanao	2027	2	7	10	80	138	138	25
Mindanao	2027	2	7	11	78	138	138	25
Mindanao	2027	2	7	12	85	138	138	25
Mindanao	2027	2	7	13	86	138	138	25
Mindanao	2027	2	7	14	88	138	138	25
Mindanao	2027	2	7	15	87	138	138	25
Mindanao	2027	2	7	16	87	138	138	25
Mindanao	2027	2	7	17	86	138	138	25
Mindanao	2027	2	7	18	95	138	138	25
Mindanao	2027	2	7	19	97	138	138	25
Mindanao	2027	2	7	20	95	138	138	25
Mindanao	2027	2	7	21	92	138	138	25
Mindanao	2027	2	7	22	86	138	138	25
Mindanao	2027	2	7	23	81	138	138	25
Mindanao	2027	2	7	24	76	138	138	25
Mindanao	2027	2	8	1	72	138	138	25
Mindanao	2027	2	8	2	69	138	138	25
Mindanao	2027	2	8	3	68	138	138	25
Mindanao	2027	2	8	4	68	138	138	25
Mindanao	2027	2	8	5	69	138	138	25
Mindanao	2027	2	8	6	73	138	138	25
Mindanao	2027	2	8	7	73	138	138	25
Mindanao	2027	2	8	8	80	138	138	25
Mindanao	2027	2	8	9	93	138	138	25
Mindanao	2027	2	8	10	100	138	138	25
Mindanao	2027	2	8	11	107	138	138	25
Mindanao	2027	2	8	12	105	138	138	25
Mindanao	2027	2	8	13	108	138	138	25
Mindanao	2027	2	8	14	113	138	138	25
Mindanao	2027	2	8	15	111	138	138	25
Mindanao	2027	2	8	16	110	138	138	25
Mindanao	2027	2	8	17	102	138	138	25
Mindanao	2027	2	8	18	108	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	8	19	107	138	138	25
Mindanao	2027	2	8	20	102	138	138	25
Mindanao	2027	2	8	21	97	138	138	25
Mindanao	2027	2	8	22	92	138	138	25
Mindanao	2027	2	8	23	86	138	138	25
Mindanao	2027	2	8	24	81	138	138	25
Mindanao	2027	2	9	1	76	138	138	25
Mindanao	2027	2	9	2	74	138	138	25
Mindanao	2027	2	9	3	73	138	138	25
Mindanao	2027	2	9	4	73	138	138	25
Mindanao	2027	2	9	5	74	138	138	25
Mindanao	2027	2	9	6	80	138	138	25
Mindanao	2027	2	9	7	75	138	138	25
Mindanao	2027	2	9	8	82	138	138	25
Mindanao	2027	2	9	9	94	138	138	25
Mindanao	2027	2	9	10	101	138	138	25
Mindanao	2027	2	9	11	107	138	138	25
Mindanao	2027	2	9	12	102	138	138	25
Mindanao	2027	2	9	13	105	138	138	25
Mindanao	2027	2	9	14	110	138	138	25
Mindanao	2027	2	9	15	108	138	138	25
Mindanao	2027	2	9	16	105	138	138	25
Mindanao	2027	2	9	17	100	138	138	25
Mindanao	2027	2	9	18	104	138	138	25
Mindanao	2027	2	9	19	103	138	138	25
Mindanao	2027	2	9	20	100	138	138	25
Mindanao	2027	2	9	21	96	138	138	25
Mindanao	2027	2	9	22	90	138	138	25
Mindanao	2027	2	9	23	84	138	138	25
Mindanao	2027	2	9	24	78	138	138	25
Mindanao	2027	2	10	1	75	138	138	25
Mindanao	2027	2	10	2	73	138	138	25
Mindanao	2027	2	10	3	70	138	138	25
Mindanao	2027	2	10	4	70	138	138	25
Mindanao	2027	2	10	5	71	138	138	25
Mindanao	2027	2	10	6	74	138	138	25
Mindanao	2027	2	10	7	75	138	138	25
Mindanao	2027	2	10	8	82	138	138	25
Mindanao	2027	2	10	9	92	138	138	25
Mindanao	2027	2	10	10	101	138	138	25
Mindanao	2027	2	10	11	105	138	138	25
Mindanao	2027	2	10	12	103	138	138	25
Mindanao	2027	2	10	13	103	138	138	25
Mindanao	2027	2	10	14	107	138	138	25
Mindanao	2027	2	10	15	105	138	138	25
Mindanao	2027	2	10	16	103	138	138	25
Mindanao	2027	2	10	17	99	138	138	25
Mindanao	2027	2	10	18	104	138	138	25
Mindanao	2027	2	10	19	102	138	138	25
Mindanao	2027	2	10	20	100	138	138	25
Mindanao	2027	2	10	21	94	138	138	25
Mindanao	2027	2	10	22	89	138	138	25
Mindanao	2027	2	10	23	84	138	138	25
Mindanao	2027	2	10	24	74	138	138	25
Mindanao	2027	2	11	1	76	138	138	25
Mindanao	2027	2	11	2	73	138	138	25
Mindanao	2027	2	11	3	73	138	138	25
Mindanao	2027	2	11	4	71	138	138	25
Mindanao	2027	2	11	5	73	138	138	25
Mindanao	2027	2	11	6	78	138	138	25
Mindanao	2027	2	11	7	75	138	138	25
Mindanao	2027	2	11	8	82	138	138	25
Mindanao	2027	2	11	9	94	138	138	25
Mindanao	2027	2	11	10	101	138	138	25
Mindanao	2027	2	11	11	105	138	138	25
Mindanao	2027	2	11	12	104	138	138	25
Mindanao	2027	2	11	13	104	138	138	25
Mindanao	2027	2	11	14	104	138	138	25
Mindanao	2027	2	11	15	108	138	138	25
Mindanao	2027	2	11	16	105	138	138	25
Mindanao	2027	2	11	17	99	138	138	25
Mindanao	2027	2	11	18	102	138	138	25
Mindanao	2027	2	11	19	102	138	138	25
Mindanao	2027	2	11	20	100	138	138	25
Mindanao	2027	2	11	21	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	11	22	91	138	138	25
Mindanao	2027	2	11	23	85	138	138	25
Mindanao	2027	2	11	24	78	138	138	25
Mindanao	2027	2	12	1	74	138	138	25
Mindanao	2027	2	12	2	73	138	138	25
Mindanao	2027	2	12	3	70	138	138	25
Mindanao	2027	2	12	4	69	138	138	25
Mindanao	2027	2	12	5	71	138	138	25
Mindanao	2027	2	12	6	77	138	138	25
Mindanao	2027	2	12	7	77	138	138	25
Mindanao	2027	2	12	8	83	138	138	25
Mindanao	2027	2	12	9	94	138	138	25
Mindanao	2027	2	12	10	100	138	138	25
Mindanao	2027	2	12	11	105	138	138	25
Mindanao	2027	2	12	12	103	138	138	25
Mindanao	2027	2	12	13	104	138	138	25
Mindanao	2027	2	12	14	112	138	138	25
Mindanao	2027	2	12	15	110	138	138	25
Mindanao	2027	2	12	16	109	138	138	25
Mindanao	2027	2	12	17	101	138	138	25
Mindanao	2027	2	12	18	105	138	138	25
Mindanao	2027	2	12	19	106	138	138	25
Mindanao	2027	2	12	20	102	138	138	25
Mindanao	2027	2	12	21	98	138	138	25
Mindanao	2027	2	12	22	91	138	138	25
Mindanao	2027	2	12	23	86	138	138	25
Mindanao	2027	2	12	24	80	138	138	25
Mindanao	2027	2	13	1	77	138	138	25
Mindanao	2027	2	13	2	74	138	138	25
Mindanao	2027	2	13	3	73	138	138	25
Mindanao	2027	2	13	4	72	138	138	25
Mindanao	2027	2	13	5	71	138	138	25
Mindanao	2027	2	13	6	75	138	138	25
Mindanao	2027	2	13	7	74	138	138	25
Mindanao	2027	2	13	8	75	138	138	25
Mindanao	2027	2	13	9	85	138	138	25
Mindanao	2027	2	13	10	92	138	138	25
Mindanao	2027	2	13	11	97	138	138	25
Mindanao	2027	2	13	12	97	138	138	25
Mindanao	2027	2	13	13	99	138	138	25
Mindanao	2027	2	13	14	102	138	138	25
Mindanao	2027	2	13	15	102	138	138	25
Mindanao	2027	2	13	16	100	138	138	25
Mindanao	2027	2	13	17	94	138	138	25
Mindanao	2027	2	13	18	99	138	138	25
Mindanao	2027	2	13	19	102	138	138	25
Mindanao	2027	2	13	20	98	138	138	25
Mindanao	2027	2	13	21	95	138	138	25
Mindanao	2027	2	13	22	89	138	138	25
Mindanao	2027	2	13	23	84	138	138	25
Mindanao	2027	2	13	24	81	138	138	25
Mindanao	2027	2	14	1	76	138	138	25
Mindanao	2027	2	14	2	74	138	138	25
Mindanao	2027	2	14	3	73	138	138	25
Mindanao	2027	2	14	4	71	138	138	25
Mindanao	2027	2	14	5	70	138	138	25
Mindanao	2027	2	14	6	72	138	138	25
Mindanao	2027	2	14	7	72	138	138	25
Mindanao	2027	2	14	8	71	138	138	25
Mindanao	2027	2	14	9	75	138	138	25
Mindanao	2027	2	14	10	81	138	138	25
Mindanao	2027	2	14	11	84	138	138	25
Mindanao	2027	2	14	12	84	138	138	25
Mindanao	2027	2	14	13	85	138	138	25
Mindanao	2027	2	14	14	88	138	138	25
Mindanao	2027	2	14	15	86	138	138	25
Mindanao	2027	2	14	16	86	138	138	25
Mindanao	2027	2	14	17	84	138	138	25
Mindanao	2027	2	14	18	92	138	138	25
Mindanao	2027	2	14	19	99	138	138	25
Mindanao	2027	2	14	20	94	138	138	25
Mindanao	2027	2	14	21	94	138	138	25
Mindanao	2027	2	14	22	87	138	138	25
Mindanao	2027	2	14	23	80	138	138	25
Mindanao	2027	2	14	24	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	15	1	75	138	138	25
Mindanao	2027	2	15	2	73	138	138	25
Mindanao	2027	2	15	3	71	138	138	25
Mindanao	2027	2	15	4	71	138	138	25
Mindanao	2027	2	15	5	76	138	138	25
Mindanao	2027	2	15	6	83	138	138	25
Mindanao	2027	2	15	7	75	138	138	25
Mindanao	2027	2	15	8	79	138	138	25
Mindanao	2027	2	15	9	93	138	138	25
Mindanao	2027	2	15	10	100	138	138	25
Mindanao	2027	2	15	11	103	138	138	25
Mindanao	2027	2	15	12	103	138	138	25
Mindanao	2027	2	15	13	102	138	138	25
Mindanao	2027	2	15	14	107	138	138	25
Mindanao	2027	2	15	15	106	138	138	25
Mindanao	2027	2	15	16	104	138	138	25
Mindanao	2027	2	15	17	101	138	138	25
Mindanao	2027	2	15	18	105	138	138	25
Mindanao	2027	2	15	19	104	138	138	25
Mindanao	2027	2	15	20	101	138	138	25
Mindanao	2027	2	15	21	96	138	138	25
Mindanao	2027	2	15	22	89	138	138	25
Mindanao	2027	2	15	23	84	138	138	25
Mindanao	2027	2	15	24	80	138	138	25
Mindanao	2027	2	16	1	76	138	138	25
Mindanao	2027	2	16	2	73	138	138	25
Mindanao	2027	2	16	3	72	138	138	25
Mindanao	2027	2	16	4	72	138	138	25
Mindanao	2027	2	16	5	77	138	138	25
Mindanao	2027	2	16	6	83	138	138	25
Mindanao	2027	2	16	7	77	138	138	25
Mindanao	2027	2	16	8	81	138	138	25
Mindanao	2027	2	16	9	90	138	138	25
Mindanao	2027	2	16	10	98	138	138	25
Mindanao	2027	2	16	11	100	138	138	25
Mindanao	2027	2	16	12	96	138	138	25
Mindanao	2027	2	16	13	96	138	138	25
Mindanao	2027	2	16	14	98	138	138	25
Mindanao	2027	2	16	15	97	138	138	25
Mindanao	2027	2	16	16	94	138	138	25
Mindanao	2027	2	16	17	94	138	138	25
Mindanao	2027	2	16	18	99	138	138	25
Mindanao	2027	2	16	19	97	138	138	25
Mindanao	2027	2	16	20	92	138	138	25
Mindanao	2027	2	16	21	87	138	138	25
Mindanao	2027	2	16	22	81	138	138	25
Mindanao	2027	2	16	23	78	138	138	25
Mindanao	2027	2	16	24	72	138	138	25
Mindanao	2027	2	17	1	70	138	138	25
Mindanao	2027	2	17	2	68	138	138	25
Mindanao	2027	2	17	3	67	138	138	25
Mindanao	2027	2	17	4	66	138	138	25
Mindanao	2027	2	17	5	71	138	138	25
Mindanao	2027	2	17	6	77	138	138	25
Mindanao	2027	2	17	7	75	138	138	25
Mindanao	2027	2	17	8	75	138	138	25
Mindanao	2027	2	17	9	87	138	138	25
Mindanao	2027	2	17	10	95	138	138	25
Mindanao	2027	2	17	11	99	138	138	25
Mindanao	2027	2	17	12	97	138	138	25
Mindanao	2027	2	17	13	95	138	138	25
Mindanao	2027	2	17	14	100	138	138	25
Mindanao	2027	2	17	15	99	138	138	25
Mindanao	2027	2	17	16	100	138	138	25
Mindanao	2027	2	17	17	96	138	138	25
Mindanao	2027	2	17	18	103	138	138	25
Mindanao	2027	2	17	19	103	138	138	25
Mindanao	2027	2	17	20	98	138	138	25
Mindanao	2027	2	17	21	95	138	138	25
Mindanao	2027	2	17	22	88	138	138	25
Mindanao	2027	2	17	23	83	138	138	25
Mindanao	2027	2	17	24	78	138	138	25
Mindanao	2027	2	18	1	75	138	138	25
Mindanao	2027	2	18	2	72	138	138	25
Mindanao	2027	2	18	3	69	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	18	4	68	138	138	25
Mindanao	2027	2	18	5	70	138	138	25
Mindanao	2027	2	18	6	77	138	138	25
Mindanao	2027	2	18	7	71	138	138	25
Mindanao	2027	2	18	8	74	138	138	25
Mindanao	2027	2	18	9	84	138	138	25
Mindanao	2027	2	18	10	89	138	138	25
Mindanao	2027	2	18	11	93	138	138	25
Mindanao	2027	2	18	12	90	138	138	25
Mindanao	2027	2	18	13	91	138	138	25
Mindanao	2027	2	18	14	94	138	138	25
Mindanao	2027	2	18	15	88	138	138	25
Mindanao	2027	2	18	16	89	138	138	25
Mindanao	2027	2	18	17	88	138	138	25
Mindanao	2027	2	18	18	93	138	138	25
Mindanao	2027	2	18	19	93	138	138	25
Mindanao	2027	2	18	20	88	138	138	25
Mindanao	2027	2	18	21	84	138	138	25
Mindanao	2027	2	18	22	77	138	138	25
Mindanao	2027	2	18	23	72	138	138	25
Mindanao	2027	2	18	24	73	138	138	25
Mindanao	2027	2	19	1	71	138	138	25
Mindanao	2027	2	19	2	68	138	138	25
Mindanao	2027	2	19	3	68	138	138	25
Mindanao	2027	2	19	4	68	138	138	25
Mindanao	2027	2	19	5	71	138	138	25
Mindanao	2027	2	19	6	79	138	138	25
Mindanao	2027	2	19	7	74	138	138	25
Mindanao	2027	2	19	8	78	138	138	25
Mindanao	2027	2	19	9	87	138	138	25
Mindanao	2027	2	19	10	93	138	138	25
Mindanao	2027	2	19	11	96	138	138	25
Mindanao	2027	2	19	12	92	138	138	25
Mindanao	2027	2	19	13	92	138	138	25
Mindanao	2027	2	19	14	95	138	138	25
Mindanao	2027	2	19	15	95	138	138	25
Mindanao	2027	2	19	16	96	138	138	25
Mindanao	2027	2	19	17	95	138	138	25
Mindanao	2027	2	19	18	98	138	138	25
Mindanao	2027	2	19	19	96	138	138	25
Mindanao	2027	2	19	20	92	138	138	25
Mindanao	2027	2	19	21	87	138	138	25
Mindanao	2027	2	19	22	80	138	138	25
Mindanao	2027	2	19	23	77	138	138	25
Mindanao	2027	2	19	24	73	138	138	25
Mindanao	2027	2	20	1	69	138	138	25
Mindanao	2027	2	20	2	68	138	138	25
Mindanao	2027	2	20	3	67	138	138	25
Mindanao	2027	2	20	4	65	138	138	25
Mindanao	2027	2	20	5	66	138	138	25
Mindanao	2027	2	20	6	69	138	138	25
Mindanao	2027	2	20	7	72	138	138	25
Mindanao	2027	2	20	8	74	138	138	25
Mindanao	2027	2	20	9	80	138	138	25
Mindanao	2027	2	20	10	83	138	138	25
Mindanao	2027	2	20	11	86	138	138	25
Mindanao	2027	2	20	12	85	138	138	25
Mindanao	2027	2	20	13	86	138	138	25
Mindanao	2027	2	20	14	88	138	138	25
Mindanao	2027	2	20	15	88	138	138	25
Mindanao	2027	2	20	16	89	138	138	25
Mindanao	2027	2	20	17	87	138	138	25
Mindanao	2027	2	20	18	95	138	138	25
Mindanao	2027	2	20	19	98	138	138	25
Mindanao	2027	2	20	20	94	138	138	25
Mindanao	2027	2	20	21	90	138	138	25
Mindanao	2027	2	20	22	83	138	138	25
Mindanao	2027	2	20	23	78	138	138	25
Mindanao	2027	2	20	24	72	138	138	25
Mindanao	2027	2	21	1	70	138	138	25
Mindanao	2027	2	21	2	69	138	138	25
Mindanao	2027	2	21	3	66	138	138	25
Mindanao	2027	2	21	4	65	138	138	25
Mindanao	2027	2	21	5	67	138	138	25
Mindanao	2027	2	21	6	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	21	7	68	138	138	25
Mindanao	2027	2	21	8	70	138	138	25
Mindanao	2027	2	21	9	74	138	138	25
Mindanao	2027	2	21	10	79	138	138	25
Mindanao	2027	2	21	11	82	138	138	25
Mindanao	2027	2	21	12	83	138	138	25
Mindanao	2027	2	21	13	85	138	138	25
Mindanao	2027	2	21	14	87	138	138	25
Mindanao	2027	2	21	15	86	138	138	25
Mindanao	2027	2	21	16	85	138	138	25
Mindanao	2027	2	21	17	84	138	138	25
Mindanao	2027	2	21	18	94	138	138	25
Mindanao	2027	2	21	19	98	138	138	25
Mindanao	2027	2	21	20	95	138	138	25
Mindanao	2027	2	21	21	91	138	138	25
Mindanao	2027	2	21	22	87	138	138	25
Mindanao	2027	2	21	23	84	138	138	25
Mindanao	2027	2	21	24	79	138	138	25
Mindanao	2027	2	22	1	75	138	138	25
Mindanao	2027	2	22	2	72	138	138	25
Mindanao	2027	2	22	3	71	138	138	25
Mindanao	2027	2	22	4	70	138	138	25
Mindanao	2027	2	22	5	75	138	138	25
Mindanao	2027	2	22	6	82	138	138	25
Mindanao	2027	2	22	7	74	138	138	25
Mindanao	2027	2	22	8	82	138	138	25
Mindanao	2027	2	22	9	95	138	138	25
Mindanao	2027	2	22	10	104	138	138	25
Mindanao	2027	2	22	11	108	138	138	25
Mindanao	2027	2	22	12	104	138	138	25
Mindanao	2027	2	22	13	106	138	138	25
Mindanao	2027	2	22	14	109	138	138	25
Mindanao	2027	2	22	15	107	138	138	25
Mindanao	2027	2	22	16	104	138	138	25
Mindanao	2027	2	22	17	101	138	138	25
Mindanao	2027	2	22	18	104	138	138	25
Mindanao	2027	2	22	19	105	138	138	25
Mindanao	2027	2	22	20	101	138	138	25
Mindanao	2027	2	22	21	97	138	138	25
Mindanao	2027	2	22	22	89	138	138	25
Mindanao	2027	2	22	23	84	138	138	25
Mindanao	2027	2	22	24	79	138	138	25
Mindanao	2027	2	23	1	75	138	138	25
Mindanao	2027	2	23	2	74	138	138	25
Mindanao	2027	2	23	3	72	138	138	25
Mindanao	2027	2	23	4	71	138	138	25
Mindanao	2027	2	23	5	74	138	138	25
Mindanao	2027	2	23	6	83	138	138	25
Mindanao	2027	2	23	7	74	138	138	25
Mindanao	2027	2	23	8	81	138	138	25
Mindanao	2027	2	23	9	93	138	138	25
Mindanao	2027	2	23	10	103	138	138	25
Mindanao	2027	2	23	11	107	138	138	25
Mindanao	2027	2	23	12	104	138	138	25
Mindanao	2027	2	23	13	105	138	138	25
Mindanao	2027	2	23	14	111	138	138	25
Mindanao	2027	2	23	15	110	138	138	25
Mindanao	2027	2	23	16	107	138	138	25
Mindanao	2027	2	23	17	103	138	138	25
Mindanao	2027	2	23	18	104	138	138	25
Mindanao	2027	2	23	19	104	138	138	25
Mindanao	2027	2	23	20	96	138	138	25
Mindanao	2027	2	23	21	95	138	138	25
Mindanao	2027	2	23	22	88	138	138	25
Mindanao	2027	2	23	23	83	138	138	25
Mindanao	2027	2	23	24	78	138	138	25
Mindanao	2027	2	24	1	75	138	138	25
Mindanao	2027	2	24	2	72	138	138	25
Mindanao	2027	2	24	3	71	138	138	25
Mindanao	2027	2	24	4	71	138	138	25
Mindanao	2027	2	24	5	75	138	138	25
Mindanao	2027	2	24	6	82	138	138	25
Mindanao	2027	2	24	7	73	138	138	25
Mindanao	2027	2	24	8	80	138	138	25
Mindanao	2027	2	24	9	92	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	24	10	99	138	138	25
Mindanao	2027	2	24	11	103	138	138	25
Mindanao	2027	2	24	12	101	138	138	25
Mindanao	2027	2	24	13	103	138	138	25
Mindanao	2027	2	24	14	109	138	138	25
Mindanao	2027	2	24	15	108	138	138	25
Mindanao	2027	2	24	16	106	138	138	25
Mindanao	2027	2	24	17	100	138	138	25
Mindanao	2027	2	24	18	104	138	138	25
Mindanao	2027	2	24	19	105	138	138	25
Mindanao	2027	2	24	20	102	138	138	25
Mindanao	2027	2	24	21	99	138	138	25
Mindanao	2027	2	24	22	93	138	138	25
Mindanao	2027	2	24	23	87	138	138	25
Mindanao	2027	2	24	24	81	138	138	25
Mindanao	2027	2	25	1	79	138	138	25
Mindanao	2027	2	25	2	76	138	138	25
Mindanao	2027	2	25	3	75	138	138	25
Mindanao	2027	2	25	4	73	138	138	25
Mindanao	2027	2	25	5	74	138	138	25
Mindanao	2027	2	25	6	79	138	138	25
Mindanao	2027	2	25	7	76	138	138	25
Mindanao	2027	2	25	8	81	138	138	25
Mindanao	2027	2	25	9	90	138	138	25
Mindanao	2027	2	25	10	100	138	138	25
Mindanao	2027	2	25	11	105	138	138	25
Mindanao	2027	2	25	12	104	138	138	25
Mindanao	2027	2	25	13	106	138	138	25
Mindanao	2027	2	25	14	109	138	138	25
Mindanao	2027	2	25	15	106	138	138	25
Mindanao	2027	2	25	16	104	138	138	25
Mindanao	2027	2	25	17	99	138	138	25
Mindanao	2027	2	25	18	103	138	138	25
Mindanao	2027	2	25	19	106	138	138	25
Mindanao	2027	2	25	20	103	138	138	25
Mindanao	2027	2	25	21	100	138	138	25
Mindanao	2027	2	25	22	94	138	138	25
Mindanao	2027	2	25	23	88	138	138	25
Mindanao	2027	2	25	24	84	138	138	25
Mindanao	2027	2	26	1	75	138	138	25
Mindanao	2027	2	26	2	72	138	138	25
Mindanao	2027	2	26	3	71	138	138	25
Mindanao	2027	2	26	4	69	138	138	25
Mindanao	2027	2	26	5	73	138	138	25
Mindanao	2027	2	26	6	78	138	138	25
Mindanao	2027	2	26	7	73	138	138	25
Mindanao	2027	2	26	8	79	138	138	25
Mindanao	2027	2	26	9	90	138	138	25
Mindanao	2027	2	26	10	95	138	138	25
Mindanao	2027	2	26	11	100	138	138	25
Mindanao	2027	2	26	12	100	138	138	25
Mindanao	2027	2	26	13	101	138	138	25
Mindanao	2027	2	26	14	107	138	138	25
Mindanao	2027	2	26	15	105	138	138	25
Mindanao	2027	2	26	16	102	138	138	25
Mindanao	2027	2	26	17	98	138	138	25
Mindanao	2027	2	26	18	102	138	138	25
Mindanao	2027	2	26	19	103	138	138	25
Mindanao	2027	2	26	20	100	138	138	25
Mindanao	2027	2	26	21	97	138	138	25
Mindanao	2027	2	26	22	91	138	138	25
Mindanao	2027	2	26	23	84	138	138	25
Mindanao	2027	2	26	24	80	138	138	25
Mindanao	2027	2	27	1	79	138	138	25
Mindanao	2027	2	27	2	76	138	138	25
Mindanao	2027	2	27	3	73	138	138	25
Mindanao	2027	2	27	4	74	138	138	25
Mindanao	2027	2	27	5	74	138	138	25
Mindanao	2027	2	27	6	77	138	138	25
Mindanao	2027	2	27	7	77	138	138	25
Mindanao	2027	2	27	8	80	138	138	25
Mindanao	2027	2	27	9	83	138	138	25
Mindanao	2027	2	27	10	88	138	138	25
Mindanao	2027	2	27	11	94	138	138	25
Mindanao	2027	2	27	12	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	2	27	13	96	138	138	25
Mindanao	2027	2	27	14	98	138	138	25
Mindanao	2027	2	27	15	95	138	138	25
Mindanao	2027	2	27	16	93	138	138	25
Mindanao	2027	2	27	17	92	138	138	25
Mindanao	2027	2	27	18	101	138	138	25
Mindanao	2027	2	27	19	101	138	138	25
Mindanao	2027	2	27	20	99	138	138	25
Mindanao	2027	2	27	21	94	138	138	25
Mindanao	2027	2	27	22	89	138	138	25
Mindanao	2027	2	27	23	82	138	138	25
Mindanao	2027	2	27	24	78	138	138	25
Mindanao	2027	2	28	1	76	138	138	25
Mindanao	2027	2	28	2	72	138	138	25
Mindanao	2027	2	28	3	70	138	138	25
Mindanao	2027	2	28	4	70	138	138	25
Mindanao	2027	2	28	5	69	138	138	25
Mindanao	2027	2	28	6	70	138	138	25
Mindanao	2027	2	28	7	70	138	138	25
Mindanao	2027	2	28	8	71	138	138	25
Mindanao	2027	2	28	9	73	138	138	25
Mindanao	2027	2	28	10	77	138	138	25
Mindanao	2027	2	28	11	82	138	138	25
Mindanao	2027	2	28	12	81	138	138	25
Mindanao	2027	2	28	13	83	138	138	25
Mindanao	2027	2	28	14	86	138	138	25
Mindanao	2027	2	28	15	85	138	138	25
Mindanao	2027	2	28	16	83	138	138	25
Mindanao	2027	2	28	17	83	138	138	25
Mindanao	2027	2	28	18	93	138	138	25
Mindanao	2027	2	28	19	97	138	138	25
Mindanao	2027	2	28	20	93	138	138	25
Mindanao	2027	2	28	21	91	138	138	25
Mindanao	2027	2	28	22	87	138	138	25
Mindanao	2027	2	28	23	81	138	138	25
Mindanao	2027	2	28	24	76	138	138	25
Mindanao	2027	3	1	1	73	138	138	25
Mindanao	2027	3	1	2	70	138	138	25
Mindanao	2027	3	1	3	68	138	138	25
Mindanao	2027	3	1	4	68	138	138	25
Mindanao	2027	3	1	5	73	138	138	25
Mindanao	2027	3	1	6	79	138	138	25
Mindanao	2027	3	1	7	72	138	138	25
Mindanao	2027	3	1	8	80	138	138	25
Mindanao	2027	3	1	9	93	138	138	25
Mindanao	2027	3	1	10	99	138	138	25
Mindanao	2027	3	1	11	103	138	138	25
Mindanao	2027	3	1	12	102	138	138	25
Mindanao	2027	3	1	13	103	138	138	25
Mindanao	2027	3	1	14	107	138	138	25
Mindanao	2027	3	1	15	107	138	138	25
Mindanao	2027	3	1	16	106	138	138	25
Mindanao	2027	3	1	17	100	138	138	25
Mindanao	2027	3	1	18	104	138	138	25
Mindanao	2027	3	1	19	106	138	138	25
Mindanao	2027	3	1	20	103	138	138	25
Mindanao	2027	3	1	21	99	138	138	25
Mindanao	2027	3	1	22	92	138	138	25
Mindanao	2027	3	1	23	86	138	138	25
Mindanao	2027	3	1	24	81	138	138	25
Mindanao	2027	3	2	1	76	138	138	25
Mindanao	2027	3	2	2	72	138	138	25
Mindanao	2027	3	2	3	73	138	138	25
Mindanao	2027	3	2	4	71	138	138	25
Mindanao	2027	3	2	5	75	138	138	25
Mindanao	2027	3	2	6	81	138	138	25
Mindanao	2027	3	2	7	75	138	138	25
Mindanao	2027	3	2	8	81	138	138	25
Mindanao	2027	3	2	9	91	138	138	25
Mindanao	2027	3	2	10	103	138	138	25
Mindanao	2027	3	2	11	106	138	138	25
Mindanao	2027	3	2	12	102	138	138	25
Mindanao	2027	3	2	13	105	138	138	25
Mindanao	2027	3	2	14	111	138	138	25
Mindanao	2027	3	2	15	108	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	2	16	108	138	138	25
Mindanao	2027	3	2	17	103	138	138	25
Mindanao	2027	3	2	18	104	138	138	25
Mindanao	2027	3	2	19	106	138	138	25
Mindanao	2027	3	2	20	103	138	138	25
Mindanao	2027	3	2	21	99	138	138	25
Mindanao	2027	3	2	22	92	138	138	25
Mindanao	2027	3	2	23	87	138	138	25
Mindanao	2027	3	2	24	81	138	138	25
Mindanao	2027	3	3	1	78	138	138	25
Mindanao	2027	3	3	2	74	138	138	25
Mindanao	2027	3	3	3	73	138	138	25
Mindanao	2027	3	3	4	73	138	138	25
Mindanao	2027	3	3	5	77	138	138	25
Mindanao	2027	3	3	6	83	138	138	25
Mindanao	2027	3	3	7	74	138	138	25
Mindanao	2027	3	3	8	82	138	138	25
Mindanao	2027	3	3	9	97	138	138	25
Mindanao	2027	3	3	10	105	138	138	25
Mindanao	2027	3	3	11	106	138	138	25
Mindanao	2027	3	3	12	107	138	138	25
Mindanao	2027	3	3	13	109	138	138	25
Mindanao	2027	3	3	14	114	138	138	25
Mindanao	2027	3	3	15	112	138	138	25
Mindanao	2027	3	3	16	108	138	138	25
Mindanao	2027	3	3	17	103	138	138	25
Mindanao	2027	3	3	18	107	138	138	25
Mindanao	2027	3	3	19	107	138	138	25
Mindanao	2027	3	3	20	104	138	138	25
Mindanao	2027	3	3	21	100	138	138	25
Mindanao	2027	3	3	22	94	138	138	25
Mindanao	2027	3	3	23	88	138	138	25
Mindanao	2027	3	3	24	82	138	138	25
Mindanao	2027	3	4	1	79	138	138	25
Mindanao	2027	3	4	2	76	138	138	25
Mindanao	2027	3	4	3	74	138	138	25
Mindanao	2027	3	4	4	74	138	138	25
Mindanao	2027	3	4	5	76	138	138	25
Mindanao	2027	3	4	6	84	138	138	25
Mindanao	2027	3	4	7	74	138	138	25
Mindanao	2027	3	4	8	81	138	138	25
Mindanao	2027	3	4	9	93	138	138	25
Mindanao	2027	3	4	10	98	138	138	25
Mindanao	2027	3	4	11	101	138	138	25
Mindanao	2027	3	4	12	99	138	138	25
Mindanao	2027	3	4	13	101	138	138	25
Mindanao	2027	3	4	14	106	138	138	25
Mindanao	2027	3	4	15	105	138	138	25
Mindanao	2027	3	4	16	103	138	138	25
Mindanao	2027	3	4	17	98	138	138	25
Mindanao	2027	3	4	18	103	138	138	25
Mindanao	2027	3	4	19	103	138	138	25
Mindanao	2027	3	4	20	98	138	138	25
Mindanao	2027	3	4	21	97	138	138	25
Mindanao	2027	3	4	22	90	138	138	25
Mindanao	2027	3	4	23	83	138	138	25
Mindanao	2027	3	4	24	78	138	138	25
Mindanao	2027	3	5	1	75	138	138	25
Mindanao	2027	3	5	2	72	138	138	25
Mindanao	2027	3	5	3	71	138	138	25
Mindanao	2027	3	5	4	69	138	138	25
Mindanao	2027	3	5	5	73	138	138	25
Mindanao	2027	3	5	6	78	138	138	25
Mindanao	2027	3	5	7	73	138	138	25
Mindanao	2027	3	5	8	79	138	138	25
Mindanao	2027	3	5	9	90	138	138	25
Mindanao	2027	3	5	10	95	138	138	25
Mindanao	2027	3	5	11	100	138	138	25
Mindanao	2027	3	5	12	100	138	138	25
Mindanao	2027	3	5	13	101	138	138	25
Mindanao	2027	3	5	14	107	138	138	25
Mindanao	2027	3	5	15	105	138	138	25
Mindanao	2027	3	5	16	102	138	138	25
Mindanao	2027	3	5	17	98	138	138	25
Mindanao	2027	3	5	18	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	5	19	103	138	138	25
Mindanao	2027	3	5	20	100	138	138	25
Mindanao	2027	3	5	21	97	138	138	25
Mindanao	2027	3	5	22	91	138	138	25
Mindanao	2027	3	5	23	84	138	138	25
Mindanao	2027	3	5	24	80	138	138	25
Mindanao	2027	3	6	1	75	138	138	25
Mindanao	2027	3	6	2	72	138	138	25
Mindanao	2027	3	6	3	72	138	138	25
Mindanao	2027	3	6	4	71	138	138	25
Mindanao	2027	3	6	5	71	138	138	25
Mindanao	2027	3	6	6	75	138	138	25
Mindanao	2027	3	6	7	72	138	138	25
Mindanao	2027	3	6	8	76	138	138	25
Mindanao	2027	3	6	9	80	138	138	25
Mindanao	2027	3	6	10	85	138	138	25
Mindanao	2027	3	6	11	89	138	138	25
Mindanao	2027	3	6	12	89	138	138	25
Mindanao	2027	3	6	13	92	138	138	25
Mindanao	2027	3	6	14	95	138	138	25
Mindanao	2027	3	6	15	95	138	138	25
Mindanao	2027	3	6	16	93	138	138	25
Mindanao	2027	3	6	17	90	138	138	25
Mindanao	2027	3	6	18	97	138	138	25
Mindanao	2027	3	6	19	100	138	138	25
Mindanao	2027	3	6	20	97	138	138	25
Mindanao	2027	3	6	21	93	138	138	25
Mindanao	2027	3	6	22	87	138	138	25
Mindanao	2027	3	6	23	81	138	138	25
Mindanao	2027	3	6	24	77	138	138	25
Mindanao	2027	3	7	1	73	138	138	25
Mindanao	2027	3	7	2	70	138	138	25
Mindanao	2027	3	7	3	68	138	138	25
Mindanao	2027	3	7	4	66	138	138	25
Mindanao	2027	3	7	5	67	138	138	25
Mindanao	2027	3	7	6	69	138	138	25
Mindanao	2027	3	7	7	70	138	138	25
Mindanao	2027	3	7	8	69	138	138	25
Mindanao	2027	3	7	9	71	138	138	25
Mindanao	2027	3	7	10	79	138	138	25
Mindanao	2027	3	7	11	82	138	138	25
Mindanao	2027	3	7	12	83	138	138	25
Mindanao	2027	3	7	13	86	138	138	25
Mindanao	2027	3	7	14	87	138	138	25
Mindanao	2027	3	7	15	87	138	138	25
Mindanao	2027	3	7	16	86	138	138	25
Mindanao	2027	3	7	17	84	138	138	25
Mindanao	2027	3	7	18	96	138	138	25
Mindanao	2027	3	7	19	98	138	138	25
Mindanao	2027	3	7	20	96	138	138	25
Mindanao	2027	3	7	21	94	138	138	25
Mindanao	2027	3	7	22	89	138	138	25
Mindanao	2027	3	7	23	83	138	138	25
Mindanao	2027	3	7	24	78	138	138	25
Mindanao	2027	3	8	1	74	138	138	25
Mindanao	2027	3	8	2	71	138	138	25
Mindanao	2027	3	8	3	70	138	138	25
Mindanao	2027	3	8	4	69	138	138	25
Mindanao	2027	3	8	5	73	138	138	25
Mindanao	2027	3	8	6	79	138	138	25
Mindanao	2027	3	8	7	72	138	138	25
Mindanao	2027	3	8	8	79	138	138	25
Mindanao	2027	3	8	9	92	138	138	25
Mindanao	2027	3	8	10	99	138	138	25
Mindanao	2027	3	8	11	105	138	138	25
Mindanao	2027	3	8	12	102	138	138	25
Mindanao	2027	3	8	13	107	138	138	25
Mindanao	2027	3	8	14	111	138	138	25
Mindanao	2027	3	8	15	111	138	138	25
Mindanao	2027	3	8	16	109	138	138	25
Mindanao	2027	3	8	17	103	138	138	25
Mindanao	2027	3	8	18	106	138	138	25
Mindanao	2027	3	8	19	109	138	138	25
Mindanao	2027	3	8	20	104	138	138	25
Mindanao	2027	3	8	21	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	8	22	93	138	138	25
Mindanao	2027	3	8	23	88	138	138	25
Mindanao	2027	3	8	24	81	138	138	25
Mindanao	2027	3	9	1	79	138	138	25
Mindanao	2027	3	9	2	77	138	138	25
Mindanao	2027	3	9	3	74	138	138	25
Mindanao	2027	3	9	4	74	138	138	25
Mindanao	2027	3	9	5	78	138	138	25
Mindanao	2027	3	9	6	85	138	138	25
Mindanao	2027	3	9	7	77	138	138	25
Mindanao	2027	3	9	8	85	138	138	25
Mindanao	2027	3	9	9	94	138	138	25
Mindanao	2027	3	9	10	100	138	138	25
Mindanao	2027	3	9	11	105	138	138	25
Mindanao	2027	3	9	12	102	138	138	25
Mindanao	2027	3	9	13	101	138	138	25
Mindanao	2027	3	9	14	107	138	138	25
Mindanao	2027	3	9	15	103	138	138	25
Mindanao	2027	3	9	16	103	138	138	25
Mindanao	2027	3	9	17	96	138	138	25
Mindanao	2027	3	9	18	101	138	138	25
Mindanao	2027	3	9	19	102	138	138	25
Mindanao	2027	3	9	20	100	138	138	25
Mindanao	2027	3	9	21	97	138	138	25
Mindanao	2027	3	9	22	89	138	138	25
Mindanao	2027	3	9	23	85	138	138	25
Mindanao	2027	3	9	24	78	138	138	25
Mindanao	2027	3	10	1	75	138	138	25
Mindanao	2027	3	10	2	73	138	138	25
Mindanao	2027	3	10	3	72	138	138	25
Mindanao	2027	3	10	4	72	138	138	25
Mindanao	2027	3	10	5	76	138	138	25
Mindanao	2027	3	10	6	83	138	138	25
Mindanao	2027	3	10	7	75	138	138	25
Mindanao	2027	3	10	8	83	138	138	25
Mindanao	2027	3	10	9	94	138	138	25
Mindanao	2027	3	10	10	103	138	138	25
Mindanao	2027	3	10	11	109	138	138	25
Mindanao	2027	3	10	12	106	138	138	25
Mindanao	2027	3	10	13	110	138	138	25
Mindanao	2027	3	10	14	115	138	138	25
Mindanao	2027	3	10	15	114	138	138	25
Mindanao	2027	3	10	16	112	138	138	25
Mindanao	2027	3	10	17	105	138	138	25
Mindanao	2027	3	10	18	108	138	138	25
Mindanao	2027	3	10	19	110	138	138	25
Mindanao	2027	3	10	20	106	138	138	25
Mindanao	2027	3	10	21	102	138	138	25
Mindanao	2027	3	10	22	96	138	138	25
Mindanao	2027	3	10	23	90	138	138	25
Mindanao	2027	3	10	24	84	138	138	25
Mindanao	2027	3	11	1	81	138	138	25
Mindanao	2027	3	11	2	77	138	138	25
Mindanao	2027	3	11	3	75	138	138	25
Mindanao	2027	3	11	4	76	138	138	25
Mindanao	2027	3	11	5	80	138	138	25
Mindanao	2027	3	11	6	84	138	138	25
Mindanao	2027	3	11	7	76	138	138	25
Mindanao	2027	3	11	8	87	138	138	25
Mindanao	2027	3	11	9	99	138	138	25
Mindanao	2027	3	11	10	105	138	138	25
Mindanao	2027	3	11	11	111	138	138	25
Mindanao	2027	3	11	12	109	138	138	25
Mindanao	2027	3	11	13	110	138	138	25
Mindanao	2027	3	11	14	117	138	138	25
Mindanao	2027	3	11	15	116	138	138	25
Mindanao	2027	3	11	16	113	138	138	25
Mindanao	2027	3	11	17	106	138	138	25
Mindanao	2027	3	11	18	109	138	138	25
Mindanao	2027	3	11	19	111	138	138	25
Mindanao	2027	3	11	20	107	138	138	25
Mindanao	2027	3	11	21	102	138	138	25
Mindanao	2027	3	11	22	95	138	138	25
Mindanao	2027	3	11	23	91	138	138	25
Mindanao	2027	3	11	24	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	12	1	81	138	138	25
Mindanao	2027	3	12	2	79	138	138	25
Mindanao	2027	3	12	3	76	138	138	25
Mindanao	2027	3	12	4	75	138	138	25
Mindanao	2027	3	12	5	77	138	138	25
Mindanao	2027	3	12	6	85	138	138	25
Mindanao	2027	3	12	7	78	138	138	25
Mindanao	2027	3	12	8	88	138	138	25
Mindanao	2027	3	12	9	99	138	138	25
Mindanao	2027	3	12	10	106	138	138	25
Mindanao	2027	3	12	11	108	138	138	25
Mindanao	2027	3	12	12	107	138	138	25
Mindanao	2027	3	12	13	109	138	138	25
Mindanao	2027	3	12	14	113	138	138	25
Mindanao	2027	3	12	15	112	138	138	25
Mindanao	2027	3	12	16	110	138	138	25
Mindanao	2027	3	12	17	104	138	138	25
Mindanao	2027	3	12	18	106	138	138	25
Mindanao	2027	3	12	19	109	138	138	25
Mindanao	2027	3	12	20	105	138	138	25
Mindanao	2027	3	12	21	101	138	138	25
Mindanao	2027	3	12	22	95	138	138	25
Mindanao	2027	3	12	23	88	138	138	25
Mindanao	2027	3	12	24	84	138	138	25
Mindanao	2027	3	13	1	79	138	138	25
Mindanao	2027	3	13	2	77	138	138	25
Mindanao	2027	3	13	3	73	138	138	25
Mindanao	2027	3	13	4	72	138	138	25
Mindanao	2027	3	13	5	74	138	138	25
Mindanao	2027	3	13	6	76	138	138	25
Mindanao	2027	3	13	7	76	138	138	25
Mindanao	2027	3	13	8	81	138	138	25
Mindanao	2027	3	13	9	88	138	138	25
Mindanao	2027	3	13	10	96	138	138	25
Mindanao	2027	3	13	11	101	138	138	25
Mindanao	2027	3	13	12	99	138	138	25
Mindanao	2027	3	13	13	101	138	138	25
Mindanao	2027	3	13	14	105	138	138	25
Mindanao	2027	3	13	15	105	138	138	25
Mindanao	2027	3	13	16	103	138	138	25
Mindanao	2027	3	13	17	98	138	138	25
Mindanao	2027	3	13	18	102	138	138	25
Mindanao	2027	3	13	19	105	138	138	25
Mindanao	2027	3	13	20	102	138	138	25
Mindanao	2027	3	13	21	101	138	138	25
Mindanao	2027	3	13	22	94	138	138	25
Mindanao	2027	3	13	23	89	138	138	25
Mindanao	2027	3	13	24	82	138	138	25
Mindanao	2027	3	14	1	78	138	138	25
Mindanao	2027	3	14	2	76	138	138	25
Mindanao	2027	3	14	3	74	138	138	25
Mindanao	2027	3	14	4	73	138	138	25
Mindanao	2027	3	14	5	73	138	138	25
Mindanao	2027	3	14	6	75	138	138	25
Mindanao	2027	3	14	7	73	138	138	25
Mindanao	2027	3	14	8	77	138	138	25
Mindanao	2027	3	14	9	78	138	138	25
Mindanao	2027	3	14	10	83	138	138	25
Mindanao	2027	3	14	11	86	138	138	25
Mindanao	2027	3	14	12	87	138	138	25
Mindanao	2027	3	14	13	88	138	138	25
Mindanao	2027	3	14	14	91	138	138	25
Mindanao	2027	3	14	15	89	138	138	25
Mindanao	2027	3	14	16	86	138	138	25
Mindanao	2027	3	14	17	87	138	138	25
Mindanao	2027	3	14	18	97	138	138	25
Mindanao	2027	3	14	19	100	138	138	25
Mindanao	2027	3	14	20	99	138	138	25
Mindanao	2027	3	14	21	96	138	138	25
Mindanao	2027	3	14	22	89	138	138	25
Mindanao	2027	3	14	23	84	138	138	25
Mindanao	2027	3	14	24	81	138	138	25
Mindanao	2027	3	15	1	77	138	138	25
Mindanao	2027	3	15	2	74	138	138	25
Mindanao	2027	3	15	3	71	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	15	4	71	138	138	25
Mindanao	2027	3	15	5	75	138	138	25
Mindanao	2027	3	15	6	83	138	138	25
Mindanao	2027	3	15	7	74	138	138	25
Mindanao	2027	3	15	8	83	138	138	25
Mindanao	2027	3	15	9	95	138	138	25
Mindanao	2027	3	15	10	105	138	138	25
Mindanao	2027	3	15	11	108	138	138	25
Mindanao	2027	3	15	12	107	138	138	25
Mindanao	2027	3	15	13	107	138	138	25
Mindanao	2027	3	15	14	113	138	138	25
Mindanao	2027	3	15	15	110	138	138	25
Mindanao	2027	3	15	16	107	138	138	25
Mindanao	2027	3	15	17	103	138	138	25
Mindanao	2027	3	15	18	105	138	138	25
Mindanao	2027	3	15	19	105	138	138	25
Mindanao	2027	3	15	20	98	138	138	25
Mindanao	2027	3	15	21	94	138	138	25
Mindanao	2027	3	15	22	88	138	138	25
Mindanao	2027	3	15	23	82	138	138	25
Mindanao	2027	3	15	24	79	138	138	25
Mindanao	2027	3	16	1	75	138	138	25
Mindanao	2027	3	16	2	73	138	138	25
Mindanao	2027	3	16	3	72	138	138	25
Mindanao	2027	3	16	4	72	138	138	25
Mindanao	2027	3	16	5	76	138	138	25
Mindanao	2027	3	16	6	79	138	138	25
Mindanao	2027	3	16	7	77	138	138	25
Mindanao	2027	3	16	8	83	138	138	25
Mindanao	2027	3	16	9	91	138	138	25
Mindanao	2027	3	16	10	97	138	138	25
Mindanao	2027	3	16	11	100	138	138	25
Mindanao	2027	3	16	12	97	138	138	25
Mindanao	2027	3	16	13	98	138	138	25
Mindanao	2027	3	16	14	103	138	138	25
Mindanao	2027	3	16	15	103	138	138	25
Mindanao	2027	3	16	16	102	138	138	25
Mindanao	2027	3	16	17	97	138	138	25
Mindanao	2027	3	16	18	103	138	138	25
Mindanao	2027	3	16	19	103	138	138	25
Mindanao	2027	3	16	20	101	138	138	25
Mindanao	2027	3	16	21	95	138	138	25
Mindanao	2027	3	16	22	87	138	138	25
Mindanao	2027	3	16	23	84	138	138	25
Mindanao	2027	3	16	24	78	138	138	25
Mindanao	2027	3	17	1	74	138	138	25
Mindanao	2027	3	17	2	72	138	138	25
Mindanao	2027	3	17	3	69	138	138	25
Mindanao	2027	3	17	4	69	138	138	25
Mindanao	2027	3	17	5	75	138	138	25
Mindanao	2027	3	17	6	82	138	138	25
Mindanao	2027	3	17	7	73	138	138	25
Mindanao	2027	3	17	8	80	138	138	25
Mindanao	2027	3	17	9	94	138	138	25
Mindanao	2027	3	17	10	101	138	138	25
Mindanao	2027	3	17	11	106	138	138	25
Mindanao	2027	3	17	12	104	138	138	25
Mindanao	2027	3	17	13	106	138	138	25
Mindanao	2027	3	17	14	111	138	138	25
Mindanao	2027	3	17	15	110	138	138	25
Mindanao	2027	3	17	16	106	138	138	25
Mindanao	2027	3	17	17	100	138	138	25
Mindanao	2027	3	17	18	103	138	138	25
Mindanao	2027	3	17	19	104	138	138	25
Mindanao	2027	3	17	20	101	138	138	25
Mindanao	2027	3	17	21	99	138	138	25
Mindanao	2027	3	17	22	92	138	138	25
Mindanao	2027	3	17	23	85	138	138	25
Mindanao	2027	3	17	24	79	138	138	25
Mindanao	2027	3	18	1	74	138	138	25
Mindanao	2027	3	18	2	71	138	138	25
Mindanao	2027	3	18	3	69	138	138	25
Mindanao	2027	3	18	4	69	138	138	25
Mindanao	2027	3	18	5	74	138	138	25
Mindanao	2027	3	18	6	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	18	7	71	138	138	25
Mindanao	2027	3	18	8	81	138	138	25
Mindanao	2027	3	18	9	93	138	138	25
Mindanao	2027	3	18	10	100	138	138	25
Mindanao	2027	3	18	11	103	138	138	25
Mindanao	2027	3	18	12	102	138	138	25
Mindanao	2027	3	18	13	105	138	138	25
Mindanao	2027	3	18	14	109	138	138	25
Mindanao	2027	3	18	15	106	138	138	25
Mindanao	2027	3	18	16	101	138	138	25
Mindanao	2027	3	18	17	95	138	138	25
Mindanao	2027	3	18	18	94	138	138	25
Mindanao	2027	3	18	19	97	138	138	25
Mindanao	2027	3	18	20	96	138	138	25
Mindanao	2027	3	18	21	91	138	138	25
Mindanao	2027	3	18	22	85	138	138	25
Mindanao	2027	3	18	23	81	138	138	25
Mindanao	2027	3	18	24	76	138	138	25
Mindanao	2027	3	19	1	73	138	138	25
Mindanao	2027	3	19	2	69	138	138	25
Mindanao	2027	3	19	3	67	138	138	25
Mindanao	2027	3	19	4	67	138	138	25
Mindanao	2027	3	19	5	70	138	138	25
Mindanao	2027	3	19	6	76	138	138	25
Mindanao	2027	3	19	7	68	138	138	25
Mindanao	2027	3	19	8	79	138	138	25
Mindanao	2027	3	19	9	90	138	138	25
Mindanao	2027	3	19	10	97	138	138	25
Mindanao	2027	3	19	11	101	138	138	25
Mindanao	2027	3	19	12	99	138	138	25
Mindanao	2027	3	19	13	100	138	138	25
Mindanao	2027	3	19	14	106	138	138	25
Mindanao	2027	3	19	15	104	138	138	25
Mindanao	2027	3	19	16	103	138	138	25
Mindanao	2027	3	19	17	95	138	138	25
Mindanao	2027	3	19	18	99	138	138	25
Mindanao	2027	3	19	19	101	138	138	25
Mindanao	2027	3	19	20	95	138	138	25
Mindanao	2027	3	19	21	89	138	138	25
Mindanao	2027	3	19	22	86	138	138	25
Mindanao	2027	3	19	23	82	138	138	25
Mindanao	2027	3	19	24	77	138	138	25
Mindanao	2027	3	20	1	75	138	138	25
Mindanao	2027	3	20	2	71	138	138	25
Mindanao	2027	3	20	3	69	138	138	25
Mindanao	2027	3	20	4	67	138	138	25
Mindanao	2027	3	20	5	70	138	138	25
Mindanao	2027	3	20	6	71	138	138	25
Mindanao	2027	3	20	7	70	138	138	25
Mindanao	2027	3	20	8	74	138	138	25
Mindanao	2027	3	20	9	82	138	138	25
Mindanao	2027	3	20	10	87	138	138	25
Mindanao	2027	3	20	11	93	138	138	25
Mindanao	2027	3	20	12	91	138	138	25
Mindanao	2027	3	20	13	93	138	138	25
Mindanao	2027	3	20	14	95	138	138	25
Mindanao	2027	3	20	15	92	138	138	25
Mindanao	2027	3	20	16	89	138	138	25
Mindanao	2027	3	20	17	87	138	138	25
Mindanao	2027	3	20	18	93	138	138	25
Mindanao	2027	3	20	19	92	138	138	25
Mindanao	2027	3	20	20	89	138	138	25
Mindanao	2027	3	20	21	88	138	138	25
Mindanao	2027	3	20	22	82	138	138	25
Mindanao	2027	3	20	23	76	138	138	25
Mindanao	2027	3	20	24	71	138	138	25
Mindanao	2027	3	21	1	68	138	138	25
Mindanao	2027	3	21	2	66	138	138	25
Mindanao	2027	3	21	3	64	138	138	25
Mindanao	2027	3	21	4	64	138	138	25
Mindanao	2027	3	21	5	66	138	138	25
Mindanao	2027	3	21	6	68	138	138	25
Mindanao	2027	3	21	7	64	138	138	25
Mindanao	2027	3	21	8	67	138	138	25
Mindanao	2027	3	21	9	72	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	21	10	75	138	138	25
Mindanao	2027	3	21	11	80	138	138	25
Mindanao	2027	3	21	12	83	138	138	25
Mindanao	2027	3	21	13	85	138	138	25
Mindanao	2027	3	21	14	88	138	138	25
Mindanao	2027	3	21	15	87	138	138	25
Mindanao	2027	3	21	16	85	138	138	25
Mindanao	2027	3	21	17	84	138	138	25
Mindanao	2027	3	21	18	92	138	138	25
Mindanao	2027	3	21	19	95	138	138	25
Mindanao	2027	3	21	20	93	138	138	25
Mindanao	2027	3	21	21	89	138	138	25
Mindanao	2027	3	21	22	85	138	138	25
Mindanao	2027	3	21	23	80	138	138	25
Mindanao	2027	3	21	24	73	138	138	25
Mindanao	2027	3	22	1	69	138	138	25
Mindanao	2027	3	22	2	68	138	138	25
Mindanao	2027	3	22	3	65	138	138	25
Mindanao	2027	3	22	4	67	138	138	25
Mindanao	2027	3	22	5	70	138	138	25
Mindanao	2027	3	22	6	74	138	138	25
Mindanao	2027	3	22	7	70	138	138	25
Mindanao	2027	3	22	8	78	138	138	25
Mindanao	2027	3	22	9	91	138	138	25
Mindanao	2027	3	22	10	101	138	138	25
Mindanao	2027	3	22	11	102	138	138	25
Mindanao	2027	3	22	12	100	138	138	25
Mindanao	2027	3	22	13	103	138	138	25
Mindanao	2027	3	22	14	108	138	138	25
Mindanao	2027	3	22	15	108	138	138	25
Mindanao	2027	3	22	16	106	138	138	25
Mindanao	2027	3	22	17	99	138	138	25
Mindanao	2027	3	22	18	102	138	138	25
Mindanao	2027	3	22	19	105	138	138	25
Mindanao	2027	3	22	20	102	138	138	25
Mindanao	2027	3	22	21	100	138	138	25
Mindanao	2027	3	22	22	92	138	138	25
Mindanao	2027	3	22	23	86	138	138	25
Mindanao	2027	3	22	24	80	138	138	25
Mindanao	2027	3	23	1	77	138	138	25
Mindanao	2027	3	23	2	75	138	138	25
Mindanao	2027	3	23	3	71	138	138	25
Mindanao	2027	3	23	4	70	138	138	25
Mindanao	2027	3	23	5	73	138	138	25
Mindanao	2027	3	23	6	80	138	138	25
Mindanao	2027	3	23	7	71	138	138	25
Mindanao	2027	3	23	8	83	138	138	25
Mindanao	2027	3	23	9	95	138	138	25
Mindanao	2027	3	23	10	102	138	138	25
Mindanao	2027	3	23	11	105	138	138	25
Mindanao	2027	3	23	12	104	138	138	25
Mindanao	2027	3	23	13	107	138	138	25
Mindanao	2027	3	23	14	111	138	138	25
Mindanao	2027	3	23	15	110	138	138	25
Mindanao	2027	3	23	16	109	138	138	25
Mindanao	2027	3	23	17	101	138	138	25
Mindanao	2027	3	23	18	104	138	138	25
Mindanao	2027	3	23	19	104	138	138	25
Mindanao	2027	3	23	20	103	138	138	25
Mindanao	2027	3	23	21	99	138	138	25
Mindanao	2027	3	23	22	92	138	138	25
Mindanao	2027	3	23	23	85	138	138	25
Mindanao	2027	3	23	24	82	138	138	25
Mindanao	2027	3	24	1	77	138	138	25
Mindanao	2027	3	24	2	74	138	138	25
Mindanao	2027	3	24	3	72	138	138	25
Mindanao	2027	3	24	4	71	138	138	25
Mindanao	2027	3	24	5	74	138	138	25
Mindanao	2027	3	24	6	78	138	138	25
Mindanao	2027	3	24	7	71	138	138	25
Mindanao	2027	3	24	8	81	138	138	25
Mindanao	2027	3	24	9	94	138	138	25
Mindanao	2027	3	24	10	101	138	138	25
Mindanao	2027	3	24	11	104	138	138	25
Mindanao	2027	3	24	12	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	24	13	106	138	138	25
Mindanao	2027	3	24	14	111	138	138	25
Mindanao	2027	3	24	15	110	138	138	25
Mindanao	2027	3	24	16	106	138	138	25
Mindanao	2027	3	24	17	98	138	138	25
Mindanao	2027	3	24	18	101	138	138	25
Mindanao	2027	3	24	19	103	138	138	25
Mindanao	2027	3	24	20	100	138	138	25
Mindanao	2027	3	24	21	98	138	138	25
Mindanao	2027	3	24	22	92	138	138	25
Mindanao	2027	3	24	23	85	138	138	25
Mindanao	2027	3	24	24	81	138	138	25
Mindanao	2027	3	25	1	77	138	138	25
Mindanao	2027	3	25	2	73	138	138	25
Mindanao	2027	3	25	3	72	138	138	25
Mindanao	2027	3	25	4	69	138	138	25
Mindanao	2027	3	25	5	69	138	138	25
Mindanao	2027	3	25	6	69	138	138	25
Mindanao	2027	3	25	7	68	138	138	25
Mindanao	2027	3	25	8	68	138	138	25
Mindanao	2027	3	25	9	73	138	138	25
Mindanao	2027	3	25	10	78	138	138	25
Mindanao	2027	3	25	11	82	138	138	25
Mindanao	2027	3	25	12	83	138	138	25
Mindanao	2027	3	25	13	85	138	138	25
Mindanao	2027	3	25	14	87	138	138	25
Mindanao	2027	3	25	15	86	138	138	25
Mindanao	2027	3	25	16	84	138	138	25
Mindanao	2027	3	25	17	82	138	138	25
Mindanao	2027	3	25	18	90	138	138	25
Mindanao	2027	3	25	19	90	138	138	25
Mindanao	2027	3	25	20	88	138	138	25
Mindanao	2027	3	25	21	87	138	138	25
Mindanao	2027	3	25	22	81	138	138	25
Mindanao	2027	3	25	23	78	138	138	25
Mindanao	2027	3	25	24	73	138	138	25
Mindanao	2027	3	26	1	70	138	138	25
Mindanao	2027	3	26	2	68	138	138	25
Mindanao	2027	3	26	3	67	138	138	25
Mindanao	2027	3	26	4	63	138	138	25
Mindanao	2027	3	26	5	63	138	138	25
Mindanao	2027	3	26	6	63	138	138	25
Mindanao	2027	3	26	7	62	138	138	25
Mindanao	2027	3	26	8	64	138	138	25
Mindanao	2027	3	26	9	65	138	138	25
Mindanao	2027	3	26	10	66	138	138	25
Mindanao	2027	3	26	11	71	138	138	25
Mindanao	2027	3	26	12	73	138	138	25
Mindanao	2027	3	26	13	74	138	138	25
Mindanao	2027	3	26	14	75	138	138	25
Mindanao	2027	3	26	15	76	138	138	25
Mindanao	2027	3	26	16	73	138	138	25
Mindanao	2027	3	26	17	72	138	138	25
Mindanao	2027	3	26	18	80	138	138	25
Mindanao	2027	3	26	19	84	138	138	25
Mindanao	2027	3	26	20	84	138	138	25
Mindanao	2027	3	26	21	82	138	138	25
Mindanao	2027	3	26	22	80	138	138	25
Mindanao	2027	3	26	23	74	138	138	25
Mindanao	2027	3	26	24	71	138	138	25
Mindanao	2027	3	27	1	76	138	138	25
Mindanao	2027	3	27	2	75	138	138	25
Mindanao	2027	3	27	3	75	138	138	25
Mindanao	2027	3	27	4	71	138	138	25
Mindanao	2027	3	27	5	73	138	138	25
Mindanao	2027	3	27	6	74	138	138	25
Mindanao	2027	3	27	7	69	138	138	25
Mindanao	2027	3	27	8	75	138	138	25
Mindanao	2027	3	27	9	84	138	138	25
Mindanao	2027	3	27	10	91	138	138	25
Mindanao	2027	3	27	11	94	138	138	25
Mindanao	2027	3	27	12	93	138	138	25
Mindanao	2027	3	27	13	97	138	138	25
Mindanao	2027	3	27	14	103	138	138	25
Mindanao	2027	3	27	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	27	16	101	138	138	25
Mindanao	2027	3	27	17	96	138	138	25
Mindanao	2027	3	27	18	101	138	138	25
Mindanao	2027	3	27	19	103	138	138	25
Mindanao	2027	3	27	20	99	138	138	25
Mindanao	2027	3	27	21	96	138	138	25
Mindanao	2027	3	27	22	93	138	138	25
Mindanao	2027	3	27	23	87	138	138	25
Mindanao	2027	3	27	24	82	138	138	25
Mindanao	2027	3	28	1	79	138	138	25
Mindanao	2027	3	28	2	77	138	138	25
Mindanao	2027	3	28	3	76	138	138	25
Mindanao	2027	3	28	4	73	138	138	25
Mindanao	2027	3	28	5	72	138	138	25
Mindanao	2027	3	28	6	71	138	138	25
Mindanao	2027	3	28	7	69	138	138	25
Mindanao	2027	3	28	8	71	138	138	25
Mindanao	2027	3	28	9	75	138	138	25
Mindanao	2027	3	28	10	80	138	138	25
Mindanao	2027	3	28	11	84	138	138	25
Mindanao	2027	3	28	12	85	138	138	25
Mindanao	2027	3	28	13	87	138	138	25
Mindanao	2027	3	28	14	90	138	138	25
Mindanao	2027	3	28	15	89	138	138	25
Mindanao	2027	3	28	16	86	138	138	25
Mindanao	2027	3	28	17	86	138	138	25
Mindanao	2027	3	28	18	95	138	138	25
Mindanao	2027	3	28	19	98	138	138	25
Mindanao	2027	3	28	20	96	138	138	25
Mindanao	2027	3	28	21	96	138	138	25
Mindanao	2027	3	28	22	88	138	138	25
Mindanao	2027	3	28	23	83	138	138	25
Mindanao	2027	3	28	24	78	138	138	25
Mindanao	2027	3	29	1	75	138	138	25
Mindanao	2027	3	29	2	73	138	138	25
Mindanao	2027	3	29	3	71	138	138	25
Mindanao	2027	3	29	4	69	138	138	25
Mindanao	2027	3	29	5	72	138	138	25
Mindanao	2027	3	29	6	75	138	138	25
Mindanao	2027	3	29	7	70	138	138	25
Mindanao	2027	3	29	8	79	138	138	25
Mindanao	2027	3	29	9	90	138	138	25
Mindanao	2027	3	29	10	99	138	138	25
Mindanao	2027	3	29	11	105	138	138	25
Mindanao	2027	3	29	12	105	138	138	25
Mindanao	2027	3	29	13	106	138	138	25
Mindanao	2027	3	29	14	112	138	138	25
Mindanao	2027	3	29	15	109	138	138	25
Mindanao	2027	3	29	16	107	138	138	25
Mindanao	2027	3	29	17	101	138	138	25
Mindanao	2027	3	29	18	102	138	138	25
Mindanao	2027	3	29	19	104	138	138	25
Mindanao	2027	3	29	20	102	138	138	25
Mindanao	2027	3	29	21	97	138	138	25
Mindanao	2027	3	29	22	92	138	138	25
Mindanao	2027	3	29	23	87	138	138	25
Mindanao	2027	3	29	24	83	138	138	25
Mindanao	2027	3	30	1	77	138	138	25
Mindanao	2027	3	30	2	76	138	138	25
Mindanao	2027	3	30	3	75	138	138	25
Mindanao	2027	3	30	4	73	138	138	25
Mindanao	2027	3	30	5	76	138	138	25
Mindanao	2027	3	30	6	79	138	138	25
Mindanao	2027	3	30	7	71	138	138	25
Mindanao	2027	3	30	8	82	138	138	25
Mindanao	2027	3	30	9	94	138	138	25
Mindanao	2027	3	30	10	101	138	138	25
Mindanao	2027	3	30	11	106	138	138	25
Mindanao	2027	3	30	12	105	138	138	25
Mindanao	2027	3	30	13	107	138	138	25
Mindanao	2027	3	30	14	106	138	138	25
Mindanao	2027	3	30	15	110	138	138	25
Mindanao	2027	3	30	16	106	138	138	25
Mindanao	2027	3	30	17	101	138	138	25
Mindanao	2027	3	30	18	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	3	30	19	102	138	138	25
Mindanao	2027	3	30	20	100	138	138	25
Mindanao	2027	3	30	21	97	138	138	25
Mindanao	2027	3	30	22	90	138	138	25
Mindanao	2027	3	30	23	86	138	138	25
Mindanao	2027	3	30	24	81	138	138	25
Mindanao	2027	3	31	1	78	138	138	25
Mindanao	2027	3	31	2	81	138	138	25
Mindanao	2027	3	31	3	81	138	138	25
Mindanao	2027	3	31	4	79	138	138	25
Mindanao	2027	3	31	5	81	138	138	25
Mindanao	2027	3	31	6	86	138	138	25
Mindanao	2027	3	31	7	79	138	138	25
Mindanao	2027	3	31	8	90	138	138	25
Mindanao	2027	3	31	9	100	138	138	25
Mindanao	2027	3	31	10	108	138	138	25
Mindanao	2027	3	31	11	113	138	138	25
Mindanao	2027	3	31	12	112	138	138	25
Mindanao	2027	3	31	13	113	138	138	25
Mindanao	2027	3	31	14	115	138	138	25
Mindanao	2027	3	31	15	111	138	138	25
Mindanao	2027	3	31	16	110	138	138	25
Mindanao	2027	3	31	17	105	138	138	25
Mindanao	2027	3	31	18	108	138	138	25
Mindanao	2027	3	31	19	106	138	138	25
Mindanao	2027	3	31	20	102	138	138	25
Mindanao	2027	3	31	21	100	138	138	25
Mindanao	2027	3	31	22	94	138	138	25
Mindanao	2027	3	31	23	89	138	138	25
Mindanao	2027	3	31	24	84	138	138	25
Mindanao	2027	4	1	1	80	138	138	25
Mindanao	2027	4	1	2	78	138	138	25
Mindanao	2027	4	1	3	78	138	138	25
Mindanao	2027	4	1	4	74	138	138	25
Mindanao	2027	4	1	5	79	138	138	25
Mindanao	2027	4	1	6	82	138	138	25
Mindanao	2027	4	1	7	76	138	138	25
Mindanao	2027	4	1	8	86	138	138	25
Mindanao	2027	4	1	9	98	138	138	25
Mindanao	2027	4	1	10	107	138	138	25
Mindanao	2027	4	1	11	112	138	138	25
Mindanao	2027	4	1	12	110	138	138	25
Mindanao	2027	4	1	13	112	138	138	25
Mindanao	2027	4	1	14	116	138	138	25
Mindanao	2027	4	1	15	114	138	138	25
Mindanao	2027	4	1	16	110	138	138	25
Mindanao	2027	4	1	17	107	138	138	25
Mindanao	2027	4	1	18	109	138	138	25
Mindanao	2027	4	1	19	108	138	138	25
Mindanao	2027	4	1	20	103	138	138	25
Mindanao	2027	4	1	21	101	138	138	25
Mindanao	2027	4	1	22	95	138	138	25
Mindanao	2027	4	1	23	90	138	138	25
Mindanao	2027	4	1	24	85	138	138	25
Mindanao	2027	4	2	1	81	138	138	25
Mindanao	2027	4	2	2	79	138	138	25
Mindanao	2027	4	2	3	78	138	138	25
Mindanao	2027	4	2	4	75	138	138	25
Mindanao	2027	4	2	5	79	138	138	25
Mindanao	2027	4	2	6	83	138	138	25
Mindanao	2027	4	2	7	77	138	138	25
Mindanao	2027	4	2	8	85	138	138	25
Mindanao	2027	4	2	9	97	138	138	25
Mindanao	2027	4	2	10	104	138	138	25
Mindanao	2027	4	2	11	109	138	138	25
Mindanao	2027	4	2	12	110	138	138	25
Mindanao	2027	4	2	13	112	138	138	25
Mindanao	2027	4	2	14	118	138	138	25
Mindanao	2027	4	2	15	113	138	138	25
Mindanao	2027	4	2	16	111	138	138	25
Mindanao	2027	4	2	17	104	138	138	25
Mindanao	2027	4	2	18	108	138	138	25
Mindanao	2027	4	2	19	107	138	138	25
Mindanao	2027	4	2	20	104	138	138	25
Mindanao	2027	4	2	21	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	2	22	95	138	138	25
Mindanao	2027	4	2	23	90	138	138	25
Mindanao	2027	4	2	24	85	138	138	25
Mindanao	2027	4	3	1	82	138	138	25
Mindanao	2027	4	3	2	79	138	138	25
Mindanao	2027	4	3	3	78	138	138	25
Mindanao	2027	4	3	4	76	138	138	25
Mindanao	2027	4	3	5	75	138	138	25
Mindanao	2027	4	3	6	78	138	138	25
Mindanao	2027	4	3	7	77	138	138	25
Mindanao	2027	4	3	8	82	138	138	25
Mindanao	2027	4	3	9	90	138	138	25
Mindanao	2027	4	3	10	96	138	138	25
Mindanao	2027	4	3	11	98	138	138	25
Mindanao	2027	4	3	12	98	138	138	25
Mindanao	2027	4	3	13	99	138	138	25
Mindanao	2027	4	3	14	103	138	138	25
Mindanao	2027	4	3	15	102	138	138	25
Mindanao	2027	4	3	16	100	138	138	25
Mindanao	2027	4	3	17	98	138	138	25
Mindanao	2027	4	3	18	105	138	138	25
Mindanao	2027	4	3	19	103	138	138	25
Mindanao	2027	4	3	20	99	138	138	25
Mindanao	2027	4	3	21	97	138	138	25
Mindanao	2027	4	3	22	89	138	138	25
Mindanao	2027	4	3	23	86	138	138	25
Mindanao	2027	4	3	24	80	138	138	25
Mindanao	2027	4	4	1	76	138	138	25
Mindanao	2027	4	4	2	75	138	138	25
Mindanao	2027	4	4	3	74	138	138	25
Mindanao	2027	4	4	4	71	138	138	25
Mindanao	2027	4	4	5	70	138	138	25
Mindanao	2027	4	4	6	72	138	138	25
Mindanao	2027	4	4	7	69	138	138	25
Mindanao	2027	4	4	8	70	138	138	25
Mindanao	2027	4	4	9	78	138	138	25
Mindanao	2027	4	4	10	87	138	138	25
Mindanao	2027	4	4	11	88	138	138	25
Mindanao	2027	4	4	12	89	138	138	25
Mindanao	2027	4	4	13	88	138	138	25
Mindanao	2027	4	4	14	90	138	138	25
Mindanao	2027	4	4	15	90	138	138	25
Mindanao	2027	4	4	16	87	138	138	25
Mindanao	2027	4	4	17	85	138	138	25
Mindanao	2027	4	4	18	98	138	138	25
Mindanao	2027	4	4	19	98	138	138	25
Mindanao	2027	4	4	20	98	138	138	25
Mindanao	2027	4	4	21	96	138	138	25
Mindanao	2027	4	4	22	89	138	138	25
Mindanao	2027	4	4	23	83	138	138	25
Mindanao	2027	4	4	24	81	138	138	25
Mindanao	2027	4	5	1	76	138	138	25
Mindanao	2027	4	5	2	74	138	138	25
Mindanao	2027	4	5	3	73	138	138	25
Mindanao	2027	4	5	4	73	138	138	25
Mindanao	2027	4	5	5	76	138	138	25
Mindanao	2027	4	5	6	81	138	138	25
Mindanao	2027	4	5	7	76	138	138	25
Mindanao	2027	4	5	8	84	138	138	25
Mindanao	2027	4	5	9	97	138	138	25
Mindanao	2027	4	5	10	107	138	138	25
Mindanao	2027	4	5	11	113	138	138	25
Mindanao	2027	4	5	12	111	138	138	25
Mindanao	2027	4	5	13	112	138	138	25
Mindanao	2027	4	5	14	116	138	138	25
Mindanao	2027	4	5	15	115	138	138	25
Mindanao	2027	4	5	16	112	138	138	25
Mindanao	2027	4	5	17	107	138	138	25
Mindanao	2027	4	5	18	108	138	138	25
Mindanao	2027	4	5	19	109	138	138	25
Mindanao	2027	4	5	20	105	138	138	25
Mindanao	2027	4	5	21	102	138	138	25
Mindanao	2027	4	5	22	95	138	138	25
Mindanao	2027	4	5	23	89	138	138	25
Mindanao	2027	4	5	24	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	6	1	80	138	138	25
Mindanao	2027	4	6	2	78	138	138	25
Mindanao	2027	4	6	3	78	138	138	25
Mindanao	2027	4	6	4	74	138	138	25
Mindanao	2027	4	6	5	77	138	138	25
Mindanao	2027	4	6	6	83	138	138	25
Mindanao	2027	4	6	7	75	138	138	25
Mindanao	2027	4	6	8	85	138	138	25
Mindanao	2027	4	6	9	97	138	138	25
Mindanao	2027	4	6	10	104	138	138	25
Mindanao	2027	4	6	11	109	138	138	25
Mindanao	2027	4	6	12	107	138	138	25
Mindanao	2027	4	6	13	110	138	138	25
Mindanao	2027	4	6	14	117	138	138	25
Mindanao	2027	4	6	15	115	138	138	25
Mindanao	2027	4	6	16	111	138	138	25
Mindanao	2027	4	6	17	105	138	138	25
Mindanao	2027	4	6	18	109	138	138	25
Mindanao	2027	4	6	19	109	138	138	25
Mindanao	2027	4	6	20	105	138	138	25
Mindanao	2027	4	6	21	102	138	138	25
Mindanao	2027	4	6	22	97	138	138	25
Mindanao	2027	4	6	23	90	138	138	25
Mindanao	2027	4	6	24	86	138	138	25
Mindanao	2027	4	7	1	82	138	138	25
Mindanao	2027	4	7	2	79	138	138	25
Mindanao	2027	4	7	3	78	138	138	25
Mindanao	2027	4	7	4	76	138	138	25
Mindanao	2027	4	7	5	78	138	138	25
Mindanao	2027	4	7	6	79	138	138	25
Mindanao	2027	4	7	7	75	138	138	25
Mindanao	2027	4	7	8	85	138	138	25
Mindanao	2027	4	7	9	96	138	138	25
Mindanao	2027	4	7	10	104	138	138	25
Mindanao	2027	4	7	11	108	138	138	25
Mindanao	2027	4	7	12	104	138	138	25
Mindanao	2027	4	7	13	103	138	138	25
Mindanao	2027	4	7	14	106	138	138	25
Mindanao	2027	4	7	15	105	138	138	25
Mindanao	2027	4	7	16	102	138	138	25
Mindanao	2027	4	7	17	99	138	138	25
Mindanao	2027	4	7	18	105	138	138	25
Mindanao	2027	4	7	19	104	138	138	25
Mindanao	2027	4	7	20	100	138	138	25
Mindanao	2027	4	7	21	96	138	138	25
Mindanao	2027	4	7	22	92	138	138	25
Mindanao	2027	4	7	23	87	138	138	25
Mindanao	2027	4	7	24	81	138	138	25
Mindanao	2027	4	8	1	86	138	138	25
Mindanao	2027	4	8	2	83	138	138	25
Mindanao	2027	4	8	3	81	138	138	25
Mindanao	2027	4	8	4	79	138	138	25
Mindanao	2027	4	8	5	82	138	138	25
Mindanao	2027	4	8	6	86	138	138	25
Mindanao	2027	4	8	7	78	138	138	25
Mindanao	2027	4	8	8	89	138	138	25
Mindanao	2027	4	8	9	104	138	138	25
Mindanao	2027	4	8	10	111	138	138	25
Mindanao	2027	4	8	11	116	138	138	25
Mindanao	2027	4	8	12	116	138	138	25
Mindanao	2027	4	8	13	119	138	138	25
Mindanao	2027	4	8	14	124	138	138	25
Mindanao	2027	4	8	15	123	138	138	25
Mindanao	2027	4	8	16	120	138	138	25
Mindanao	2027	4	8	17	114	138	138	25
Mindanao	2027	4	8	18	116	138	138	25
Mindanao	2027	4	8	19	117	138	138	25
Mindanao	2027	4	8	20	113	138	138	25
Mindanao	2027	4	8	21	111	138	138	25
Mindanao	2027	4	8	22	104	138	138	25
Mindanao	2027	4	8	23	99	138	138	25
Mindanao	2027	4	8	24	93	138	138	25
Mindanao	2027	4	9	1	70	138	138	25
Mindanao	2027	4	9	2	70	138	138	25
Mindanao	2027	4	9	3	70	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	9	4	66	138	138	25
Mindanao	2027	4	9	5	66	138	138	25
Mindanao	2027	4	9	6	69	138	138	25
Mindanao	2027	4	9	7	69	138	138	25
Mindanao	2027	4	9	8	73	138	138	25
Mindanao	2027	4	9	9	79	138	138	25
Mindanao	2027	4	9	10	87	138	138	25
Mindanao	2027	4	9	11	92	138	138	25
Mindanao	2027	4	9	12	91	138	138	25
Mindanao	2027	4	9	13	92	138	138	25
Mindanao	2027	4	9	14	96	138	138	25
Mindanao	2027	4	9	15	95	138	138	25
Mindanao	2027	4	9	16	94	138	138	25
Mindanao	2027	4	9	17	93	138	138	25
Mindanao	2027	4	9	18	99	138	138	25
Mindanao	2027	4	9	19	99	138	138	25
Mindanao	2027	4	9	20	99	138	138	25
Mindanao	2027	4	9	21	95	138	138	25
Mindanao	2027	4	9	22	89	138	138	25
Mindanao	2027	4	9	23	85	138	138	25
Mindanao	2027	4	9	24	80	138	138	25
Mindanao	2027	4	10	1	69	138	138	25
Mindanao	2027	4	10	2	67	138	138	25
Mindanao	2027	4	10	3	65	138	138	25
Mindanao	2027	4	10	4	65	138	138	25
Mindanao	2027	4	10	5	63	138	138	25
Mindanao	2027	4	10	6	65	138	138	25
Mindanao	2027	4	10	7	67	138	138	25
Mindanao	2027	4	10	8	71	138	138	25
Mindanao	2027	4	10	9	76	138	138	25
Mindanao	2027	4	10	10	83	138	138	25
Mindanao	2027	4	10	11	88	138	138	25
Mindanao	2027	4	10	12	88	138	138	25
Mindanao	2027	4	10	13	90	138	138	25
Mindanao	2027	4	10	14	92	138	138	25
Mindanao	2027	4	10	15	92	138	138	25
Mindanao	2027	4	10	16	92	138	138	25
Mindanao	2027	4	10	17	90	138	138	25
Mindanao	2027	4	10	18	96	138	138	25
Mindanao	2027	4	10	19	97	138	138	25
Mindanao	2027	4	10	20	94	138	138	25
Mindanao	2027	4	10	21	93	138	138	25
Mindanao	2027	4	10	22	88	138	138	25
Mindanao	2027	4	10	23	82	138	138	25
Mindanao	2027	4	10	24	77	138	138	25
Mindanao	2027	4	11	1	75	138	138	25
Mindanao	2027	4	11	2	74	138	138	25
Mindanao	2027	4	11	3	72	138	138	25
Mindanao	2027	4	11	4	71	138	138	25
Mindanao	2027	4	11	5	69	138	138	25
Mindanao	2027	4	11	6	70	138	138	25
Mindanao	2027	4	11	7	72	138	138	25
Mindanao	2027	4	11	8	73	138	138	25
Mindanao	2027	4	11	9	78	138	138	25
Mindanao	2027	4	11	10	83	138	138	25
Mindanao	2027	4	11	11	87	138	138	25
Mindanao	2027	4	11	12	87	138	138	25
Mindanao	2027	4	11	13	88	138	138	25
Mindanao	2027	4	11	14	88	138	138	25
Mindanao	2027	4	11	15	87	138	138	25
Mindanao	2027	4	11	16	87	138	138	25
Mindanao	2027	4	11	17	87	138	138	25
Mindanao	2027	4	11	18	88	138	138	25
Mindanao	2027	4	11	19	92	138	138	25
Mindanao	2027	4	11	20	91	138	138	25
Mindanao	2027	4	11	21	89	138	138	25
Mindanao	2027	4	11	22	82	138	138	25
Mindanao	2027	4	11	23	77	138	138	25
Mindanao	2027	4	11	24	74	138	138	25
Mindanao	2027	4	12	1	82	138	138	25
Mindanao	2027	4	12	2	80	138	138	25
Mindanao	2027	4	12	3	78	138	138	25
Mindanao	2027	4	12	4	77	138	138	25
Mindanao	2027	4	12	5	80	138	138	25
Mindanao	2027	4	12	6	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	12	7	77	138	138	25
Mindanao	2027	4	12	8	89	138	138	25
Mindanao	2027	4	12	9	102	138	138	25
Mindanao	2027	4	12	10	110	138	138	25
Mindanao	2027	4	12	11	116	138	138	25
Mindanao	2027	4	12	12	116	138	138	25
Mindanao	2027	4	12	13	118	138	138	25
Mindanao	2027	4	12	14	124	138	138	25
Mindanao	2027	4	12	15	121	138	138	25
Mindanao	2027	4	12	16	118	138	138	25
Mindanao	2027	4	12	17	111	138	138	25
Mindanao	2027	4	12	18	114	138	138	25
Mindanao	2027	4	12	19	114	138	138	25
Mindanao	2027	4	12	20	112	138	138	25
Mindanao	2027	4	12	21	108	138	138	25
Mindanao	2027	4	12	22	103	138	138	25
Mindanao	2027	4	12	23	96	138	138	25
Mindanao	2027	4	12	24	91	138	138	25
Mindanao	2027	4	13	1	77	138	138	25
Mindanao	2027	4	13	2	75	138	138	25
Mindanao	2027	4	13	3	73	138	138	25
Mindanao	2027	4	13	4	71	138	138	25
Mindanao	2027	4	13	5	76	138	138	25
Mindanao	2027	4	13	6	81	138	138	25
Mindanao	2027	4	13	7	72	138	138	25
Mindanao	2027	4	13	8	84	138	138	25
Mindanao	2027	4	13	9	97	138	138	25
Mindanao	2027	4	13	10	106	138	138	25
Mindanao	2027	4	13	11	111	138	138	25
Mindanao	2027	4	13	12	108	138	138	25
Mindanao	2027	4	13	13	112	138	138	25
Mindanao	2027	4	13	14	118	138	138	25
Mindanao	2027	4	13	15	117	138	138	25
Mindanao	2027	4	13	16	115	138	138	25
Mindanao	2027	4	13	17	108	138	138	25
Mindanao	2027	4	13	18	111	138	138	25
Mindanao	2027	4	13	19	110	138	138	25
Mindanao	2027	4	13	20	107	138	138	25
Mindanao	2027	4	13	21	102	138	138	25
Mindanao	2027	4	13	22	96	138	138	25
Mindanao	2027	4	13	23	91	138	138	25
Mindanao	2027	4	13	24	85	138	138	25
Mindanao	2027	4	14	1	82	138	138	25
Mindanao	2027	4	14	2	80	138	138	25
Mindanao	2027	4	14	3	76	138	138	25
Mindanao	2027	4	14	4	76	138	138	25
Mindanao	2027	4	14	5	79	138	138	25
Mindanao	2027	4	14	6	84	138	138	25
Mindanao	2027	4	14	7	76	138	138	25
Mindanao	2027	4	14	8	87	138	138	25
Mindanao	2027	4	14	9	101	138	138	25
Mindanao	2027	4	14	10	109	138	138	25
Mindanao	2027	4	14	11	114	138	138	25
Mindanao	2027	4	14	12	112	138	138	25
Mindanao	2027	4	14	13	115	138	138	25
Mindanao	2027	4	14	14	120	138	138	25
Mindanao	2027	4	14	15	116	138	138	25
Mindanao	2027	4	14	16	115	138	138	25
Mindanao	2027	4	14	17	110	138	138	25
Mindanao	2027	4	14	18	114	138	138	25
Mindanao	2027	4	14	19	115	138	138	25
Mindanao	2027	4	14	20	113	138	138	25
Mindanao	2027	4	14	21	108	138	138	25
Mindanao	2027	4	14	22	102	138	138	25
Mindanao	2027	4	14	23	94	138	138	25
Mindanao	2027	4	14	24	91	138	138	25
Mindanao	2027	4	15	1	86	138	138	25
Mindanao	2027	4	15	2	83	138	138	25
Mindanao	2027	4	15	3	81	138	138	25
Mindanao	2027	4	15	4	79	138	138	25
Mindanao	2027	4	15	5	82	138	138	25
Mindanao	2027	4	15	6	86	138	138	25
Mindanao	2027	4	15	7	78	138	138	25
Mindanao	2027	4	15	8	89	138	138	25
Mindanao	2027	4	15	9	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	15	10	111	138	138	25
Mindanao	2027	4	15	11	116	138	138	25
Mindanao	2027	4	15	12	116	138	138	25
Mindanao	2027	4	15	13	119	138	138	25
Mindanao	2027	4	15	14	124	138	138	25
Mindanao	2027	4	15	15	123	138	138	25
Mindanao	2027	4	15	16	120	138	138	25
Mindanao	2027	4	15	17	114	138	138	25
Mindanao	2027	4	15	18	116	138	138	25
Mindanao	2027	4	15	19	117	138	138	25
Mindanao	2027	4	15	20	113	138	138	25
Mindanao	2027	4	15	21	111	138	138	25
Mindanao	2027	4	15	22	104	138	138	25
Mindanao	2027	4	15	23	99	138	138	25
Mindanao	2027	4	15	24	93	138	138	25
Mindanao	2027	4	16	1	89	138	138	25
Mindanao	2027	4	16	2	86	138	138	25
Mindanao	2027	4	16	3	85	138	138	25
Mindanao	2027	4	16	4	82	138	138	25
Mindanao	2027	4	16	5	81	138	138	25
Mindanao	2027	4	16	6	88	138	138	25
Mindanao	2027	4	16	7	80	138	138	25
Mindanao	2027	4	16	8	92	138	138	25
Mindanao	2027	4	16	9	106	138	138	25
Mindanao	2027	4	16	10	113	138	138	25
Mindanao	2027	4	16	11	118	138	138	25
Mindanao	2027	4	16	12	117	138	138	25
Mindanao	2027	4	16	13	119	138	138	25
Mindanao	2027	4	16	14	125	138	138	25
Mindanao	2027	4	16	15	124	138	138	25
Mindanao	2027	4	16	16	121	138	138	25
Mindanao	2027	4	16	17	115	138	138	25
Mindanao	2027	4	16	18	114	138	138	25
Mindanao	2027	4	16	19	114	138	138	25
Mindanao	2027	4	16	20	110	138	138	25
Mindanao	2027	4	16	21	107	138	138	25
Mindanao	2027	4	16	22	104	138	138	25
Mindanao	2027	4	16	23	99	138	138	25
Mindanao	2027	4	16	24	94	138	138	25
Mindanao	2027	4	17	1	90	138	138	25
Mindanao	2027	4	17	2	87	138	138	25
Mindanao	2027	4	17	3	85	138	138	25
Mindanao	2027	4	17	4	83	138	138	25
Mindanao	2027	4	17	5	84	138	138	25
Mindanao	2027	4	17	6	84	138	138	25
Mindanao	2027	4	17	7	81	138	138	25
Mindanao	2027	4	17	8	89	138	138	25
Mindanao	2027	4	17	9	100	138	138	25
Mindanao	2027	4	17	10	107	138	138	25
Mindanao	2027	4	17	11	113	138	138	25
Mindanao	2027	4	17	12	113	138	138	25
Mindanao	2027	4	17	13	115	138	138	25
Mindanao	2027	4	17	14	118	138	138	25
Mindanao	2027	4	17	15	117	138	138	25
Mindanao	2027	4	17	16	114	138	138	25
Mindanao	2027	4	17	17	109	138	138	25
Mindanao	2027	4	17	18	114	138	138	25
Mindanao	2027	4	17	19	114	138	138	25
Mindanao	2027	4	17	20	109	138	138	25
Mindanao	2027	4	17	21	104	138	138	25
Mindanao	2027	4	17	22	99	138	138	25
Mindanao	2027	4	17	23	94	138	138	25
Mindanao	2027	4	17	24	90	138	138	25
Mindanao	2027	4	18	1	86	138	138	25
Mindanao	2027	4	18	2	84	138	138	25
Mindanao	2027	4	18	3	81	138	138	25
Mindanao	2027	4	18	4	78	138	138	25
Mindanao	2027	4	18	5	77	138	138	25
Mindanao	2027	4	18	6	75	138	138	25
Mindanao	2027	4	18	7	76	138	138	25
Mindanao	2027	4	18	8	79	138	138	25
Mindanao	2027	4	18	9	83	138	138	25
Mindanao	2027	4	18	10	91	138	138	25
Mindanao	2027	4	18	11	96	138	138	25
Mindanao	2027	4	18	12	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	18	13	100	138	138	25
Mindanao	2027	4	18	14	101	138	138	25
Mindanao	2027	4	18	15	101	138	138	25
Mindanao	2027	4	18	16	100	138	138	25
Mindanao	2027	4	18	17	97	138	138	25
Mindanao	2027	4	18	18	103	138	138	25
Mindanao	2027	4	18	19	107	138	138	25
Mindanao	2027	4	18	20	107	138	138	25
Mindanao	2027	4	18	21	104	138	138	25
Mindanao	2027	4	18	22	99	138	138	25
Mindanao	2027	4	18	23	94	138	138	25
Mindanao	2027	4	18	24	89	138	138	25
Mindanao	2027	4	19	1	82	138	138	25
Mindanao	2027	4	19	2	80	138	138	25
Mindanao	2027	4	19	3	78	138	138	25
Mindanao	2027	4	19	4	77	138	138	25
Mindanao	2027	4	19	5	80	138	138	25
Mindanao	2027	4	19	6	84	138	138	25
Mindanao	2027	4	19	7	77	138	138	25
Mindanao	2027	4	19	8	89	138	138	25
Mindanao	2027	4	19	9	102	138	138	25
Mindanao	2027	4	19	10	110	138	138	25
Mindanao	2027	4	19	11	116	138	138	25
Mindanao	2027	4	19	12	116	138	138	25
Mindanao	2027	4	19	13	118	138	138	25
Mindanao	2027	4	19	14	124	138	138	25
Mindanao	2027	4	19	15	121	138	138	25
Mindanao	2027	4	19	16	118	138	138	25
Mindanao	2027	4	19	17	111	138	138	25
Mindanao	2027	4	19	18	114	138	138	25
Mindanao	2027	4	19	19	114	138	138	25
Mindanao	2027	4	19	20	112	138	138	25
Mindanao	2027	4	19	21	108	138	138	25
Mindanao	2027	4	19	22	103	138	138	25
Mindanao	2027	4	19	23	96	138	138	25
Mindanao	2027	4	19	24	91	138	138	25
Mindanao	2027	4	20	1	87	138	138	25
Mindanao	2027	4	20	2	84	138	138	25
Mindanao	2027	4	20	3	83	138	138	25
Mindanao	2027	4	20	4	81	138	138	25
Mindanao	2027	4	20	5	84	138	138	25
Mindanao	2027	4	20	6	86	138	138	25
Mindanao	2027	4	20	7	80	138	138	25
Mindanao	2027	4	20	8	90	138	138	25
Mindanao	2027	4	20	9	106	138	138	25
Mindanao	2027	4	20	10	113	138	138	25
Mindanao	2027	4	20	11	119	138	138	25
Mindanao	2027	4	20	12	118	138	138	25
Mindanao	2027	4	20	13	118	138	138	25
Mindanao	2027	4	20	14	126	138	138	25
Mindanao	2027	4	20	15	123	138	138	25
Mindanao	2027	4	20	16	121	138	138	25
Mindanao	2027	4	20	17	116	138	138	25
Mindanao	2027	4	20	18	118	138	138	25
Mindanao	2027	4	20	19	119	138	138	25
Mindanao	2027	4	20	20	116	138	138	25
Mindanao	2027	4	20	21	114	138	138	25
Mindanao	2027	4	20	22	107	138	138	25
Mindanao	2027	4	20	23	101	138	138	25
Mindanao	2027	4	20	24	94	138	138	25
Mindanao	2027	4	21	1	90	138	138	25
Mindanao	2027	4	21	2	87	138	138	25
Mindanao	2027	4	21	3	85	138	138	25
Mindanao	2027	4	21	4	84	138	138	25
Mindanao	2027	4	21	5	86	138	138	25
Mindanao	2027	4	21	6	87	138	138	25
Mindanao	2027	4	21	7	82	138	138	25
Mindanao	2027	4	21	8	94	138	138	25
Mindanao	2027	4	21	9	107	138	138	25
Mindanao	2027	4	21	10	116	138	138	25
Mindanao	2027	4	21	11	120	138	138	25
Mindanao	2027	4	21	12	117	138	138	25
Mindanao	2027	4	21	13	122	138	138	25
Mindanao	2027	4	21	14	128	138	138	25
Mindanao	2027	4	21	15	125	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	21	16	123	138	138	25
Mindanao	2027	4	21	17	118	138	138	25
Mindanao	2027	4	21	18	118	138	138	25
Mindanao	2027	4	21	19	119	138	138	25
Mindanao	2027	4	21	20	117	138	138	25
Mindanao	2027	4	21	21	114	138	138	25
Mindanao	2027	4	21	22	107	138	138	25
Mindanao	2027	4	21	23	103	138	138	25
Mindanao	2027	4	21	24	98	138	138	25
Mindanao	2027	4	22	1	93	138	138	25
Mindanao	2027	4	22	2	91	138	138	25
Mindanao	2027	4	22	3	88	138	138	25
Mindanao	2027	4	22	4	86	138	138	25
Mindanao	2027	4	22	5	87	138	138	25
Mindanao	2027	4	22	6	89	138	138	25
Mindanao	2027	4	22	7	83	138	138	25
Mindanao	2027	4	22	8	94	138	138	25
Mindanao	2027	4	22	9	109	138	138	25
Mindanao	2027	4	22	10	117	138	138	25
Mindanao	2027	4	22	11	122	138	138	25
Mindanao	2027	4	22	12	122	138	138	25
Mindanao	2027	4	22	13	122	138	138	25
Mindanao	2027	4	22	14	125	138	138	25
Mindanao	2027	4	22	15	126	138	138	25
Mindanao	2027	4	22	16	122	138	138	25
Mindanao	2027	4	22	17	114	138	138	25
Mindanao	2027	4	22	18	117	138	138	25
Mindanao	2027	4	22	19	117	138	138	25
Mindanao	2027	4	22	20	114	138	138	25
Mindanao	2027	4	22	21	113	138	138	25
Mindanao	2027	4	22	22	107	138	138	25
Mindanao	2027	4	22	23	100	138	138	25
Mindanao	2027	4	22	24	97	138	138	25
Mindanao	2027	4	23	1	92	138	138	25
Mindanao	2027	4	23	2	90	138	138	25
Mindanao	2027	4	23	3	87	138	138	25
Mindanao	2027	4	23	4	84	138	138	25
Mindanao	2027	4	23	5	83	138	138	25
Mindanao	2027	4	23	6	83	138	138	25
Mindanao	2027	4	23	7	81	138	138	25
Mindanao	2027	4	23	8	87	138	138	25
Mindanao	2027	4	23	9	97	138	138	25
Mindanao	2027	4	23	10	105	138	138	25
Mindanao	2027	4	23	11	111	138	138	25
Mindanao	2027	4	23	12	108	138	138	25
Mindanao	2027	4	23	13	110	138	138	25
Mindanao	2027	4	23	14	112	138	138	25
Mindanao	2027	4	23	15	111	138	138	25
Mindanao	2027	4	23	16	108	138	138	25
Mindanao	2027	4	23	17	100	138	138	25
Mindanao	2027	4	23	18	106	138	138	25
Mindanao	2027	4	23	19	108	138	138	25
Mindanao	2027	4	23	20	105	138	138	25
Mindanao	2027	4	23	21	103	138	138	25
Mindanao	2027	4	23	22	99	138	138	25
Mindanao	2027	4	23	23	93	138	138	25
Mindanao	2027	4	23	24	89	138	138	25
Mindanao	2027	4	24	1	84	138	138	25
Mindanao	2027	4	24	2	81	138	138	25
Mindanao	2027	4	24	3	80	138	138	25
Mindanao	2027	4	24	4	78	138	138	25
Mindanao	2027	4	24	5	80	138	138	25
Mindanao	2027	4	24	6	79	138	138	25
Mindanao	2027	4	24	7	78	138	138	25
Mindanao	2027	4	24	8	83	138	138	25
Mindanao	2027	4	24	9	94	138	138	25
Mindanao	2027	4	24	10	102	138	138	25
Mindanao	2027	4	24	11	107	138	138	25
Mindanao	2027	4	24	12	107	138	138	25
Mindanao	2027	4	24	13	110	138	138	25
Mindanao	2027	4	24	14	113	138	138	25
Mindanao	2027	4	24	15	111	138	138	25
Mindanao	2027	4	24	16	106	138	138	25
Mindanao	2027	4	24	17	104	138	138	25
Mindanao	2027	4	24	18	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	24	19	110	138	138	25
Mindanao	2027	4	24	20	108	138	138	25
Mindanao	2027	4	24	21	105	138	138	25
Mindanao	2027	4	24	22	99	138	138	25
Mindanao	2027	4	24	23	94	138	138	25
Mindanao	2027	4	24	24	89	138	138	25
Mindanao	2027	4	25	1	86	138	138	25
Mindanao	2027	4	25	2	82	138	138	25
Mindanao	2027	4	25	3	79	138	138	25
Mindanao	2027	4	25	4	78	138	138	25
Mindanao	2027	4	25	5	78	138	138	25
Mindanao	2027	4	25	6	78	138	138	25
Mindanao	2027	4	25	7	77	138	138	25
Mindanao	2027	4	25	8	79	138	138	25
Mindanao	2027	4	25	9	83	138	138	25
Mindanao	2027	4	25	10	88	138	138	25
Mindanao	2027	4	25	11	96	138	138	25
Mindanao	2027	4	25	12	98	138	138	25
Mindanao	2027	4	25	13	100	138	138	25
Mindanao	2027	4	25	14	102	138	138	25
Mindanao	2027	4	25	15	101	138	138	25
Mindanao	2027	4	25	16	97	138	138	25
Mindanao	2027	4	25	17	95	138	138	25
Mindanao	2027	4	25	18	105	138	138	25
Mindanao	2027	4	25	19	109	138	138	25
Mindanao	2027	4	25	20	107	138	138	25
Mindanao	2027	4	25	21	104	138	138	25
Mindanao	2027	4	25	22	99	138	138	25
Mindanao	2027	4	25	23	93	138	138	25
Mindanao	2027	4	25	24	89	138	138	25
Mindanao	2027	4	26	1	83	138	138	25
Mindanao	2027	4	26	2	81	138	138	25
Mindanao	2027	4	26	3	79	138	138	25
Mindanao	2027	4	26	4	78	138	138	25
Mindanao	2027	4	26	5	82	138	138	25
Mindanao	2027	4	26	6	86	138	138	25
Mindanao	2027	4	26	7	80	138	138	25
Mindanao	2027	4	26	8	92	138	138	25
Mindanao	2027	4	26	9	106	138	138	25
Mindanao	2027	4	26	10	113	138	138	25
Mindanao	2027	4	26	11	118	138	138	25
Mindanao	2027	4	26	12	119	138	138	25
Mindanao	2027	4	26	13	122	138	138	25
Mindanao	2027	4	26	14	127	138	138	25
Mindanao	2027	4	26	15	125	138	138	25
Mindanao	2027	4	26	16	123	138	138	25
Mindanao	2027	4	26	17	114	138	138	25
Mindanao	2027	4	26	18	117	138	138	25
Mindanao	2027	4	26	19	118	138	138	25
Mindanao	2027	4	26	20	113	138	138	25
Mindanao	2027	4	26	21	111	138	138	25
Mindanao	2027	4	26	22	104	138	138	25
Mindanao	2027	4	26	23	97	138	138	25
Mindanao	2027	4	26	24	92	138	138	25
Mindanao	2027	4	27	1	87	138	138	25
Mindanao	2027	4	27	2	83	138	138	25
Mindanao	2027	4	27	3	81	138	138	25
Mindanao	2027	4	27	4	78	138	138	25
Mindanao	2027	4	27	5	84	138	138	25
Mindanao	2027	4	27	6	84	138	138	25
Mindanao	2027	4	27	7	79	138	138	25
Mindanao	2027	4	27	8	89	138	138	25
Mindanao	2027	4	27	9	103	138	138	25
Mindanao	2027	4	27	10	113	138	138	25
Mindanao	2027	4	27	11	117	138	138	25
Mindanao	2027	4	27	12	117	138	138	25
Mindanao	2027	4	27	13	120	138	138	25
Mindanao	2027	4	27	14	123	138	138	25
Mindanao	2027	4	27	15	120	138	138	25
Mindanao	2027	4	27	16	116	138	138	25
Mindanao	2027	4	27	17	113	138	138	25
Mindanao	2027	4	27	18	116	138	138	25
Mindanao	2027	4	27	19	118	138	138	25
Mindanao	2027	4	27	20	114	138	138	25
Mindanao	2027	4	27	21	112	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	4	27	22	104	138	138	25
Mindanao	2027	4	27	23	99	138	138	25
Mindanao	2027	4	27	24	95	138	138	25
Mindanao	2027	4	28	1	90	138	138	25
Mindanao	2027	4	28	2	84	138	138	25
Mindanao	2027	4	28	3	83	138	138	25
Mindanao	2027	4	28	4	82	138	138	25
Mindanao	2027	4	28	5	85	138	138	25
Mindanao	2027	4	28	6	86	138	138	25
Mindanao	2027	4	28	7	80	138	138	25
Mindanao	2027	4	28	8	92	138	138	25
Mindanao	2027	4	28	9	105	138	138	25
Mindanao	2027	4	28	10	110	138	138	25
Mindanao	2027	4	28	11	115	138	138	25
Mindanao	2027	4	28	12	113	138	138	25
Mindanao	2027	4	28	13	113	138	138	25
Mindanao	2027	4	28	14	119	138	138	25
Mindanao	2027	4	28	15	118	138	138	25
Mindanao	2027	4	28	16	122	138	138	25
Mindanao	2027	4	28	17	115	138	138	25
Mindanao	2027	4	28	18	119	138	138	25
Mindanao	2027	4	28	19	121	138	138	25
Mindanao	2027	4	28	20	117	138	138	25
Mindanao	2027	4	28	21	116	138	138	25
Mindanao	2027	4	28	22	108	138	138	25
Mindanao	2027	4	28	23	103	138	138	25
Mindanao	2027	4	28	24	97	138	138	25
Mindanao	2027	4	29	1	92	138	138	25
Mindanao	2027	4	29	2	88	138	138	25
Mindanao	2027	4	29	3	86	138	138	25
Mindanao	2027	4	29	4	82	138	138	25
Mindanao	2027	4	29	5	85	138	138	25
Mindanao	2027	4	29	6	86	138	138	25
Mindanao	2027	4	29	7	81	138	138	25
Mindanao	2027	4	29	8	93	138	138	25
Mindanao	2027	4	29	9	107	138	138	25
Mindanao	2027	4	29	10	115	138	138	25
Mindanao	2027	4	29	11	120	138	138	25
Mindanao	2027	4	29	12	118	138	138	25
Mindanao	2027	4	29	13	120	138	138	25
Mindanao	2027	4	29	14	124	138	138	25
Mindanao	2027	4	29	15	122	138	138	25
Mindanao	2027	4	29	16	120	138	138	25
Mindanao	2027	4	29	17	112	138	138	25
Mindanao	2027	4	29	18	116	138	138	25
Mindanao	2027	4	29	19	118	138	138	25
Mindanao	2027	4	29	20	115	138	138	25
Mindanao	2027	4	29	21	113	138	138	25
Mindanao	2027	4	29	22	106	138	138	25
Mindanao	2027	4	29	23	99	138	138	25
Mindanao	2027	4	29	24	95	138	138	25
Mindanao	2027	4	30	1	90	138	138	25
Mindanao	2027	4	30	2	86	138	138	25
Mindanao	2027	4	30	3	82	138	138	25
Mindanao	2027	4	30	4	80	138	138	25
Mindanao	2027	4	30	5	84	138	138	25
Mindanao	2027	4	30	6	83	138	138	25
Mindanao	2027	4	30	7	80	138	138	25
Mindanao	2027	4	30	8	92	138	138	25
Mindanao	2027	4	30	9	105	138	138	25
Mindanao	2027	4	30	10	114	138	138	25
Mindanao	2027	4	30	11	119	138	138	25
Mindanao	2027	4	30	12	118	138	138	25
Mindanao	2027	4	30	13	121	138	138	25
Mindanao	2027	4	30	14	125	138	138	25
Mindanao	2027	4	30	15	125	138	138	25
Mindanao	2027	4	30	16	122	138	138	25
Mindanao	2027	4	30	17	115	138	138	25
Mindanao	2027	4	30	18	117	138	138	25
Mindanao	2027	4	30	19	118	138	138	25
Mindanao	2027	4	30	20	117	138	138	25
Mindanao	2027	4	30	21	114	138	138	25
Mindanao	2027	4	30	22	107	138	138	25
Mindanao	2027	4	30	23	100	138	138	25
Mindanao	2027	4	30	24	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	1	1	79	138	138	25
Mindanao	2027	5	1	2	75	138	138	25
Mindanao	2027	5	1	3	75	138	138	25
Mindanao	2027	5	1	4	72	138	138	25
Mindanao	2027	5	1	5	73	138	138	25
Mindanao	2027	5	1	6	73	138	138	25
Mindanao	2027	5	1	7	71	138	138	25
Mindanao	2027	5	1	8	75	138	138	25
Mindanao	2027	5	1	9	83	138	138	25
Mindanao	2027	5	1	10	90	138	138	25
Mindanao	2027	5	1	11	93	138	138	25
Mindanao	2027	5	1	12	94	138	138	25
Mindanao	2027	5	1	13	96	138	138	25
Mindanao	2027	5	1	14	99	138	138	25
Mindanao	2027	5	1	15	97	138	138	25
Mindanao	2027	5	1	16	94	138	138	25
Mindanao	2027	5	1	17	92	138	138	25
Mindanao	2027	5	1	18	101	138	138	25
Mindanao	2027	5	1	19	104	138	138	25
Mindanao	2027	5	1	20	103	138	138	25
Mindanao	2027	5	1	21	99	138	138	25
Mindanao	2027	5	1	22	93	138	138	25
Mindanao	2027	5	1	23	89	138	138	25
Mindanao	2027	5	1	24	85	138	138	25
Mindanao	2027	5	2	1	81	138	138	25
Mindanao	2027	5	2	2	79	138	138	25
Mindanao	2027	5	2	3	75	138	138	25
Mindanao	2027	5	2	4	74	138	138	25
Mindanao	2027	5	2	5	74	138	138	25
Mindanao	2027	5	2	6	73	138	138	25
Mindanao	2027	5	2	7	69	138	138	25
Mindanao	2027	5	2	8	69	138	138	25
Mindanao	2027	5	2	9	74	138	138	25
Mindanao	2027	5	2	10	80	138	138	25
Mindanao	2027	5	2	11	81	138	138	25
Mindanao	2027	5	2	12	84	138	138	25
Mindanao	2027	5	2	13	86	138	138	25
Mindanao	2027	5	2	14	89	138	138	25
Mindanao	2027	5	2	15	86	138	138	25
Mindanao	2027	5	2	16	84	138	138	25
Mindanao	2027	5	2	17	87	138	138	25
Mindanao	2027	5	2	18	96	138	138	25
Mindanao	2027	5	2	19	99	138	138	25
Mindanao	2027	5	2	20	98	138	138	25
Mindanao	2027	5	2	21	98	138	138	25
Mindanao	2027	5	2	22	92	138	138	25
Mindanao	2027	5	2	23	87	138	138	25
Mindanao	2027	5	2	24	82	138	138	25
Mindanao	2027	5	3	1	87	138	138	25
Mindanao	2027	5	3	2	84	138	138	25
Mindanao	2027	5	3	3	79	138	138	25
Mindanao	2027	5	3	4	79	138	138	25
Mindanao	2027	5	3	5	85	138	138	25
Mindanao	2027	5	3	6	86	138	138	25
Mindanao	2027	5	3	7	79	138	138	25
Mindanao	2027	5	3	8	93	138	138	25
Mindanao	2027	5	3	9	109	138	138	25
Mindanao	2027	5	3	10	115	138	138	25
Mindanao	2027	5	3	11	121	138	138	25
Mindanao	2027	5	3	12	121	138	138	25
Mindanao	2027	5	3	13	122	138	138	25
Mindanao	2027	5	3	14	127	138	138	25
Mindanao	2027	5	3	15	126	138	138	25
Mindanao	2027	5	3	16	124	138	138	25
Mindanao	2027	5	3	17	116	138	138	25
Mindanao	2027	5	3	18	114	138	138	25
Mindanao	2027	5	3	19	120	138	138	25
Mindanao	2027	5	3	20	118	138	138	25
Mindanao	2027	5	3	21	114	138	138	25
Mindanao	2027	5	3	22	108	138	138	25
Mindanao	2027	5	3	23	101	138	138	25
Mindanao	2027	5	3	24	97	138	138	25
Mindanao	2027	5	4	1	82	138	138	25
Mindanao	2027	5	4	2	78	138	138	25
Mindanao	2027	5	4	3	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	4	4	75	138	138	25
Mindanao	2027	5	4	5	79	138	138	25
Mindanao	2027	5	4	6	81	138	138	25
Mindanao	2027	5	4	7	76	138	138	25
Mindanao	2027	5	4	8	88	138	138	25
Mindanao	2027	5	4	9	102	138	138	25
Mindanao	2027	5	4	10	111	138	138	25
Mindanao	2027	5	4	11	116	138	138	25
Mindanao	2027	5	4	12	114	138	138	25
Mindanao	2027	5	4	13	114	138	138	25
Mindanao	2027	5	4	14	114	138	138	25
Mindanao	2027	5	4	15	113	138	138	25
Mindanao	2027	5	4	16	111	138	138	25
Mindanao	2027	5	4	17	107	138	138	25
Mindanao	2027	5	4	18	106	138	138	25
Mindanao	2027	5	4	19	107	138	138	25
Mindanao	2027	5	4	20	104	138	138	25
Mindanao	2027	5	4	21	102	138	138	25
Mindanao	2027	5	4	22	95	138	138	25
Mindanao	2027	5	4	23	92	138	138	25
Mindanao	2027	5	4	24	86	138	138	25
Mindanao	2027	5	5	1	83	138	138	25
Mindanao	2027	5	5	2	81	138	138	25
Mindanao	2027	5	5	3	78	138	138	25
Mindanao	2027	5	5	4	78	138	138	25
Mindanao	2027	5	5	5	82	138	138	25
Mindanao	2027	5	5	6	85	138	138	25
Mindanao	2027	5	5	7	77	138	138	25
Mindanao	2027	5	5	8	89	138	138	25
Mindanao	2027	5	5	9	100	138	138	25
Mindanao	2027	5	5	10	109	138	138	25
Mindanao	2027	5	5	11	113	138	138	25
Mindanao	2027	5	5	12	109	138	138	25
Mindanao	2027	5	5	13	110	138	138	25
Mindanao	2027	5	5	14	113	138	138	25
Mindanao	2027	5	5	15	111	138	138	25
Mindanao	2027	5	5	16	110	138	138	25
Mindanao	2027	5	5	17	107	138	138	25
Mindanao	2027	5	5	18	113	138	138	25
Mindanao	2027	5	5	19	111	138	138	25
Mindanao	2027	5	5	20	109	138	138	25
Mindanao	2027	5	5	21	107	138	138	25
Mindanao	2027	5	5	22	98	138	138	25
Mindanao	2027	5	5	23	93	138	138	25
Mindanao	2027	5	5	24	87	138	138	25
Mindanao	2027	5	6	1	83	138	138	25
Mindanao	2027	5	6	2	80	138	138	25
Mindanao	2027	5	6	3	77	138	138	25
Mindanao	2027	5	6	4	76	138	138	25
Mindanao	2027	5	6	5	82	138	138	25
Mindanao	2027	5	6	6	82	138	138	25
Mindanao	2027	5	6	7	75	138	138	25
Mindanao	2027	5	6	8	86	138	138	25
Mindanao	2027	5	6	9	100	138	138	25
Mindanao	2027	5	6	10	109	138	138	25
Mindanao	2027	5	6	11	114	138	138	25
Mindanao	2027	5	6	12	113	138	138	25
Mindanao	2027	5	6	13	114	138	138	25
Mindanao	2027	5	6	14	118	138	138	25
Mindanao	2027	5	6	15	119	138	138	25
Mindanao	2027	5	6	16	114	138	138	25
Mindanao	2027	5	6	17	109	138	138	25
Mindanao	2027	5	6	18	112	138	138	25
Mindanao	2027	5	6	19	113	138	138	25
Mindanao	2027	5	6	20	111	138	138	25
Mindanao	2027	5	6	21	109	138	138	25
Mindanao	2027	5	6	22	101	138	138	25
Mindanao	2027	5	6	23	97	138	138	25
Mindanao	2027	5	6	24	90	138	138	25
Mindanao	2027	5	7	1	87	138	138	25
Mindanao	2027	5	7	2	84	138	138	25
Mindanao	2027	5	7	3	81	138	138	25
Mindanao	2027	5	7	4	80	138	138	25
Mindanao	2027	5	7	5	84	138	138	25
Mindanao	2027	5	7	6	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	7	7	80	138	138	25
Mindanao	2027	5	7	8	92	138	138	25
Mindanao	2027	5	7	9	105	138	138	25
Mindanao	2027	5	7	10	113	138	138	25
Mindanao	2027	5	7	11	117	138	138	25
Mindanao	2027	5	7	12	117	138	138	25
Mindanao	2027	5	7	13	117	138	138	25
Mindanao	2027	5	7	14	118	138	138	25
Mindanao	2027	5	7	15	117	138	138	25
Mindanao	2027	5	7	16	112	138	138	25
Mindanao	2027	5	7	17	108	138	138	25
Mindanao	2027	5	7	18	111	138	138	25
Mindanao	2027	5	7	19	110	138	138	25
Mindanao	2027	5	7	20	110	138	138	25
Mindanao	2027	5	7	21	107	138	138	25
Mindanao	2027	5	7	22	101	138	138	25
Mindanao	2027	5	7	23	94	138	138	25
Mindanao	2027	5	7	24	90	138	138	25
Mindanao	2027	5	8	1	86	138	138	25
Mindanao	2027	5	8	2	83	138	138	25
Mindanao	2027	5	8	3	81	138	138	25
Mindanao	2027	5	8	4	78	138	138	25
Mindanao	2027	5	8	5	81	138	138	25
Mindanao	2027	5	8	6	81	138	138	25
Mindanao	2027	5	8	7	77	138	138	25
Mindanao	2027	5	8	8	84	138	138	25
Mindanao	2027	5	8	9	95	138	138	25
Mindanao	2027	5	8	10	99	138	138	25
Mindanao	2027	5	8	11	106	138	138	25
Mindanao	2027	5	8	12	107	138	138	25
Mindanao	2027	5	8	13	109	138	138	25
Mindanao	2027	5	8	14	113	138	138	25
Mindanao	2027	5	8	15	110	138	138	25
Mindanao	2027	5	8	16	107	138	138	25
Mindanao	2027	5	8	17	105	138	138	25
Mindanao	2027	5	8	18	112	138	138	25
Mindanao	2027	5	8	19	112	138	138	25
Mindanao	2027	5	8	20	110	138	138	25
Mindanao	2027	5	8	21	107	138	138	25
Mindanao	2027	5	8	22	101	138	138	25
Mindanao	2027	5	8	23	95	138	138	25
Mindanao	2027	5	8	24	91	138	138	25
Mindanao	2027	5	9	1	85	138	138	25
Mindanao	2027	5	9	2	83	138	138	25
Mindanao	2027	5	9	3	80	138	138	25
Mindanao	2027	5	9	4	78	138	138	25
Mindanao	2027	5	9	5	79	138	138	25
Mindanao	2027	5	9	6	77	138	138	25
Mindanao	2027	5	9	7	75	138	138	25
Mindanao	2027	5	9	8	78	138	138	25
Mindanao	2027	5	9	9	85	138	138	25
Mindanao	2027	5	9	10	91	138	138	25
Mindanao	2027	5	9	11	95	138	138	25
Mindanao	2027	5	9	12	98	138	138	25
Mindanao	2027	5	9	13	99	138	138	25
Mindanao	2027	5	9	14	100	138	138	25
Mindanao	2027	5	9	15	99	138	138	25
Mindanao	2027	5	9	16	95	138	138	25
Mindanao	2027	5	9	17	94	138	138	25
Mindanao	2027	5	9	18	103	138	138	25
Mindanao	2027	5	9	19	108	138	138	25
Mindanao	2027	5	9	20	108	138	138	25
Mindanao	2027	5	9	21	106	138	138	25
Mindanao	2027	5	9	22	101	138	138	25
Mindanao	2027	5	9	23	94	138	138	25
Mindanao	2027	5	9	24	91	138	138	25
Mindanao	2027	5	10	1	87	138	138	25
Mindanao	2027	5	10	2	84	138	138	25
Mindanao	2027	5	10	3	79	138	138	25
Mindanao	2027	5	10	4	79	138	138	25
Mindanao	2027	5	10	5	85	138	138	25
Mindanao	2027	5	10	6	86	138	138	25
Mindanao	2027	5	10	7	79	138	138	25
Mindanao	2027	5	10	8	93	138	138	25
Mindanao	2027	5	10	9	109	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	10	10	115	138	138	25
Mindanao	2027	5	10	11	121	138	138	25
Mindanao	2027	5	10	12	121	138	138	25
Mindanao	2027	5	10	13	122	138	138	25
Mindanao	2027	5	10	14	127	138	138	25
Mindanao	2027	5	10	15	126	138	138	25
Mindanao	2027	5	10	16	124	138	138	25
Mindanao	2027	5	10	17	116	138	138	25
Mindanao	2027	5	10	18	114	138	138	25
Mindanao	2027	5	10	19	120	138	138	25
Mindanao	2027	5	10	20	118	138	138	25
Mindanao	2027	5	10	21	114	138	138	25
Mindanao	2027	5	10	22	108	138	138	25
Mindanao	2027	5	10	23	101	138	138	25
Mindanao	2027	5	10	24	97	138	138	25
Mindanao	2027	5	11	1	91	138	138	25
Mindanao	2027	5	11	2	88	138	138	25
Mindanao	2027	5	11	3	84	138	138	25
Mindanao	2027	5	11	4	83	138	138	25
Mindanao	2027	5	11	5	85	138	138	25
Mindanao	2027	5	11	6	89	138	138	25
Mindanao	2027	5	11	7	83	138	138	25
Mindanao	2027	5	11	8	93	138	138	25
Mindanao	2027	5	11	9	110	138	138	25
Mindanao	2027	5	11	10	116	138	138	25
Mindanao	2027	5	11	11	122	138	138	25
Mindanao	2027	5	11	12	122	138	138	25
Mindanao	2027	5	11	13	123	138	138	25
Mindanao	2027	5	11	14	129	138	138	25
Mindanao	2027	5	11	15	127	138	138	25
Mindanao	2027	5	11	16	124	138	138	25
Mindanao	2027	5	11	17	117	138	138	25
Mindanao	2027	5	11	18	118	138	138	25
Mindanao	2027	5	11	19	121	138	138	25
Mindanao	2027	5	11	20	116	138	138	25
Mindanao	2027	5	11	21	115	138	138	25
Mindanao	2027	5	11	22	108	138	138	25
Mindanao	2027	5	11	23	100	138	138	25
Mindanao	2027	5	11	24	95	138	138	25
Mindanao	2027	5	12	1	91	138	138	25
Mindanao	2027	5	12	2	87	138	138	25
Mindanao	2027	5	12	3	84	138	138	25
Mindanao	2027	5	12	4	83	138	138	25
Mindanao	2027	5	12	5	87	138	138	25
Mindanao	2027	5	12	6	87	138	138	25
Mindanao	2027	5	12	7	80	138	138	25
Mindanao	2027	5	12	8	93	138	138	25
Mindanao	2027	5	12	9	110	138	138	25
Mindanao	2027	5	12	10	118	138	138	25
Mindanao	2027	5	12	11	123	138	138	25
Mindanao	2027	5	12	12	122	138	138	25
Mindanao	2027	5	12	13	124	138	138	25
Mindanao	2027	5	12	14	127	138	138	25
Mindanao	2027	5	12	15	126	138	138	25
Mindanao	2027	5	12	16	124	138	138	25
Mindanao	2027	5	12	17	117	138	138	25
Mindanao	2027	5	12	18	119	138	138	25
Mindanao	2027	5	12	19	120	138	138	25
Mindanao	2027	5	12	20	117	138	138	25
Mindanao	2027	5	12	21	115	138	138	25
Mindanao	2027	5	12	22	109	138	138	25
Mindanao	2027	5	12	23	101	138	138	25
Mindanao	2027	5	12	24	95	138	138	25
Mindanao	2027	5	13	1	91	138	138	25
Mindanao	2027	5	13	2	87	138	138	25
Mindanao	2027	5	13	3	85	138	138	25
Mindanao	2027	5	13	4	82	138	138	25
Mindanao	2027	5	13	5	86	138	138	25
Mindanao	2027	5	13	6	86	138	138	25
Mindanao	2027	5	13	7	82	138	138	25
Mindanao	2027	5	13	8	95	138	138	25
Mindanao	2027	5	13	9	107	138	138	25
Mindanao	2027	5	13	10	118	138	138	25
Mindanao	2027	5	13	11	123	138	138	25
Mindanao	2027	5	13	12	121	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	13	13	123	138	138	25
Mindanao	2027	5	13	14	125	138	138	25
Mindanao	2027	5	13	15	124	138	138	25
Mindanao	2027	5	13	16	123	138	138	25
Mindanao	2027	5	13	17	114	138	138	25
Mindanao	2027	5	13	18	117	138	138	25
Mindanao	2027	5	13	19	120	138	138	25
Mindanao	2027	5	13	20	117	138	138	25
Mindanao	2027	5	13	21	114	138	138	25
Mindanao	2027	5	13	22	107	138	138	25
Mindanao	2027	5	13	23	101	138	138	25
Mindanao	2027	5	13	24	95	138	138	25
Mindanao	2027	5	14	1	90	138	138	25
Mindanao	2027	5	14	2	87	138	138	25
Mindanao	2027	5	14	3	82	138	138	25
Mindanao	2027	5	14	4	81	138	138	25
Mindanao	2027	5	14	5	85	138	138	25
Mindanao	2027	5	14	6	87	138	138	25
Mindanao	2027	5	14	7	83	138	138	25
Mindanao	2027	5	14	8	93	138	138	25
Mindanao	2027	5	14	9	106	138	138	25
Mindanao	2027	5	14	10	115	138	138	25
Mindanao	2027	5	14	11	122	138	138	25
Mindanao	2027	5	14	12	121	138	138	25
Mindanao	2027	5	14	13	124	138	138	25
Mindanao	2027	5	14	14	128	138	138	25
Mindanao	2027	5	14	15	126	138	138	25
Mindanao	2027	5	14	16	121	138	138	25
Mindanao	2027	5	14	17	114	138	138	25
Mindanao	2027	5	14	18	115	138	138	25
Mindanao	2027	5	14	19	117	138	138	25
Mindanao	2027	5	14	20	115	138	138	25
Mindanao	2027	5	14	21	113	138	138	25
Mindanao	2027	5	14	22	108	138	138	25
Mindanao	2027	5	14	23	101	138	138	25
Mindanao	2027	5	14	24	96	138	138	25
Mindanao	2027	5	15	1	92	138	138	25
Mindanao	2027	5	15	2	88	138	138	25
Mindanao	2027	5	15	3	85	138	138	25
Mindanao	2027	5	15	4	81	138	138	25
Mindanao	2027	5	15	5	81	138	138	25
Mindanao	2027	5	15	6	82	138	138	25
Mindanao	2027	5	15	7	81	138	138	25
Mindanao	2027	5	15	8	86	138	138	25
Mindanao	2027	5	15	9	97	138	138	25
Mindanao	2027	5	15	10	103	138	138	25
Mindanao	2027	5	15	11	111	138	138	25
Mindanao	2027	5	15	12	110	138	138	25
Mindanao	2027	5	15	13	113	138	138	25
Mindanao	2027	5	15	14	118	138	138	25
Mindanao	2027	5	15	15	114	138	138	25
Mindanao	2027	5	15	16	110	138	138	25
Mindanao	2027	5	15	17	108	138	138	25
Mindanao	2027	5	15	18	113	138	138	25
Mindanao	2027	5	15	19	117	138	138	25
Mindanao	2027	5	15	20	114	138	138	25
Mindanao	2027	5	15	21	114	138	138	25
Mindanao	2027	5	15	22	106	138	138	25
Mindanao	2027	5	15	23	101	138	138	25
Mindanao	2027	5	15	24	95	138	138	25
Mindanao	2027	5	16	1	90	138	138	25
Mindanao	2027	5	16	2	86	138	138	25
Mindanao	2027	5	16	3	85	138	138	25
Mindanao	2027	5	16	4	82	138	138	25
Mindanao	2027	5	16	5	83	138	138	25
Mindanao	2027	5	16	6	80	138	138	25
Mindanao	2027	5	16	7	80	138	138	25
Mindanao	2027	5	16	8	82	138	138	25
Mindanao	2027	5	16	9	87	138	138	25
Mindanao	2027	5	16	10	91	138	138	25
Mindanao	2027	5	16	11	98	138	138	25
Mindanao	2027	5	16	12	99	138	138	25
Mindanao	2027	5	16	13	101	138	138	25
Mindanao	2027	5	16	14	102	138	138	25
Mindanao	2027	5	16	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	16	16	99	138	138	25
Mindanao	2027	5	16	17	97	138	138	25
Mindanao	2027	5	16	18	104	138	138	25
Mindanao	2027	5	16	19	108	138	138	25
Mindanao	2027	5	16	20	105	138	138	25
Mindanao	2027	5	16	21	103	138	138	25
Mindanao	2027	5	16	22	98	138	138	25
Mindanao	2027	5	16	23	92	138	138	25
Mindanao	2027	5	16	24	87	138	138	25
Mindanao	2027	5	17	1	84	138	138	25
Mindanao	2027	5	17	2	79	138	138	25
Mindanao	2027	5	17	3	78	138	138	25
Mindanao	2027	5	17	4	77	138	138	25
Mindanao	2027	5	17	5	81	138	138	25
Mindanao	2027	5	17	6	81	138	138	25
Mindanao	2027	5	17	7	78	138	138	25
Mindanao	2027	5	17	8	90	138	138	25
Mindanao	2027	5	17	9	105	138	138	25
Mindanao	2027	5	17	10	114	138	138	25
Mindanao	2027	5	17	11	116	138	138	25
Mindanao	2027	5	17	12	119	138	138	25
Mindanao	2027	5	17	13	120	138	138	25
Mindanao	2027	5	17	14	126	138	138	25
Mindanao	2027	5	17	15	125	138	138	25
Mindanao	2027	5	17	16	120	138	138	25
Mindanao	2027	5	17	17	114	138	138	25
Mindanao	2027	5	17	18	115	138	138	25
Mindanao	2027	5	17	19	116	138	138	25
Mindanao	2027	5	17	20	110	138	138	25
Mindanao	2027	5	17	21	107	138	138	25
Mindanao	2027	5	17	22	102	138	138	25
Mindanao	2027	5	17	23	96	138	138	25
Mindanao	2027	5	17	24	91	138	138	25
Mindanao	2027	5	18	1	87	138	138	25
Mindanao	2027	5	18	2	84	138	138	25
Mindanao	2027	5	18	3	78	138	138	25
Mindanao	2027	5	18	4	77	138	138	25
Mindanao	2027	5	18	5	82	138	138	25
Mindanao	2027	5	18	6	85	138	138	25
Mindanao	2027	5	18	7	74	138	138	25
Mindanao	2027	5	18	8	89	138	138	25
Mindanao	2027	5	18	9	106	138	138	25
Mindanao	2027	5	18	10	115	138	138	25
Mindanao	2027	5	18	11	120	138	138	25
Mindanao	2027	5	18	12	121	138	138	25
Mindanao	2027	5	18	13	123	138	138	25
Mindanao	2027	5	18	14	127	138	138	25
Mindanao	2027	5	18	15	126	138	138	25
Mindanao	2027	5	18	16	120	138	138	25
Mindanao	2027	5	18	17	112	138	138	25
Mindanao	2027	5	18	18	114	138	138	25
Mindanao	2027	5	18	19	115	138	138	25
Mindanao	2027	5	18	20	112	138	138	25
Mindanao	2027	5	18	21	109	138	138	25
Mindanao	2027	5	18	22	102	138	138	25
Mindanao	2027	5	18	23	96	138	138	25
Mindanao	2027	5	18	24	90	138	138	25
Mindanao	2027	5	19	1	86	138	138	25
Mindanao	2027	5	19	2	84	138	138	25
Mindanao	2027	5	19	3	81	138	138	25
Mindanao	2027	5	19	4	79	138	138	25
Mindanao	2027	5	19	5	84	138	138	25
Mindanao	2027	5	19	6	84	138	138	25
Mindanao	2027	5	19	7	79	138	138	25
Mindanao	2027	5	19	8	92	138	138	25
Mindanao	2027	5	19	9	107	138	138	25
Mindanao	2027	5	19	10	115	138	138	25
Mindanao	2027	5	19	11	116	138	138	25
Mindanao	2027	5	19	12	117	138	138	25
Mindanao	2027	5	19	13	120	138	138	25
Mindanao	2027	5	19	14	124	138	138	25
Mindanao	2027	5	19	15	122	138	138	25
Mindanao	2027	5	19	16	117	138	138	25
Mindanao	2027	5	19	17	110	138	138	25
Mindanao	2027	5	19	18	112	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	19	19	115	138	138	25
Mindanao	2027	5	19	20	112	138	138	25
Mindanao	2027	5	19	21	108	138	138	25
Mindanao	2027	5	19	22	102	138	138	25
Mindanao	2027	5	19	23	95	138	138	25
Mindanao	2027	5	19	24	91	138	138	25
Mindanao	2027	5	20	1	85	138	138	25
Mindanao	2027	5	20	2	83	138	138	25
Mindanao	2027	5	20	3	81	138	138	25
Mindanao	2027	5	20	4	79	138	138	25
Mindanao	2027	5	20	5	83	138	138	25
Mindanao	2027	5	20	6	85	138	138	25
Mindanao	2027	5	20	7	80	138	138	25
Mindanao	2027	5	20	8	91	138	138	25
Mindanao	2027	5	20	9	103	138	138	25
Mindanao	2027	5	20	10	110	138	138	25
Mindanao	2027	5	20	11	117	138	138	25
Mindanao	2027	5	20	12	116	138	138	25
Mindanao	2027	5	20	13	118	138	138	25
Mindanao	2027	5	20	14	122	138	138	25
Mindanao	2027	5	20	15	116	138	138	25
Mindanao	2027	5	20	16	111	138	138	25
Mindanao	2027	5	20	17	105	138	138	25
Mindanao	2027	5	20	18	108	138	138	25
Mindanao	2027	5	20	19	111	138	138	25
Mindanao	2027	5	20	20	108	138	138	25
Mindanao	2027	5	20	21	107	138	138	25
Mindanao	2027	5	20	22	100	138	138	25
Mindanao	2027	5	20	23	94	138	138	25
Mindanao	2027	5	20	24	89	138	138	25
Mindanao	2027	5	21	1	86	138	138	25
Mindanao	2027	5	21	2	83	138	138	25
Mindanao	2027	5	21	3	80	138	138	25
Mindanao	2027	5	21	4	79	138	138	25
Mindanao	2027	5	21	5	81	138	138	25
Mindanao	2027	5	21	6	84	138	138	25
Mindanao	2027	5	21	7	82	138	138	25
Mindanao	2027	5	21	8	92	138	138	25
Mindanao	2027	5	21	9	106	138	138	25
Mindanao	2027	5	21	10	113	138	138	25
Mindanao	2027	5	21	11	116	138	138	25
Mindanao	2027	5	21	12	116	138	138	25
Mindanao	2027	5	21	13	117	138	138	25
Mindanao	2027	5	21	14	118	138	138	25
Mindanao	2027	5	21	15	114	138	138	25
Mindanao	2027	5	21	16	109	138	138	25
Mindanao	2027	5	21	17	105	138	138	25
Mindanao	2027	5	21	18	109	138	138	25
Mindanao	2027	5	21	19	110	138	138	25
Mindanao	2027	5	21	20	105	138	138	25
Mindanao	2027	5	21	21	103	138	138	25
Mindanao	2027	5	21	22	97	138	138	25
Mindanao	2027	5	21	23	91	138	138	25
Mindanao	2027	5	21	24	84	138	138	25
Mindanao	2027	5	22	1	82	138	138	25
Mindanao	2027	5	22	2	79	138	138	25
Mindanao	2027	5	22	3	78	138	138	25
Mindanao	2027	5	22	4	76	138	138	25
Mindanao	2027	5	22	5	79	138	138	25
Mindanao	2027	5	22	6	79	138	138	25
Mindanao	2027	5	22	7	78	138	138	25
Mindanao	2027	5	22	8	82	138	138	25
Mindanao	2027	5	22	9	92	138	138	25
Mindanao	2027	5	22	10	100	138	138	25
Mindanao	2027	5	22	11	105	138	138	25
Mindanao	2027	5	22	12	100	138	138	25
Mindanao	2027	5	22	13	103	138	138	25
Mindanao	2027	5	22	14	106	138	138	25
Mindanao	2027	5	22	15	103	138	138	25
Mindanao	2027	5	22	16	100	138	138	25
Mindanao	2027	5	22	17	98	138	138	25
Mindanao	2027	5	22	18	104	138	138	25
Mindanao	2027	5	22	19	106	138	138	25
Mindanao	2027	5	22	20	104	138	138	25
Mindanao	2027	5	22	21	100	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	22	22	96	138	138	25
Mindanao	2027	5	22	23	90	138	138	25
Mindanao	2027	5	22	24	85	138	138	25
Mindanao	2027	5	23	1	81	138	138	25
Mindanao	2027	5	23	2	79	138	138	25
Mindanao	2027	5	23	3	75	138	138	25
Mindanao	2027	5	23	4	74	138	138	25
Mindanao	2027	5	23	5	75	138	138	25
Mindanao	2027	5	23	6	75	138	138	25
Mindanao	2027	5	23	7	76	138	138	25
Mindanao	2027	5	23	8	77	138	138	25
Mindanao	2027	5	23	9	83	138	138	25
Mindanao	2027	5	23	10	87	138	138	25
Mindanao	2027	5	23	11	91	138	138	25
Mindanao	2027	5	23	12	94	138	138	25
Mindanao	2027	5	23	13	94	138	138	25
Mindanao	2027	5	23	14	94	138	138	25
Mindanao	2027	5	23	15	94	138	138	25
Mindanao	2027	5	23	16	90	138	138	25
Mindanao	2027	5	23	17	91	138	138	25
Mindanao	2027	5	23	18	100	138	138	25
Mindanao	2027	5	23	19	103	138	138	25
Mindanao	2027	5	23	20	100	138	138	25
Mindanao	2027	5	23	21	98	138	138	25
Mindanao	2027	5	23	22	98	138	138	25
Mindanao	2027	5	23	23	91	138	138	25
Mindanao	2027	5	23	24	85	138	138	25
Mindanao	2027	5	24	1	81	138	138	25
Mindanao	2027	5	24	2	79	138	138	25
Mindanao	2027	5	24	3	76	138	138	25
Mindanao	2027	5	24	4	74	138	138	25
Mindanao	2027	5	24	5	80	138	138	25
Mindanao	2027	5	24	6	81	138	138	25
Mindanao	2027	5	24	7	76	138	138	25
Mindanao	2027	5	24	8	90	138	138	25
Mindanao	2027	5	24	9	104	138	138	25
Mindanao	2027	5	24	10	113	138	138	25
Mindanao	2027	5	24	11	117	138	138	25
Mindanao	2027	5	24	12	118	138	138	25
Mindanao	2027	5	24	13	118	138	138	25
Mindanao	2027	5	24	14	124	138	138	25
Mindanao	2027	5	24	15	123	138	138	25
Mindanao	2027	5	24	16	119	138	138	25
Mindanao	2027	5	24	17	112	138	138	25
Mindanao	2027	5	24	18	115	138	138	25
Mindanao	2027	5	24	19	114	138	138	25
Mindanao	2027	5	24	20	109	138	138	25
Mindanao	2027	5	24	21	106	138	138	25
Mindanao	2027	5	24	22	98	138	138	25
Mindanao	2027	5	24	23	93	138	138	25
Mindanao	2027	5	24	24	90	138	138	25
Mindanao	2027	5	25	1	85	138	138	25
Mindanao	2027	5	25	2	83	138	138	25
Mindanao	2027	5	25	3	81	138	138	25
Mindanao	2027	5	25	4	79	138	138	25
Mindanao	2027	5	25	5	84	138	138	25
Mindanao	2027	5	25	6	85	138	138	25
Mindanao	2027	5	25	7	80	138	138	25
Mindanao	2027	5	25	8	92	138	138	25
Mindanao	2027	5	25	9	106	138	138	25
Mindanao	2027	5	25	10	112	138	138	25
Mindanao	2027	5	25	11	118	138	138	25
Mindanao	2027	5	25	12	115	138	138	25
Mindanao	2027	5	25	13	119	138	138	25
Mindanao	2027	5	25	14	124	138	138	25
Mindanao	2027	5	25	15	123	138	138	25
Mindanao	2027	5	25	16	119	138	138	25
Mindanao	2027	5	25	17	113	138	138	25
Mindanao	2027	5	25	18	112	138	138	25
Mindanao	2027	5	25	19	115	138	138	25
Mindanao	2027	5	25	20	112	138	138	25
Mindanao	2027	5	25	21	107	138	138	25
Mindanao	2027	5	25	22	102	138	138	25
Mindanao	2027	5	25	23	96	138	138	25
Mindanao	2027	5	25	24	91	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	26	1	86	138	138	25
Mindanao	2027	5	26	2	84	138	138	25
Mindanao	2027	5	26	3	82	138	138	25
Mindanao	2027	5	26	4	81	138	138	25
Mindanao	2027	5	26	5	83	138	138	25
Mindanao	2027	5	26	6	87	138	138	25
Mindanao	2027	5	26	7	80	138	138	25
Mindanao	2027	5	26	8	89	138	138	25
Mindanao	2027	5	26	9	103	138	138	25
Mindanao	2027	5	26	10	111	138	138	25
Mindanao	2027	5	26	11	115	138	138	25
Mindanao	2027	5	26	12	114	138	138	25
Mindanao	2027	5	26	13	117	138	138	25
Mindanao	2027	5	26	14	120	138	138	25
Mindanao	2027	5	26	15	117	138	138	25
Mindanao	2027	5	26	16	115	138	138	25
Mindanao	2027	5	26	17	110	138	138	25
Mindanao	2027	5	26	18	108	138	138	25
Mindanao	2027	5	26	19	109	138	138	25
Mindanao	2027	5	26	20	109	138	138	25
Mindanao	2027	5	26	21	106	138	138	25
Mindanao	2027	5	26	22	99	138	138	25
Mindanao	2027	5	26	23	92	138	138	25
Mindanao	2027	5	26	24	88	138	138	25
Mindanao	2027	5	27	1	85	138	138	25
Mindanao	2027	5	27	2	81	138	138	25
Mindanao	2027	5	27	3	80	138	138	25
Mindanao	2027	5	27	4	79	138	138	25
Mindanao	2027	5	27	5	83	138	138	25
Mindanao	2027	5	27	6	83	138	138	25
Mindanao	2027	5	27	7	79	138	138	25
Mindanao	2027	5	27	8	91	138	138	25
Mindanao	2027	5	27	9	102	138	138	25
Mindanao	2027	5	27	10	112	138	138	25
Mindanao	2027	5	27	11	115	138	138	25
Mindanao	2027	5	27	12	114	138	138	25
Mindanao	2027	5	27	13	115	138	138	25
Mindanao	2027	5	27	14	113	138	138	25
Mindanao	2027	5	27	15	111	138	138	25
Mindanao	2027	5	27	16	111	138	138	25
Mindanao	2027	5	27	17	106	138	138	25
Mindanao	2027	5	27	18	109	138	138	25
Mindanao	2027	5	27	19	109	138	138	25
Mindanao	2027	5	27	20	106	138	138	25
Mindanao	2027	5	27	21	104	138	138	25
Mindanao	2027	5	27	22	95	138	138	25
Mindanao	2027	5	27	23	92	138	138	25
Mindanao	2027	5	27	24	85	138	138	25
Mindanao	2027	5	28	1	83	138	138	25
Mindanao	2027	5	28	2	80	138	138	25
Mindanao	2027	5	28	3	79	138	138	25
Mindanao	2027	5	28	4	77	138	138	25
Mindanao	2027	5	28	5	81	138	138	25
Mindanao	2027	5	28	6	83	138	138	25
Mindanao	2027	5	28	7	80	138	138	25
Mindanao	2027	5	28	8	91	138	138	25
Mindanao	2027	5	28	9	105	138	138	25
Mindanao	2027	5	28	10	113	138	138	25
Mindanao	2027	5	28	11	116	138	138	25
Mindanao	2027	5	28	12	116	138	138	25
Mindanao	2027	5	28	13	117	138	138	25
Mindanao	2027	5	28	14	120	138	138	25
Mindanao	2027	5	28	15	119	138	138	25
Mindanao	2027	5	28	16	116	138	138	25
Mindanao	2027	5	28	17	110	138	138	25
Mindanao	2027	5	28	18	112	138	138	25
Mindanao	2027	5	28	19	113	138	138	25
Mindanao	2027	5	28	20	109	138	138	25
Mindanao	2027	5	28	21	106	138	138	25
Mindanao	2027	5	28	22	101	138	138	25
Mindanao	2027	5	28	23	96	138	138	25
Mindanao	2027	5	28	24	90	138	138	25
Mindanao	2027	5	29	1	87	138	138	25
Mindanao	2027	5	29	2	83	138	138	25
Mindanao	2027	5	29	3	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	5	29	4	78	138	138	25
Mindanao	2027	5	29	5	81	138	138	25
Mindanao	2027	5	29	6	80	138	138	25
Mindanao	2027	5	29	7	80	138	138	25
Mindanao	2027	5	29	8	85	138	138	25
Mindanao	2027	5	29	9	94	138	138	25
Mindanao	2027	5	29	10	99	138	138	25
Mindanao	2027	5	29	11	103	138	138	25
Mindanao	2027	5	29	12	97	138	138	25
Mindanao	2027	5	29	13	97	138	138	25
Mindanao	2027	5	29	14	102	138	138	25
Mindanao	2027	5	29	15	99	138	138	25
Mindanao	2027	5	29	16	99	138	138	25
Mindanao	2027	5	29	17	98	138	138	25
Mindanao	2027	5	29	18	103	138	138	25
Mindanao	2027	5	29	19	105	138	138	25
Mindanao	2027	5	29	20	103	138	138	25
Mindanao	2027	5	29	21	101	138	138	25
Mindanao	2027	5	29	22	95	138	138	25
Mindanao	2027	5	29	23	90	138	138	25
Mindanao	2027	5	29	24	84	138	138	25
Mindanao	2027	5	30	1	80	138	138	25
Mindanao	2027	5	30	2	78	138	138	25
Mindanao	2027	5	30	3	74	138	138	25
Mindanao	2027	5	30	4	73	138	138	25
Mindanao	2027	5	30	5	70	138	138	25
Mindanao	2027	5	30	6	72	138	138	25
Mindanao	2027	5	30	7	70	138	138	25
Mindanao	2027	5	30	8	72	138	138	25
Mindanao	2027	5	30	9	77	138	138	25
Mindanao	2027	5	30	10	83	138	138	25
Mindanao	2027	5	30	11	85	138	138	25
Mindanao	2027	5	30	12	84	138	138	25
Mindanao	2027	5	30	13	82	138	138	25
Mindanao	2027	5	30	14	83	138	138	25
Mindanao	2027	5	30	15	85	138	138	25
Mindanao	2027	5	30	16	85	138	138	25
Mindanao	2027	5	30	17	86	138	138	25
Mindanao	2027	5	30	18	94	138	138	25
Mindanao	2027	5	30	19	102	138	138	25
Mindanao	2027	5	30	20	102	138	138	25
Mindanao	2027	5	30	21	99	138	138	25
Mindanao	2027	5	30	22	94	138	138	25
Mindanao	2027	5	30	23	88	138	138	25
Mindanao	2027	5	30	24	84	138	138	25
Mindanao	2027	5	31	1	80	138	138	25
Mindanao	2027	5	31	2	78	138	138	25
Mindanao	2027	5	31	3	75	138	138	25
Mindanao	2027	5	31	4	74	138	138	25
Mindanao	2027	5	31	5	79	138	138	25
Mindanao	2027	5	31	6	81	138	138	25
Mindanao	2027	5	31	7	75	138	138	25
Mindanao	2027	5	31	8	87	138	138	25
Mindanao	2027	5	31	9	102	138	138	25
Mindanao	2027	5	31	10	112	138	138	25
Mindanao	2027	5	31	11	115	138	138	25
Mindanao	2027	5	31	12	115	138	138	25
Mindanao	2027	5	31	13	116	138	138	25
Mindanao	2027	5	31	14	120	138	138	25
Mindanao	2027	5	31	15	120	138	138	25
Mindanao	2027	5	31	16	117	138	138	25
Mindanao	2027	5	31	17	109	138	138	25
Mindanao	2027	5	31	18	111	138	138	25
Mindanao	2027	5	31	19	113	138	138	25
Mindanao	2027	5	31	20	110	138	138	25
Mindanao	2027	5	31	21	106	138	138	25
Mindanao	2027	5	31	22	100	138	138	25
Mindanao	2027	5	31	23	95	138	138	25
Mindanao	2027	5	31	24	89	138	138	25
Mindanao	2027	6	1	1	86	138	138	25
Mindanao	2027	6	1	2	83	138	138	25
Mindanao	2027	6	1	3	79	138	138	25
Mindanao	2027	6	1	4	80	138	138	25
Mindanao	2027	6	1	5	84	138	138	25
Mindanao	2027	6	1	6	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	1	7	80	138	138	25
Mindanao	2027	6	1	8	94	138	138	25
Mindanao	2027	6	1	9	106	138	138	25
Mindanao	2027	6	1	10	115	138	138	25
Mindanao	2027	6	1	11	119	138	138	25
Mindanao	2027	6	1	12	118	138	138	25
Mindanao	2027	6	1	13	120	138	138	25
Mindanao	2027	6	1	14	125	138	138	25
Mindanao	2027	6	1	15	124	138	138	25
Mindanao	2027	6	1	16	120	138	138	25
Mindanao	2027	6	1	17	114	138	138	25
Mindanao	2027	6	1	18	115	138	138	25
Mindanao	2027	6	1	19	117	138	138	25
Mindanao	2027	6	1	20	113	138	138	25
Mindanao	2027	6	1	21	109	138	138	25
Mindanao	2027	6	1	22	105	138	138	25
Mindanao	2027	6	1	23	96	138	138	25
Mindanao	2027	6	1	24	92	138	138	25
Mindanao	2027	6	2	1	88	138	138	25
Mindanao	2027	6	2	2	86	138	138	25
Mindanao	2027	6	2	3	84	138	138	25
Mindanao	2027	6	2	4	82	138	138	25
Mindanao	2027	6	2	5	85	138	138	25
Mindanao	2027	6	2	6	86	138	138	25
Mindanao	2027	6	2	7	82	138	138	25
Mindanao	2027	6	2	8	92	138	138	25
Mindanao	2027	6	2	9	107	138	138	25
Mindanao	2027	6	2	10	115	138	138	25
Mindanao	2027	6	2	11	120	138	138	25
Mindanao	2027	6	2	12	118	138	138	25
Mindanao	2027	6	2	13	119	138	138	25
Mindanao	2027	6	2	14	124	138	138	25
Mindanao	2027	6	2	15	120	138	138	25
Mindanao	2027	6	2	16	119	138	138	25
Mindanao	2027	6	2	17	112	138	138	25
Mindanao	2027	6	2	18	115	138	138	25
Mindanao	2027	6	2	19	115	138	138	25
Mindanao	2027	6	2	20	112	138	138	25
Mindanao	2027	6	2	21	109	138	138	25
Mindanao	2027	6	2	22	103	138	138	25
Mindanao	2027	6	2	23	97	138	138	25
Mindanao	2027	6	2	24	92	138	138	25
Mindanao	2027	6	3	1	88	138	138	25
Mindanao	2027	6	3	2	87	138	138	25
Mindanao	2027	6	3	3	81	138	138	25
Mindanao	2027	6	3	4	81	138	138	25
Mindanao	2027	6	3	5	85	138	138	25
Mindanao	2027	6	3	6	86	138	138	25
Mindanao	2027	6	3	7	82	138	138	25
Mindanao	2027	6	3	8	91	138	138	25
Mindanao	2027	6	3	9	104	138	138	25
Mindanao	2027	6	3	10	113	138	138	25
Mindanao	2027	6	3	11	118	138	138	25
Mindanao	2027	6	3	12	117	138	138	25
Mindanao	2027	6	3	13	119	138	138	25
Mindanao	2027	6	3	14	124	138	138	25
Mindanao	2027	6	3	15	122	138	138	25
Mindanao	2027	6	3	16	120	138	138	25
Mindanao	2027	6	3	17	111	138	138	25
Mindanao	2027	6	3	18	111	138	138	25
Mindanao	2027	6	3	19	115	138	138	25
Mindanao	2027	6	3	20	114	138	138	25
Mindanao	2027	6	3	21	112	138	138	25
Mindanao	2027	6	3	22	104	138	138	25
Mindanao	2027	6	3	23	99	138	138	25
Mindanao	2027	6	3	24	93	138	138	25
Mindanao	2027	6	4	1	89	138	138	25
Mindanao	2027	6	4	2	85	138	138	25
Mindanao	2027	6	4	3	82	138	138	25
Mindanao	2027	6	4	4	81	138	138	25
Mindanao	2027	6	4	5	83	138	138	25
Mindanao	2027	6	4	6	84	138	138	25
Mindanao	2027	6	4	7	78	138	138	25
Mindanao	2027	6	4	8	90	138	138	25
Mindanao	2027	6	4	9	105	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	4	10	113	138	138	25
Mindanao	2027	6	4	11	117	138	138	25
Mindanao	2027	6	4	12	116	138	138	25
Mindanao	2027	6	4	13	118	138	138	25
Mindanao	2027	6	4	14	118	138	138	25
Mindanao	2027	6	4	15	120	138	138	25
Mindanao	2027	6	4	16	117	138	138	25
Mindanao	2027	6	4	17	110	138	138	25
Mindanao	2027	6	4	18	114	138	138	25
Mindanao	2027	6	4	19	114	138	138	25
Mindanao	2027	6	4	20	112	138	138	25
Mindanao	2027	6	4	21	110	138	138	25
Mindanao	2027	6	4	22	103	138	138	25
Mindanao	2027	6	4	23	97	138	138	25
Mindanao	2027	6	4	24	92	138	138	25
Mindanao	2027	6	5	1	87	138	138	25
Mindanao	2027	6	5	2	84	138	138	25
Mindanao	2027	6	5	3	81	138	138	25
Mindanao	2027	6	5	4	79	138	138	25
Mindanao	2027	6	5	5	80	138	138	25
Mindanao	2027	6	5	6	78	138	138	25
Mindanao	2027	6	5	7	74	138	138	25
Mindanao	2027	6	5	8	81	138	138	25
Mindanao	2027	6	5	9	90	138	138	25
Mindanao	2027	6	5	10	99	138	138	25
Mindanao	2027	6	5	11	103	138	138	25
Mindanao	2027	6	5	12	103	138	138	25
Mindanao	2027	6	5	13	105	138	138	25
Mindanao	2027	6	5	14	109	138	138	25
Mindanao	2027	6	5	15	104	138	138	25
Mindanao	2027	6	5	16	101	138	138	25
Mindanao	2027	6	5	17	97	138	138	25
Mindanao	2027	6	5	18	107	138	138	25
Mindanao	2027	6	5	19	109	138	138	25
Mindanao	2027	6	5	20	107	138	138	25
Mindanao	2027	6	5	21	104	138	138	25
Mindanao	2027	6	5	22	99	138	138	25
Mindanao	2027	6	5	23	94	138	138	25
Mindanao	2027	6	5	24	90	138	138	25
Mindanao	2027	6	6	1	82	138	138	25
Mindanao	2027	6	6	2	81	138	138	25
Mindanao	2027	6	6	3	78	138	138	25
Mindanao	2027	6	6	4	71	138	138	25
Mindanao	2027	6	6	5	72	138	138	25
Mindanao	2027	6	6	6	71	138	138	25
Mindanao	2027	6	6	7	69	138	138	25
Mindanao	2027	6	6	8	73	138	138	25
Mindanao	2027	6	6	9	80	138	138	25
Mindanao	2027	6	6	10	85	138	138	25
Mindanao	2027	6	6	11	91	138	138	25
Mindanao	2027	6	6	12	92	138	138	25
Mindanao	2027	6	6	13	93	138	138	25
Mindanao	2027	6	6	14	94	138	138	25
Mindanao	2027	6	6	15	92	138	138	25
Mindanao	2027	6	6	16	90	138	138	25
Mindanao	2027	6	6	17	92	138	138	25
Mindanao	2027	6	6	18	100	138	138	25
Mindanao	2027	6	6	19	102	138	138	25
Mindanao	2027	6	6	20	102	138	138	25
Mindanao	2027	6	6	21	97	138	138	25
Mindanao	2027	6	6	22	91	138	138	25
Mindanao	2027	6	6	23	83	138	138	25
Mindanao	2027	6	6	24	81	138	138	25
Mindanao	2027	6	7	1	77	138	138	25
Mindanao	2027	6	7	2	75	138	138	25
Mindanao	2027	6	7	3	73	138	138	25
Mindanao	2027	6	7	4	73	138	138	25
Mindanao	2027	6	7	5	76	138	138	25
Mindanao	2027	6	7	6	78	138	138	25
Mindanao	2027	6	7	7	74	138	138	25
Mindanao	2027	6	7	8	83	138	138	25
Mindanao	2027	6	7	9	96	138	138	25
Mindanao	2027	6	7	10	104	138	138	25
Mindanao	2027	6	7	11	111	138	138	25
Mindanao	2027	6	7	12	111	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	7	13	113	138	138	25
Mindanao	2027	6	7	14	117	138	138	25
Mindanao	2027	6	7	15	119	138	138	25
Mindanao	2027	6	7	16	115	138	138	25
Mindanao	2027	6	7	17	108	138	138	25
Mindanao	2027	6	7	18	111	138	138	25
Mindanao	2027	6	7	19	111	138	138	25
Mindanao	2027	6	7	20	109	138	138	25
Mindanao	2027	6	7	21	106	138	138	25
Mindanao	2027	6	7	22	101	138	138	25
Mindanao	2027	6	7	23	96	138	138	25
Mindanao	2027	6	7	24	87	138	138	25
Mindanao	2027	6	8	1	84	138	138	25
Mindanao	2027	6	8	2	82	138	138	25
Mindanao	2027	6	8	3	79	138	138	25
Mindanao	2027	6	8	4	77	138	138	25
Mindanao	2027	6	8	5	82	138	138	25
Mindanao	2027	6	8	6	84	138	138	25
Mindanao	2027	6	8	7	77	138	138	25
Mindanao	2027	6	8	8	84	138	138	25
Mindanao	2027	6	8	9	100	138	138	25
Mindanao	2027	6	8	10	110	138	138	25
Mindanao	2027	6	8	11	115	138	138	25
Mindanao	2027	6	8	12	114	138	138	25
Mindanao	2027	6	8	13	116	138	138	25
Mindanao	2027	6	8	14	120	138	138	25
Mindanao	2027	6	8	15	116	138	138	25
Mindanao	2027	6	8	16	112	138	138	25
Mindanao	2027	6	8	17	104	138	138	25
Mindanao	2027	6	8	18	108	138	138	25
Mindanao	2027	6	8	19	109	138	138	25
Mindanao	2027	6	8	20	105	138	138	25
Mindanao	2027	6	8	21	100	138	138	25
Mindanao	2027	6	8	22	95	138	138	25
Mindanao	2027	6	8	23	90	138	138	25
Mindanao	2027	6	8	24	85	138	138	25
Mindanao	2027	6	9	1	82	138	138	25
Mindanao	2027	6	9	2	80	138	138	25
Mindanao	2027	6	9	3	77	138	138	25
Mindanao	2027	6	9	4	77	138	138	25
Mindanao	2027	6	9	5	80	138	138	25
Mindanao	2027	6	9	6	83	138	138	25
Mindanao	2027	6	9	7	77	138	138	25
Mindanao	2027	6	9	8	87	138	138	25
Mindanao	2027	6	9	9	99	138	138	25
Mindanao	2027	6	9	10	108	138	138	25
Mindanao	2027	6	9	11	113	138	138	25
Mindanao	2027	6	9	12	112	138	138	25
Mindanao	2027	6	9	13	113	138	138	25
Mindanao	2027	6	9	14	119	138	138	25
Mindanao	2027	6	9	15	116	138	138	25
Mindanao	2027	6	9	16	112	138	138	25
Mindanao	2027	6	9	17	107	138	138	25
Mindanao	2027	6	9	18	107	138	138	25
Mindanao	2027	6	9	19	108	138	138	25
Mindanao	2027	6	9	20	106	138	138	25
Mindanao	2027	6	9	21	104	138	138	25
Mindanao	2027	6	9	22	98	138	138	25
Mindanao	2027	6	9	23	92	138	138	25
Mindanao	2027	6	9	24	88	138	138	25
Mindanao	2027	6	10	1	83	138	138	25
Mindanao	2027	6	10	2	81	138	138	25
Mindanao	2027	6	10	3	78	138	138	25
Mindanao	2027	6	10	4	77	138	138	25
Mindanao	2027	6	10	5	82	138	138	25
Mindanao	2027	6	10	6	84	138	138	25
Mindanao	2027	6	10	7	76	138	138	25
Mindanao	2027	6	10	8	88	138	138	25
Mindanao	2027	6	10	9	101	138	138	25
Mindanao	2027	6	10	10	108	138	138	25
Mindanao	2027	6	10	11	114	138	138	25
Mindanao	2027	6	10	12	113	138	138	25
Mindanao	2027	6	10	13	116	138	138	25
Mindanao	2027	6	10	14	119	138	138	25
Mindanao	2027	6	10	15	117	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	10	16	113	138	138	25
Mindanao	2027	6	10	17	109	138	138	25
Mindanao	2027	6	10	18	111	138	138	25
Mindanao	2027	6	10	19	111	138	138	25
Mindanao	2027	6	10	20	109	138	138	25
Mindanao	2027	6	10	21	107	138	138	25
Mindanao	2027	6	10	22	100	138	138	25
Mindanao	2027	6	10	23	95	138	138	25
Mindanao	2027	6	10	24	91	138	138	25
Mindanao	2027	6	11	1	84	138	138	25
Mindanao	2027	6	11	2	80	138	138	25
Mindanao	2027	6	11	3	79	138	138	25
Mindanao	2027	6	11	4	79	138	138	25
Mindanao	2027	6	11	5	83	138	138	25
Mindanao	2027	6	11	6	82	138	138	25
Mindanao	2027	6	11	7	77	138	138	25
Mindanao	2027	6	11	8	89	138	138	25
Mindanao	2027	6	11	9	103	138	138	25
Mindanao	2027	6	11	10	110	138	138	25
Mindanao	2027	6	11	11	116	138	138	25
Mindanao	2027	6	11	12	115	138	138	25
Mindanao	2027	6	11	13	117	138	138	25
Mindanao	2027	6	11	14	120	138	138	25
Mindanao	2027	6	11	15	117	138	138	25
Mindanao	2027	6	11	16	113	138	138	25
Mindanao	2027	6	11	17	108	138	138	25
Mindanao	2027	6	11	18	108	138	138	25
Mindanao	2027	6	11	19	111	138	138	25
Mindanao	2027	6	11	20	107	138	138	25
Mindanao	2027	6	11	21	105	138	138	25
Mindanao	2027	6	11	22	97	138	138	25
Mindanao	2027	6	11	23	94	138	138	25
Mindanao	2027	6	11	24	88	138	138	25
Mindanao	2027	6	12	1	79	138	138	25
Mindanao	2027	6	12	2	75	138	138	25
Mindanao	2027	6	12	3	74	138	138	25
Mindanao	2027	6	12	4	72	138	138	25
Mindanao	2027	6	12	5	73	138	138	25
Mindanao	2027	6	12	6	74	138	138	25
Mindanao	2027	6	12	7	71	138	138	25
Mindanao	2027	6	12	8	77	138	138	25
Mindanao	2027	6	12	9	85	138	138	25
Mindanao	2027	6	12	10	92	138	138	25
Mindanao	2027	6	12	11	97	138	138	25
Mindanao	2027	6	12	12	97	138	138	25
Mindanao	2027	6	12	13	100	138	138	25
Mindanao	2027	6	12	14	103	138	138	25
Mindanao	2027	6	12	15	104	138	138	25
Mindanao	2027	6	12	16	98	138	138	25
Mindanao	2027	6	12	17	96	138	138	25
Mindanao	2027	6	12	18	103	138	138	25
Mindanao	2027	6	12	19	109	138	138	25
Mindanao	2027	6	12	20	107	138	138	25
Mindanao	2027	6	12	21	105	138	138	25
Mindanao	2027	6	12	22	100	138	138	25
Mindanao	2027	6	12	23	93	138	138	25
Mindanao	2027	6	12	24	88	138	138	25
Mindanao	2027	6	13	1	81	138	138	25
Mindanao	2027	6	13	2	80	138	138	25
Mindanao	2027	6	13	3	77	138	138	25
Mindanao	2027	6	13	4	74	138	138	25
Mindanao	2027	6	13	5	75	138	138	25
Mindanao	2027	6	13	6	73	138	138	25
Mindanao	2027	6	13	7	72	138	138	25
Mindanao	2027	6	13	8	74	138	138	25
Mindanao	2027	6	13	9	78	138	138	25
Mindanao	2027	6	13	10	84	138	138	25
Mindanao	2027	6	13	11	88	138	138	25
Mindanao	2027	6	13	12	90	138	138	25
Mindanao	2027	6	13	13	91	138	138	25
Mindanao	2027	6	13	14	93	138	138	25
Mindanao	2027	6	13	15	92	138	138	25
Mindanao	2027	6	13	16	89	138	138	25
Mindanao	2027	6	13	17	89	138	138	25
Mindanao	2027	6	13	18	97	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	13	19	100	138	138	25
Mindanao	2027	6	13	20	99	138	138	25
Mindanao	2027	6	13	21	97	138	138	25
Mindanao	2027	6	13	22	92	138	138	25
Mindanao	2027	6	13	23	87	138	138	25
Mindanao	2027	6	13	24	84	138	138	25
Mindanao	2027	6	14	1	74	138	138	25
Mindanao	2027	6	14	2	73	138	138	25
Mindanao	2027	6	14	3	73	138	138	25
Mindanao	2027	6	14	4	72	138	138	25
Mindanao	2027	6	14	5	76	138	138	25
Mindanao	2027	6	14	6	79	138	138	25
Mindanao	2027	6	14	7	76	138	138	25
Mindanao	2027	6	14	8	84	138	138	25
Mindanao	2027	6	14	9	98	138	138	25
Mindanao	2027	6	14	10	107	138	138	25
Mindanao	2027	6	14	11	113	138	138	25
Mindanao	2027	6	14	12	113	138	138	25
Mindanao	2027	6	14	13	114	138	138	25
Mindanao	2027	6	14	14	118	138	138	25
Mindanao	2027	6	14	15	117	138	138	25
Mindanao	2027	6	14	16	115	138	138	25
Mindanao	2027	6	14	17	108	138	138	25
Mindanao	2027	6	14	18	108	138	138	25
Mindanao	2027	6	14	19	108	138	138	25
Mindanao	2027	6	14	20	106	138	138	25
Mindanao	2027	6	14	21	100	138	138	25
Mindanao	2027	6	14	22	94	138	138	25
Mindanao	2027	6	14	23	89	138	138	25
Mindanao	2027	6	14	24	84	138	138	25
Mindanao	2027	6	15	1	83	138	138	25
Mindanao	2027	6	15	2	81	138	138	25
Mindanao	2027	6	15	3	78	138	138	25
Mindanao	2027	6	15	4	76	138	138	25
Mindanao	2027	6	15	5	81	138	138	25
Mindanao	2027	6	15	6	82	138	138	25
Mindanao	2027	6	15	7	77	138	138	25
Mindanao	2027	6	15	8	89	138	138	25
Mindanao	2027	6	15	9	104	138	138	25
Mindanao	2027	6	15	10	114	138	138	25
Mindanao	2027	6	15	11	117	138	138	25
Mindanao	2027	6	15	12	95	138	138	25
Mindanao	2027	6	15	13	108	138	138	25
Mindanao	2027	6	15	14	120	138	138	25
Mindanao	2027	6	15	15	120	138	138	25
Mindanao	2027	6	15	16	116	138	138	25
Mindanao	2027	6	15	17	109	138	138	25
Mindanao	2027	6	15	18	106	138	138	25
Mindanao	2027	6	15	19	109	138	138	25
Mindanao	2027	6	15	20	107	138	138	25
Mindanao	2027	6	15	21	107	138	138	25
Mindanao	2027	6	15	22	100	138	138	25
Mindanao	2027	6	15	23	94	138	138	25
Mindanao	2027	6	15	24	90	138	138	25
Mindanao	2027	6	16	1	86	138	138	25
Mindanao	2027	6	16	2	83	138	138	25
Mindanao	2027	6	16	3	80	138	138	25
Mindanao	2027	6	16	4	79	138	138	25
Mindanao	2027	6	16	5	82	138	138	25
Mindanao	2027	6	16	6	84	138	138	25
Mindanao	2027	6	16	7	79	138	138	25
Mindanao	2027	6	16	8	87	138	138	25
Mindanao	2027	6	16	9	99	138	138	25
Mindanao	2027	6	16	10	106	138	138	25
Mindanao	2027	6	16	11	112	138	138	25
Mindanao	2027	6	16	12	110	138	138	25
Mindanao	2027	6	16	13	111	138	138	25
Mindanao	2027	6	16	14	116	138	138	25
Mindanao	2027	6	16	15	112	138	138	25
Mindanao	2027	6	16	16	110	138	138	25
Mindanao	2027	6	16	17	106	138	138	25
Mindanao	2027	6	16	18	107	138	138	25
Mindanao	2027	6	16	19	110	138	138	25
Mindanao	2027	6	16	20	105	138	138	25
Mindanao	2027	6	16	21	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	16	22	96	138	138	25
Mindanao	2027	6	16	23	89	138	138	25
Mindanao	2027	6	16	24	85	138	138	25
Mindanao	2027	6	17	1	80	138	138	25
Mindanao	2027	6	17	2	78	138	138	25
Mindanao	2027	6	17	3	76	138	138	25
Mindanao	2027	6	17	4	75	138	138	25
Mindanao	2027	6	17	5	80	138	138	25
Mindanao	2027	6	17	6	82	138	138	25
Mindanao	2027	6	17	7	76	138	138	25
Mindanao	2027	6	17	8	83	138	138	25
Mindanao	2027	6	17	9	94	138	138	25
Mindanao	2027	6	17	10	102	138	138	25
Mindanao	2027	6	17	11	106	138	138	25
Mindanao	2027	6	17	12	105	138	138	25
Mindanao	2027	6	17	13	107	138	138	25
Mindanao	2027	6	17	14	112	138	138	25
Mindanao	2027	6	17	15	111	138	138	25
Mindanao	2027	6	17	16	111	138	138	25
Mindanao	2027	6	17	17	105	138	138	25
Mindanao	2027	6	17	18	107	138	138	25
Mindanao	2027	6	17	19	110	138	138	25
Mindanao	2027	6	17	20	108	138	138	25
Mindanao	2027	6	17	21	102	138	138	25
Mindanao	2027	6	17	22	97	138	138	25
Mindanao	2027	6	17	23	91	138	138	25
Mindanao	2027	6	17	24	84	138	138	25
Mindanao	2027	6	18	1	82	138	138	25
Mindanao	2027	6	18	2	79	138	138	25
Mindanao	2027	6	18	3	77	138	138	25
Mindanao	2027	6	18	4	75	138	138	25
Mindanao	2027	6	18	5	79	138	138	25
Mindanao	2027	6	18	6	82	138	138	25
Mindanao	2027	6	18	7	78	138	138	25
Mindanao	2027	6	18	8	83	138	138	25
Mindanao	2027	6	18	9	95	138	138	25
Mindanao	2027	6	18	10	102	138	138	25
Mindanao	2027	6	18	11	109	138	138	25
Mindanao	2027	6	18	12	108	138	138	25
Mindanao	2027	6	18	13	108	138	138	25
Mindanao	2027	6	18	14	112	138	138	25
Mindanao	2027	6	18	15	113	138	138	25
Mindanao	2027	6	18	16	109	138	138	25
Mindanao	2027	6	18	17	103	138	138	25
Mindanao	2027	6	18	18	105	138	138	25
Mindanao	2027	6	18	19	106	138	138	25
Mindanao	2027	6	18	20	102	138	138	25
Mindanao	2027	6	18	21	99	138	138	25
Mindanao	2027	6	18	22	92	138	138	25
Mindanao	2027	6	18	23	87	138	138	25
Mindanao	2027	6	18	24	83	138	138	25
Mindanao	2027	6	19	1	79	138	138	25
Mindanao	2027	6	19	2	77	138	138	25
Mindanao	2027	6	19	3	75	138	138	25
Mindanao	2027	6	19	4	73	138	138	25
Mindanao	2027	6	19	5	76	138	138	25
Mindanao	2027	6	19	6	76	138	138	25
Mindanao	2027	6	19	7	75	138	138	25
Mindanao	2027	6	19	8	79	138	138	25
Mindanao	2027	6	19	9	88	138	138	25
Mindanao	2027	6	19	10	95	138	138	25
Mindanao	2027	6	19	11	98	138	138	25
Mindanao	2027	6	19	12	98	138	138	25
Mindanao	2027	6	19	13	101	138	138	25
Mindanao	2027	6	19	14	104	138	138	25
Mindanao	2027	6	19	15	102	138	138	25
Mindanao	2027	6	19	16	101	138	138	25
Mindanao	2027	6	19	17	98	138	138	25
Mindanao	2027	6	19	18	102	138	138	25
Mindanao	2027	6	19	19	104	138	138	25
Mindanao	2027	6	19	20	102	138	138	25
Mindanao	2027	6	19	21	98	138	138	25
Mindanao	2027	6	19	22	92	138	138	25
Mindanao	2027	6	19	23	88	138	138	25
Mindanao	2027	6	19	24	83	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	20	1	79	138	138	25
Mindanao	2027	6	20	2	76	138	138	25
Mindanao	2027	6	20	3	74	138	138	25
Mindanao	2027	6	20	4	72	138	138	25
Mindanao	2027	6	20	5	73	138	138	25
Mindanao	2027	6	20	6	73	138	138	25
Mindanao	2027	6	20	7	71	138	138	25
Mindanao	2027	6	20	8	72	138	138	25
Mindanao	2027	6	20	9	77	138	138	25
Mindanao	2027	6	20	10	83	138	138	25
Mindanao	2027	6	20	11	84	138	138	25
Mindanao	2027	6	20	12	88	138	138	25
Mindanao	2027	6	20	13	88	138	138	25
Mindanao	2027	6	20	14	90	138	138	25
Mindanao	2027	6	20	15	91	138	138	25
Mindanao	2027	6	20	16	90	138	138	25
Mindanao	2027	6	20	17	89	138	138	25
Mindanao	2027	6	20	18	96	138	138	25
Mindanao	2027	6	20	19	98	138	138	25
Mindanao	2027	6	20	20	96	138	138	25
Mindanao	2027	6	20	21	92	138	138	25
Mindanao	2027	6	20	22	88	138	138	25
Mindanao	2027	6	20	23	83	138	138	25
Mindanao	2027	6	20	24	79	138	138	25
Mindanao	2027	6	21	1	74	138	138	25
Mindanao	2027	6	21	2	73	138	138	25
Mindanao	2027	6	21	3	73	138	138	25
Mindanao	2027	6	21	4	72	138	138	25
Mindanao	2027	6	21	5	76	138	138	25
Mindanao	2027	6	21	6	79	138	138	25
Mindanao	2027	6	21	7	76	138	138	25
Mindanao	2027	6	21	8	84	138	138	25
Mindanao	2027	6	21	9	98	138	138	25
Mindanao	2027	6	21	10	107	138	138	25
Mindanao	2027	6	21	11	113	138	138	25
Mindanao	2027	6	21	12	113	138	138	25
Mindanao	2027	6	21	13	114	138	138	25
Mindanao	2027	6	21	14	118	138	138	25
Mindanao	2027	6	21	15	117	138	138	25
Mindanao	2027	6	21	16	115	138	138	25
Mindanao	2027	6	21	17	108	138	138	25
Mindanao	2027	6	21	18	108	138	138	25
Mindanao	2027	6	21	19	108	138	138	25
Mindanao	2027	6	21	20	106	138	138	25
Mindanao	2027	6	21	21	100	138	138	25
Mindanao	2027	6	21	22	94	138	138	25
Mindanao	2027	6	21	23	89	138	138	25
Mindanao	2027	6	21	24	84	138	138	25
Mindanao	2027	6	22	1	80	138	138	25
Mindanao	2027	6	22	2	77	138	138	25
Mindanao	2027	6	22	3	75	138	138	25
Mindanao	2027	6	22	4	75	138	138	25
Mindanao	2027	6	22	5	78	138	138	25
Mindanao	2027	6	22	6	83	138	138	25
Mindanao	2027	6	22	7	78	138	138	25
Mindanao	2027	6	22	8	86	138	138	25
Mindanao	2027	6	22	9	98	138	138	25
Mindanao	2027	6	22	10	107	138	138	25
Mindanao	2027	6	22	11	112	138	138	25
Mindanao	2027	6	22	12	111	138	138	25
Mindanao	2027	6	22	13	113	138	138	25
Mindanao	2027	6	22	14	118	138	138	25
Mindanao	2027	6	22	15	120	138	138	25
Mindanao	2027	6	22	16	117	138	138	25
Mindanao	2027	6	22	17	110	138	138	25
Mindanao	2027	6	22	18	108	138	138	25
Mindanao	2027	6	22	19	107	138	138	25
Mindanao	2027	6	22	20	104	138	138	25
Mindanao	2027	6	22	21	101	138	138	25
Mindanao	2027	6	22	22	94	138	138	25
Mindanao	2027	6	22	23	90	138	138	25
Mindanao	2027	6	22	24	86	138	138	25
Mindanao	2027	6	23	1	81	138	138	25
Mindanao	2027	6	23	2	79	138	138	25
Mindanao	2027	6	23	3	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	23	4	76	138	138	25
Mindanao	2027	6	23	5	80	138	138	25
Mindanao	2027	6	23	6	84	138	138	25
Mindanao	2027	6	23	7	79	138	138	25
Mindanao	2027	6	23	8	85	138	138	25
Mindanao	2027	6	23	9	97	138	138	25
Mindanao	2027	6	23	10	105	138	138	25
Mindanao	2027	6	23	11	109	138	138	25
Mindanao	2027	6	23	12	104	138	138	25
Mindanao	2027	6	23	13	107	138	138	25
Mindanao	2027	6	23	14	112	138	138	25
Mindanao	2027	6	23	15	110	138	138	25
Mindanao	2027	6	23	16	109	138	138	25
Mindanao	2027	6	23	17	104	138	138	25
Mindanao	2027	6	23	18	104	138	138	25
Mindanao	2027	6	23	19	105	138	138	25
Mindanao	2027	6	23	20	100	138	138	25
Mindanao	2027	6	23	21	98	138	138	25
Mindanao	2027	6	23	22	92	138	138	25
Mindanao	2027	6	23	23	84	138	138	25
Mindanao	2027	6	23	24	82	138	138	25
Mindanao	2027	6	24	1	78	138	138	25
Mindanao	2027	6	24	2	75	138	138	25
Mindanao	2027	6	24	3	73	138	138	25
Mindanao	2027	6	24	4	73	138	138	25
Mindanao	2027	6	24	5	76	138	138	25
Mindanao	2027	6	24	6	80	138	138	25
Mindanao	2027	6	24	7	76	138	138	25
Mindanao	2027	6	24	8	81	138	138	25
Mindanao	2027	6	24	9	91	138	138	25
Mindanao	2027	6	24	10	100	138	138	25
Mindanao	2027	6	24	11	103	138	138	25
Mindanao	2027	6	24	12	101	138	138	25
Mindanao	2027	6	24	13	103	138	138	25
Mindanao	2027	6	24	14	110	138	138	25
Mindanao	2027	6	24	15	110	138	138	25
Mindanao	2027	6	24	16	109	138	138	25
Mindanao	2027	6	24	17	103	138	138	25
Mindanao	2027	6	24	18	106	138	138	25
Mindanao	2027	6	24	19	109	138	138	25
Mindanao	2027	6	24	20	106	138	138	25
Mindanao	2027	6	24	21	102	138	138	25
Mindanao	2027	6	24	22	94	138	138	25
Mindanao	2027	6	24	23	90	138	138	25
Mindanao	2027	6	24	24	84	138	138	25
Mindanao	2027	6	25	1	80	138	138	25
Mindanao	2027	6	25	2	78	138	138	25
Mindanao	2027	6	25	3	74	138	138	25
Mindanao	2027	6	25	4	75	138	138	25
Mindanao	2027	6	25	5	77	138	138	25
Mindanao	2027	6	25	6	79	138	138	25
Mindanao	2027	6	25	7	77	138	138	25
Mindanao	2027	6	25	8	86	138	138	25
Mindanao	2027	6	25	9	97	138	138	25
Mindanao	2027	6	25	10	104	138	138	25
Mindanao	2027	6	25	11	109	138	138	25
Mindanao	2027	6	25	12	109	138	138	25
Mindanao	2027	6	25	13	112	138	138	25
Mindanao	2027	6	25	14	115	138	138	25
Mindanao	2027	6	25	15	117	138	138	25
Mindanao	2027	6	25	16	115	138	138	25
Mindanao	2027	6	25	17	110	138	138	25
Mindanao	2027	6	25	18	109	138	138	25
Mindanao	2027	6	25	19	111	138	138	25
Mindanao	2027	6	25	20	107	138	138	25
Mindanao	2027	6	25	21	104	138	138	25
Mindanao	2027	6	25	22	99	138	138	25
Mindanao	2027	6	25	23	94	138	138	25
Mindanao	2027	6	25	24	88	138	138	25
Mindanao	2027	6	26	1	84	138	138	25
Mindanao	2027	6	26	2	81	138	138	25
Mindanao	2027	6	26	3	79	138	138	25
Mindanao	2027	6	26	4	78	138	138	25
Mindanao	2027	6	26	5	78	138	138	25
Mindanao	2027	6	26	6	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	26	7	79	138	138	25
Mindanao	2027	6	26	8	81	138	138	25
Mindanao	2027	6	26	9	87	138	138	25
Mindanao	2027	6	26	10	92	138	138	25
Mindanao	2027	6	26	11	97	138	138	25
Mindanao	2027	6	26	12	96	138	138	25
Mindanao	2027	6	26	13	98	138	138	25
Mindanao	2027	6	26	14	102	138	138	25
Mindanao	2027	6	26	15	101	138	138	25
Mindanao	2027	6	26	16	99	138	138	25
Mindanao	2027	6	26	17	98	138	138	25
Mindanao	2027	6	26	18	103	138	138	25
Mindanao	2027	6	26	19	103	138	138	25
Mindanao	2027	6	26	20	100	138	138	25
Mindanao	2027	6	26	21	95	138	138	25
Mindanao	2027	6	26	22	92	138	138	25
Mindanao	2027	6	26	23	87	138	138	25
Mindanao	2027	6	26	24	81	138	138	25
Mindanao	2027	6	27	1	79	138	138	25
Mindanao	2027	6	27	2	76	138	138	25
Mindanao	2027	6	27	3	73	138	138	25
Mindanao	2027	6	27	4	73	138	138	25
Mindanao	2027	6	27	5	74	138	138	25
Mindanao	2027	6	27	6	74	138	138	25
Mindanao	2027	6	27	7	73	138	138	25
Mindanao	2027	6	27	8	74	138	138	25
Mindanao	2027	6	27	9	78	138	138	25
Mindanao	2027	6	27	10	81	138	138	25
Mindanao	2027	6	27	11	85	138	138	25
Mindanao	2027	6	27	12	86	138	138	25
Mindanao	2027	6	27	13	86	138	138	25
Mindanao	2027	6	27	14	85	138	138	25
Mindanao	2027	6	27	15	85	138	138	25
Mindanao	2027	6	27	16	87	138	138	25
Mindanao	2027	6	27	17	88	138	138	25
Mindanao	2027	6	27	18	95	138	138	25
Mindanao	2027	6	27	19	99	138	138	25
Mindanao	2027	6	27	20	98	138	138	25
Mindanao	2027	6	27	21	95	138	138	25
Mindanao	2027	6	27	22	90	138	138	25
Mindanao	2027	6	27	23	85	138	138	25
Mindanao	2027	6	27	24	82	138	138	25
Mindanao	2027	6	28	1	79	138	138	25
Mindanao	2027	6	28	2	75	138	138	25
Mindanao	2027	6	28	3	72	138	138	25
Mindanao	2027	6	28	4	72	138	138	25
Mindanao	2027	6	28	5	76	138	138	25
Mindanao	2027	6	28	6	79	138	138	25
Mindanao	2027	6	28	7	74	138	138	25
Mindanao	2027	6	28	8	85	138	138	25
Mindanao	2027	6	28	9	98	138	138	25
Mindanao	2027	6	28	10	105	138	138	25
Mindanao	2027	6	28	11	110	138	138	25
Mindanao	2027	6	28	12	110	138	138	25
Mindanao	2027	6	28	13	110	138	138	25
Mindanao	2027	6	28	14	116	138	138	25
Mindanao	2027	6	28	15	116	138	138	25
Mindanao	2027	6	28	16	113	138	138	25
Mindanao	2027	6	28	17	106	138	138	25
Mindanao	2027	6	28	18	107	138	138	25
Mindanao	2027	6	28	19	112	138	138	25
Mindanao	2027	6	28	20	108	138	138	25
Mindanao	2027	6	28	21	104	138	138	25
Mindanao	2027	6	28	22	97	138	138	25
Mindanao	2027	6	28	23	92	138	138	25
Mindanao	2027	6	28	24	87	138	138	25
Mindanao	2027	6	29	1	84	138	138	25
Mindanao	2027	6	29	2	81	138	138	25
Mindanao	2027	6	29	3	79	138	138	25
Mindanao	2027	6	29	4	78	138	138	25
Mindanao	2027	6	29	5	79	138	138	25
Mindanao	2027	6	29	6	82	138	138	25
Mindanao	2027	6	29	7	78	138	138	25
Mindanao	2027	6	29	8	86	138	138	25
Mindanao	2027	6	29	9	99	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	6	29	10	110	138	138	25
Mindanao	2027	6	29	11	115	138	138	25
Mindanao	2027	6	29	12	113	138	138	25
Mindanao	2027	6	29	13	113	138	138	25
Mindanao	2027	6	29	14	119	138	138	25
Mindanao	2027	6	29	15	120	138	138	25
Mindanao	2027	6	29	16	117	138	138	25
Mindanao	2027	6	29	17	110	138	138	25
Mindanao	2027	6	29	18	109	138	138	25
Mindanao	2027	6	29	19	110	138	138	25
Mindanao	2027	6	29	20	109	138	138	25
Mindanao	2027	6	29	21	105	138	138	25
Mindanao	2027	6	29	22	98	138	138	25
Mindanao	2027	6	29	23	93	138	138	25
Mindanao	2027	6	29	24	88	138	138	25
Mindanao	2027	6	30	1	83	138	138	25
Mindanao	2027	6	30	2	80	138	138	25
Mindanao	2027	6	30	3	77	138	138	25
Mindanao	2027	6	30	4	77	138	138	25
Mindanao	2027	6	30	5	78	138	138	25
Mindanao	2027	6	30	6	76	138	138	25
Mindanao	2027	6	30	7	75	138	138	25
Mindanao	2027	6	30	8	79	138	138	25
Mindanao	2027	6	30	9	86	138	138	25
Mindanao	2027	6	30	10	94	138	138	25
Mindanao	2027	6	30	11	99	138	138	25
Mindanao	2027	6	30	12	98	138	138	25
Mindanao	2027	6	30	13	100	138	138	25
Mindanao	2027	6	30	14	106	138	138	25
Mindanao	2027	6	30	15	103	138	138	25
Mindanao	2027	6	30	16	102	138	138	25
Mindanao	2027	6	30	17	101	138	138	25
Mindanao	2027	6	30	18	105	138	138	25
Mindanao	2027	6	30	19	107	138	138	25
Mindanao	2027	6	30	20	105	138	138	25
Mindanao	2027	6	30	21	102	138	138	25
Mindanao	2027	6	30	22	94	138	138	25
Mindanao	2027	6	30	23	89	138	138	25
Mindanao	2027	6	30	24	82	138	138	25
Mindanao	2027	7	1	1	79	138	138	25
Mindanao	2027	7	1	2	78	138	138	25
Mindanao	2027	7	1	3	76	138	138	25
Mindanao	2027	7	1	4	75	138	138	25
Mindanao	2027	7	1	5	80	138	138	25
Mindanao	2027	7	1	6	83	138	138	25
Mindanao	2027	7	1	7	78	138	138	25
Mindanao	2027	7	1	8	87	138	138	25
Mindanao	2027	7	1	9	100	138	138	25
Mindanao	2027	7	1	10	108	138	138	25
Mindanao	2027	7	1	11	112	138	138	25
Mindanao	2027	7	1	12	111	138	138	25
Mindanao	2027	7	1	13	114	138	138	25
Mindanao	2027	7	1	14	119	138	138	25
Mindanao	2027	7	1	15	120	138	138	25
Mindanao	2027	7	1	16	117	138	138	25
Mindanao	2027	7	1	17	110	138	138	25
Mindanao	2027	7	1	18	111	138	138	25
Mindanao	2027	7	1	19	111	138	138	25
Mindanao	2027	7	1	20	110	138	138	25
Mindanao	2027	7	1	21	104	138	138	25
Mindanao	2027	7	1	22	97	138	138	25
Mindanao	2027	7	1	23	90	138	138	25
Mindanao	2027	7	1	24	87	138	138	25
Mindanao	2027	7	2	1	83	138	138	25
Mindanao	2027	7	2	2	80	138	138	25
Mindanao	2027	7	2	3	77	138	138	25
Mindanao	2027	7	2	4	76	138	138	25
Mindanao	2027	7	2	5	80	138	138	25
Mindanao	2027	7	2	6	81	138	138	25
Mindanao	2027	7	2	7	77	138	138	25
Mindanao	2027	7	2	8	86	138	138	25
Mindanao	2027	7	2	9	99	138	138	25
Mindanao	2027	7	2	10	106	138	138	25
Mindanao	2027	7	2	11	112	138	138	25
Mindanao	2027	7	2	12	111	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	2	13	113	138	138	25
Mindanao	2027	7	2	14	117	138	138	25
Mindanao	2027	7	2	15	117	138	138	25
Mindanao	2027	7	2	16	114	138	138	25
Mindanao	2027	7	2	17	107	138	138	25
Mindanao	2027	7	2	18	109	138	138	25
Mindanao	2027	7	2	19	112	138	138	25
Mindanao	2027	7	2	20	108	138	138	25
Mindanao	2027	7	2	21	106	138	138	25
Mindanao	2027	7	2	22	101	138	138	25
Mindanao	2027	7	2	23	96	138	138	25
Mindanao	2027	7	2	24	90	138	138	25
Mindanao	2027	7	3	1	86	138	138	25
Mindanao	2027	7	3	2	84	138	138	25
Mindanao	2027	7	3	3	79	138	138	25
Mindanao	2027	7	3	4	77	138	138	25
Mindanao	2027	7	3	5	79	138	138	25
Mindanao	2027	7	3	6	81	138	138	25
Mindanao	2027	7	3	7	78	138	138	25
Mindanao	2027	7	3	8	83	138	138	25
Mindanao	2027	7	3	9	92	138	138	25
Mindanao	2027	7	3	10	97	138	138	25
Mindanao	2027	7	3	11	101	138	138	25
Mindanao	2027	7	3	12	101	138	138	25
Mindanao	2027	7	3	13	103	138	138	25
Mindanao	2027	7	3	14	105	138	138	25
Mindanao	2027	7	3	15	103	138	138	25
Mindanao	2027	7	3	16	104	138	138	25
Mindanao	2027	7	3	17	98	138	138	25
Mindanao	2027	7	3	18	103	138	138	25
Mindanao	2027	7	3	19	106	138	138	25
Mindanao	2027	7	3	20	103	138	138	25
Mindanao	2027	7	3	21	101	138	138	25
Mindanao	2027	7	3	22	97	138	138	25
Mindanao	2027	7	3	23	90	138	138	25
Mindanao	2027	7	3	24	86	138	138	25
Mindanao	2027	7	4	1	82	138	138	25
Mindanao	2027	7	4	2	80	138	138	25
Mindanao	2027	7	4	3	76	138	138	25
Mindanao	2027	7	4	4	74	138	138	25
Mindanao	2027	7	4	5	75	138	138	25
Mindanao	2027	7	4	6	74	138	138	25
Mindanao	2027	7	4	7	71	138	138	25
Mindanao	2027	7	4	8	73	138	138	25
Mindanao	2027	7	4	9	78	138	138	25
Mindanao	2027	7	4	10	83	138	138	25
Mindanao	2027	7	4	11	87	138	138	25
Mindanao	2027	7	4	12	89	138	138	25
Mindanao	2027	7	4	13	90	138	138	25
Mindanao	2027	7	4	14	91	138	138	25
Mindanao	2027	7	4	15	92	138	138	25
Mindanao	2027	7	4	16	90	138	138	25
Mindanao	2027	7	4	17	89	138	138	25
Mindanao	2027	7	4	18	97	138	138	25
Mindanao	2027	7	4	19	104	138	138	25
Mindanao	2027	7	4	20	102	138	138	25
Mindanao	2027	7	4	21	100	138	138	25
Mindanao	2027	7	4	22	95	138	138	25
Mindanao	2027	7	4	23	90	138	138	25
Mindanao	2027	7	4	24	86	138	138	25
Mindanao	2027	7	5	1	80	138	138	25
Mindanao	2027	7	5	2	77	138	138	25
Mindanao	2027	7	5	3	76	138	138	25
Mindanao	2027	7	5	4	74	138	138	25
Mindanao	2027	7	5	5	77	138	138	25
Mindanao	2027	7	5	6	79	138	138	25
Mindanao	2027	7	5	7	78	138	138	25
Mindanao	2027	7	5	8	85	138	138	25
Mindanao	2027	7	5	9	96	138	138	25
Mindanao	2027	7	5	10	102	138	138	25
Mindanao	2027	7	5	11	107	138	138	25
Mindanao	2027	7	5	12	105	138	138	25
Mindanao	2027	7	5	13	106	138	138	25
Mindanao	2027	7	5	14	110	138	138	25
Mindanao	2027	7	5	15	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	5	16	110	138	138	25
Mindanao	2027	7	5	17	104	138	138	25
Mindanao	2027	7	5	18	106	138	138	25
Mindanao	2027	7	5	19	108	138	138	25
Mindanao	2027	7	5	20	103	138	138	25
Mindanao	2027	7	5	21	99	138	138	25
Mindanao	2027	7	5	22	95	138	138	25
Mindanao	2027	7	5	23	90	138	138	25
Mindanao	2027	7	5	24	85	138	138	25
Mindanao	2027	7	6	1	82	138	138	25
Mindanao	2027	7	6	2	79	138	138	25
Mindanao	2027	7	6	3	75	138	138	25
Mindanao	2027	7	6	4	75	138	138	25
Mindanao	2027	7	6	5	78	138	138	25
Mindanao	2027	7	6	6	80	138	138	25
Mindanao	2027	7	6	7	79	138	138	25
Mindanao	2027	7	6	8	87	138	138	25
Mindanao	2027	7	6	9	98	138	138	25
Mindanao	2027	7	6	10	104	138	138	25
Mindanao	2027	7	6	11	108	138	138	25
Mindanao	2027	7	6	12	108	138	138	25
Mindanao	2027	7	6	13	109	138	138	25
Mindanao	2027	7	6	14	111	138	138	25
Mindanao	2027	7	6	15	113	138	138	25
Mindanao	2027	7	6	16	110	138	138	25
Mindanao	2027	7	6	17	103	138	138	25
Mindanao	2027	7	6	18	104	138	138	25
Mindanao	2027	7	6	19	105	138	138	25
Mindanao	2027	7	6	20	103	138	138	25
Mindanao	2027	7	6	21	99	138	138	25
Mindanao	2027	7	6	22	93	138	138	25
Mindanao	2027	7	6	23	88	138	138	25
Mindanao	2027	7	6	24	83	138	138	25
Mindanao	2027	7	7	1	78	138	138	25
Mindanao	2027	7	7	2	76	138	138	25
Mindanao	2027	7	7	3	73	138	138	25
Mindanao	2027	7	7	4	72	138	138	25
Mindanao	2027	7	7	5	75	138	138	25
Mindanao	2027	7	7	6	79	138	138	25
Mindanao	2027	7	7	7	77	138	138	25
Mindanao	2027	7	7	8	83	138	138	25
Mindanao	2027	7	7	9	93	138	138	25
Mindanao	2027	7	7	10	103	138	138	25
Mindanao	2027	7	7	11	106	138	138	25
Mindanao	2027	7	7	12	107	138	138	25
Mindanao	2027	7	7	13	110	138	138	25
Mindanao	2027	7	7	14	115	138	138	25
Mindanao	2027	7	7	15	116	138	138	25
Mindanao	2027	7	7	16	115	138	138	25
Mindanao	2027	7	7	17	109	138	138	25
Mindanao	2027	7	7	18	109	138	138	25
Mindanao	2027	7	7	19	113	138	138	25
Mindanao	2027	7	7	20	111	138	138	25
Mindanao	2027	7	7	21	107	138	138	25
Mindanao	2027	7	7	22	101	138	138	25
Mindanao	2027	7	7	23	97	138	138	25
Mindanao	2027	7	7	24	90	138	138	25
Mindanao	2027	7	8	1	86	138	138	25
Mindanao	2027	7	8	2	81	138	138	25
Mindanao	2027	7	8	3	80	138	138	25
Mindanao	2027	7	8	4	79	138	138	25
Mindanao	2027	7	8	5	82	138	138	25
Mindanao	2027	7	8	6	83	138	138	25
Mindanao	2027	7	8	7	81	138	138	25
Mindanao	2027	7	8	8	91	138	138	25
Mindanao	2027	7	8	9	107	138	138	25
Mindanao	2027	7	8	10	113	138	138	25
Mindanao	2027	7	8	11	119	138	138	25
Mindanao	2027	7	8	12	118	138	138	25
Mindanao	2027	7	8	13	120	138	138	25
Mindanao	2027	7	8	14	123	138	138	25
Mindanao	2027	7	8	15	120	138	138	25
Mindanao	2027	7	8	16	118	138	138	25
Mindanao	2027	7	8	17	109	138	138	25
Mindanao	2027	7	8	18	109	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	8	19	110	138	138	25
Mindanao	2027	7	8	20	108	138	138	25
Mindanao	2027	7	8	21	105	138	138	25
Mindanao	2027	7	8	22	99	138	138	25
Mindanao	2027	7	8	23	95	138	138	25
Mindanao	2027	7	8	24	89	138	138	25
Mindanao	2027	7	9	1	84	138	138	25
Mindanao	2027	7	9	2	83	138	138	25
Mindanao	2027	7	9	3	79	138	138	25
Mindanao	2027	7	9	4	78	138	138	25
Mindanao	2027	7	9	5	80	138	138	25
Mindanao	2027	7	9	6	84	138	138	25
Mindanao	2027	7	9	7	82	138	138	25
Mindanao	2027	7	9	8	92	138	138	25
Mindanao	2027	7	9	9	105	138	138	25
Mindanao	2027	7	9	10	112	138	138	25
Mindanao	2027	7	9	11	118	138	138	25
Mindanao	2027	7	9	12	115	138	138	25
Mindanao	2027	7	9	13	117	138	138	25
Mindanao	2027	7	9	14	122	138	138	25
Mindanao	2027	7	9	15	121	138	138	25
Mindanao	2027	7	9	16	119	138	138	25
Mindanao	2027	7	9	17	109	138	138	25
Mindanao	2027	7	9	18	107	138	138	25
Mindanao	2027	7	9	19	113	138	138	25
Mindanao	2027	7	9	20	111	138	138	25
Mindanao	2027	7	9	21	106	138	138	25
Mindanao	2027	7	9	22	103	138	138	25
Mindanao	2027	7	9	23	96	138	138	25
Mindanao	2027	7	9	24	91	138	138	25
Mindanao	2027	7	10	1	87	138	138	25
Mindanao	2027	7	10	2	84	138	138	25
Mindanao	2027	7	10	3	81	138	138	25
Mindanao	2027	7	10	4	79	138	138	25
Mindanao	2027	7	10	5	80	138	138	25
Mindanao	2027	7	10	6	81	138	138	25
Mindanao	2027	7	10	7	77	138	138	25
Mindanao	2027	7	10	8	84	138	138	25
Mindanao	2027	7	10	9	91	138	138	25
Mindanao	2027	7	10	10	99	138	138	25
Mindanao	2027	7	10	11	103	138	138	25
Mindanao	2027	7	10	12	102	138	138	25
Mindanao	2027	7	10	13	103	138	138	25
Mindanao	2027	7	10	14	105	138	138	25
Mindanao	2027	7	10	15	102	138	138	25
Mindanao	2027	7	10	16	101	138	138	25
Mindanao	2027	7	10	17	98	138	138	25
Mindanao	2027	7	10	18	102	138	138	25
Mindanao	2027	7	10	19	104	138	138	25
Mindanao	2027	7	10	20	102	138	138	25
Mindanao	2027	7	10	21	99	138	138	25
Mindanao	2027	7	10	22	94	138	138	25
Mindanao	2027	7	10	23	88	138	138	25
Mindanao	2027	7	10	24	83	138	138	25
Mindanao	2027	7	11	1	80	138	138	25
Mindanao	2027	7	11	2	79	138	138	25
Mindanao	2027	7	11	3	75	138	138	25
Mindanao	2027	7	11	4	74	138	138	25
Mindanao	2027	7	11	5	74	138	138	25
Mindanao	2027	7	11	6	76	138	138	25
Mindanao	2027	7	11	7	73	138	138	25
Mindanao	2027	7	11	8	74	138	138	25
Mindanao	2027	7	11	9	79	138	138	25
Mindanao	2027	7	11	10	85	138	138	25
Mindanao	2027	7	11	11	89	138	138	25
Mindanao	2027	7	11	12	91	138	138	25
Mindanao	2027	7	11	13	92	138	138	25
Mindanao	2027	7	11	14	93	138	138	25
Mindanao	2027	7	11	15	92	138	138	25
Mindanao	2027	7	11	16	89	138	138	25
Mindanao	2027	7	11	17	91	138	138	25
Mindanao	2027	7	11	18	97	138	138	25
Mindanao	2027	7	11	19	100	138	138	25
Mindanao	2027	7	11	20	96	138	138	25
Mindanao	2027	7	11	21	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	11	22	88	138	138	25
Mindanao	2027	7	11	23	83	138	138	25
Mindanao	2027	7	11	24	79	138	138	25
Mindanao	2027	7	12	1	76	138	138	25
Mindanao	2027	7	12	2	74	138	138	25
Mindanao	2027	7	12	3	72	138	138	25
Mindanao	2027	7	12	4	71	138	138	25
Mindanao	2027	7	12	5	73	138	138	25
Mindanao	2027	7	12	6	77	138	138	25
Mindanao	2027	7	12	7	77	138	138	25
Mindanao	2027	7	12	8	85	138	138	25
Mindanao	2027	7	12	9	98	138	138	25
Mindanao	2027	7	12	10	108	138	138	25
Mindanao	2027	7	12	11	114	138	138	25
Mindanao	2027	7	12	12	113	138	138	25
Mindanao	2027	7	12	13	115	138	138	25
Mindanao	2027	7	12	14	119	138	138	25
Mindanao	2027	7	12	15	118	138	138	25
Mindanao	2027	7	12	16	117	138	138	25
Mindanao	2027	7	12	17	110	138	138	25
Mindanao	2027	7	12	18	109	138	138	25
Mindanao	2027	7	12	19	109	138	138	25
Mindanao	2027	7	12	20	107	138	138	25
Mindanao	2027	7	12	21	105	138	138	25
Mindanao	2027	7	12	22	100	138	138	25
Mindanao	2027	7	12	23	95	138	138	25
Mindanao	2027	7	12	24	90	138	138	25
Mindanao	2027	7	13	1	85	138	138	25
Mindanao	2027	7	13	2	84	138	138	25
Mindanao	2027	7	13	3	80	138	138	25
Mindanao	2027	7	13	4	78	138	138	25
Mindanao	2027	7	13	5	81	138	138	25
Mindanao	2027	7	13	6	83	138	138	25
Mindanao	2027	7	13	7	80	138	138	25
Mindanao	2027	7	13	8	90	138	138	25
Mindanao	2027	7	13	9	103	138	138	25
Mindanao	2027	7	13	10	110	138	138	25
Mindanao	2027	7	13	11	117	138	138	25
Mindanao	2027	7	13	12	115	138	138	25
Mindanao	2027	7	13	13	116	138	138	25
Mindanao	2027	7	13	14	119	138	138	25
Mindanao	2027	7	13	15	118	138	138	25
Mindanao	2027	7	13	16	117	138	138	25
Mindanao	2027	7	13	17	109	138	138	25
Mindanao	2027	7	13	18	107	138	138	25
Mindanao	2027	7	13	19	110	138	138	25
Mindanao	2027	7	13	20	108	138	138	25
Mindanao	2027	7	13	21	104	138	138	25
Mindanao	2027	7	13	22	99	138	138	25
Mindanao	2027	7	13	23	95	138	138	25
Mindanao	2027	7	13	24	89	138	138	25
Mindanao	2027	7	14	1	85	138	138	25
Mindanao	2027	7	14	2	83	138	138	25
Mindanao	2027	7	14	3	81	138	138	25
Mindanao	2027	7	14	4	80	138	138	25
Mindanao	2027	7	14	5	81	138	138	25
Mindanao	2027	7	14	6	82	138	138	25
Mindanao	2027	7	14	7	81	138	138	25
Mindanao	2027	7	14	8	89	138	138	25
Mindanao	2027	7	14	9	100	138	138	25
Mindanao	2027	7	14	10	108	138	138	25
Mindanao	2027	7	14	11	112	138	138	25
Mindanao	2027	7	14	12	111	138	138	25
Mindanao	2027	7	14	13	111	138	138	25
Mindanao	2027	7	14	14	115	138	138	25
Mindanao	2027	7	14	15	114	138	138	25
Mindanao	2027	7	14	16	110	138	138	25
Mindanao	2027	7	14	17	104	138	138	25
Mindanao	2027	7	14	18	104	138	138	25
Mindanao	2027	7	14	19	106	138	138	25
Mindanao	2027	7	14	20	104	138	138	25
Mindanao	2027	7	14	21	100	138	138	25
Mindanao	2027	7	14	22	95	138	138	25
Mindanao	2027	7	14	23	90	138	138	25
Mindanao	2027	7	14	24	86	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	15	1	80	138	138	25
Mindanao	2027	7	15	2	76	138	138	25
Mindanao	2027	7	15	3	72	138	138	25
Mindanao	2027	7	15	4	72	138	138	25
Mindanao	2027	7	15	5	74	138	138	25
Mindanao	2027	7	15	6	77	138	138	25
Mindanao	2027	7	15	7	79	138	138	25
Mindanao	2027	7	15	8	87	138	138	25
Mindanao	2027	7	15	9	99	138	138	25
Mindanao	2027	7	15	10	106	138	138	25
Mindanao	2027	7	15	11	110	138	138	25
Mindanao	2027	7	15	12	108	138	138	25
Mindanao	2027	7	15	13	107	138	138	25
Mindanao	2027	7	15	14	110	138	138	25
Mindanao	2027	7	15	15	105	138	138	25
Mindanao	2027	7	15	16	103	138	138	25
Mindanao	2027	7	15	17	98	138	138	25
Mindanao	2027	7	15	18	100	138	138	25
Mindanao	2027	7	15	19	104	138	138	25
Mindanao	2027	7	15	20	101	138	138	25
Mindanao	2027	7	15	21	99	138	138	25
Mindanao	2027	7	15	22	93	138	138	25
Mindanao	2027	7	15	23	89	138	138	25
Mindanao	2027	7	15	24	85	138	138	25
Mindanao	2027	7	16	1	79	138	138	25
Mindanao	2027	7	16	2	77	138	138	25
Mindanao	2027	7	16	3	76	138	138	25
Mindanao	2027	7	16	4	74	138	138	25
Mindanao	2027	7	16	5	77	138	138	25
Mindanao	2027	7	16	6	79	138	138	25
Mindanao	2027	7	16	7	77	138	138	25
Mindanao	2027	7	16	8	87	138	138	25
Mindanao	2027	7	16	9	100	138	138	25
Mindanao	2027	7	16	10	106	138	138	25
Mindanao	2027	7	16	11	112	138	138	25
Mindanao	2027	7	16	12	110	138	138	25
Mindanao	2027	7	16	13	112	138	138	25
Mindanao	2027	7	16	14	115	138	138	25
Mindanao	2027	7	16	15	110	138	138	25
Mindanao	2027	7	16	16	110	138	138	25
Mindanao	2027	7	16	17	103	138	138	25
Mindanao	2027	7	16	18	102	138	138	25
Mindanao	2027	7	16	19	103	138	138	25
Mindanao	2027	7	16	20	101	138	138	25
Mindanao	2027	7	16	21	97	138	138	25
Mindanao	2027	7	16	22	93	138	138	25
Mindanao	2027	7	16	23	89	138	138	25
Mindanao	2027	7	16	24	84	138	138	25
Mindanao	2027	7	17	1	80	138	138	25
Mindanao	2027	7	17	2	77	138	138	25
Mindanao	2027	7	17	3	76	138	138	25
Mindanao	2027	7	17	4	73	138	138	25
Mindanao	2027	7	17	5	75	138	138	25
Mindanao	2027	7	17	6	76	138	138	25
Mindanao	2027	7	17	7	75	138	138	25
Mindanao	2027	7	17	8	80	138	138	25
Mindanao	2027	7	17	9	89	138	138	25
Mindanao	2027	7	17	10	97	138	138	25
Mindanao	2027	7	17	11	100	138	138	25
Mindanao	2027	7	17	12	101	138	138	25
Mindanao	2027	7	17	13	104	138	138	25
Mindanao	2027	7	17	14	107	138	138	25
Mindanao	2027	7	17	15	106	138	138	25
Mindanao	2027	7	17	16	103	138	138	25
Mindanao	2027	7	17	17	98	138	138	25
Mindanao	2027	7	17	18	104	138	138	25
Mindanao	2027	7	17	19	107	138	138	25
Mindanao	2027	7	17	20	103	138	138	25
Mindanao	2027	7	17	21	101	138	138	25
Mindanao	2027	7	17	22	95	138	138	25
Mindanao	2027	7	17	23	91	138	138	25
Mindanao	2027	7	17	24	86	138	138	25
Mindanao	2027	7	18	1	82	138	138	25
Mindanao	2027	7	18	2	81	138	138	25
Mindanao	2027	7	18	3	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	18	4	77	138	138	25
Mindanao	2027	7	18	5	75	138	138	25
Mindanao	2027	7	18	6	75	138	138	25
Mindanao	2027	7	18	7	76	138	138	25
Mindanao	2027	7	18	8	73	138	138	25
Mindanao	2027	7	18	9	81	138	138	25
Mindanao	2027	7	18	10	84	138	138	25
Mindanao	2027	7	18	11	88	138	138	25
Mindanao	2027	7	18	12	85	138	138	25
Mindanao	2027	7	18	13	87	138	138	25
Mindanao	2027	7	18	14	88	138	138	25
Mindanao	2027	7	18	15	88	138	138	25
Mindanao	2027	7	18	16	86	138	138	25
Mindanao	2027	7	18	17	86	138	138	25
Mindanao	2027	7	18	18	92	138	138	25
Mindanao	2027	7	18	19	98	138	138	25
Mindanao	2027	7	18	20	98	138	138	25
Mindanao	2027	7	18	21	96	138	138	25
Mindanao	2027	7	18	22	91	138	138	25
Mindanao	2027	7	18	23	87	138	138	25
Mindanao	2027	7	18	24	83	138	138	25
Mindanao	2027	7	19	1	79	138	138	25
Mindanao	2027	7	19	2	77	138	138	25
Mindanao	2027	7	19	3	74	138	138	25
Mindanao	2027	7	19	4	73	138	138	25
Mindanao	2027	7	19	5	75	138	138	25
Mindanao	2027	7	19	6	77	138	138	25
Mindanao	2027	7	19	7	79	138	138	25
Mindanao	2027	7	19	8	88	138	138	25
Mindanao	2027	7	19	9	99	138	138	25
Mindanao	2027	7	19	10	107	138	138	25
Mindanao	2027	7	19	11	116	138	138	25
Mindanao	2027	7	19	12	116	138	138	25
Mindanao	2027	7	19	13	117	138	138	25
Mindanao	2027	7	19	14	120	138	138	25
Mindanao	2027	7	19	15	120	138	138	25
Mindanao	2027	7	19	16	117	138	138	25
Mindanao	2027	7	19	17	110	138	138	25
Mindanao	2027	7	19	18	109	138	138	25
Mindanao	2027	7	19	19	113	138	138	25
Mindanao	2027	7	19	20	111	138	138	25
Mindanao	2027	7	19	21	107	138	138	25
Mindanao	2027	7	19	22	103	138	138	25
Mindanao	2027	7	19	23	96	138	138	25
Mindanao	2027	7	19	24	91	138	138	25
Mindanao	2027	7	20	1	86	138	138	25
Mindanao	2027	7	20	2	84	138	138	25
Mindanao	2027	7	20	3	82	138	138	25
Mindanao	2027	7	20	4	80	138	138	25
Mindanao	2027	7	20	5	81	138	138	25
Mindanao	2027	7	20	6	84	138	138	25
Mindanao	2027	7	20	7	83	138	138	25
Mindanao	2027	7	20	8	91	138	138	25
Mindanao	2027	7	20	9	100	138	138	25
Mindanao	2027	7	20	10	105	138	138	25
Mindanao	2027	7	20	11	107	138	138	25
Mindanao	2027	7	20	12	105	138	138	25
Mindanao	2027	7	20	13	108	138	138	25
Mindanao	2027	7	20	14	111	138	138	25
Mindanao	2027	7	20	15	110	138	138	25
Mindanao	2027	7	20	16	108	138	138	25
Mindanao	2027	7	20	17	105	138	138	25
Mindanao	2027	7	20	18	106	138	138	25
Mindanao	2027	7	20	19	105	138	138	25
Mindanao	2027	7	20	20	103	138	138	25
Mindanao	2027	7	20	21	99	138	138	25
Mindanao	2027	7	20	22	91	138	138	25
Mindanao	2027	7	20	23	87	138	138	25
Mindanao	2027	7	20	24	83	138	138	25
Mindanao	2027	7	21	1	81	138	138	25
Mindanao	2027	7	21	2	78	138	138	25
Mindanao	2027	7	21	3	75	138	138	25
Mindanao	2027	7	21	4	75	138	138	25
Mindanao	2027	7	21	5	76	138	138	25
Mindanao	2027	7	21	6	79	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	21	7	80	138	138	25
Mindanao	2027	7	21	8	84	138	138	25
Mindanao	2027	7	21	9	92	138	138	25
Mindanao	2027	7	21	10	101	138	138	25
Mindanao	2027	7	21	11	103	138	138	25
Mindanao	2027	7	21	12	102	138	138	25
Mindanao	2027	7	21	13	103	138	138	25
Mindanao	2027	7	21	14	108	138	138	25
Mindanao	2027	7	21	15	110	138	138	25
Mindanao	2027	7	21	16	108	138	138	25
Mindanao	2027	7	21	17	101	138	138	25
Mindanao	2027	7	21	18	103	138	138	25
Mindanao	2027	7	21	19	107	138	138	25
Mindanao	2027	7	21	20	103	138	138	25
Mindanao	2027	7	21	21	100	138	138	25
Mindanao	2027	7	21	22	95	138	138	25
Mindanao	2027	7	21	23	88	138	138	25
Mindanao	2027	7	21	24	86	138	138	25
Mindanao	2027	7	22	1	82	138	138	25
Mindanao	2027	7	22	2	78	138	138	25
Mindanao	2027	7	22	3	78	138	138	25
Mindanao	2027	7	22	4	75	138	138	25
Mindanao	2027	7	22	5	77	138	138	25
Mindanao	2027	7	22	6	81	138	138	25
Mindanao	2027	7	22	7	81	138	138	25
Mindanao	2027	7	22	8	90	138	138	25
Mindanao	2027	7	22	9	102	138	138	25
Mindanao	2027	7	22	10	110	138	138	25
Mindanao	2027	7	22	11	115	138	138	25
Mindanao	2027	7	22	12	114	138	138	25
Mindanao	2027	7	22	13	115	138	138	25
Mindanao	2027	7	22	14	121	138	138	25
Mindanao	2027	7	22	15	120	138	138	25
Mindanao	2027	7	22	16	118	138	138	25
Mindanao	2027	7	22	17	111	138	138	25
Mindanao	2027	7	22	18	110	138	138	25
Mindanao	2027	7	22	19	113	138	138	25
Mindanao	2027	7	22	20	111	138	138	25
Mindanao	2027	7	22	21	106	138	138	25
Mindanao	2027	7	22	22	101	138	138	25
Mindanao	2027	7	22	23	95	138	138	25
Mindanao	2027	7	22	24	90	138	138	25
Mindanao	2027	7	23	1	86	138	138	25
Mindanao	2027	7	23	2	83	138	138	25
Mindanao	2027	7	23	3	79	138	138	25
Mindanao	2027	7	23	4	78	138	138	25
Mindanao	2027	7	23	5	80	138	138	25
Mindanao	2027	7	23	6	83	138	138	25
Mindanao	2027	7	23	7	81	138	138	25
Mindanao	2027	7	23	8	91	138	138	25
Mindanao	2027	7	23	9	103	138	138	25
Mindanao	2027	7	23	10	111	138	138	25
Mindanao	2027	7	23	11	114	138	138	25
Mindanao	2027	7	23	12	114	138	138	25
Mindanao	2027	7	23	13	115	138	138	25
Mindanao	2027	7	23	14	121	138	138	25
Mindanao	2027	7	23	15	121	138	138	25
Mindanao	2027	7	23	16	118	138	138	25
Mindanao	2027	7	23	17	111	138	138	25
Mindanao	2027	7	23	18	110	138	138	25
Mindanao	2027	7	23	19	113	138	138	25
Mindanao	2027	7	23	20	110	138	138	25
Mindanao	2027	7	23	21	108	138	138	25
Mindanao	2027	7	23	22	102	138	138	25
Mindanao	2027	7	23	23	96	138	138	25
Mindanao	2027	7	23	24	82	138	138	25
Mindanao	2027	7	24	1	84	138	138	25
Mindanao	2027	7	24	2	82	138	138	25
Mindanao	2027	7	24	3	83	138	138	25
Mindanao	2027	7	24	4	81	138	138	25
Mindanao	2027	7	24	5	79	138	138	25
Mindanao	2027	7	24	6	82	138	138	25
Mindanao	2027	7	24	7	80	138	138	25
Mindanao	2027	7	24	8	83	138	138	25
Mindanao	2027	7	24	9	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	24	10	99	138	138	25
Mindanao	2027	7	24	11	102	138	138	25
Mindanao	2027	7	24	12	101	138	138	25
Mindanao	2027	7	24	13	100	138	138	25
Mindanao	2027	7	24	14	98	138	138	25
Mindanao	2027	7	24	15	97	138	138	25
Mindanao	2027	7	24	16	92	138	138	25
Mindanao	2027	7	24	17	91	138	138	25
Mindanao	2027	7	24	18	96	138	138	25
Mindanao	2027	7	24	19	99	138	138	25
Mindanao	2027	7	24	20	97	138	138	25
Mindanao	2027	7	24	21	95	138	138	25
Mindanao	2027	7	24	22	91	138	138	25
Mindanao	2027	7	24	23	86	138	138	25
Mindanao	2027	7	24	24	82	138	138	25
Mindanao	2027	7	25	1	79	138	138	25
Mindanao	2027	7	25	2	76	138	138	25
Mindanao	2027	7	25	3	74	138	138	25
Mindanao	2027	7	25	4	73	138	138	25
Mindanao	2027	7	25	5	74	138	138	25
Mindanao	2027	7	25	6	73	138	138	25
Mindanao	2027	7	25	7	72	138	138	25
Mindanao	2027	7	25	8	74	138	138	25
Mindanao	2027	7	25	9	75	138	138	25
Mindanao	2027	7	25	10	80	138	138	25
Mindanao	2027	7	25	11	83	138	138	25
Mindanao	2027	7	25	12	85	138	138	25
Mindanao	2027	7	25	13	85	138	138	25
Mindanao	2027	7	25	14	86	138	138	25
Mindanao	2027	7	25	15	85	138	138	25
Mindanao	2027	7	25	16	85	138	138	25
Mindanao	2027	7	25	17	86	138	138	25
Mindanao	2027	7	25	18	95	138	138	25
Mindanao	2027	7	25	19	99	138	138	25
Mindanao	2027	7	25	20	98	138	138	25
Mindanao	2027	7	25	21	97	138	138	25
Mindanao	2027	7	25	22	90	138	138	25
Mindanao	2027	7	25	23	86	138	138	25
Mindanao	2027	7	25	24	82	138	138	25
Mindanao	2027	7	26	1	80	138	138	25
Mindanao	2027	7	26	2	75	138	138	25
Mindanao	2027	7	26	3	73	138	138	25
Mindanao	2027	7	26	4	74	138	138	25
Mindanao	2027	7	26	5	73	138	138	25
Mindanao	2027	7	26	6	78	138	138	25
Mindanao	2027	7	26	7	76	138	138	25
Mindanao	2027	7	26	8	87	138	138	25
Mindanao	2027	7	26	9	101	138	138	25
Mindanao	2027	7	26	10	108	138	138	25
Mindanao	2027	7	26	11	112	138	138	25
Mindanao	2027	7	26	12	110	138	138	25
Mindanao	2027	7	26	13	110	138	138	25
Mindanao	2027	7	26	14	113	138	138	25
Mindanao	2027	7	26	15	111	138	138	25
Mindanao	2027	7	26	16	110	138	138	25
Mindanao	2027	7	26	17	104	138	138	25
Mindanao	2027	7	26	18	105	138	138	25
Mindanao	2027	7	26	19	107	138	138	25
Mindanao	2027	7	26	20	105	138	138	25
Mindanao	2027	7	26	21	98	138	138	25
Mindanao	2027	7	26	22	94	138	138	25
Mindanao	2027	7	26	23	90	138	138	25
Mindanao	2027	7	26	24	84	138	138	25
Mindanao	2027	7	27	1	82	138	138	25
Mindanao	2027	7	27	2	79	138	138	25
Mindanao	2027	7	27	3	76	138	138	25
Mindanao	2027	7	27	4	76	138	138	25
Mindanao	2027	7	27	5	76	138	138	25
Mindanao	2027	7	27	6	78	138	138	25
Mindanao	2027	7	27	7	79	138	138	25
Mindanao	2027	7	27	8	90	138	138	25
Mindanao	2027	7	27	9	103	138	138	25
Mindanao	2027	7	27	10	104	138	138	25
Mindanao	2027	7	27	11	114	138	138	25
Mindanao	2027	7	27	12	114	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	27	13	111	138	138	25
Mindanao	2027	7	27	14	109	138	138	25
Mindanao	2027	7	27	15	105	138	138	25
Mindanao	2027	7	27	16	97	138	138	25
Mindanao	2027	7	27	17	96	138	138	25
Mindanao	2027	7	27	18	98	138	138	25
Mindanao	2027	7	27	19	102	138	138	25
Mindanao	2027	7	27	20	99	138	138	25
Mindanao	2027	7	27	21	98	138	138	25
Mindanao	2027	7	27	22	93	138	138	25
Mindanao	2027	7	27	23	89	138	138	25
Mindanao	2027	7	27	24	85	138	138	25
Mindanao	2027	7	28	1	81	138	138	25
Mindanao	2027	7	28	2	78	138	138	25
Mindanao	2027	7	28	3	76	138	138	25
Mindanao	2027	7	28	4	74	138	138	25
Mindanao	2027	7	28	5	75	138	138	25
Mindanao	2027	7	28	6	80	138	138	25
Mindanao	2027	7	28	7	78	138	138	25
Mindanao	2027	7	28	8	87	138	138	25
Mindanao	2027	7	28	9	101	138	138	25
Mindanao	2027	7	28	10	108	138	138	25
Mindanao	2027	7	28	11	114	138	138	25
Mindanao	2027	7	28	12	113	138	138	25
Mindanao	2027	7	28	13	116	138	138	25
Mindanao	2027	7	28	14	120	138	138	25
Mindanao	2027	7	28	15	121	138	138	25
Mindanao	2027	7	28	16	118	138	138	25
Mindanao	2027	7	28	17	112	138	138	25
Mindanao	2027	7	28	18	111	138	138	25
Mindanao	2027	7	28	19	113	138	138	25
Mindanao	2027	7	28	20	111	138	138	25
Mindanao	2027	7	28	21	107	138	138	25
Mindanao	2027	7	28	22	101	138	138	25
Mindanao	2027	7	28	23	96	138	138	25
Mindanao	2027	7	28	24	91	138	138	25
Mindanao	2027	7	29	1	87	138	138	25
Mindanao	2027	7	29	2	84	138	138	25
Mindanao	2027	7	29	3	82	138	138	25
Mindanao	2027	7	29	4	80	138	138	25
Mindanao	2027	7	29	5	81	138	138	25
Mindanao	2027	7	29	6	85	138	138	25
Mindanao	2027	7	29	7	82	138	138	25
Mindanao	2027	7	29	8	91	138	138	25
Mindanao	2027	7	29	9	104	138	138	25
Mindanao	2027	7	29	10	112	138	138	25
Mindanao	2027	7	29	11	118	138	138	25
Mindanao	2027	7	29	12	115	138	138	25
Mindanao	2027	7	29	13	118	138	138	25
Mindanao	2027	7	29	14	121	138	138	25
Mindanao	2027	7	29	15	121	138	138	25
Mindanao	2027	7	29	16	117	138	138	25
Mindanao	2027	7	29	17	111	138	138	25
Mindanao	2027	7	29	18	111	138	138	25
Mindanao	2027	7	29	19	112	138	138	25
Mindanao	2027	7	29	20	109	138	138	25
Mindanao	2027	7	29	21	106	138	138	25
Mindanao	2027	7	29	22	101	138	138	25
Mindanao	2027	7	29	23	96	138	138	25
Mindanao	2027	7	29	24	92	138	138	25
Mindanao	2027	7	30	1	86	138	138	25
Mindanao	2027	7	30	2	85	138	138	25
Mindanao	2027	7	30	3	80	138	138	25
Mindanao	2027	7	30	4	79	138	138	25
Mindanao	2027	7	30	5	80	138	138	25
Mindanao	2027	7	30	6	83	138	138	25
Mindanao	2027	7	30	7	79	138	138	25
Mindanao	2027	7	30	8	87	138	138	25
Mindanao	2027	7	30	9	100	138	138	25
Mindanao	2027	7	30	10	106	138	138	25
Mindanao	2027	7	30	11	111	138	138	25
Mindanao	2027	7	30	12	110	138	138	25
Mindanao	2027	7	30	13	110	138	138	25
Mindanao	2027	7	30	14	111	138	138	25
Mindanao	2027	7	30	15	108	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	7	30	16	106	138	138	25
Mindanao	2027	7	30	17	101	138	138	25
Mindanao	2027	7	30	18	104	138	138	25
Mindanao	2027	7	30	19	102	138	138	25
Mindanao	2027	7	30	20	101	138	138	25
Mindanao	2027	7	30	21	99	138	138	25
Mindanao	2027	7	30	22	93	138	138	25
Mindanao	2027	7	30	23	88	138	138	25
Mindanao	2027	7	30	24	84	138	138	25
Mindanao	2027	7	31	1	80	138	138	25
Mindanao	2027	7	31	2	78	138	138	25
Mindanao	2027	7	31	3	77	138	138	25
Mindanao	2027	7	31	4	75	138	138	25
Mindanao	2027	7	31	5	75	138	138	25
Mindanao	2027	7	31	6	77	138	138	25
Mindanao	2027	7	31	7	77	138	138	25
Mindanao	2027	7	31	8	84	138	138	25
Mindanao	2027	7	31	9	92	138	138	25
Mindanao	2027	7	31	10	97	138	138	25
Mindanao	2027	7	31	11	104	138	138	25
Mindanao	2027	7	31	12	104	138	138	25
Mindanao	2027	7	31	13	105	138	138	25
Mindanao	2027	7	31	14	109	138	138	25
Mindanao	2027	7	31	15	108	138	138	25
Mindanao	2027	7	31	16	105	138	138	25
Mindanao	2027	7	31	17	102	138	138	25
Mindanao	2027	7	31	18	107	138	138	25
Mindanao	2027	7	31	19	109	138	138	25
Mindanao	2027	7	31	20	107	138	138	25
Mindanao	2027	7	31	21	105	138	138	25
Mindanao	2027	7	31	22	100	138	138	25
Mindanao	2027	7	31	23	96	138	138	25
Mindanao	2027	7	31	24	90	138	138	25
Mindanao	2027	8	1	1	86	138	138	25
Mindanao	2027	8	1	2	81	138	138	25
Mindanao	2027	8	1	3	79	138	138	25
Mindanao	2027	8	1	4	78	138	138	25
Mindanao	2027	8	1	5	78	138	138	25
Mindanao	2027	8	1	6	78	138	138	25
Mindanao	2027	8	1	7	74	138	138	25
Mindanao	2027	8	1	8	77	138	138	25
Mindanao	2027	8	1	9	81	138	138	25
Mindanao	2027	8	1	10	87	138	138	25
Mindanao	2027	8	1	11	90	138	138	25
Mindanao	2027	8	1	12	90	138	138	25
Mindanao	2027	8	1	13	92	138	138	25
Mindanao	2027	8	1	14	94	138	138	25
Mindanao	2027	8	1	15	95	138	138	25
Mindanao	2027	8	1	16	93	138	138	25
Mindanao	2027	8	1	17	94	138	138	25
Mindanao	2027	8	1	18	99	138	138	25
Mindanao	2027	8	1	19	106	138	138	25
Mindanao	2027	8	1	20	104	138	138	25
Mindanao	2027	8	1	21	103	138	138	25
Mindanao	2027	8	1	22	98	138	138	25
Mindanao	2027	8	1	23	92	138	138	25
Mindanao	2027	8	1	24	88	138	138	25
Mindanao	2027	8	2	1	82	138	138	25
Mindanao	2027	8	2	2	80	138	138	25
Mindanao	2027	8	2	3	76	138	138	25
Mindanao	2027	8	2	4	74	138	138	25
Mindanao	2027	8	2	5	76	138	138	25
Mindanao	2027	8	2	6	78	138	138	25
Mindanao	2027	8	2	7	77	138	138	25
Mindanao	2027	8	2	8	88	138	138	25
Mindanao	2027	8	2	9	104	138	138	25
Mindanao	2027	8	2	10	113	138	138	25
Mindanao	2027	8	2	11	119	138	138	25
Mindanao	2027	8	2	12	119	138	138	25
Mindanao	2027	8	2	13	121	138	138	25
Mindanao	2027	8	2	14	126	138	138	25
Mindanao	2027	8	2	15	124	138	138	25
Mindanao	2027	8	2	16	123	138	138	25
Mindanao	2027	8	2	17	114	138	138	25
Mindanao	2027	8	2	18	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	2	19	115	138	138	25
Mindanao	2027	8	2	20	110	138	138	25
Mindanao	2027	8	2	21	109	138	138	25
Mindanao	2027	8	2	22	104	138	138	25
Mindanao	2027	8	2	23	97	138	138	25
Mindanao	2027	8	2	24	93	138	138	25
Mindanao	2027	8	3	1	88	138	138	25
Mindanao	2027	8	3	2	86	138	138	25
Mindanao	2027	8	3	3	83	138	138	25
Mindanao	2027	8	3	4	81	138	138	25
Mindanao	2027	8	3	5	83	138	138	25
Mindanao	2027	8	3	6	85	138	138	25
Mindanao	2027	8	3	7	82	138	138	25
Mindanao	2027	8	3	8	91	138	138	25
Mindanao	2027	8	3	9	105	138	138	25
Mindanao	2027	8	3	10	112	138	138	25
Mindanao	2027	8	3	11	118	138	138	25
Mindanao	2027	8	3	12	117	138	138	25
Mindanao	2027	8	3	13	119	138	138	25
Mindanao	2027	8	3	14	124	138	138	25
Mindanao	2027	8	3	15	123	138	138	25
Mindanao	2027	8	3	16	121	138	138	25
Mindanao	2027	8	3	17	114	138	138	25
Mindanao	2027	8	3	18	109	138	138	25
Mindanao	2027	8	3	19	116	138	138	25
Mindanao	2027	8	3	20	114	138	138	25
Mindanao	2027	8	3	21	110	138	138	25
Mindanao	2027	8	3	22	105	138	138	25
Mindanao	2027	8	3	23	100	138	138	25
Mindanao	2027	8	3	24	94	138	138	25
Mindanao	2027	8	4	1	90	138	138	25
Mindanao	2027	8	4	2	85	138	138	25
Mindanao	2027	8	4	3	82	138	138	25
Mindanao	2027	8	4	4	80	138	138	25
Mindanao	2027	8	4	5	80	138	138	25
Mindanao	2027	8	4	6	84	138	138	25
Mindanao	2027	8	4	7	80	138	138	25
Mindanao	2027	8	4	8	91	138	138	25
Mindanao	2027	8	4	9	105	138	138	25
Mindanao	2027	8	4	10	113	138	138	25
Mindanao	2027	8	4	11	118	138	138	25
Mindanao	2027	8	4	12	117	138	138	25
Mindanao	2027	8	4	13	120	138	138	25
Mindanao	2027	8	4	14	125	138	138	25
Mindanao	2027	8	4	15	124	138	138	25
Mindanao	2027	8	4	16	122	138	138	25
Mindanao	2027	8	4	17	115	138	138	25
Mindanao	2027	8	4	18	112	138	138	25
Mindanao	2027	8	4	19	118	138	138	25
Mindanao	2027	8	4	20	115	138	138	25
Mindanao	2027	8	4	21	112	138	138	25
Mindanao	2027	8	4	22	108	138	138	25
Mindanao	2027	8	4	23	102	138	138	25
Mindanao	2027	8	4	24	96	138	138	25
Mindanao	2027	8	5	1	91	138	138	25
Mindanao	2027	8	5	2	87	138	138	25
Mindanao	2027	8	5	3	84	138	138	25
Mindanao	2027	8	5	4	83	138	138	25
Mindanao	2027	8	5	5	82	138	138	25
Mindanao	2027	8	5	6	83	138	138	25
Mindanao	2027	8	5	7	81	138	138	25
Mindanao	2027	8	5	8	92	138	138	25
Mindanao	2027	8	5	9	106	138	138	25
Mindanao	2027	8	5	10	113	138	138	25
Mindanao	2027	8	5	11	119	138	138	25
Mindanao	2027	8	5	12	117	138	138	25
Mindanao	2027	8	5	13	120	138	138	25
Mindanao	2027	8	5	14	124	138	138	25
Mindanao	2027	8	5	15	122	138	138	25
Mindanao	2027	8	5	16	120	138	138	25
Mindanao	2027	8	5	17	111	138	138	25
Mindanao	2027	8	5	18	110	138	138	25
Mindanao	2027	8	5	19	115	138	138	25
Mindanao	2027	8	5	20	114	138	138	25
Mindanao	2027	8	5	21	112	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	5	22	105	138	138	25
Mindanao	2027	8	5	23	98	138	138	25
Mindanao	2027	8	5	24	92	138	138	25
Mindanao	2027	8	6	1	89	138	138	25
Mindanao	2027	8	6	2	84	138	138	25
Mindanao	2027	8	6	3	81	138	138	25
Mindanao	2027	8	6	4	81	138	138	25
Mindanao	2027	8	6	5	81	138	138	25
Mindanao	2027	8	6	6	83	138	138	25
Mindanao	2027	8	6	7	80	138	138	25
Mindanao	2027	8	6	8	91	138	138	25
Mindanao	2027	8	6	9	105	138	138	25
Mindanao	2027	8	6	10	113	138	138	25
Mindanao	2027	8	6	11	119	138	138	25
Mindanao	2027	8	6	12	116	138	138	25
Mindanao	2027	8	6	13	117	138	138	25
Mindanao	2027	8	6	14	123	138	138	25
Mindanao	2027	8	6	15	123	138	138	25
Mindanao	2027	8	6	16	118	138	138	25
Mindanao	2027	8	6	17	112	138	138	25
Mindanao	2027	8	6	18	110	138	138	25
Mindanao	2027	8	6	19	110	138	138	25
Mindanao	2027	8	6	20	112	138	138	25
Mindanao	2027	8	6	21	106	138	138	25
Mindanao	2027	8	6	22	101	138	138	25
Mindanao	2027	8	6	23	95	138	138	25
Mindanao	2027	8	6	24	90	138	138	25
Mindanao	2027	8	7	1	87	138	138	25
Mindanao	2027	8	7	2	84	138	138	25
Mindanao	2027	8	7	3	81	138	138	25
Mindanao	2027	8	7	4	79	138	138	25
Mindanao	2027	8	7	5	80	138	138	25
Mindanao	2027	8	7	6	80	138	138	25
Mindanao	2027	8	7	7	77	138	138	25
Mindanao	2027	8	7	8	83	138	138	25
Mindanao	2027	8	7	9	91	138	138	25
Mindanao	2027	8	7	10	99	138	138	25
Mindanao	2027	8	7	11	104	138	138	25
Mindanao	2027	8	7	12	104	138	138	25
Mindanao	2027	8	7	13	104	138	138	25
Mindanao	2027	8	7	14	111	138	138	25
Mindanao	2027	8	7	15	111	138	138	25
Mindanao	2027	8	7	16	109	138	138	25
Mindanao	2027	8	7	17	105	138	138	25
Mindanao	2027	8	7	18	105	138	138	25
Mindanao	2027	8	7	19	114	138	138	25
Mindanao	2027	8	7	20	111	138	138	25
Mindanao	2027	8	7	21	109	138	138	25
Mindanao	2027	8	7	22	104	138	138	25
Mindanao	2027	8	7	23	97	138	138	25
Mindanao	2027	8	7	24	93	138	138	25
Mindanao	2027	8	8	1	89	138	138	25
Mindanao	2027	8	8	2	86	138	138	25
Mindanao	2027	8	8	3	83	138	138	25
Mindanao	2027	8	8	4	80	138	138	25
Mindanao	2027	8	8	5	79	138	138	25
Mindanao	2027	8	8	6	78	138	138	25
Mindanao	2027	8	8	7	75	138	138	25
Mindanao	2027	8	8	8	77	138	138	25
Mindanao	2027	8	8	9	81	138	138	25
Mindanao	2027	8	8	10	84	138	138	25
Mindanao	2027	8	8	11	90	138	138	25
Mindanao	2027	8	8	12	91	138	138	25
Mindanao	2027	8	8	13	93	138	138	25
Mindanao	2027	8	8	14	95	138	138	25
Mindanao	2027	8	8	15	91	138	138	25
Mindanao	2027	8	8	16	93	138	138	25
Mindanao	2027	8	8	17	93	138	138	25
Mindanao	2027	8	8	18	98	138	138	25
Mindanao	2027	8	8	19	106	138	138	25
Mindanao	2027	8	8	20	103	138	138	25
Mindanao	2027	8	8	21	102	138	138	25
Mindanao	2027	8	8	22	99	138	138	25
Mindanao	2027	8	8	23	94	138	138	25
Mindanao	2027	8	8	24	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	9	1	85	138	138	25
Mindanao	2027	8	9	2	80	138	138	25
Mindanao	2027	8	9	3	79	138	138	25
Mindanao	2027	8	9	4	77	138	138	25
Mindanao	2027	8	9	5	78	138	138	25
Mindanao	2027	8	9	6	79	138	138	25
Mindanao	2027	8	9	7	77	138	138	25
Mindanao	2027	8	9	8	88	138	138	25
Mindanao	2027	8	9	9	102	138	138	25
Mindanao	2027	8	9	10	111	138	138	25
Mindanao	2027	8	9	11	116	138	138	25
Mindanao	2027	8	9	12	114	138	138	25
Mindanao	2027	8	9	13	115	138	138	25
Mindanao	2027	8	9	14	114	138	138	25
Mindanao	2027	8	9	15	114	138	138	25
Mindanao	2027	8	9	16	113	138	138	25
Mindanao	2027	8	9	17	111	138	138	25
Mindanao	2027	8	9	18	108	138	138	25
Mindanao	2027	8	9	19	110	138	138	25
Mindanao	2027	8	9	20	108	138	138	25
Mindanao	2027	8	9	21	107	138	138	25
Mindanao	2027	8	9	22	104	138	138	25
Mindanao	2027	8	9	23	98	138	138	25
Mindanao	2027	8	9	24	93	138	138	25
Mindanao	2027	8	10	1	89	138	138	25
Mindanao	2027	8	10	2	85	138	138	25
Mindanao	2027	8	10	3	83	138	138	25
Mindanao	2027	8	10	4	81	138	138	25
Mindanao	2027	8	10	5	82	138	138	25
Mindanao	2027	8	10	6	83	138	138	25
Mindanao	2027	8	10	7	81	138	138	25
Mindanao	2027	8	10	8	92	138	138	25
Mindanao	2027	8	10	9	105	138	138	25
Mindanao	2027	8	10	10	113	138	138	25
Mindanao	2027	8	10	11	118	138	138	25
Mindanao	2027	8	10	12	115	138	138	25
Mindanao	2027	8	10	13	116	138	138	25
Mindanao	2027	8	10	14	120	138	138	25
Mindanao	2027	8	10	15	118	138	138	25
Mindanao	2027	8	10	16	116	138	138	25
Mindanao	2027	8	10	17	112	138	138	25
Mindanao	2027	8	10	18	111	138	138	25
Mindanao	2027	8	10	19	114	138	138	25
Mindanao	2027	8	10	20	110	138	138	25
Mindanao	2027	8	10	21	109	138	138	25
Mindanao	2027	8	10	22	104	138	138	25
Mindanao	2027	8	10	23	99	138	138	25
Mindanao	2027	8	10	24	93	138	138	25
Mindanao	2027	8	11	1	89	138	138	25
Mindanao	2027	8	11	2	86	138	138	25
Mindanao	2027	8	11	3	83	138	138	25
Mindanao	2027	8	11	4	83	138	138	25
Mindanao	2027	8	11	5	83	138	138	25
Mindanao	2027	8	11	6	85	138	138	25
Mindanao	2027	8	11	7	83	138	138	25
Mindanao	2027	8	11	8	91	138	138	25
Mindanao	2027	8	11	9	101	138	138	25
Mindanao	2027	8	11	10	108	138	138	25
Mindanao	2027	8	11	11	119	138	138	25
Mindanao	2027	8	11	12	118	138	138	25
Mindanao	2027	8	11	13	119	138	138	25
Mindanao	2027	8	11	14	124	138	138	25
Mindanao	2027	8	11	15	124	138	138	25
Mindanao	2027	8	11	16	121	138	138	25
Mindanao	2027	8	11	17	115	138	138	25
Mindanao	2027	8	11	18	114	138	138	25
Mindanao	2027	8	11	19	117	138	138	25
Mindanao	2027	8	11	20	115	138	138	25
Mindanao	2027	8	11	21	110	138	138	25
Mindanao	2027	8	11	22	107	138	138	25
Mindanao	2027	8	11	23	100	138	138	25
Mindanao	2027	8	11	24	94	138	138	25
Mindanao	2027	8	12	1	90	138	138	25
Mindanao	2027	8	12	2	89	138	138	25
Mindanao	2027	8	12	3	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	12	4	86	138	138	25
Mindanao	2027	8	12	5	87	138	138	25
Mindanao	2027	8	12	6	87	138	138	25
Mindanao	2027	8	12	7	83	138	138	25
Mindanao	2027	8	12	8	93	138	138	25
Mindanao	2027	8	12	9	104	138	138	25
Mindanao	2027	8	12	10	112	138	138	25
Mindanao	2027	8	12	11	116	138	138	25
Mindanao	2027	8	12	12	113	138	138	25
Mindanao	2027	8	12	13	115	138	138	25
Mindanao	2027	8	12	14	118	138	138	25
Mindanao	2027	8	12	15	116	138	138	25
Mindanao	2027	8	12	16	111	138	138	25
Mindanao	2027	8	12	17	107	138	138	25
Mindanao	2027	8	12	18	109	138	138	25
Mindanao	2027	8	12	19	110	138	138	25
Mindanao	2027	8	12	20	109	138	138	25
Mindanao	2027	8	12	21	104	138	138	25
Mindanao	2027	8	12	22	101	138	138	25
Mindanao	2027	8	12	23	95	138	138	25
Mindanao	2027	8	12	24	91	138	138	25
Mindanao	2027	8	13	1	87	138	138	25
Mindanao	2027	8	13	2	86	138	138	25
Mindanao	2027	8	13	3	83	138	138	25
Mindanao	2027	8	13	4	81	138	138	25
Mindanao	2027	8	13	5	83	138	138	25
Mindanao	2027	8	13	6	85	138	138	25
Mindanao	2027	8	13	7	82	138	138	25
Mindanao	2027	8	13	8	91	138	138	25
Mindanao	2027	8	13	9	103	138	138	25
Mindanao	2027	8	13	10	109	138	138	25
Mindanao	2027	8	13	11	115	138	138	25
Mindanao	2027	8	13	12	111	138	138	25
Mindanao	2027	8	13	13	113	138	138	25
Mindanao	2027	8	13	14	117	138	138	25
Mindanao	2027	8	13	15	114	138	138	25
Mindanao	2027	8	13	16	111	138	138	25
Mindanao	2027	8	13	17	107	138	138	25
Mindanao	2027	8	13	18	110	138	138	25
Mindanao	2027	8	13	19	111	138	138	25
Mindanao	2027	8	13	20	109	138	138	25
Mindanao	2027	8	13	21	105	138	138	25
Mindanao	2027	8	13	22	100	138	138	25
Mindanao	2027	8	13	23	96	138	138	25
Mindanao	2027	8	13	24	90	138	138	25
Mindanao	2027	8	14	1	86	138	138	25
Mindanao	2027	8	14	2	84	138	138	25
Mindanao	2027	8	14	3	84	138	138	25
Mindanao	2027	8	14	4	82	138	138	25
Mindanao	2027	8	14	5	82	138	138	25
Mindanao	2027	8	14	6	82	138	138	25
Mindanao	2027	8	14	7	80	138	138	25
Mindanao	2027	8	14	8	83	138	138	25
Mindanao	2027	8	14	9	90	138	138	25
Mindanao	2027	8	14	10	96	138	138	25
Mindanao	2027	8	14	11	99	138	138	25
Mindanao	2027	8	14	12	98	138	138	25
Mindanao	2027	8	14	13	98	138	138	25
Mindanao	2027	8	14	14	101	138	138	25
Mindanao	2027	8	14	15	99	138	138	25
Mindanao	2027	8	14	16	97	138	138	25
Mindanao	2027	8	14	17	94	138	138	25
Mindanao	2027	8	14	18	103	138	138	25
Mindanao	2027	8	14	19	105	138	138	25
Mindanao	2027	8	14	20	102	138	138	25
Mindanao	2027	8	14	21	99	138	138	25
Mindanao	2027	8	14	22	93	138	138	25
Mindanao	2027	8	14	23	89	138	138	25
Mindanao	2027	8	14	24	86	138	138	25
Mindanao	2027	8	15	1	84	138	138	25
Mindanao	2027	8	15	2	81	138	138	25
Mindanao	2027	8	15	3	80	138	138	25
Mindanao	2027	8	15	4	78	138	138	25
Mindanao	2027	8	15	5	77	138	138	25
Mindanao	2027	8	15	6	76	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	15	7	76	138	138	25
Mindanao	2027	8	15	8	77	138	138	25
Mindanao	2027	8	15	9	81	138	138	25
Mindanao	2027	8	15	10	85	138	138	25
Mindanao	2027	8	15	11	89	138	138	25
Mindanao	2027	8	15	12	92	138	138	25
Mindanao	2027	8	15	13	92	138	138	25
Mindanao	2027	8	15	14	93	138	138	25
Mindanao	2027	8	15	15	92	138	138	25
Mindanao	2027	8	15	16	91	138	138	25
Mindanao	2027	8	15	17	91	138	138	25
Mindanao	2027	8	15	18	99	138	138	25
Mindanao	2027	8	15	19	101	138	138	25
Mindanao	2027	8	15	20	98	138	138	25
Mindanao	2027	8	15	21	97	138	138	25
Mindanao	2027	8	15	22	91	138	138	25
Mindanao	2027	8	15	23	87	138	138	25
Mindanao	2027	8	15	24	82	138	138	25
Mindanao	2027	8	16	1	80	138	138	25
Mindanao	2027	8	16	2	78	138	138	25
Mindanao	2027	8	16	3	77	138	138	25
Mindanao	2027	8	16	4	74	138	138	25
Mindanao	2027	8	16	5	76	138	138	25
Mindanao	2027	8	16	6	79	138	138	25
Mindanao	2027	8	16	7	78	138	138	25
Mindanao	2027	8	16	8	86	138	138	25
Mindanao	2027	8	16	9	97	138	138	25
Mindanao	2027	8	16	10	106	138	138	25
Mindanao	2027	8	16	11	111	138	138	25
Mindanao	2027	8	16	12	110	138	138	25
Mindanao	2027	8	16	13	112	138	138	25
Mindanao	2027	8	16	14	114	138	138	25
Mindanao	2027	8	16	15	113	138	138	25
Mindanao	2027	8	16	16	109	138	138	25
Mindanao	2027	8	16	17	107	138	138	25
Mindanao	2027	8	16	18	108	138	138	25
Mindanao	2027	8	16	19	108	138	138	25
Mindanao	2027	8	16	20	105	138	138	25
Mindanao	2027	8	16	21	103	138	138	25
Mindanao	2027	8	16	22	99	138	138	25
Mindanao	2027	8	16	23	92	138	138	25
Mindanao	2027	8	16	24	89	138	138	25
Mindanao	2027	8	17	1	85	138	138	25
Mindanao	2027	8	17	2	82	138	138	25
Mindanao	2027	8	17	3	80	138	138	25
Mindanao	2027	8	17	4	77	138	138	25
Mindanao	2027	8	17	5	80	138	138	25
Mindanao	2027	8	17	6	83	138	138	25
Mindanao	2027	8	17	7	82	138	138	25
Mindanao	2027	8	17	8	88	138	138	25
Mindanao	2027	8	17	9	101	138	138	25
Mindanao	2027	8	17	10	106	138	138	25
Mindanao	2027	8	17	11	111	138	138	25
Mindanao	2027	8	17	12	110	138	138	25
Mindanao	2027	8	17	13	112	138	138	25
Mindanao	2027	8	17	14	115	138	138	25
Mindanao	2027	8	17	15	110	138	138	25
Mindanao	2027	8	17	16	109	138	138	25
Mindanao	2027	8	17	17	106	138	138	25
Mindanao	2027	8	17	18	110	138	138	25
Mindanao	2027	8	17	19	110	138	138	25
Mindanao	2027	8	17	20	107	138	138	25
Mindanao	2027	8	17	21	106	138	138	25
Mindanao	2027	8	17	22	99	138	138	25
Mindanao	2027	8	17	23	95	138	138	25
Mindanao	2027	8	17	24	90	138	138	25
Mindanao	2027	8	18	1	86	138	138	25
Mindanao	2027	8	18	2	83	138	138	25
Mindanao	2027	8	18	3	81	138	138	25
Mindanao	2027	8	18	4	81	138	138	25
Mindanao	2027	8	18	5	82	138	138	25
Mindanao	2027	8	18	6	84	138	138	25
Mindanao	2027	8	18	7	81	138	138	25
Mindanao	2027	8	18	8	89	138	138	25
Mindanao	2027	8	18	9	101	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	18	10	108	138	138	25
Mindanao	2027	8	18	11	112	138	138	25
Mindanao	2027	8	18	12	110	138	138	25
Mindanao	2027	8	18	13	112	138	138	25
Mindanao	2027	8	18	14	114	138	138	25
Mindanao	2027	8	18	15	111	138	138	25
Mindanao	2027	8	18	16	109	138	138	25
Mindanao	2027	8	18	17	103	138	138	25
Mindanao	2027	8	18	18	104	138	138	25
Mindanao	2027	8	18	19	104	138	138	25
Mindanao	2027	8	18	20	98	138	138	25
Mindanao	2027	8	18	21	98	138	138	25
Mindanao	2027	8	18	22	93	138	138	25
Mindanao	2027	8	18	23	88	138	138	25
Mindanao	2027	8	18	24	81	138	138	25
Mindanao	2027	8	19	1	80	138	138	25
Mindanao	2027	8	19	2	77	138	138	25
Mindanao	2027	8	19	3	76	138	138	25
Mindanao	2027	8	19	4	76	138	138	25
Mindanao	2027	8	19	5	77	138	138	25
Mindanao	2027	8	19	6	79	138	138	25
Mindanao	2027	8	19	7	76	138	138	25
Mindanao	2027	8	19	8	84	138	138	25
Mindanao	2027	8	19	9	97	138	138	25
Mindanao	2027	8	19	10	105	138	138	25
Mindanao	2027	8	19	11	109	138	138	25
Mindanao	2027	8	19	12	107	138	138	25
Mindanao	2027	8	19	13	108	138	138	25
Mindanao	2027	8	19	14	113	138	138	25
Mindanao	2027	8	19	15	111	138	138	25
Mindanao	2027	8	19	16	109	138	138	25
Mindanao	2027	8	19	17	105	138	138	25
Mindanao	2027	8	19	18	109	138	138	25
Mindanao	2027	8	19	19	108	138	138	25
Mindanao	2027	8	19	20	105	138	138	25
Mindanao	2027	8	19	21	100	138	138	25
Mindanao	2027	8	19	22	95	138	138	25
Mindanao	2027	8	19	23	90	138	138	25
Mindanao	2027	8	19	24	86	138	138	25
Mindanao	2027	8	20	1	82	138	138	25
Mindanao	2027	8	20	2	80	138	138	25
Mindanao	2027	8	20	3	76	138	138	25
Mindanao	2027	8	20	4	75	138	138	25
Mindanao	2027	8	20	5	77	138	138	25
Mindanao	2027	8	20	6	80	138	138	25
Mindanao	2027	8	20	7	78	138	138	25
Mindanao	2027	8	20	8	85	138	138	25
Mindanao	2027	8	20	9	98	138	138	25
Mindanao	2027	8	20	10	106	138	138	25
Mindanao	2027	8	20	11	111	138	138	25
Mindanao	2027	8	20	12	109	138	138	25
Mindanao	2027	8	20	13	111	138	138	25
Mindanao	2027	8	20	14	115	138	138	25
Mindanao	2027	8	20	15	112	138	138	25
Mindanao	2027	8	20	16	108	138	138	25
Mindanao	2027	8	20	17	106	138	138	25
Mindanao	2027	8	20	18	107	138	138	25
Mindanao	2027	8	20	19	106	138	138	25
Mindanao	2027	8	20	20	103	138	138	25
Mindanao	2027	8	20	21	99	138	138	25
Mindanao	2027	8	20	22	94	138	138	25
Mindanao	2027	8	20	23	89	138	138	25
Mindanao	2027	8	20	24	84	138	138	25
Mindanao	2027	8	21	1	75	138	138	25
Mindanao	2027	8	21	2	74	138	138	25
Mindanao	2027	8	21	3	71	138	138	25
Mindanao	2027	8	21	4	70	138	138	25
Mindanao	2027	8	21	5	70	138	138	25
Mindanao	2027	8	21	6	72	138	138	25
Mindanao	2027	8	21	7	71	138	138	25
Mindanao	2027	8	21	8	73	138	138	25
Mindanao	2027	8	21	9	82	138	138	25
Mindanao	2027	8	21	10	88	138	138	25
Mindanao	2027	8	21	11	93	138	138	25
Mindanao	2027	8	21	12	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	21	13	93	138	138	25
Mindanao	2027	8	21	14	95	138	138	25
Mindanao	2027	8	21	15	94	138	138	25
Mindanao	2027	8	21	16	92	138	138	25
Mindanao	2027	8	21	17	93	138	138	25
Mindanao	2027	8	21	18	101	138	138	25
Mindanao	2027	8	21	19	100	138	138	25
Mindanao	2027	8	21	20	98	138	138	25
Mindanao	2027	8	21	21	96	138	138	25
Mindanao	2027	8	21	22	90	138	138	25
Mindanao	2027	8	21	23	84	138	138	25
Mindanao	2027	8	21	24	78	138	138	25
Mindanao	2027	8	22	1	78	138	138	25
Mindanao	2027	8	22	2	74	138	138	25
Mindanao	2027	8	22	3	73	138	138	25
Mindanao	2027	8	22	4	71	138	138	25
Mindanao	2027	8	22	5	72	138	138	25
Mindanao	2027	8	22	6	72	138	138	25
Mindanao	2027	8	22	7	72	138	138	25
Mindanao	2027	8	22	8	74	138	138	25
Mindanao	2027	8	22	9	78	138	138	25
Mindanao	2027	8	22	10	85	138	138	25
Mindanao	2027	8	22	11	89	138	138	25
Mindanao	2027	8	22	12	91	138	138	25
Mindanao	2027	8	22	13	93	138	138	25
Mindanao	2027	8	22	14	94	138	138	25
Mindanao	2027	8	22	15	93	138	138	25
Mindanao	2027	8	22	16	90	138	138	25
Mindanao	2027	8	22	17	91	138	138	25
Mindanao	2027	8	22	18	97	138	138	25
Mindanao	2027	8	22	19	96	138	138	25
Mindanao	2027	8	22	20	96	138	138	25
Mindanao	2027	8	22	21	92	138	138	25
Mindanao	2027	8	22	22	87	138	138	25
Mindanao	2027	8	22	23	83	138	138	25
Mindanao	2027	8	22	24	78	138	138	25
Mindanao	2027	8	23	1	80	138	138	25
Mindanao	2027	8	23	2	78	138	138	25
Mindanao	2027	8	23	3	77	138	138	25
Mindanao	2027	8	23	4	74	138	138	25
Mindanao	2027	8	23	5	76	138	138	25
Mindanao	2027	8	23	6	79	138	138	25
Mindanao	2027	8	23	7	78	138	138	25
Mindanao	2027	8	23	8	86	138	138	25
Mindanao	2027	8	23	9	97	138	138	25
Mindanao	2027	8	23	10	106	138	138	25
Mindanao	2027	8	23	11	111	138	138	25
Mindanao	2027	8	23	12	110	138	138	25
Mindanao	2027	8	23	13	112	138	138	25
Mindanao	2027	8	23	14	114	138	138	25
Mindanao	2027	8	23	15	113	138	138	25
Mindanao	2027	8	23	16	109	138	138	25
Mindanao	2027	8	23	17	107	138	138	25
Mindanao	2027	8	23	18	108	138	138	25
Mindanao	2027	8	23	19	108	138	138	25
Mindanao	2027	8	23	20	105	138	138	25
Mindanao	2027	8	23	21	103	138	138	25
Mindanao	2027	8	23	22	99	138	138	25
Mindanao	2027	8	23	23	92	138	138	25
Mindanao	2027	8	23	24	89	138	138	25
Mindanao	2027	8	24	1	76	138	138	25
Mindanao	2027	8	24	2	73	138	138	25
Mindanao	2027	8	24	3	71	138	138	25
Mindanao	2027	8	24	4	69	138	138	25
Mindanao	2027	8	24	5	73	138	138	25
Mindanao	2027	8	24	6	76	138	138	25
Mindanao	2027	8	24	7	74	138	138	25
Mindanao	2027	8	24	8	83	138	138	25
Mindanao	2027	8	24	9	96	138	138	25
Mindanao	2027	8	24	10	105	138	138	25
Mindanao	2027	8	24	11	110	138	138	25
Mindanao	2027	8	24	12	109	138	138	25
Mindanao	2027	8	24	13	111	138	138	25
Mindanao	2027	8	24	14	114	138	138	25
Mindanao	2027	8	24	15	112	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	24	16	109	138	138	25
Mindanao	2027	8	24	17	105	138	138	25
Mindanao	2027	8	24	18	106	138	138	25
Mindanao	2027	8	24	19	107	138	138	25
Mindanao	2027	8	24	20	103	138	138	25
Mindanao	2027	8	24	21	100	138	138	25
Mindanao	2027	8	24	22	93	138	138	25
Mindanao	2027	8	24	23	88	138	138	25
Mindanao	2027	8	24	24	84	138	138	25
Mindanao	2027	8	25	1	80	138	138	25
Mindanao	2027	8	25	2	77	138	138	25
Mindanao	2027	8	25	3	75	138	138	25
Mindanao	2027	8	25	4	74	138	138	25
Mindanao	2027	8	25	5	75	138	138	25
Mindanao	2027	8	25	6	78	138	138	25
Mindanao	2027	8	25	7	76	138	138	25
Mindanao	2027	8	25	8	85	138	138	25
Mindanao	2027	8	25	9	97	138	138	25
Mindanao	2027	8	25	10	103	138	138	25
Mindanao	2027	8	25	11	108	138	138	25
Mindanao	2027	8	25	12	105	138	138	25
Mindanao	2027	8	25	13	106	138	138	25
Mindanao	2027	8	25	14	112	138	138	25
Mindanao	2027	8	25	15	111	138	138	25
Mindanao	2027	8	25	16	109	138	138	25
Mindanao	2027	8	25	17	104	138	138	25
Mindanao	2027	8	25	18	107	138	138	25
Mindanao	2027	8	25	19	108	138	138	25
Mindanao	2027	8	25	20	104	138	138	25
Mindanao	2027	8	25	21	100	138	138	25
Mindanao	2027	8	25	22	95	138	138	25
Mindanao	2027	8	25	23	89	138	138	25
Mindanao	2027	8	25	24	85	138	138	25
Mindanao	2027	8	26	1	81	138	138	25
Mindanao	2027	8	26	2	76	138	138	25
Mindanao	2027	8	26	3	74	138	138	25
Mindanao	2027	8	26	4	74	138	138	25
Mindanao	2027	8	26	5	77	138	138	25
Mindanao	2027	8	26	6	79	138	138	25
Mindanao	2027	8	26	7	76	138	138	25
Mindanao	2027	8	26	8	85	138	138	25
Mindanao	2027	8	26	9	98	138	138	25
Mindanao	2027	8	26	10	107	138	138	25
Mindanao	2027	8	26	11	113	138	138	25
Mindanao	2027	8	26	12	111	138	138	25
Mindanao	2027	8	26	13	113	138	138	25
Mindanao	2027	8	26	14	118	138	138	25
Mindanao	2027	8	26	15	117	138	138	25
Mindanao	2027	8	26	16	113	138	138	25
Mindanao	2027	8	26	17	108	138	138	25
Mindanao	2027	8	26	18	107	138	138	25
Mindanao	2027	8	26	19	107	138	138	25
Mindanao	2027	8	26	20	104	138	138	25
Mindanao	2027	8	26	21	101	138	138	25
Mindanao	2027	8	26	22	96	138	138	25
Mindanao	2027	8	26	23	90	138	138	25
Mindanao	2027	8	26	24	85	138	138	25
Mindanao	2027	8	27	1	80	138	138	25
Mindanao	2027	8	27	2	78	138	138	25
Mindanao	2027	8	27	3	76	138	138	25
Mindanao	2027	8	27	4	75	138	138	25
Mindanao	2027	8	27	5	76	138	138	25
Mindanao	2027	8	27	6	79	138	138	25
Mindanao	2027	8	27	7	76	138	138	25
Mindanao	2027	8	27	8	86	138	138	25
Mindanao	2027	8	27	9	100	138	138	25
Mindanao	2027	8	27	10	109	138	138	25
Mindanao	2027	8	27	11	113	138	138	25
Mindanao	2027	8	27	12	113	138	138	25
Mindanao	2027	8	27	13	115	138	138	25
Mindanao	2027	8	27	14	118	138	138	25
Mindanao	2027	8	27	15	116	138	138	25
Mindanao	2027	8	27	16	112	138	138	25
Mindanao	2027	8	27	17	107	138	138	25
Mindanao	2027	8	27	18	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	27	19	110	138	138	25
Mindanao	2027	8	27	20	108	138	138	25
Mindanao	2027	8	27	21	102	138	138	25
Mindanao	2027	8	27	22	100	138	138	25
Mindanao	2027	8	27	23	92	138	138	25
Mindanao	2027	8	27	24	88	138	138	25
Mindanao	2027	8	28	1	81	138	138	25
Mindanao	2027	8	28	2	80	138	138	25
Mindanao	2027	8	28	3	79	138	138	25
Mindanao	2027	8	28	4	77	138	138	25
Mindanao	2027	8	28	5	77	138	138	25
Mindanao	2027	8	28	6	79	138	138	25
Mindanao	2027	8	28	7	76	138	138	25
Mindanao	2027	8	28	8	83	138	138	25
Mindanao	2027	8	28	9	92	138	138	25
Mindanao	2027	8	28	10	100	138	138	25
Mindanao	2027	8	28	11	104	138	138	25
Mindanao	2027	8	28	12	104	138	138	25
Mindanao	2027	8	28	13	105	138	138	25
Mindanao	2027	8	28	14	110	138	138	25
Mindanao	2027	8	28	15	108	138	138	25
Mindanao	2027	8	28	16	104	138	138	25
Mindanao	2027	8	28	17	102	138	138	25
Mindanao	2027	8	28	18	108	138	138	25
Mindanao	2027	8	28	19	105	138	138	25
Mindanao	2027	8	28	20	103	138	138	25
Mindanao	2027	8	28	21	102	138	138	25
Mindanao	2027	8	28	22	96	138	138	25
Mindanao	2027	8	28	23	90	138	138	25
Mindanao	2027	8	28	24	85	138	138	25
Mindanao	2027	8	29	1	81	138	138	25
Mindanao	2027	8	29	2	79	138	138	25
Mindanao	2027	8	29	3	76	138	138	25
Mindanao	2027	8	29	4	74	138	138	25
Mindanao	2027	8	29	5	76	138	138	25
Mindanao	2027	8	29	6	72	138	138	25
Mindanao	2027	8	29	7	72	138	138	25
Mindanao	2027	8	29	8	72	138	138	25
Mindanao	2027	8	29	9	76	138	138	25
Mindanao	2027	8	29	10	82	138	138	25
Mindanao	2027	8	29	11	87	138	138	25
Mindanao	2027	8	29	12	88	138	138	25
Mindanao	2027	8	29	13	90	138	138	25
Mindanao	2027	8	29	14	92	138	138	25
Mindanao	2027	8	29	15	90	138	138	25
Mindanao	2027	8	29	16	87	138	138	25
Mindanao	2027	8	29	17	90	138	138	25
Mindanao	2027	8	29	18	97	138	138	25
Mindanao	2027	8	29	19	99	138	138	25
Mindanao	2027	8	29	20	98	138	138	25
Mindanao	2027	8	29	21	98	138	138	25
Mindanao	2027	8	29	22	93	138	138	25
Mindanao	2027	8	29	23	88	138	138	25
Mindanao	2027	8	29	24	82	138	138	25
Mindanao	2027	8	30	1	79	138	138	25
Mindanao	2027	8	30	2	77	138	138	25
Mindanao	2027	8	30	3	75	138	138	25
Mindanao	2027	8	30	4	73	138	138	25
Mindanao	2027	8	30	5	73	138	138	25
Mindanao	2027	8	30	6	73	138	138	25
Mindanao	2027	8	30	7	71	138	138	25
Mindanao	2027	8	30	8	74	138	138	25
Mindanao	2027	8	30	9	82	138	138	25
Mindanao	2027	8	30	10	91	138	138	25
Mindanao	2027	8	30	11	95	138	138	25
Mindanao	2027	8	30	12	93	138	138	25
Mindanao	2027	8	30	13	94	138	138	25
Mindanao	2027	8	30	14	96	138	138	25
Mindanao	2027	8	30	15	95	138	138	25
Mindanao	2027	8	30	16	92	138	138	25
Mindanao	2027	8	30	17	93	138	138	25
Mindanao	2027	8	30	18	100	138	138	25
Mindanao	2027	8	30	19	101	138	138	25
Mindanao	2027	8	30	20	99	138	138	25
Mindanao	2027	8	30	21	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	8	30	22	93	138	138	25
Mindanao	2027	8	30	23	87	138	138	25
Mindanao	2027	8	30	24	82	138	138	25
Mindanao	2027	8	31	1	79	138	138	25
Mindanao	2027	8	31	2	76	138	138	25
Mindanao	2027	8	31	3	72	138	138	25
Mindanao	2027	8	31	4	73	138	138	25
Mindanao	2027	8	31	5	79	138	138	25
Mindanao	2027	8	31	6	81	138	138	25
Mindanao	2027	8	31	7	72	138	138	25
Mindanao	2027	8	31	8	84	138	138	25
Mindanao	2027	8	31	9	98	138	138	25
Mindanao	2027	8	31	10	105	138	138	25
Mindanao	2027	8	31	11	110	138	138	25
Mindanao	2027	8	31	12	109	138	138	25
Mindanao	2027	8	31	13	110	138	138	25
Mindanao	2027	8	31	14	115	138	138	25
Mindanao	2027	8	31	15	113	138	138	25
Mindanao	2027	8	31	16	109	138	138	25
Mindanao	2027	8	31	17	105	138	138	25
Mindanao	2027	8	31	18	110	138	138	25
Mindanao	2027	8	31	19	113	138	138	25
Mindanao	2027	8	31	20	111	138	138	25
Mindanao	2027	8	31	21	109	138	138	25
Mindanao	2027	8	31	22	100	138	138	25
Mindanao	2027	8	31	23	95	138	138	25
Mindanao	2027	8	31	24	90	138	138	25
Mindanao	2027	9	1	1	85	138	138	25
Mindanao	2027	9	1	2	83	138	138	25
Mindanao	2027	9	1	3	79	138	138	25
Mindanao	2027	9	1	4	77	138	138	25
Mindanao	2027	9	1	5	82	138	138	25
Mindanao	2027	9	1	6	83	138	138	25
Mindanao	2027	9	1	7	75	138	138	25
Mindanao	2027	9	1	8	88	138	138	25
Mindanao	2027	9	1	9	101	138	138	25
Mindanao	2027	9	1	10	109	138	138	25
Mindanao	2027	9	1	11	114	138	138	25
Mindanao	2027	9	1	12	113	138	138	25
Mindanao	2027	9	1	13	116	138	138	25
Mindanao	2027	9	1	14	121	138	138	25
Mindanao	2027	9	1	15	120	138	138	25
Mindanao	2027	9	1	16	117	138	138	25
Mindanao	2027	9	1	17	112	138	138	25
Mindanao	2027	9	1	18	115	138	138	25
Mindanao	2027	9	1	19	116	138	138	25
Mindanao	2027	9	1	20	114	138	138	25
Mindanao	2027	9	1	21	111	138	138	25
Mindanao	2027	9	1	22	105	138	138	25
Mindanao	2027	9	1	23	99	138	138	25
Mindanao	2027	9	1	24	93	138	138	25
Mindanao	2027	9	2	1	89	138	138	25
Mindanao	2027	9	2	2	83	138	138	25
Mindanao	2027	9	2	3	81	138	138	25
Mindanao	2027	9	2	4	80	138	138	25
Mindanao	2027	9	2	5	86	138	138	25
Mindanao	2027	9	2	6	85	138	138	25
Mindanao	2027	9	2	7	78	138	138	25
Mindanao	2027	9	2	8	89	138	138	25
Mindanao	2027	9	2	9	102	138	138	25
Mindanao	2027	9	2	10	110	138	138	25
Mindanao	2027	9	2	11	115	138	138	25
Mindanao	2027	9	2	12	114	138	138	25
Mindanao	2027	9	2	13	116	138	138	25
Mindanao	2027	9	2	14	120	138	138	25
Mindanao	2027	9	2	15	120	138	138	25
Mindanao	2027	9	2	16	118	138	138	25
Mindanao	2027	9	2	17	111	138	138	25
Mindanao	2027	9	2	18	113	138	138	25
Mindanao	2027	9	2	19	115	138	138	25
Mindanao	2027	9	2	20	114	138	138	25
Mindanao	2027	9	2	21	112	138	138	25
Mindanao	2027	9	2	22	106	138	138	25
Mindanao	2027	9	2	23	99	138	138	25
Mindanao	2027	9	2	24	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	3	1	89	138	138	25
Mindanao	2027	9	3	2	85	138	138	25
Mindanao	2027	9	3	3	82	138	138	25
Mindanao	2027	9	3	4	81	138	138	25
Mindanao	2027	9	3	5	84	138	138	25
Mindanao	2027	9	3	6	85	138	138	25
Mindanao	2027	9	3	7	79	138	138	25
Mindanao	2027	9	3	8	88	138	138	25
Mindanao	2027	9	3	9	101	138	138	25
Mindanao	2027	9	3	10	110	138	138	25
Mindanao	2027	9	3	11	115	138	138	25
Mindanao	2027	9	3	12	113	138	138	25
Mindanao	2027	9	3	13	115	138	138	25
Mindanao	2027	9	3	14	121	138	138	25
Mindanao	2027	9	3	15	118	138	138	25
Mindanao	2027	9	3	16	116	138	138	25
Mindanao	2027	9	3	17	111	138	138	25
Mindanao	2027	9	3	18	114	138	138	25
Mindanao	2027	9	3	19	115	138	138	25
Mindanao	2027	9	3	20	112	138	138	25
Mindanao	2027	9	3	21	109	138	138	25
Mindanao	2027	9	3	22	105	138	138	25
Mindanao	2027	9	3	23	99	138	138	25
Mindanao	2027	9	3	24	94	138	138	25
Mindanao	2027	9	4	1	88	138	138	25
Mindanao	2027	9	4	2	86	138	138	25
Mindanao	2027	9	4	3	83	138	138	25
Mindanao	2027	9	4	4	78	138	138	25
Mindanao	2027	9	4	5	80	138	138	25
Mindanao	2027	9	4	6	80	138	138	25
Mindanao	2027	9	4	7	79	138	138	25
Mindanao	2027	9	4	8	86	138	138	25
Mindanao	2027	9	4	9	95	138	138	25
Mindanao	2027	9	4	10	101	138	138	25
Mindanao	2027	9	4	11	107	138	138	25
Mindanao	2027	9	4	12	107	138	138	25
Mindanao	2027	9	4	13	107	138	138	25
Mindanao	2027	9	4	14	112	138	138	25
Mindanao	2027	9	4	15	110	138	138	25
Mindanao	2027	9	4	16	106	138	138	25
Mindanao	2027	9	4	17	103	138	138	25
Mindanao	2027	9	4	18	109	138	138	25
Mindanao	2027	9	4	19	112	138	138	25
Mindanao	2027	9	4	20	109	138	138	25
Mindanao	2027	9	4	21	107	138	138	25
Mindanao	2027	9	4	22	102	138	138	25
Mindanao	2027	9	4	23	95	138	138	25
Mindanao	2027	9	4	24	90	138	138	25
Mindanao	2027	9	5	1	86	138	138	25
Mindanao	2027	9	5	2	83	138	138	25
Mindanao	2027	9	5	3	81	138	138	25
Mindanao	2027	9	5	4	78	138	138	25
Mindanao	2027	9	5	5	78	138	138	25
Mindanao	2027	9	5	6	79	138	138	25
Mindanao	2027	9	5	7	77	138	138	25
Mindanao	2027	9	5	8	76	138	138	25
Mindanao	2027	9	5	9	81	138	138	25
Mindanao	2027	9	5	10	86	138	138	25
Mindanao	2027	9	5	11	91	138	138	25
Mindanao	2027	9	5	12	93	138	138	25
Mindanao	2027	9	5	13	95	138	138	25
Mindanao	2027	9	5	14	96	138	138	25
Mindanao	2027	9	5	15	94	138	138	25
Mindanao	2027	9	5	16	93	138	138	25
Mindanao	2027	9	5	17	93	138	138	25
Mindanao	2027	9	5	18	101	138	138	25
Mindanao	2027	9	5	19	105	138	138	25
Mindanao	2027	9	5	20	104	138	138	25
Mindanao	2027	9	5	21	103	138	138	25
Mindanao	2027	9	5	22	96	138	138	25
Mindanao	2027	9	5	23	92	138	138	25
Mindanao	2027	9	5	24	84	138	138	25
Mindanao	2027	9	6	1	82	138	138	25
Mindanao	2027	9	6	2	78	138	138	25
Mindanao	2027	9	6	3	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	6	4	75	138	138	25
Mindanao	2027	9	6	5	81	138	138	25
Mindanao	2027	9	6	6	82	138	138	25
Mindanao	2027	9	6	7	76	138	138	25
Mindanao	2027	9	6	8	88	138	138	25
Mindanao	2027	9	6	9	101	138	138	25
Mindanao	2027	9	6	10	111	138	138	25
Mindanao	2027	9	6	11	115	138	138	25
Mindanao	2027	9	6	12	115	138	138	25
Mindanao	2027	9	6	13	117	138	138	25
Mindanao	2027	9	6	14	121	138	138	25
Mindanao	2027	9	6	15	121	138	138	25
Mindanao	2027	9	6	16	119	138	138	25
Mindanao	2027	9	6	17	114	138	138	25
Mindanao	2027	9	6	18	117	138	138	25
Mindanao	2027	9	6	19	116	138	138	25
Mindanao	2027	9	6	20	115	138	138	25
Mindanao	2027	9	6	21	111	138	138	25
Mindanao	2027	9	6	22	105	138	138	25
Mindanao	2027	9	6	23	99	138	138	25
Mindanao	2027	9	6	24	92	138	138	25
Mindanao	2027	9	7	1	89	138	138	25
Mindanao	2027	9	7	2	86	138	138	25
Mindanao	2027	9	7	3	83	138	138	25
Mindanao	2027	9	7	4	81	138	138	25
Mindanao	2027	9	7	5	86	138	138	25
Mindanao	2027	9	7	6	87	138	138	25
Mindanao	2027	9	7	7	79	138	138	25
Mindanao	2027	9	7	8	91	138	138	25
Mindanao	2027	9	7	9	105	138	138	25
Mindanao	2027	9	7	10	111	138	138	25
Mindanao	2027	9	7	11	118	138	138	25
Mindanao	2027	9	7	12	117	138	138	25
Mindanao	2027	9	7	13	120	138	138	25
Mindanao	2027	9	7	14	122	138	138	25
Mindanao	2027	9	7	15	121	138	138	25
Mindanao	2027	9	7	16	118	138	138	25
Mindanao	2027	9	7	17	112	138	138	25
Mindanao	2027	9	7	18	117	138	138	25
Mindanao	2027	9	7	19	117	138	138	25
Mindanao	2027	9	7	20	115	138	138	25
Mindanao	2027	9	7	21	113	138	138	25
Mindanao	2027	9	7	22	106	138	138	25
Mindanao	2027	9	7	23	100	138	138	25
Mindanao	2027	9	7	24	96	138	138	25
Mindanao	2027	9	8	1	90	138	138	25
Mindanao	2027	9	8	2	87	138	138	25
Mindanao	2027	9	8	3	83	138	138	25
Mindanao	2027	9	8	4	82	138	138	25
Mindanao	2027	9	8	5	86	138	138	25
Mindanao	2027	9	8	6	89	138	138	25
Mindanao	2027	9	8	7	79	138	138	25
Mindanao	2027	9	8	8	87	138	138	25
Mindanao	2027	9	8	9	96	138	138	25
Mindanao	2027	9	8	10	109	138	138	25
Mindanao	2027	9	8	11	115	138	138	25
Mindanao	2027	9	8	12	113	138	138	25
Mindanao	2027	9	8	13	114	138	138	25
Mindanao	2027	9	8	14	117	138	138	25
Mindanao	2027	9	8	15	116	138	138	25
Mindanao	2027	9	8	16	114	138	138	25
Mindanao	2027	9	8	17	110	138	138	25
Mindanao	2027	9	8	18	113	138	138	25
Mindanao	2027	9	8	19	114	138	138	25
Mindanao	2027	9	8	20	111	138	138	25
Mindanao	2027	9	8	21	109	138	138	25
Mindanao	2027	9	8	22	101	138	138	25
Mindanao	2027	9	8	23	94	138	138	25
Mindanao	2027	9	8	24	89	138	138	25
Mindanao	2027	9	9	1	85	138	138	25
Mindanao	2027	9	9	2	83	138	138	25
Mindanao	2027	9	9	3	80	138	138	25
Mindanao	2027	9	9	4	78	138	138	25
Mindanao	2027	9	9	5	83	138	138	25
Mindanao	2027	9	9	6	87	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	9	7	78	138	138	25
Mindanao	2027	9	9	8	88	138	138	25
Mindanao	2027	9	9	9	100	138	138	25
Mindanao	2027	9	9	10	109	138	138	25
Mindanao	2027	9	9	11	115	138	138	25
Mindanao	2027	9	9	12	113	138	138	25
Mindanao	2027	9	9	13	115	138	138	25
Mindanao	2027	9	9	14	119	138	138	25
Mindanao	2027	9	9	15	118	138	138	25
Mindanao	2027	9	9	16	116	138	138	25
Mindanao	2027	9	9	17	112	138	138	25
Mindanao	2027	9	9	18	114	138	138	25
Mindanao	2027	9	9	19	115	138	138	25
Mindanao	2027	9	9	20	112	138	138	25
Mindanao	2027	9	9	21	111	138	138	25
Mindanao	2027	9	9	22	102	138	138	25
Mindanao	2027	9	9	23	97	138	138	25
Mindanao	2027	9	9	24	90	138	138	25
Mindanao	2027	9	10	1	87	138	138	25
Mindanao	2027	9	10	2	83	138	138	25
Mindanao	2027	9	10	3	80	138	138	25
Mindanao	2027	9	10	4	78	138	138	25
Mindanao	2027	9	10	5	84	138	138	25
Mindanao	2027	9	10	6	85	138	138	25
Mindanao	2027	9	10	7	76	138	138	25
Mindanao	2027	9	10	8	87	138	138	25
Mindanao	2027	9	10	9	101	138	138	25
Mindanao	2027	9	10	10	110	138	138	25
Mindanao	2027	9	10	11	115	138	138	25
Mindanao	2027	9	10	12	114	138	138	25
Mindanao	2027	9	10	13	115	138	138	25
Mindanao	2027	9	10	14	119	138	138	25
Mindanao	2027	9	10	15	113	138	138	25
Mindanao	2027	9	10	16	111	138	138	25
Mindanao	2027	9	10	17	107	138	138	25
Mindanao	2027	9	10	18	111	138	138	25
Mindanao	2027	9	10	19	110	138	138	25
Mindanao	2027	9	10	20	106	138	138	25
Mindanao	2027	9	10	21	102	138	138	25
Mindanao	2027	9	10	22	97	138	138	25
Mindanao	2027	9	10	23	91	138	138	25
Mindanao	2027	9	10	24	86	138	138	25
Mindanao	2027	9	11	1	82	138	138	25
Mindanao	2027	9	11	2	79	138	138	25
Mindanao	2027	9	11	3	76	138	138	25
Mindanao	2027	9	11	4	75	138	138	25
Mindanao	2027	9	11	5	75	138	138	25
Mindanao	2027	9	11	6	77	138	138	25
Mindanao	2027	9	11	7	74	138	138	25
Mindanao	2027	9	11	8	77	138	138	25
Mindanao	2027	9	11	9	86	138	138	25
Mindanao	2027	9	11	10	93	138	138	25
Mindanao	2027	9	11	11	98	138	138	25
Mindanao	2027	9	11	12	98	138	138	25
Mindanao	2027	9	11	13	99	138	138	25
Mindanao	2027	9	11	14	102	138	138	25
Mindanao	2027	9	11	15	101	138	138	25
Mindanao	2027	9	11	16	99	138	138	25
Mindanao	2027	9	11	17	97	138	138	25
Mindanao	2027	9	11	18	106	138	138	25
Mindanao	2027	9	11	19	107	138	138	25
Mindanao	2027	9	11	20	103	138	138	25
Mindanao	2027	9	11	21	102	138	138	25
Mindanao	2027	9	11	22	97	138	138	25
Mindanao	2027	9	11	23	90	138	138	25
Mindanao	2027	9	11	24	87	138	138	25
Mindanao	2027	9	12	1	81	138	138	25
Mindanao	2027	9	12	2	78	138	138	25
Mindanao	2027	9	12	3	76	138	138	25
Mindanao	2027	9	12	4	73	138	138	25
Mindanao	2027	9	12	5	74	138	138	25
Mindanao	2027	9	12	6	74	138	138	25
Mindanao	2027	9	12	7	75	138	138	25
Mindanao	2027	9	12	8	74	138	138	25
Mindanao	2027	9	12	9	78	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	12	10	83	138	138	25
Mindanao	2027	9	12	11	86	138	138	25
Mindanao	2027	9	12	12	87	138	138	25
Mindanao	2027	9	12	13	87	138	138	25
Mindanao	2027	9	12	14	88	138	138	25
Mindanao	2027	9	12	15	86	138	138	25
Mindanao	2027	9	12	16	88	138	138	25
Mindanao	2027	9	12	17	89	138	138	25
Mindanao	2027	9	12	18	99	138	138	25
Mindanao	2027	9	12	19	100	138	138	25
Mindanao	2027	9	12	20	98	138	138	25
Mindanao	2027	9	12	21	96	138	138	25
Mindanao	2027	9	12	22	90	138	138	25
Mindanao	2027	9	12	23	85	138	138	25
Mindanao	2027	9	12	24	81	138	138	25
Mindanao	2027	9	13	1	77	138	138	25
Mindanao	2027	9	13	2	75	138	138	25
Mindanao	2027	9	13	3	71	138	138	25
Mindanao	2027	9	13	4	72	138	138	25
Mindanao	2027	9	13	5	78	138	138	25
Mindanao	2027	9	13	6	83	138	138	25
Mindanao	2027	9	13	7	73	138	138	25
Mindanao	2027	9	13	8	84	138	138	25
Mindanao	2027	9	13	9	98	138	138	25
Mindanao	2027	9	13	10	107	138	138	25
Mindanao	2027	9	13	11	114	138	138	25
Mindanao	2027	9	13	12	113	138	138	25
Mindanao	2027	9	13	13	113	138	138	25
Mindanao	2027	9	13	14	117	138	138	25
Mindanao	2027	9	13	15	112	138	138	25
Mindanao	2027	9	13	16	112	138	138	25
Mindanao	2027	9	13	17	108	138	138	25
Mindanao	2027	9	13	18	112	138	138	25
Mindanao	2027	9	13	19	111	138	138	25
Mindanao	2027	9	13	20	108	138	138	25
Mindanao	2027	9	13	21	105	138	138	25
Mindanao	2027	9	13	22	96	138	138	25
Mindanao	2027	9	13	23	93	138	138	25
Mindanao	2027	9	13	24	86	138	138	25
Mindanao	2027	9	14	1	83	138	138	25
Mindanao	2027	9	14	2	79	138	138	25
Mindanao	2027	9	14	3	78	138	138	25
Mindanao	2027	9	14	4	77	138	138	25
Mindanao	2027	9	14	5	83	138	138	25
Mindanao	2027	9	14	6	86	138	138	25
Mindanao	2027	9	14	7	76	138	138	25
Mindanao	2027	9	14	8	87	138	138	25
Mindanao	2027	9	14	9	101	138	138	25
Mindanao	2027	9	14	10	108	138	138	25
Mindanao	2027	9	14	11	113	138	138	25
Mindanao	2027	9	14	12	112	138	138	25
Mindanao	2027	9	14	13	114	138	138	25
Mindanao	2027	9	14	14	117	138	138	25
Mindanao	2027	9	14	15	115	138	138	25
Mindanao	2027	9	14	16	112	138	138	25
Mindanao	2027	9	14	17	108	138	138	25
Mindanao	2027	9	14	18	113	138	138	25
Mindanao	2027	9	14	19	112	138	138	25
Mindanao	2027	9	14	20	108	138	138	25
Mindanao	2027	9	14	21	104	138	138	25
Mindanao	2027	9	14	22	96	138	138	25
Mindanao	2027	9	14	23	89	138	138	25
Mindanao	2027	9	14	24	83	138	138	25
Mindanao	2027	9	15	1	80	138	138	25
Mindanao	2027	9	15	2	77	138	138	25
Mindanao	2027	9	15	3	76	138	138	25
Mindanao	2027	9	15	4	75	138	138	25
Mindanao	2027	9	15	5	81	138	138	25
Mindanao	2027	9	15	6	85	138	138	25
Mindanao	2027	9	15	7	75	138	138	25
Mindanao	2027	9	15	8	87	138	138	25
Mindanao	2027	9	15	9	100	138	138	25
Mindanao	2027	9	15	10	108	138	138	25
Mindanao	2027	9	15	11	112	138	138	25
Mindanao	2027	9	15	12	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	15	13	111	138	138	25
Mindanao	2027	9	15	14	114	138	138	25
Mindanao	2027	9	15	15	112	138	138	25
Mindanao	2027	9	15	16	110	138	138	25
Mindanao	2027	9	15	17	107	138	138	25
Mindanao	2027	9	15	18	111	138	138	25
Mindanao	2027	9	15	19	107	138	138	25
Mindanao	2027	9	15	20	104	138	138	25
Mindanao	2027	9	15	21	100	138	138	25
Mindanao	2027	9	15	22	93	138	138	25
Mindanao	2027	9	15	23	88	138	138	25
Mindanao	2027	9	15	24	84	138	138	25
Mindanao	2027	9	16	1	80	138	138	25
Mindanao	2027	9	16	2	77	138	138	25
Mindanao	2027	9	16	3	75	138	138	25
Mindanao	2027	9	16	4	74	138	138	25
Mindanao	2027	9	16	5	80	138	138	25
Mindanao	2027	9	16	6	85	138	138	25
Mindanao	2027	9	16	7	77	138	138	25
Mindanao	2027	9	16	8	86	138	138	25
Mindanao	2027	9	16	9	98	138	138	25
Mindanao	2027	9	16	10	104	138	138	25
Mindanao	2027	9	16	11	110	138	138	25
Mindanao	2027	9	16	12	108	138	138	25
Mindanao	2027	9	16	13	111	138	138	25
Mindanao	2027	9	16	14	115	138	138	25
Mindanao	2027	9	16	15	113	138	138	25
Mindanao	2027	9	16	16	113	138	138	25
Mindanao	2027	9	16	17	109	138	138	25
Mindanao	2027	9	16	18	113	138	138	25
Mindanao	2027	9	16	19	112	138	138	25
Mindanao	2027	9	16	20	109	138	138	25
Mindanao	2027	9	16	21	105	138	138	25
Mindanao	2027	9	16	22	98	138	138	25
Mindanao	2027	9	16	23	91	138	138	25
Mindanao	2027	9	16	24	86	138	138	25
Mindanao	2027	9	17	1	81	138	138	25
Mindanao	2027	9	17	2	79	138	138	25
Mindanao	2027	9	17	3	76	138	138	25
Mindanao	2027	9	17	4	76	138	138	25
Mindanao	2027	9	17	5	81	138	138	25
Mindanao	2027	9	17	6	85	138	138	25
Mindanao	2027	9	17	7	75	138	138	25
Mindanao	2027	9	17	8	86	138	138	25
Mindanao	2027	9	17	9	98	138	138	25
Mindanao	2027	9	17	10	105	138	138	25
Mindanao	2027	9	17	11	106	138	138	25
Mindanao	2027	9	17	12	106	138	138	25
Mindanao	2027	9	17	13	108	138	138	25
Mindanao	2027	9	17	14	113	138	138	25
Mindanao	2027	9	17	15	112	138	138	25
Mindanao	2027	9	17	16	112	138	138	25
Mindanao	2027	9	17	17	105	138	138	25
Mindanao	2027	9	17	18	113	138	138	25
Mindanao	2027	9	17	19	111	138	138	25
Mindanao	2027	9	17	20	108	138	138	25
Mindanao	2027	9	17	21	105	138	138	25
Mindanao	2027	9	17	22	97	138	138	25
Mindanao	2027	9	17	23	91	138	138	25
Mindanao	2027	9	17	24	87	138	138	25
Mindanao	2027	9	18	1	82	138	138	25
Mindanao	2027	9	18	2	80	138	138	25
Mindanao	2027	9	18	3	78	138	138	25
Mindanao	2027	9	18	4	76	138	138	25
Mindanao	2027	9	18	5	76	138	138	25
Mindanao	2027	9	18	6	79	138	138	25
Mindanao	2027	9	18	7	78	138	138	25
Mindanao	2027	9	18	8	80	138	138	25
Mindanao	2027	9	18	9	89	138	138	25
Mindanao	2027	9	18	10	98	138	138	25
Mindanao	2027	9	18	11	101	138	138	25
Mindanao	2027	9	18	12	99	138	138	25
Mindanao	2027	9	18	13	101	138	138	25
Mindanao	2027	9	18	14	101	138	138	25
Mindanao	2027	9	18	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	18	16	98	138	138	25
Mindanao	2027	9	18	17	101	138	138	25
Mindanao	2027	9	18	18	105	138	138	25
Mindanao	2027	9	18	19	103	138	138	25
Mindanao	2027	9	18	20	100	138	138	25
Mindanao	2027	9	18	21	97	138	138	25
Mindanao	2027	9	18	22	91	138	138	25
Mindanao	2027	9	18	23	85	138	138	25
Mindanao	2027	9	18	24	81	138	138	25
Mindanao	2027	9	19	1	78	138	138	25
Mindanao	2027	9	19	2	75	138	138	25
Mindanao	2027	9	19	3	74	138	138	25
Mindanao	2027	9	19	4	72	138	138	25
Mindanao	2027	9	19	5	74	138	138	25
Mindanao	2027	9	19	6	74	138	138	25
Mindanao	2027	9	19	7	71	138	138	25
Mindanao	2027	9	19	8	71	138	138	25
Mindanao	2027	9	19	9	76	138	138	25
Mindanao	2027	9	19	10	82	138	138	25
Mindanao	2027	9	19	11	87	138	138	25
Mindanao	2027	9	19	12	89	138	138	25
Mindanao	2027	9	19	13	88	138	138	25
Mindanao	2027	9	19	14	90	138	138	25
Mindanao	2027	9	19	15	87	138	138	25
Mindanao	2027	9	19	16	87	138	138	25
Mindanao	2027	9	19	17	88	138	138	25
Mindanao	2027	9	19	18	95	138	138	25
Mindanao	2027	9	19	19	98	138	138	25
Mindanao	2027	9	19	20	97	138	138	25
Mindanao	2027	9	19	21	95	138	138	25
Mindanao	2027	9	19	22	88	138	138	25
Mindanao	2027	9	19	23	81	138	138	25
Mindanao	2027	9	19	24	78	138	138	25
Mindanao	2027	9	20	1	75	138	138	25
Mindanao	2027	9	20	2	72	138	138	25
Mindanao	2027	9	20	3	70	138	138	25
Mindanao	2027	9	20	4	70	138	138	25
Mindanao	2027	9	20	5	76	138	138	25
Mindanao	2027	9	20	6	78	138	138	25
Mindanao	2027	9	20	7	71	138	138	25
Mindanao	2027	9	20	8	80	138	138	25
Mindanao	2027	9	20	9	92	138	138	25
Mindanao	2027	9	20	10	101	138	138	25
Mindanao	2027	9	20	11	107	138	138	25
Mindanao	2027	9	20	12	105	138	138	25
Mindanao	2027	9	20	13	106	138	138	25
Mindanao	2027	9	20	14	109	138	138	25
Mindanao	2027	9	20	15	108	138	138	25
Mindanao	2027	9	20	16	106	138	138	25
Mindanao	2027	9	20	17	103	138	138	25
Mindanao	2027	9	20	18	108	138	138	25
Mindanao	2027	9	20	19	105	138	138	25
Mindanao	2027	9	20	20	101	138	138	25
Mindanao	2027	9	20	21	99	138	138	25
Mindanao	2027	9	20	22	90	138	138	25
Mindanao	2027	9	20	23	86	138	138	25
Mindanao	2027	9	20	24	82	138	138	25
Mindanao	2027	9	21	1	78	138	138	25
Mindanao	2027	9	21	2	76	138	138	25
Mindanao	2027	9	21	3	75	138	138	25
Mindanao	2027	9	21	4	76	138	138	25
Mindanao	2027	9	21	5	81	138	138	25
Mindanao	2027	9	21	6	84	138	138	25
Mindanao	2027	9	21	7	77	138	138	25
Mindanao	2027	9	21	8	85	138	138	25
Mindanao	2027	9	21	9	97	138	138	25
Mindanao	2027	9	21	10	104	138	138	25
Mindanao	2027	9	21	11	114	138	138	25
Mindanao	2027	9	21	12	111	138	138	25
Mindanao	2027	9	21	13	112	138	138	25
Mindanao	2027	9	21	14	115	138	138	25
Mindanao	2027	9	21	15	113	138	138	25
Mindanao	2027	9	21	16	111	138	138	25
Mindanao	2027	9	21	17	108	138	138	25
Mindanao	2027	9	21	18	113	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	21	19	112	138	138	25
Mindanao	2027	9	21	20	108	138	138	25
Mindanao	2027	9	21	21	105	138	138	25
Mindanao	2027	9	21	22	98	138	138	25
Mindanao	2027	9	21	23	91	138	138	25
Mindanao	2027	9	21	24	85	138	138	25
Mindanao	2027	9	22	1	84	138	138	25
Mindanao	2027	9	22	2	79	138	138	25
Mindanao	2027	9	22	3	77	138	138	25
Mindanao	2027	9	22	4	77	138	138	25
Mindanao	2027	9	22	5	83	138	138	25
Mindanao	2027	9	22	6	87	138	138	25
Mindanao	2027	9	22	7	79	138	138	25
Mindanao	2027	9	22	8	87	138	138	25
Mindanao	2027	9	22	9	98	138	138	25
Mindanao	2027	9	22	10	106	138	138	25
Mindanao	2027	9	22	11	111	138	138	25
Mindanao	2027	9	22	12	109	138	138	25
Mindanao	2027	9	22	13	110	138	138	25
Mindanao	2027	9	22	14	116	138	138	25
Mindanao	2027	9	22	15	115	138	138	25
Mindanao	2027	9	22	16	112	138	138	25
Mindanao	2027	9	22	17	110	138	138	25
Mindanao	2027	9	22	18	114	138	138	25
Mindanao	2027	9	22	19	112	138	138	25
Mindanao	2027	9	22	20	107	138	138	25
Mindanao	2027	9	22	21	103	138	138	25
Mindanao	2027	9	22	22	96	138	138	25
Mindanao	2027	9	22	23	89	138	138	25
Mindanao	2027	9	22	24	85	138	138	25
Mindanao	2027	9	23	1	80	138	138	25
Mindanao	2027	9	23	2	78	138	138	25
Mindanao	2027	9	23	3	77	138	138	25
Mindanao	2027	9	23	4	76	138	138	25
Mindanao	2027	9	23	5	82	138	138	25
Mindanao	2027	9	23	6	86	138	138	25
Mindanao	2027	9	23	7	77	138	138	25
Mindanao	2027	9	23	8	84	138	138	25
Mindanao	2027	9	23	9	98	138	138	25
Mindanao	2027	9	23	10	106	138	138	25
Mindanao	2027	9	23	11	111	138	138	25
Mindanao	2027	9	23	12	109	138	138	25
Mindanao	2027	9	23	13	108	138	138	25
Mindanao	2027	9	23	14	113	138	138	25
Mindanao	2027	9	23	15	111	138	138	25
Mindanao	2027	9	23	16	110	138	138	25
Mindanao	2027	9	23	17	106	138	138	25
Mindanao	2027	9	23	18	110	138	138	25
Mindanao	2027	9	23	19	107	138	138	25
Mindanao	2027	9	23	20	104	138	138	25
Mindanao	2027	9	23	21	99	138	138	25
Mindanao	2027	9	23	22	93	138	138	25
Mindanao	2027	9	23	23	87	138	138	25
Mindanao	2027	9	23	24	83	138	138	25
Mindanao	2027	9	24	1	78	138	138	25
Mindanao	2027	9	24	2	77	138	138	25
Mindanao	2027	9	24	3	74	138	138	25
Mindanao	2027	9	24	4	74	138	138	25
Mindanao	2027	9	24	5	79	138	138	25
Mindanao	2027	9	24	6	82	138	138	25
Mindanao	2027	9	24	7	75	138	138	25
Mindanao	2027	9	24	8	85	138	138	25
Mindanao	2027	9	24	9	96	138	138	25
Mindanao	2027	9	24	10	105	138	138	25
Mindanao	2027	9	24	11	110	138	138	25
Mindanao	2027	9	24	12	109	138	138	25
Mindanao	2027	9	24	13	106	138	138	25
Mindanao	2027	9	24	14	111	138	138	25
Mindanao	2027	9	24	15	108	138	138	25
Mindanao	2027	9	24	16	107	138	138	25
Mindanao	2027	9	24	17	105	138	138	25
Mindanao	2027	9	24	18	110	138	138	25
Mindanao	2027	9	24	19	105	138	138	25
Mindanao	2027	9	24	20	103	138	138	25
Mindanao	2027	9	24	21	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	24	22	92	138	138	25
Mindanao	2027	9	24	23	87	138	138	25
Mindanao	2027	9	24	24	82	138	138	25
Mindanao	2027	9	25	1	79	138	138	25
Mindanao	2027	9	25	2	76	138	138	25
Mindanao	2027	9	25	3	75	138	138	25
Mindanao	2027	9	25	4	74	138	138	25
Mindanao	2027	9	25	5	75	138	138	25
Mindanao	2027	9	25	6	76	138	138	25
Mindanao	2027	9	25	7	76	138	138	25
Mindanao	2027	9	25	8	80	138	138	25
Mindanao	2027	9	25	9	89	138	138	25
Mindanao	2027	9	25	10	97	138	138	25
Mindanao	2027	9	25	11	101	138	138	25
Mindanao	2027	9	25	12	101	138	138	25
Mindanao	2027	9	25	13	102	138	138	25
Mindanao	2027	9	25	14	107	138	138	25
Mindanao	2027	9	25	15	106	138	138	25
Mindanao	2027	9	25	16	105	138	138	25
Mindanao	2027	9	25	17	102	138	138	25
Mindanao	2027	9	25	18	112	138	138	25
Mindanao	2027	9	25	19	110	138	138	25
Mindanao	2027	9	25	20	107	138	138	25
Mindanao	2027	9	25	21	104	138	138	25
Mindanao	2027	9	25	22	97	138	138	25
Mindanao	2027	9	25	23	92	138	138	25
Mindanao	2027	9	25	24	87	138	138	25
Mindanao	2027	9	26	1	83	138	138	25
Mindanao	2027	9	26	2	79	138	138	25
Mindanao	2027	9	26	3	78	138	138	25
Mindanao	2027	9	26	4	75	138	138	25
Mindanao	2027	9	26	5	76	138	138	25
Mindanao	2027	9	26	6	76	138	138	25
Mindanao	2027	9	26	7	72	138	138	25
Mindanao	2027	9	26	8	73	138	138	25
Mindanao	2027	9	26	9	79	138	138	25
Mindanao	2027	9	26	10	85	138	138	25
Mindanao	2027	9	26	11	90	138	138	25
Mindanao	2027	9	26	12	91	138	138	25
Mindanao	2027	9	26	13	93	138	138	25
Mindanao	2027	9	26	14	95	138	138	25
Mindanao	2027	9	26	15	94	138	138	25
Mindanao	2027	9	26	16	93	138	138	25
Mindanao	2027	9	26	17	93	138	138	25
Mindanao	2027	9	26	18	105	138	138	25
Mindanao	2027	9	26	19	106	138	138	25
Mindanao	2027	9	26	20	104	138	138	25
Mindanao	2027	9	26	21	103	138	138	25
Mindanao	2027	9	26	22	97	138	138	25
Mindanao	2027	9	26	23	91	138	138	25
Mindanao	2027	9	26	24	85	138	138	25
Mindanao	2027	9	27	1	82	138	138	25
Mindanao	2027	9	27	2	80	138	138	25
Mindanao	2027	9	27	3	76	138	138	25
Mindanao	2027	9	27	4	76	138	138	25
Mindanao	2027	9	27	5	81	138	138	25
Mindanao	2027	9	27	6	85	138	138	25
Mindanao	2027	9	27	7	76	138	138	25
Mindanao	2027	9	27	8	87	138	138	25
Mindanao	2027	9	27	9	104	138	138	25
Mindanao	2027	9	27	10	113	138	138	25
Mindanao	2027	9	27	11	118	138	138	25
Mindanao	2027	9	27	12	118	138	138	25
Mindanao	2027	9	27	13	117	138	138	25
Mindanao	2027	9	27	14	124	138	138	25
Mindanao	2027	9	27	15	119	138	138	25
Mindanao	2027	9	27	16	112	138	138	25
Mindanao	2027	9	27	17	110	138	138	25
Mindanao	2027	9	27	18	118	138	138	25
Mindanao	2027	9	27	19	116	138	138	25
Mindanao	2027	9	27	20	112	138	138	25
Mindanao	2027	9	27	21	108	138	138	25
Mindanao	2027	9	27	22	102	138	138	25
Mindanao	2027	9	27	23	95	138	138	25
Mindanao	2027	9	27	24	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	9	28	1	86	138	138	25
Mindanao	2027	9	28	2	83	138	138	25
Mindanao	2027	9	28	3	81	138	138	25
Mindanao	2027	9	28	4	80	138	138	25
Mindanao	2027	9	28	5	84	138	138	25
Mindanao	2027	9	28	6	88	138	138	25
Mindanao	2027	9	28	7	79	138	138	25
Mindanao	2027	9	28	8	89	138	138	25
Mindanao	2027	9	28	9	102	138	138	25
Mindanao	2027	9	28	10	109	138	138	25
Mindanao	2027	9	28	11	112	138	138	25
Mindanao	2027	9	28	12	110	138	138	25
Mindanao	2027	9	28	13	109	138	138	25
Mindanao	2027	9	28	14	116	138	138	25
Mindanao	2027	9	28	15	115	138	138	25
Mindanao	2027	9	28	16	111	138	138	25
Mindanao	2027	9	28	17	106	138	138	25
Mindanao	2027	9	28	18	115	138	138	25
Mindanao	2027	9	28	19	111	138	138	25
Mindanao	2027	9	28	20	108	138	138	25
Mindanao	2027	9	28	21	105	138	138	25
Mindanao	2027	9	28	22	98	138	138	25
Mindanao	2027	9	28	23	91	138	138	25
Mindanao	2027	9	28	24	87	138	138	25
Mindanao	2027	9	29	1	83	138	138	25
Mindanao	2027	9	29	2	80	138	138	25
Mindanao	2027	9	29	3	78	138	138	25
Mindanao	2027	9	29	4	77	138	138	25
Mindanao	2027	9	29	5	80	138	138	25
Mindanao	2027	9	29	6	85	138	138	25
Mindanao	2027	9	29	7	80	138	138	25
Mindanao	2027	9	29	8	89	138	138	25
Mindanao	2027	9	29	9	99	138	138	25
Mindanao	2027	9	29	10	107	138	138	25
Mindanao	2027	9	29	11	112	138	138	25
Mindanao	2027	9	29	12	109	138	138	25
Mindanao	2027	9	29	13	110	138	138	25
Mindanao	2027	9	29	14	115	138	138	25
Mindanao	2027	9	29	15	115	138	138	25
Mindanao	2027	9	29	16	112	138	138	25
Mindanao	2027	9	29	17	109	138	138	25
Mindanao	2027	9	29	18	116	138	138	25
Mindanao	2027	9	29	19	112	138	138	25
Mindanao	2027	9	29	20	110	138	138	25
Mindanao	2027	9	29	21	106	138	138	25
Mindanao	2027	9	29	22	95	138	138	25
Mindanao	2027	9	29	23	91	138	138	25
Mindanao	2027	9	29	24	89	138	138	25
Mindanao	2027	9	30	1	85	138	138	25
Mindanao	2027	9	30	2	81	138	138	25
Mindanao	2027	9	30	3	79	138	138	25
Mindanao	2027	9	30	4	79	138	138	25
Mindanao	2027	9	30	5	83	138	138	25
Mindanao	2027	9	30	6	87	138	138	25
Mindanao	2027	9	30	7	79	138	138	25
Mindanao	2027	9	30	8	89	138	138	25
Mindanao	2027	9	30	9	102	138	138	25
Mindanao	2027	9	30	10	111	138	138	25
Mindanao	2027	9	30	11	113	138	138	25
Mindanao	2027	9	30	12	113	138	138	25
Mindanao	2027	9	30	13	113	138	138	25
Mindanao	2027	9	30	14	119	138	138	25
Mindanao	2027	9	30	15	117	138	138	25
Mindanao	2027	9	30	16	115	138	138	25
Mindanao	2027	9	30	17	108	138	138	25
Mindanao	2027	9	30	18	115	138	138	25
Mindanao	2027	9	30	19	110	138	138	25
Mindanao	2027	9	30	20	110	138	138	25
Mindanao	2027	9	30	21	106	138	138	25
Mindanao	2027	9	30	22	99	138	138	25
Mindanao	2027	9	30	23	94	138	138	25
Mindanao	2027	9	30	24	89	138	138	25
Mindanao	2027	10	1	1	84	138	138	25
Mindanao	2027	10	1	2	81	138	138	25
Mindanao	2027	10	1	3	77	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	1	4	78	138	138	25
Mindanao	2027	10	1	5	80	138	138	25
Mindanao	2027	10	1	6	83	138	138	25
Mindanao	2027	10	1	7	77	138	138	25
Mindanao	2027	10	1	8	91	138	138	25
Mindanao	2027	10	1	9	102	138	138	25
Mindanao	2027	10	1	10	112	138	138	25
Mindanao	2027	10	1	11	116	138	138	25
Mindanao	2027	10	1	12	113	138	138	25
Mindanao	2027	10	1	13	114	138	138	25
Mindanao	2027	10	1	14	120	138	138	25
Mindanao	2027	10	1	15	119	138	138	25
Mindanao	2027	10	1	16	116	138	138	25
Mindanao	2027	10	1	17	109	138	138	25
Mindanao	2027	10	1	18	117	138	138	25
Mindanao	2027	10	1	19	112	138	138	25
Mindanao	2027	10	1	20	110	138	138	25
Mindanao	2027	10	1	21	106	138	138	25
Mindanao	2027	10	1	22	101	138	138	25
Mindanao	2027	10	1	23	95	138	138	25
Mindanao	2027	10	1	24	88	138	138	25
Mindanao	2027	10	2	1	85	138	138	25
Mindanao	2027	10	2	2	82	138	138	25
Mindanao	2027	10	2	3	80	138	138	25
Mindanao	2027	10	2	4	78	138	138	25
Mindanao	2027	10	2	5	79	138	138	25
Mindanao	2027	10	2	6	78	138	138	25
Mindanao	2027	10	2	7	77	138	138	25
Mindanao	2027	10	2	8	83	138	138	25
Mindanao	2027	10	2	9	92	138	138	25
Mindanao	2027	10	2	10	101	138	138	25
Mindanao	2027	10	2	11	105	138	138	25
Mindanao	2027	10	2	12	105	138	138	25
Mindanao	2027	10	2	13	107	138	138	25
Mindanao	2027	10	2	14	111	138	138	25
Mindanao	2027	10	2	15	108	138	138	25
Mindanao	2027	10	2	16	104	138	138	25
Mindanao	2027	10	2	17	104	138	138	25
Mindanao	2027	10	2	18	114	138	138	25
Mindanao	2027	10	2	19	110	138	138	25
Mindanao	2027	10	2	20	109	138	138	25
Mindanao	2027	10	2	21	106	138	138	25
Mindanao	2027	10	2	22	101	138	138	25
Mindanao	2027	10	2	23	95	138	138	25
Mindanao	2027	10	2	24	90	138	138	25
Mindanao	2027	10	3	1	87	138	138	25
Mindanao	2027	10	3	2	81	138	138	25
Mindanao	2027	10	3	3	81	138	138	25
Mindanao	2027	10	3	4	78	138	138	25
Mindanao	2027	10	3	5	78	138	138	25
Mindanao	2027	10	3	6	79	138	138	25
Mindanao	2027	10	3	7	75	138	138	25
Mindanao	2027	10	3	8	79	138	138	25
Mindanao	2027	10	3	9	83	138	138	25
Mindanao	2027	10	3	10	88	138	138	25
Mindanao	2027	10	3	11	89	138	138	25
Mindanao	2027	10	3	12	91	138	138	25
Mindanao	2027	10	3	13	92	138	138	25
Mindanao	2027	10	3	14	93	138	138	25
Mindanao	2027	10	3	15	93	138	138	25
Mindanao	2027	10	3	16	92	138	138	25
Mindanao	2027	10	3	17	92	138	138	25
Mindanao	2027	10	3	18	102	138	138	25
Mindanao	2027	10	3	19	99	138	138	25
Mindanao	2027	10	3	20	95	138	138	25
Mindanao	2027	10	3	21	97	138	138	25
Mindanao	2027	10	3	22	92	138	138	25
Mindanao	2027	10	3	23	88	138	138	25
Mindanao	2027	10	3	24	83	138	138	25
Mindanao	2027	10	4	1	80	138	138	25
Mindanao	2027	10	4	2	77	138	138	25
Mindanao	2027	10	4	3	75	138	138	25
Mindanao	2027	10	4	4	74	138	138	25
Mindanao	2027	10	4	5	79	138	138	25
Mindanao	2027	10	4	6	81	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	4	7	77	138	138	25
Mindanao	2027	10	4	8	88	138	138	25
Mindanao	2027	10	4	9	100	138	138	25
Mindanao	2027	10	4	10	111	138	138	25
Mindanao	2027	10	4	11	116	138	138	25
Mindanao	2027	10	4	12	117	138	138	25
Mindanao	2027	10	4	13	117	138	138	25
Mindanao	2027	10	4	14	122	138	138	25
Mindanao	2027	10	4	15	120	138	138	25
Mindanao	2027	10	4	16	117	138	138	25
Mindanao	2027	10	4	17	111	138	138	25
Mindanao	2027	10	4	18	117	138	138	25
Mindanao	2027	10	4	19	113	138	138	25
Mindanao	2027	10	4	20	111	138	138	25
Mindanao	2027	10	4	21	107	138	138	25
Mindanao	2027	10	4	22	101	138	138	25
Mindanao	2027	10	4	23	95	138	138	25
Mindanao	2027	10	4	24	92	138	138	25
Mindanao	2027	10	5	1	88	138	138	25
Mindanao	2027	10	5	2	85	138	138	25
Mindanao	2027	10	5	3	82	138	138	25
Mindanao	2027	10	5	4	82	138	138	25
Mindanao	2027	10	5	5	87	138	138	25
Mindanao	2027	10	5	6	89	138	138	25
Mindanao	2027	10	5	7	81	138	138	25
Mindanao	2027	10	5	8	91	138	138	25
Mindanao	2027	10	5	9	104	138	138	25
Mindanao	2027	10	5	10	111	138	138	25
Mindanao	2027	10	5	11	116	138	138	25
Mindanao	2027	10	5	12	120	138	138	25
Mindanao	2027	10	5	13	121	138	138	25
Mindanao	2027	10	5	14	125	138	138	25
Mindanao	2027	10	5	15	125	138	138	25
Mindanao	2027	10	5	16	119	138	138	25
Mindanao	2027	10	5	17	110	138	138	25
Mindanao	2027	10	5	18	118	138	138	25
Mindanao	2027	10	5	19	117	138	138	25
Mindanao	2027	10	5	20	116	138	138	25
Mindanao	2027	10	5	21	112	138	138	25
Mindanao	2027	10	5	22	104	138	138	25
Mindanao	2027	10	5	23	98	138	138	25
Mindanao	2027	10	5	24	93	138	138	25
Mindanao	2027	10	6	1	89	138	138	25
Mindanao	2027	10	6	2	86	138	138	25
Mindanao	2027	10	6	3	85	138	138	25
Mindanao	2027	10	6	4	84	138	138	25
Mindanao	2027	10	6	5	87	138	138	25
Mindanao	2027	10	6	6	89	138	138	25
Mindanao	2027	10	6	7	81	138	138	25
Mindanao	2027	10	6	8	94	138	138	25
Mindanao	2027	10	6	9	107	138	138	25
Mindanao	2027	10	6	10	114	138	138	25
Mindanao	2027	10	6	11	121	138	138	25
Mindanao	2027	10	6	12	119	138	138	25
Mindanao	2027	10	6	13	121	138	138	25
Mindanao	2027	10	6	14	126	138	138	25
Mindanao	2027	10	6	15	125	138	138	25
Mindanao	2027	10	6	16	122	138	138	25
Mindanao	2027	10	6	17	114	138	138	25
Mindanao	2027	10	6	18	120	138	138	25
Mindanao	2027	10	6	19	116	138	138	25
Mindanao	2027	10	6	20	112	138	138	25
Mindanao	2027	10	6	21	109	138	138	25
Mindanao	2027	10	6	22	102	138	138	25
Mindanao	2027	10	6	23	97	138	138	25
Mindanao	2027	10	6	24	92	138	138	25
Mindanao	2027	10	7	1	88	138	138	25
Mindanao	2027	10	7	2	86	138	138	25
Mindanao	2027	10	7	3	84	138	138	25
Mindanao	2027	10	7	4	82	138	138	25
Mindanao	2027	10	7	5	85	138	138	25
Mindanao	2027	10	7	6	87	138	138	25
Mindanao	2027	10	7	7	82	138	138	25
Mindanao	2027	10	7	8	94	138	138	25
Mindanao	2027	10	7	9	104	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	7	10	114	138	138	25
Mindanao	2027	10	7	11	119	138	138	25
Mindanao	2027	10	7	12	121	138	138	25
Mindanao	2027	10	7	13	122	138	138	25
Mindanao	2027	10	7	14	127	138	138	25
Mindanao	2027	10	7	15	125	138	138	25
Mindanao	2027	10	7	16	123	138	138	25
Mindanao	2027	10	7	17	116	138	138	25
Mindanao	2027	10	7	18	122	138	138	25
Mindanao	2027	10	7	19	115	138	138	25
Mindanao	2027	10	7	20	117	138	138	25
Mindanao	2027	10	7	21	114	138	138	25
Mindanao	2027	10	7	22	107	138	138	25
Mindanao	2027	10	7	23	99	138	138	25
Mindanao	2027	10	7	24	96	138	138	25
Mindanao	2027	10	8	1	94	138	138	25
Mindanao	2027	10	8	2	90	138	138	25
Mindanao	2027	10	8	3	86	138	138	25
Mindanao	2027	10	8	4	84	138	138	25
Mindanao	2027	10	8	5	86	138	138	25
Mindanao	2027	10	8	6	89	138	138	25
Mindanao	2027	10	8	7	84	138	138	25
Mindanao	2027	10	8	8	95	138	138	25
Mindanao	2027	10	8	9	108	138	138	25
Mindanao	2027	10	8	10	116	138	138	25
Mindanao	2027	10	8	11	123	138	138	25
Mindanao	2027	10	8	12	122	138	138	25
Mindanao	2027	10	8	13	124	138	138	25
Mindanao	2027	10	8	14	128	138	138	25
Mindanao	2027	10	8	15	125	138	138	25
Mindanao	2027	10	8	16	121	138	138	25
Mindanao	2027	10	8	17	111	138	138	25
Mindanao	2027	10	8	18	119	138	138	25
Mindanao	2027	10	8	19	113	138	138	25
Mindanao	2027	10	8	20	112	138	138	25
Mindanao	2027	10	8	21	108	138	138	25
Mindanao	2027	10	8	22	102	138	138	25
Mindanao	2027	10	8	23	99	138	138	25
Mindanao	2027	10	8	24	93	138	138	25
Mindanao	2027	10	9	1	89	138	138	25
Mindanao	2027	10	9	2	87	138	138	25
Mindanao	2027	10	9	3	85	138	138	25
Mindanao	2027	10	9	4	82	138	138	25
Mindanao	2027	10	9	5	83	138	138	25
Mindanao	2027	10	9	6	86	138	138	25
Mindanao	2027	10	9	7	81	138	138	25
Mindanao	2027	10	9	8	85	138	138	25
Mindanao	2027	10	9	9	86	138	138	25
Mindanao	2027	10	9	10	100	138	138	25
Mindanao	2027	10	9	11	104	138	138	25
Mindanao	2027	10	9	12	103	138	138	25
Mindanao	2027	10	9	13	104	138	138	25
Mindanao	2027	10	9	14	107	138	138	25
Mindanao	2027	10	9	15	105	138	138	25
Mindanao	2027	10	9	16	103	138	138	25
Mindanao	2027	10	9	17	100	138	138	25
Mindanao	2027	10	9	18	103	138	138	25
Mindanao	2027	10	9	19	100	138	138	25
Mindanao	2027	10	9	20	100	138	138	25
Mindanao	2027	10	9	21	100	138	138	25
Mindanao	2027	10	9	22	97	138	138	25
Mindanao	2027	10	9	23	91	138	138	25
Mindanao	2027	10	9	24	87	138	138	25
Mindanao	2027	10	10	1	84	138	138	25
Mindanao	2027	10	10	2	82	138	138	25
Mindanao	2027	10	10	3	78	138	138	25
Mindanao	2027	10	10	4	78	138	138	25
Mindanao	2027	10	10	5	78	138	138	25
Mindanao	2027	10	10	6	77	138	138	25
Mindanao	2027	10	10	7	77	138	138	25
Mindanao	2027	10	10	8	79	138	138	25
Mindanao	2027	10	10	9	84	138	138	25
Mindanao	2027	10	10	10	89	138	138	25
Mindanao	2027	10	10	11	93	138	138	25
Mindanao	2027	10	10	12	94	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	10	13	95	138	138	25
Mindanao	2027	10	10	14	97	138	138	25
Mindanao	2027	10	10	15	94	138	138	25
Mindanao	2027	10	10	16	92	138	138	25
Mindanao	2027	10	10	17	92	138	138	25
Mindanao	2027	10	10	18	105	138	138	25
Mindanao	2027	10	10	19	104	138	138	25
Mindanao	2027	10	10	20	101	138	138	25
Mindanao	2027	10	10	21	99	138	138	25
Mindanao	2027	10	10	22	96	138	138	25
Mindanao	2027	10	10	23	92	138	138	25
Mindanao	2027	10	10	24	87	138	138	25
Mindanao	2027	10	11	1	86	138	138	25
Mindanao	2027	10	11	2	78	138	138	25
Mindanao	2027	10	11	3	77	138	138	25
Mindanao	2027	10	11	4	79	138	138	25
Mindanao	2027	10	11	5	81	138	138	25
Mindanao	2027	10	11	6	87	138	138	25
Mindanao	2027	10	11	7	77	138	138	25
Mindanao	2027	10	11	8	89	138	138	25
Mindanao	2027	10	11	9	103	138	138	25
Mindanao	2027	10	11	10	112	138	138	25
Mindanao	2027	10	11	11	117	138	138	25
Mindanao	2027	10	11	12	116	138	138	25
Mindanao	2027	10	11	13	117	138	138	25
Mindanao	2027	10	11	14	122	138	138	25
Mindanao	2027	10	11	15	121	138	138	25
Mindanao	2027	10	11	16	118	138	138	25
Mindanao	2027	10	11	17	114	138	138	25
Mindanao	2027	10	11	18	117	138	138	25
Mindanao	2027	10	11	19	112	138	138	25
Mindanao	2027	10	11	20	110	138	138	25
Mindanao	2027	10	11	21	105	138	138	25
Mindanao	2027	10	11	22	99	138	138	25
Mindanao	2027	10	11	23	95	138	138	25
Mindanao	2027	10	11	24	92	138	138	25
Mindanao	2027	10	12	1	90	138	138	25
Mindanao	2027	10	12	2	87	138	138	25
Mindanao	2027	10	12	3	84	138	138	25
Mindanao	2027	10	12	4	84	138	138	25
Mindanao	2027	10	12	5	89	138	138	25
Mindanao	2027	10	12	6	91	138	138	25
Mindanao	2027	10	12	7	82	138	138	25
Mindanao	2027	10	12	8	91	138	138	25
Mindanao	2027	10	12	9	102	138	138	25
Mindanao	2027	10	12	10	112	138	138	25
Mindanao	2027	10	12	11	117	138	138	25
Mindanao	2027	10	12	12	113	138	138	25
Mindanao	2027	10	12	13	112	138	138	25
Mindanao	2027	10	12	14	113	138	138	25
Mindanao	2027	10	12	15	112	138	138	25
Mindanao	2027	10	12	16	110	138	138	25
Mindanao	2027	10	12	17	109	138	138	25
Mindanao	2027	10	12	18	113	138	138	25
Mindanao	2027	10	12	19	108	138	138	25
Mindanao	2027	10	12	20	106	138	138	25
Mindanao	2027	10	12	21	103	138	138	25
Mindanao	2027	10	12	22	96	138	138	25
Mindanao	2027	10	12	23	91	138	138	25
Mindanao	2027	10	12	24	87	138	138	25
Mindanao	2027	10	13	1	85	138	138	25
Mindanao	2027	10	13	2	83	138	138	25
Mindanao	2027	10	13	3	79	138	138	25
Mindanao	2027	10	13	4	80	138	138	25
Mindanao	2027	10	13	5	83	138	138	25
Mindanao	2027	10	13	6	87	138	138	25
Mindanao	2027	10	13	7	79	138	138	25
Mindanao	2027	10	13	8	91	138	138	25
Mindanao	2027	10	13	9	101	138	138	25
Mindanao	2027	10	13	10	108	138	138	25
Mindanao	2027	10	13	11	114	138	138	25
Mindanao	2027	10	13	12	112	138	138	25
Mindanao	2027	10	13	13	114	138	138	25
Mindanao	2027	10	13	14	119	138	138	25
Mindanao	2027	10	13	15	117	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	13	16	113	138	138	25
Mindanao	2027	10	13	17	110	138	138	25
Mindanao	2027	10	13	18	114	138	138	25
Mindanao	2027	10	13	19	110	138	138	25
Mindanao	2027	10	13	20	107	138	138	25
Mindanao	2027	10	13	21	104	138	138	25
Mindanao	2027	10	13	22	99	138	138	25
Mindanao	2027	10	13	23	92	138	138	25
Mindanao	2027	10	13	24	88	138	138	25
Mindanao	2027	10	14	1	85	138	138	25
Mindanao	2027	10	14	2	84	138	138	25
Mindanao	2027	10	14	3	81	138	138	25
Mindanao	2027	10	14	4	80	138	138	25
Mindanao	2027	10	14	5	85	138	138	25
Mindanao	2027	10	14	6	88	138	138	25
Mindanao	2027	10	14	7	79	138	138	25
Mindanao	2027	10	14	8	89	138	138	25
Mindanao	2027	10	14	9	103	138	138	25
Mindanao	2027	10	14	10	111	138	138	25
Mindanao	2027	10	14	11	115	138	138	25
Mindanao	2027	10	14	12	113	138	138	25
Mindanao	2027	10	14	13	112	138	138	25
Mindanao	2027	10	14	14	121	138	138	25
Mindanao	2027	10	14	15	119	138	138	25
Mindanao	2027	10	14	16	116	138	138	25
Mindanao	2027	10	14	17	112	138	138	25
Mindanao	2027	10	14	18	117	138	138	25
Mindanao	2027	10	14	19	113	138	138	25
Mindanao	2027	10	14	20	110	138	138	25
Mindanao	2027	10	14	21	107	138	138	25
Mindanao	2027	10	14	22	100	138	138	25
Mindanao	2027	10	14	23	94	138	138	25
Mindanao	2027	10	14	24	90	138	138	25
Mindanao	2027	10	15	1	89	138	138	25
Mindanao	2027	10	15	2	86	138	138	25
Mindanao	2027	10	15	3	84	138	138	25
Mindanao	2027	10	15	4	83	138	138	25
Mindanao	2027	10	15	5	86	138	138	25
Mindanao	2027	10	15	6	88	138	138	25
Mindanao	2027	10	15	7	81	138	138	25
Mindanao	2027	10	15	8	90	138	138	25
Mindanao	2027	10	15	9	99	138	138	25
Mindanao	2027	10	15	10	104	138	138	25
Mindanao	2027	10	15	11	109	138	138	25
Mindanao	2027	10	15	12	108	138	138	25
Mindanao	2027	10	15	13	108	138	138	25
Mindanao	2027	10	15	14	112	138	138	25
Mindanao	2027	10	15	15	112	138	138	25
Mindanao	2027	10	15	16	109	138	138	25
Mindanao	2027	10	15	17	106	138	138	25
Mindanao	2027	10	15	18	113	138	138	25
Mindanao	2027	10	15	19	107	138	138	25
Mindanao	2027	10	15	20	106	138	138	25
Mindanao	2027	10	15	21	103	138	138	25
Mindanao	2027	10	15	22	98	138	138	25
Mindanao	2027	10	15	23	94	138	138	25
Mindanao	2027	10	15	24	92	138	138	25
Mindanao	2027	10	16	1	88	138	138	25
Mindanao	2027	10	16	2	84	138	138	25
Mindanao	2027	10	16	3	83	138	138	25
Mindanao	2027	10	16	4	82	138	138	25
Mindanao	2027	10	16	5	82	138	138	25
Mindanao	2027	10	16	6	84	138	138	25
Mindanao	2027	10	16	7	80	138	138	25
Mindanao	2027	10	16	8	86	138	138	25
Mindanao	2027	10	16	9	94	138	138	25
Mindanao	2027	10	16	10	96	138	138	25
Mindanao	2027	10	16	11	100	138	138	25
Mindanao	2027	10	16	12	100	138	138	25
Mindanao	2027	10	16	13	102	138	138	25
Mindanao	2027	10	16	14	107	138	138	25
Mindanao	2027	10	16	15	106	138	138	25
Mindanao	2027	10	16	16	103	138	138	25
Mindanao	2027	10	16	17	101	138	138	25
Mindanao	2027	10	16	18	108	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	16	19	109	138	138	25
Mindanao	2027	10	16	20	107	138	138	25
Mindanao	2027	10	16	21	105	138	138	25
Mindanao	2027	10	16	22	100	138	138	25
Mindanao	2027	10	16	23	94	138	138	25
Mindanao	2027	10	16	24	89	138	138	25
Mindanao	2027	10	17	1	86	138	138	25
Mindanao	2027	10	17	2	84	138	138	25
Mindanao	2027	10	17	3	82	138	138	25
Mindanao	2027	10	17	4	79	138	138	25
Mindanao	2027	10	17	5	79	138	138	25
Mindanao	2027	10	17	6	80	138	138	25
Mindanao	2027	10	17	7	78	138	138	25
Mindanao	2027	10	17	8	79	138	138	25
Mindanao	2027	10	17	9	83	138	138	25
Mindanao	2027	10	17	10	89	138	138	25
Mindanao	2027	10	17	11	92	138	138	25
Mindanao	2027	10	17	12	95	138	138	25
Mindanao	2027	10	17	13	96	138	138	25
Mindanao	2027	10	17	14	99	138	138	25
Mindanao	2027	10	17	15	98	138	138	25
Mindanao	2027	10	17	16	95	138	138	25
Mindanao	2027	10	17	17	96	138	138	25
Mindanao	2027	10	17	18	106	138	138	25
Mindanao	2027	10	17	19	107	138	138	25
Mindanao	2027	10	17	20	105	138	138	25
Mindanao	2027	10	17	21	103	138	138	25
Mindanao	2027	10	17	22	98	138	138	25
Mindanao	2027	10	17	23	92	138	138	25
Mindanao	2027	10	17	24	87	138	138	25
Mindanao	2027	10	18	1	85	138	138	25
Mindanao	2027	10	18	2	81	138	138	25
Mindanao	2027	10	18	3	80	138	138	25
Mindanao	2027	10	18	4	79	138	138	25
Mindanao	2027	10	18	5	83	138	138	25
Mindanao	2027	10	18	6	87	138	138	25
Mindanao	2027	10	18	7	79	138	138	25
Mindanao	2027	10	18	8	89	138	138	25
Mindanao	2027	10	18	9	103	138	138	25
Mindanao	2027	10	18	10	112	138	138	25
Mindanao	2027	10	18	11	117	138	138	25
Mindanao	2027	10	18	12	116	138	138	25
Mindanao	2027	10	18	13	117	138	138	25
Mindanao	2027	10	18	14	121	138	138	25
Mindanao	2027	10	18	15	116	138	138	25
Mindanao	2027	10	18	16	114	138	138	25
Mindanao	2027	10	18	17	111	138	138	25
Mindanao	2027	10	18	18	115	138	138	25
Mindanao	2027	10	18	19	111	138	138	25
Mindanao	2027	10	18	20	109	138	138	25
Mindanao	2027	10	18	21	104	138	138	25
Mindanao	2027	10	18	22	100	138	138	25
Mindanao	2027	10	18	23	94	138	138	25
Mindanao	2027	10	18	24	88	138	138	25
Mindanao	2027	10	19	1	85	138	138	25
Mindanao	2027	10	19	2	84	138	138	25
Mindanao	2027	10	19	3	80	138	138	25
Mindanao	2027	10	19	4	80	138	138	25
Mindanao	2027	10	19	5	85	138	138	25
Mindanao	2027	10	19	6	88	138	138	25
Mindanao	2027	10	19	7	80	138	138	25
Mindanao	2027	10	19	8	92	138	138	25
Mindanao	2027	10	19	9	106	138	138	25
Mindanao	2027	10	19	10	115	138	138	25
Mindanao	2027	10	19	11	119	138	138	25
Mindanao	2027	10	19	12	119	138	138	25
Mindanao	2027	10	19	13	121	138	138	25
Mindanao	2027	10	19	14	123	138	138	25
Mindanao	2027	10	19	15	122	138	138	25
Mindanao	2027	10	19	16	119	138	138	25
Mindanao	2027	10	19	17	114	138	138	25
Mindanao	2027	10	19	18	118	138	138	25
Mindanao	2027	10	19	19	112	138	138	25
Mindanao	2027	10	19	20	110	138	138	25
Mindanao	2027	10	19	21	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	19	22	101	138	138	25
Mindanao	2027	10	19	23	94	138	138	25
Mindanao	2027	10	19	24	90	138	138	25
Mindanao	2027	10	20	1	87	138	138	25
Mindanao	2027	10	20	2	83	138	138	25
Mindanao	2027	10	20	3	81	138	138	25
Mindanao	2027	10	20	4	80	138	138	25
Mindanao	2027	10	20	5	85	138	138	25
Mindanao	2027	10	20	6	89	138	138	25
Mindanao	2027	10	20	7	79	138	138	25
Mindanao	2027	10	20	8	92	138	138	25
Mindanao	2027	10	20	9	104	138	138	25
Mindanao	2027	10	20	10	115	138	138	25
Mindanao	2027	10	20	11	119	138	138	25
Mindanao	2027	10	20	12	119	138	138	25
Mindanao	2027	10	20	13	121	138	138	25
Mindanao	2027	10	20	14	124	138	138	25
Mindanao	2027	10	20	15	122	138	138	25
Mindanao	2027	10	20	16	119	138	138	25
Mindanao	2027	10	20	17	114	138	138	25
Mindanao	2027	10	20	18	119	138	138	25
Mindanao	2027	10	20	19	115	138	138	25
Mindanao	2027	10	20	20	112	138	138	25
Mindanao	2027	10	20	21	109	138	138	25
Mindanao	2027	10	20	22	102	138	138	25
Mindanao	2027	10	20	23	96	138	138	25
Mindanao	2027	10	20	24	92	138	138	25
Mindanao	2027	10	21	1	88	138	138	25
Mindanao	2027	10	21	2	84	138	138	25
Mindanao	2027	10	21	3	83	138	138	25
Mindanao	2027	10	21	4	83	138	138	25
Mindanao	2027	10	21	5	86	138	138	25
Mindanao	2027	10	21	6	89	138	138	25
Mindanao	2027	10	21	7	81	138	138	25
Mindanao	2027	10	21	8	90	138	138	25
Mindanao	2027	10	21	9	106	138	138	25
Mindanao	2027	10	21	10	114	138	138	25
Mindanao	2027	10	21	11	119	138	138	25
Mindanao	2027	10	21	12	119	138	138	25
Mindanao	2027	10	21	13	121	138	138	25
Mindanao	2027	10	21	14	123	138	138	25
Mindanao	2027	10	21	15	123	138	138	25
Mindanao	2027	10	21	16	118	138	138	25
Mindanao	2027	10	21	17	114	138	138	25
Mindanao	2027	10	21	18	120	138	138	25
Mindanao	2027	10	21	19	115	138	138	25
Mindanao	2027	10	21	20	113	138	138	25
Mindanao	2027	10	21	21	110	138	138	25
Mindanao	2027	10	21	22	104	138	138	25
Mindanao	2027	10	21	23	97	138	138	25
Mindanao	2027	10	21	24	91	138	138	25
Mindanao	2027	10	22	1	88	138	138	25
Mindanao	2027	10	22	2	84	138	138	25
Mindanao	2027	10	22	3	81	138	138	25
Mindanao	2027	10	22	4	80	138	138	25
Mindanao	2027	10	22	5	83	138	138	25
Mindanao	2027	10	22	6	86	138	138	25
Mindanao	2027	10	22	7	83	138	138	25
Mindanao	2027	10	22	8	93	138	138	25
Mindanao	2027	10	22	9	105	138	138	25
Mindanao	2027	10	22	10	115	138	138	25
Mindanao	2027	10	22	11	119	138	138	25
Mindanao	2027	10	22	12	120	138	138	25
Mindanao	2027	10	22	13	122	138	138	25
Mindanao	2027	10	22	14	126	138	138	25
Mindanao	2027	10	22	15	125	138	138	25
Mindanao	2027	10	22	16	121	138	138	25
Mindanao	2027	10	22	17	114	138	138	25
Mindanao	2027	10	22	18	120	138	138	25
Mindanao	2027	10	22	19	114	138	138	25
Mindanao	2027	10	22	20	113	138	138	25
Mindanao	2027	10	22	21	111	138	138	25
Mindanao	2027	10	22	22	103	138	138	25
Mindanao	2027	10	22	23	97	138	138	25
Mindanao	2027	10	22	24	93	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	23	1	88	138	138	25
Mindanao	2027	10	23	2	86	138	138	25
Mindanao	2027	10	23	3	83	138	138	25
Mindanao	2027	10	23	4	82	138	138	25
Mindanao	2027	10	23	5	83	138	138	25
Mindanao	2027	10	23	6	82	138	138	25
Mindanao	2027	10	23	7	81	138	138	25
Mindanao	2027	10	23	8	89	138	138	25
Mindanao	2027	10	23	9	99	138	138	25
Mindanao	2027	10	23	10	106	138	138	25
Mindanao	2027	10	23	11	112	138	138	25
Mindanao	2027	10	23	12	112	138	138	25
Mindanao	2027	10	23	13	113	138	138	25
Mindanao	2027	10	23	14	116	138	138	25
Mindanao	2027	10	23	15	111	138	138	25
Mindanao	2027	10	23	16	108	138	138	25
Mindanao	2027	10	23	17	108	138	138	25
Mindanao	2027	10	23	18	116	138	138	25
Mindanao	2027	10	23	19	111	138	138	25
Mindanao	2027	10	23	20	108	138	138	25
Mindanao	2027	10	23	21	103	138	138	25
Mindanao	2027	10	23	22	99	138	138	25
Mindanao	2027	10	23	23	94	138	138	25
Mindanao	2027	10	23	24	91	138	138	25
Mindanao	2027	10	24	1	85	138	138	25
Mindanao	2027	10	24	2	84	138	138	25
Mindanao	2027	10	24	3	80	138	138	25
Mindanao	2027	10	24	4	80	138	138	25
Mindanao	2027	10	24	5	81	138	138	25
Mindanao	2027	10	24	6	80	138	138	25
Mindanao	2027	10	24	7	78	138	138	25
Mindanao	2027	10	24	8	79	138	138	25
Mindanao	2027	10	24	9	83	138	138	25
Mindanao	2027	10	24	10	89	138	138	25
Mindanao	2027	10	24	11	91	138	138	25
Mindanao	2027	10	24	12	96	138	138	25
Mindanao	2027	10	24	13	98	138	138	25
Mindanao	2027	10	24	14	98	138	138	25
Mindanao	2027	10	24	15	97	138	138	25
Mindanao	2027	10	24	16	94	138	138	25
Mindanao	2027	10	24	17	95	138	138	25
Mindanao	2027	10	24	18	108	138	138	25
Mindanao	2027	10	24	19	105	138	138	25
Mindanao	2027	10	24	20	101	138	138	25
Mindanao	2027	10	24	21	99	138	138	25
Mindanao	2027	10	24	22	94	138	138	25
Mindanao	2027	10	24	23	91	138	138	25
Mindanao	2027	10	24	24	85	138	138	25
Mindanao	2027	10	25	1	82	138	138	25
Mindanao	2027	10	25	2	79	138	138	25
Mindanao	2027	10	25	3	78	138	138	25
Mindanao	2027	10	25	4	77	138	138	25
Mindanao	2027	10	25	5	83	138	138	25
Mindanao	2027	10	25	6	84	138	138	25
Mindanao	2027	10	25	7	77	138	138	25
Mindanao	2027	10	25	8	89	138	138	25
Mindanao	2027	10	25	9	103	138	138	25
Mindanao	2027	10	25	10	112	138	138	25
Mindanao	2027	10	25	11	117	138	138	25
Mindanao	2027	10	25	12	116	138	138	25
Mindanao	2027	10	25	13	117	138	138	25
Mindanao	2027	10	25	14	123	138	138	25
Mindanao	2027	10	25	15	121	138	138	25
Mindanao	2027	10	25	16	118	138	138	25
Mindanao	2027	10	25	17	112	138	138	25
Mindanao	2027	10	25	18	118	138	138	25
Mindanao	2027	10	25	19	113	138	138	25
Mindanao	2027	10	25	20	111	138	138	25
Mindanao	2027	10	25	21	105	138	138	25
Mindanao	2027	10	25	22	99	138	138	25
Mindanao	2027	10	25	23	92	138	138	25
Mindanao	2027	10	25	24	88	138	138	25
Mindanao	2027	10	26	1	84	138	138	25
Mindanao	2027	10	26	2	82	138	138	25
Mindanao	2027	10	26	3	80	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	26	4	80	138	138	25
Mindanao	2027	10	26	5	85	138	138	25
Mindanao	2027	10	26	6	86	138	138	25
Mindanao	2027	10	26	7	79	138	138	25
Mindanao	2027	10	26	8	92	138	138	25
Mindanao	2027	10	26	9	106	138	138	25
Mindanao	2027	10	26	10	114	138	138	25
Mindanao	2027	10	26	11	119	138	138	25
Mindanao	2027	10	26	12	116	138	138	25
Mindanao	2027	10	26	13	119	138	138	25
Mindanao	2027	10	26	14	124	138	138	25
Mindanao	2027	10	26	15	122	138	138	25
Mindanao	2027	10	26	16	119	138	138	25
Mindanao	2027	10	26	17	115	138	138	25
Mindanao	2027	10	26	18	121	138	138	25
Mindanao	2027	10	26	19	118	138	138	25
Mindanao	2027	10	26	20	117	138	138	25
Mindanao	2027	10	26	21	112	138	138	25
Mindanao	2027	10	26	22	106	138	138	25
Mindanao	2027	10	26	23	98	138	138	25
Mindanao	2027	10	26	24	92	138	138	25
Mindanao	2027	10	27	1	90	138	138	25
Mindanao	2027	10	27	2	88	138	138	25
Mindanao	2027	10	27	3	85	138	138	25
Mindanao	2027	10	27	4	82	138	138	25
Mindanao	2027	10	27	5	88	138	138	25
Mindanao	2027	10	27	6	91	138	138	25
Mindanao	2027	10	27	7	82	138	138	25
Mindanao	2027	10	27	8	94	138	138	25
Mindanao	2027	10	27	9	106	138	138	25
Mindanao	2027	10	27	10	114	138	138	25
Mindanao	2027	10	27	11	120	138	138	25
Mindanao	2027	10	27	12	119	138	138	25
Mindanao	2027	10	27	13	121	138	138	25
Mindanao	2027	10	27	14	125	138	138	25
Mindanao	2027	10	27	15	123	138	138	25
Mindanao	2027	10	27	16	119	138	138	25
Mindanao	2027	10	27	17	114	138	138	25
Mindanao	2027	10	27	18	118	138	138	25
Mindanao	2027	10	27	19	113	138	138	25
Mindanao	2027	10	27	20	111	138	138	25
Mindanao	2027	10	27	21	107	138	138	25
Mindanao	2027	10	27	22	100	138	138	25
Mindanao	2027	10	27	23	95	138	138	25
Mindanao	2027	10	27	24	92	138	138	25
Mindanao	2027	10	28	1	87	138	138	25
Mindanao	2027	10	28	2	85	138	138	25
Mindanao	2027	10	28	3	84	138	138	25
Mindanao	2027	10	28	4	81	138	138	25
Mindanao	2027	10	28	5	87	138	138	25
Mindanao	2027	10	28	6	90	138	138	25
Mindanao	2027	10	28	7	82	138	138	25
Mindanao	2027	10	28	8	90	138	138	25
Mindanao	2027	10	28	9	102	138	138	25
Mindanao	2027	10	28	10	106	138	138	25
Mindanao	2027	10	28	11	112	138	138	25
Mindanao	2027	10	28	12	110	138	138	25
Mindanao	2027	10	28	13	112	138	138	25
Mindanao	2027	10	28	14	114	138	138	25
Mindanao	2027	10	28	15	112	138	138	25
Mindanao	2027	10	28	16	111	138	138	25
Mindanao	2027	10	28	17	110	138	138	25
Mindanao	2027	10	28	18	118	138	138	25
Mindanao	2027	10	28	19	112	138	138	25
Mindanao	2027	10	28	20	110	138	138	25
Mindanao	2027	10	28	21	107	138	138	25
Mindanao	2027	10	28	22	100	138	138	25
Mindanao	2027	10	28	23	94	138	138	25
Mindanao	2027	10	28	24	88	138	138	25
Mindanao	2027	10	29	1	87	138	138	25
Mindanao	2027	10	29	2	82	138	138	25
Mindanao	2027	10	29	3	80	138	138	25
Mindanao	2027	10	29	4	80	138	138	25
Mindanao	2027	10	29	5	86	138	138	25
Mindanao	2027	10	29	6	88	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	10	29	7	81	138	138	25
Mindanao	2027	10	29	8	89	138	138	25
Mindanao	2027	10	29	9	105	138	138	25
Mindanao	2027	10	29	10	111	138	138	25
Mindanao	2027	10	29	11	116	138	138	25
Mindanao	2027	10	29	12	114	138	138	25
Mindanao	2027	10	29	13	116	138	138	25
Mindanao	2027	10	29	14	122	138	138	25
Mindanao	2027	10	29	15	119	138	138	25
Mindanao	2027	10	29	16	115	138	138	25
Mindanao	2027	10	29	17	112	138	138	25
Mindanao	2027	10	29	18	117	138	138	25
Mindanao	2027	10	29	19	110	138	138	25
Mindanao	2027	10	29	20	107	138	138	25
Mindanao	2027	10	29	21	103	138	138	25
Mindanao	2027	10	29	22	97	138	138	25
Mindanao	2027	10	29	23	92	138	138	25
Mindanao	2027	10	29	24	87	138	138	25
Mindanao	2027	10	30	1	83	138	138	25
Mindanao	2027	10	30	2	82	138	138	25
Mindanao	2027	10	30	3	80	138	138	25
Mindanao	2027	10	30	4	79	138	138	25
Mindanao	2027	10	30	5	80	138	138	25
Mindanao	2027	10	30	6	81	138	138	25
Mindanao	2027	10	30	7	79	138	138	25
Mindanao	2027	10	30	8	87	138	138	25
Mindanao	2027	10	30	9	95	138	138	25
Mindanao	2027	10	30	10	101	138	138	25
Mindanao	2027	10	30	11	106	138	138	25
Mindanao	2027	10	30	12	107	138	138	25
Mindanao	2027	10	30	13	108	138	138	25
Mindanao	2027	10	30	14	112	138	138	25
Mindanao	2027	10	30	15	111	138	138	25
Mindanao	2027	10	30	16	107	138	138	25
Mindanao	2027	10	30	17	105	138	138	25
Mindanao	2027	10	30	18	116	138	138	25
Mindanao	2027	10	30	19	112	138	138	25
Mindanao	2027	10	30	20	109	138	138	25
Mindanao	2027	10	30	21	106	138	138	25
Mindanao	2027	10	30	22	104	138	138	25
Mindanao	2027	10	30	23	98	138	138	25
Mindanao	2027	10	30	24	94	138	138	25
Mindanao	2027	10	31	1	90	138	138	25
Mindanao	2027	10	31	2	87	138	138	25
Mindanao	2027	10	31	3	84	138	138	25
Mindanao	2027	10	31	4	81	138	138	25
Mindanao	2027	10	31	5	82	138	138	25
Mindanao	2027	10	31	6	82	138	138	25
Mindanao	2027	10	31	7	79	138	138	25
Mindanao	2027	10	31	8	81	138	138	25
Mindanao	2027	10	31	9	87	138	138	25
Mindanao	2027	10	31	10	93	138	138	25
Mindanao	2027	10	31	11	96	138	138	25
Mindanao	2027	10	31	12	98	138	138	25
Mindanao	2027	10	31	13	100	138	138	25
Mindanao	2027	10	31	14	101	138	138	25
Mindanao	2027	10	31	15	98	138	138	25
Mindanao	2027	10	31	16	97	138	138	25
Mindanao	2027	10	31	17	97	138	138	25
Mindanao	2027	10	31	18	109	138	138	25
Mindanao	2027	10	31	19	104	138	138	25
Mindanao	2027	10	31	20	102	138	138	25
Mindanao	2027	10	31	21	101	138	138	25
Mindanao	2027	10	31	22	95	138	138	25
Mindanao	2027	10	31	23	92	138	138	25
Mindanao	2027	10	31	24	87	138	138	25
Mindanao	2027	11	1	1	84	138	138	25
Mindanao	2027	11	1	2	81	138	138	25
Mindanao	2027	11	1	3	77	138	138	25
Mindanao	2027	11	1	4	77	138	138	25
Mindanao	2027	11	1	5	76	138	138	25
Mindanao	2027	11	1	6	75	138	138	25
Mindanao	2027	11	1	7	73	138	138	25
Mindanao	2027	11	1	8	76	138	138	25
Mindanao	2027	11	1	9	84	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	1	10	90	138	138	25
Mindanao	2027	11	1	11	93	138	138	25
Mindanao	2027	11	1	12	96	138	138	25
Mindanao	2027	11	1	13	98	138	138	25
Mindanao	2027	11	1	14	100	138	138	25
Mindanao	2027	11	1	15	100	138	138	25
Mindanao	2027	11	1	16	98	138	138	25
Mindanao	2027	11	1	17	94	138	138	25
Mindanao	2027	11	1	18	105	138	138	25
Mindanao	2027	11	1	19	100	138	138	25
Mindanao	2027	11	1	20	98	138	138	25
Mindanao	2027	11	1	21	96	138	138	25
Mindanao	2027	11	1	22	93	138	138	25
Mindanao	2027	11	1	23	87	138	138	25
Mindanao	2027	11	1	24	83	138	138	25
Mindanao	2027	11	2	1	78	138	138	25
Mindanao	2027	11	2	2	74	138	138	25
Mindanao	2027	11	2	3	74	138	138	25
Mindanao	2027	11	2	4	71	138	138	25
Mindanao	2027	11	2	5	71	138	138	25
Mindanao	2027	11	2	6	73	138	138	25
Mindanao	2027	11	2	7	73	138	138	25
Mindanao	2027	11	2	8	80	138	138	25
Mindanao	2027	11	2	9	91	138	138	25
Mindanao	2027	11	2	10	99	138	138	25
Mindanao	2027	11	2	11	105	138	138	25
Mindanao	2027	11	2	12	105	138	138	25
Mindanao	2027	11	2	13	108	138	138	25
Mindanao	2027	11	2	14	111	138	138	25
Mindanao	2027	11	2	15	109	138	138	25
Mindanao	2027	11	2	16	106	138	138	25
Mindanao	2027	11	2	17	102	138	138	25
Mindanao	2027	11	2	18	111	138	138	25
Mindanao	2027	11	2	19	107	138	138	25
Mindanao	2027	11	2	20	104	138	138	25
Mindanao	2027	11	2	21	100	138	138	25
Mindanao	2027	11	2	22	96	138	138	25
Mindanao	2027	11	2	23	91	138	138	25
Mindanao	2027	11	2	24	86	138	138	25
Mindanao	2027	11	3	1	85	138	138	25
Mindanao	2027	11	3	2	83	138	138	25
Mindanao	2027	11	3	3	81	138	138	25
Mindanao	2027	11	3	4	79	138	138	25
Mindanao	2027	11	3	5	82	138	138	25
Mindanao	2027	11	3	6	86	138	138	25
Mindanao	2027	11	3	7	80	138	138	25
Mindanao	2027	11	3	8	91	138	138	25
Mindanao	2027	11	3	9	101	138	138	25
Mindanao	2027	11	3	10	108	138	138	25
Mindanao	2027	11	3	11	113	138	138	25
Mindanao	2027	11	3	12	112	138	138	25
Mindanao	2027	11	3	13	116	138	138	25
Mindanao	2027	11	3	14	120	138	138	25
Mindanao	2027	11	3	15	119	138	138	25
Mindanao	2027	11	3	16	116	138	138	25
Mindanao	2027	11	3	17	113	138	138	25
Mindanao	2027	11	3	18	120	138	138	25
Mindanao	2027	11	3	19	115	138	138	25
Mindanao	2027	11	3	20	112	138	138	25
Mindanao	2027	11	3	21	108	138	138	25
Mindanao	2027	11	3	22	102	138	138	25
Mindanao	2027	11	3	23	97	138	138	25
Mindanao	2027	11	3	24	91	138	138	25
Mindanao	2027	11	4	1	78	138	138	25
Mindanao	2027	11	4	2	76	138	138	25
Mindanao	2027	11	4	3	74	138	138	25
Mindanao	2027	11	4	4	72	138	138	25
Mindanao	2027	11	4	5	71	138	138	25
Mindanao	2027	11	4	6	71	138	138	25
Mindanao	2027	11	4	7	72	138	138	25
Mindanao	2027	11	4	8	76	138	138	25
Mindanao	2027	11	4	9	81	138	138	25
Mindanao	2027	11	4	10	89	138	138	25
Mindanao	2027	11	4	11	93	138	138	25
Mindanao	2027	11	4	12	95	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	4	13	96	138	138	25
Mindanao	2027	11	4	14	99	138	138	25
Mindanao	2027	11	4	15	99	138	138	25
Mindanao	2027	11	4	16	97	138	138	25
Mindanao	2027	11	4	17	92	138	138	25
Mindanao	2027	11	4	18	104	138	138	25
Mindanao	2027	11	4	19	99	138	138	25
Mindanao	2027	11	4	20	98	138	138	25
Mindanao	2027	11	4	21	95	138	138	25
Mindanao	2027	11	4	22	92	138	138	25
Mindanao	2027	11	4	23	88	138	138	25
Mindanao	2027	11	4	24	85	138	138	25
Mindanao	2027	11	5	1	81	138	138	25
Mindanao	2027	11	5	2	78	138	138	25
Mindanao	2027	11	5	3	76	138	138	25
Mindanao	2027	11	5	4	75	138	138	25
Mindanao	2027	11	5	5	74	138	138	25
Mindanao	2027	11	5	6	75	138	138	25
Mindanao	2027	11	5	7	77	138	138	25
Mindanao	2027	11	5	8	89	138	138	25
Mindanao	2027	11	5	9	100	138	138	25
Mindanao	2027	11	5	10	108	138	138	25
Mindanao	2027	11	5	11	116	138	138	25
Mindanao	2027	11	5	12	119	138	138	25
Mindanao	2027	11	5	13	117	138	138	25
Mindanao	2027	11	5	14	122	138	138	25
Mindanao	2027	11	5	15	120	138	138	25
Mindanao	2027	11	5	16	115	138	138	25
Mindanao	2027	11	5	17	109	138	138	25
Mindanao	2027	11	5	18	114	138	138	25
Mindanao	2027	11	5	19	111	138	138	25
Mindanao	2027	11	5	20	109	138	138	25
Mindanao	2027	11	5	21	106	138	138	25
Mindanao	2027	11	5	22	101	138	138	25
Mindanao	2027	11	5	23	96	138	138	25
Mindanao	2027	11	5	24	92	138	138	25
Mindanao	2027	11	6	1	87	138	138	25
Mindanao	2027	11	6	2	85	138	138	25
Mindanao	2027	11	6	3	82	138	138	25
Mindanao	2027	11	6	4	81	138	138	25
Mindanao	2027	11	6	5	81	138	138	25
Mindanao	2027	11	6	6	80	138	138	25
Mindanao	2027	11	6	7	81	138	138	25
Mindanao	2027	11	6	8	87	138	138	25
Mindanao	2027	11	6	9	97	138	138	25
Mindanao	2027	11	6	10	105	138	138	25
Mindanao	2027	11	6	11	109	138	138	25
Mindanao	2027	11	6	12	108	138	138	25
Mindanao	2027	11	6	13	108	138	138	25
Mindanao	2027	11	6	14	110	138	138	25
Mindanao	2027	11	6	15	107	138	138	25
Mindanao	2027	11	6	16	105	138	138	25
Mindanao	2027	11	6	17	104	138	138	25
Mindanao	2027	11	6	18	111	138	138	25
Mindanao	2027	11	6	19	107	138	138	25
Mindanao	2027	11	6	20	104	138	138	25
Mindanao	2027	11	6	21	100	138	138	25
Mindanao	2027	11	6	22	96	138	138	25
Mindanao	2027	11	6	23	88	138	138	25
Mindanao	2027	11	6	24	85	138	138	25
Mindanao	2027	11	7	1	82	138	138	25
Mindanao	2027	11	7	2	79	138	138	25
Mindanao	2027	11	7	3	77	138	138	25
Mindanao	2027	11	7	4	77	138	138	25
Mindanao	2027	11	7	5	75	138	138	25
Mindanao	2027	11	7	6	75	138	138	25
Mindanao	2027	11	7	7	76	138	138	25
Mindanao	2027	11	7	8	80	138	138	25
Mindanao	2027	11	7	9	86	138	138	25
Mindanao	2027	11	7	10	93	138	138	25
Mindanao	2027	11	7	11	97	138	138	25
Mindanao	2027	11	7	12	100	138	138	25
Mindanao	2027	11	7	13	103	138	138	25
Mindanao	2027	11	7	14	105	138	138	25
Mindanao	2027	11	7	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	7	16	101	138	138	25
Mindanao	2027	11	7	17	103	138	138	25
Mindanao	2027	11	7	18	112	138	138	25
Mindanao	2027	11	7	19	109	138	138	25
Mindanao	2027	11	7	20	106	138	138	25
Mindanao	2027	11	7	21	102	138	138	25
Mindanao	2027	11	7	22	97	138	138	25
Mindanao	2027	11	7	23	92	138	138	25
Mindanao	2027	11	7	24	87	138	138	25
Mindanao	2027	11	8	1	83	138	138	25
Mindanao	2027	11	8	2	81	138	138	25
Mindanao	2027	11	8	3	77	138	138	25
Mindanao	2027	11	8	4	78	138	138	25
Mindanao	2027	11	8	5	82	138	138	25
Mindanao	2027	11	8	6	84	138	138	25
Mindanao	2027	11	8	7	76	138	138	25
Mindanao	2027	11	8	8	90	138	138	25
Mindanao	2027	11	8	9	106	138	138	25
Mindanao	2027	11	8	10	113	138	138	25
Mindanao	2027	11	8	11	119	138	138	25
Mindanao	2027	11	8	12	118	138	138	25
Mindanao	2027	11	8	13	121	138	138	25
Mindanao	2027	11	8	14	126	138	138	25
Mindanao	2027	11	8	15	125	138	138	25
Mindanao	2027	11	8	16	122	138	138	25
Mindanao	2027	11	8	17	115	138	138	25
Mindanao	2027	11	8	18	123	138	138	25
Mindanao	2027	11	8	19	117	138	138	25
Mindanao	2027	11	8	20	114	138	138	25
Mindanao	2027	11	8	21	110	138	138	25
Mindanao	2027	11	8	22	103	138	138	25
Mindanao	2027	11	8	23	99	138	138	25
Mindanao	2027	11	8	24	94	138	138	25
Mindanao	2027	11	9	1	89	138	138	25
Mindanao	2027	11	9	2	87	138	138	25
Mindanao	2027	11	9	3	84	138	138	25
Mindanao	2027	11	9	4	84	138	138	25
Mindanao	2027	11	9	5	86	138	138	25
Mindanao	2027	11	9	6	89	138	138	25
Mindanao	2027	11	9	7	81	138	138	25
Mindanao	2027	11	9	8	94	138	138	25
Mindanao	2027	11	9	9	109	138	138	25
Mindanao	2027	11	9	10	116	138	138	25
Mindanao	2027	11	9	11	122	138	138	25
Mindanao	2027	11	9	12	119	138	138	25
Mindanao	2027	11	9	13	122	138	138	25
Mindanao	2027	11	9	14	125	138	138	25
Mindanao	2027	11	9	15	123	138	138	25
Mindanao	2027	11	9	16	121	138	138	25
Mindanao	2027	11	9	17	113	138	138	25
Mindanao	2027	11	9	18	119	138	138	25
Mindanao	2027	11	9	19	114	138	138	25
Mindanao	2027	11	9	20	111	138	138	25
Mindanao	2027	11	9	21	104	138	138	25
Mindanao	2027	11	9	22	100	138	138	25
Mindanao	2027	11	9	23	93	138	138	25
Mindanao	2027	11	9	24	89	138	138	25
Mindanao	2027	11	10	1	85	138	138	25
Mindanao	2027	11	10	2	83	138	138	25
Mindanao	2027	11	10	3	81	138	138	25
Mindanao	2027	11	10	4	79	138	138	25
Mindanao	2027	11	10	5	82	138	138	25
Mindanao	2027	11	10	6	86	138	138	25
Mindanao	2027	11	10	7	80	138	138	25
Mindanao	2027	11	10	8	91	138	138	25
Mindanao	2027	11	10	9	101	138	138	25
Mindanao	2027	11	10	10	108	138	138	25
Mindanao	2027	11	10	11	113	138	138	25
Mindanao	2027	11	10	12	112	138	138	25
Mindanao	2027	11	10	13	116	138	138	25
Mindanao	2027	11	10	14	120	138	138	25
Mindanao	2027	11	10	15	119	138	138	25
Mindanao	2027	11	10	16	116	138	138	25
Mindanao	2027	11	10	17	113	138	138	25
Mindanao	2027	11	10	18	120	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	10	19	115	138	138	25
Mindanao	2027	11	10	20	112	138	138	25
Mindanao	2027	11	10	21	108	138	138	25
Mindanao	2027	11	10	22	102	138	138	25
Mindanao	2027	11	10	23	97	138	138	25
Mindanao	2027	11	10	24	91	138	138	25
Mindanao	2027	11	11	1	87	138	138	25
Mindanao	2027	11	11	2	85	138	138	25
Mindanao	2027	11	11	3	82	138	138	25
Mindanao	2027	11	11	4	81	138	138	25
Mindanao	2027	11	11	5	85	138	138	25
Mindanao	2027	11	11	6	86	138	138	25
Mindanao	2027	11	11	7	80	138	138	25
Mindanao	2027	11	11	8	92	138	138	25
Mindanao	2027	11	11	9	108	138	138	25
Mindanao	2027	11	11	10	114	138	138	25
Mindanao	2027	11	11	11	121	138	138	25
Mindanao	2027	11	11	12	119	138	138	25
Mindanao	2027	11	11	13	120	138	138	25
Mindanao	2027	11	11	14	126	138	138	25
Mindanao	2027	11	11	15	126	138	138	25
Mindanao	2027	11	11	16	119	138	138	25
Mindanao	2027	11	11	17	114	138	138	25
Mindanao	2027	11	11	18	121	138	138	25
Mindanao	2027	11	11	19	117	138	138	25
Mindanao	2027	11	11	20	114	138	138	25
Mindanao	2027	11	11	21	113	138	138	25
Mindanao	2027	11	11	22	103	138	138	25
Mindanao	2027	11	11	23	98	138	138	25
Mindanao	2027	11	11	24	92	138	138	25
Mindanao	2027	11	12	1	89	138	138	25
Mindanao	2027	11	12	2	87	138	138	25
Mindanao	2027	11	12	3	83	138	138	25
Mindanao	2027	11	12	4	83	138	138	25
Mindanao	2027	11	12	5	84	138	138	25
Mindanao	2027	11	12	6	86	138	138	25
Mindanao	2027	11	12	7	80	138	138	25
Mindanao	2027	11	12	8	91	138	138	25
Mindanao	2027	11	12	9	104	138	138	25
Mindanao	2027	11	12	10	114	138	138	25
Mindanao	2027	11	12	11	120	138	138	25
Mindanao	2027	11	12	12	118	138	138	25
Mindanao	2027	11	12	13	121	138	138	25
Mindanao	2027	11	12	14	127	138	138	25
Mindanao	2027	11	12	15	123	138	138	25
Mindanao	2027	11	12	16	121	138	138	25
Mindanao	2027	11	12	17	115	138	138	25
Mindanao	2027	11	12	18	121	138	138	25
Mindanao	2027	11	12	19	116	138	138	25
Mindanao	2027	11	12	20	112	138	138	25
Mindanao	2027	11	12	21	111	138	138	25
Mindanao	2027	11	12	22	105	138	138	25
Mindanao	2027	11	12	23	98	138	138	25
Mindanao	2027	11	12	24	94	138	138	25
Mindanao	2027	11	13	1	90	138	138	25
Mindanao	2027	11	13	2	87	138	138	25
Mindanao	2027	11	13	3	84	138	138	25
Mindanao	2027	11	13	4	82	138	138	25
Mindanao	2027	11	13	5	82	138	138	25
Mindanao	2027	11	13	6	81	138	138	25
Mindanao	2027	11	13	7	81	138	138	25
Mindanao	2027	11	13	8	88	138	138	25
Mindanao	2027	11	13	9	100	138	138	25
Mindanao	2027	11	13	10	109	138	138	25
Mindanao	2027	11	13	11	114	138	138	25
Mindanao	2027	11	13	12	112	138	138	25
Mindanao	2027	11	13	13	115	138	138	25
Mindanao	2027	11	13	14	120	138	138	25
Mindanao	2027	11	13	15	118	138	138	25
Mindanao	2027	11	13	16	114	138	138	25
Mindanao	2027	11	13	17	111	138	138	25
Mindanao	2027	11	13	18	117	138	138	25
Mindanao	2027	11	13	19	112	138	138	25
Mindanao	2027	11	13	20	112	138	138	25
Mindanao	2027	11	13	21	106	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	13	22	102	138	138	25
Mindanao	2027	11	13	23	96	138	138	25
Mindanao	2027	11	13	24	91	138	138	25
Mindanao	2027	11	14	1	86	138	138	25
Mindanao	2027	11	14	2	83	138	138	25
Mindanao	2027	11	14	3	82	138	138	25
Mindanao	2027	11	14	4	80	138	138	25
Mindanao	2027	11	14	5	79	138	138	25
Mindanao	2027	11	14	6	78	138	138	25
Mindanao	2027	11	14	7	71	138	138	25
Mindanao	2027	11	14	8	78	138	138	25
Mindanao	2027	11	14	9	83	138	138	25
Mindanao	2027	11	14	10	90	138	138	25
Mindanao	2027	11	14	11	94	138	138	25
Mindanao	2027	11	14	12	96	138	138	25
Mindanao	2027	11	14	13	97	138	138	25
Mindanao	2027	11	14	14	100	138	138	25
Mindanao	2027	11	14	15	98	138	138	25
Mindanao	2027	11	14	16	98	138	138	25
Mindanao	2027	11	14	17	96	138	138	25
Mindanao	2027	11	14	18	109	138	138	25
Mindanao	2027	11	14	19	109	138	138	25
Mindanao	2027	11	14	20	110	138	138	25
Mindanao	2027	11	14	21	107	138	138	25
Mindanao	2027	11	14	22	100	138	138	25
Mindanao	2027	11	14	23	96	138	138	25
Mindanao	2027	11	14	24	90	138	138	25
Mindanao	2027	11	15	1	88	138	138	25
Mindanao	2027	11	15	2	83	138	138	25
Mindanao	2027	11	15	3	81	138	138	25
Mindanao	2027	11	15	4	80	138	138	25
Mindanao	2027	11	15	5	84	138	138	25
Mindanao	2027	11	15	6	86	138	138	25
Mindanao	2027	11	15	7	78	138	138	25
Mindanao	2027	11	15	8	91	138	138	25
Mindanao	2027	11	15	9	108	138	138	25
Mindanao	2027	11	15	10	116	138	138	25
Mindanao	2027	11	15	11	120	138	138	25
Mindanao	2027	11	15	12	122	138	138	25
Mindanao	2027	11	15	13	123	138	138	25
Mindanao	2027	11	15	14	127	138	138	25
Mindanao	2027	11	15	15	128	138	138	25
Mindanao	2027	11	15	16	122	138	138	25
Mindanao	2027	11	15	17	117	138	138	25
Mindanao	2027	11	15	18	123	138	138	25
Mindanao	2027	11	15	19	117	138	138	25
Mindanao	2027	11	15	20	117	138	138	25
Mindanao	2027	11	15	21	113	138	138	25
Mindanao	2027	11	15	22	106	138	138	25
Mindanao	2027	11	15	23	100	138	138	25
Mindanao	2027	11	15	24	94	138	138	25
Mindanao	2027	11	16	1	89	138	138	25
Mindanao	2027	11	16	2	87	138	138	25
Mindanao	2027	11	16	3	85	138	138	25
Mindanao	2027	11	16	4	84	138	138	25
Mindanao	2027	11	16	5	86	138	138	25
Mindanao	2027	11	16	6	86	138	138	25
Mindanao	2027	11	16	7	81	138	138	25
Mindanao	2027	11	16	8	93	138	138	25
Mindanao	2027	11	16	9	108	138	138	25
Mindanao	2027	11	16	10	118	138	138	25
Mindanao	2027	11	16	11	122	138	138	25
Mindanao	2027	11	16	12	122	138	138	25
Mindanao	2027	11	16	13	124	138	138	25
Mindanao	2027	11	16	14	127	138	138	25
Mindanao	2027	11	16	15	127	138	138	25
Mindanao	2027	11	16	16	124	138	138	25
Mindanao	2027	11	16	17	117	138	138	25
Mindanao	2027	11	16	18	125	138	138	25
Mindanao	2027	11	16	19	121	138	138	25
Mindanao	2027	11	16	20	119	138	138	25
Mindanao	2027	11	16	21	115	138	138	25
Mindanao	2027	11	16	22	109	138	138	25
Mindanao	2027	11	16	23	103	138	138	25
Mindanao	2027	11	16	24	98	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	17	1	93	138	138	25
Mindanao	2027	11	17	2	91	138	138	25
Mindanao	2027	11	17	3	87	138	138	25
Mindanao	2027	11	17	4	88	138	138	25
Mindanao	2027	11	17	5	90	138	138	25
Mindanao	2027	11	17	6	91	138	138	25
Mindanao	2027	11	17	7	86	138	138	25
Mindanao	2027	11	17	8	95	138	138	25
Mindanao	2027	11	17	9	107	138	138	25
Mindanao	2027	11	17	10	116	138	138	25
Mindanao	2027	11	17	11	120	138	138	25
Mindanao	2027	11	17	12	119	138	138	25
Mindanao	2027	11	17	13	120	138	138	25
Mindanao	2027	11	17	14	125	138	138	25
Mindanao	2027	11	17	15	123	138	138	25
Mindanao	2027	11	17	16	117	138	138	25
Mindanao	2027	11	17	17	115	138	138	25
Mindanao	2027	11	17	18	123	138	138	25
Mindanao	2027	11	17	19	116	138	138	25
Mindanao	2027	11	17	20	113	138	138	25
Mindanao	2027	11	17	21	111	138	138	25
Mindanao	2027	11	17	22	104	138	138	25
Mindanao	2027	11	17	23	98	138	138	25
Mindanao	2027	11	17	24	93	138	138	25
Mindanao	2027	11	18	1	91	138	138	25
Mindanao	2027	11	18	2	86	138	138	25
Mindanao	2027	11	18	3	84	138	138	25
Mindanao	2027	11	18	4	82	138	138	25
Mindanao	2027	11	18	5	87	138	138	25
Mindanao	2027	11	18	6	89	138	138	25
Mindanao	2027	11	18	7	82	138	138	25
Mindanao	2027	11	18	8	93	138	138	25
Mindanao	2027	11	18	9	106	138	138	25
Mindanao	2027	11	18	10	110	138	138	25
Mindanao	2027	11	18	11	114	138	138	25
Mindanao	2027	11	18	12	108	138	138	25
Mindanao	2027	11	18	13	107	138	138	25
Mindanao	2027	11	18	14	112	138	138	25
Mindanao	2027	11	18	15	110	138	138	25
Mindanao	2027	11	18	16	109	138	138	25
Mindanao	2027	11	18	17	108	138	138	25
Mindanao	2027	11	18	18	115	138	138	25
Mindanao	2027	11	18	19	110	138	138	25
Mindanao	2027	11	18	20	107	138	138	25
Mindanao	2027	11	18	21	103	138	138	25
Mindanao	2027	11	18	22	97	138	138	25
Mindanao	2027	11	18	23	92	138	138	25
Mindanao	2027	11	18	24	88	138	138	25
Mindanao	2027	11	19	1	85	138	138	25
Mindanao	2027	11	19	2	82	138	138	25
Mindanao	2027	11	19	3	80	138	138	25
Mindanao	2027	11	19	4	80	138	138	25
Mindanao	2027	11	19	5	82	138	138	25
Mindanao	2027	11	19	6	85	138	138	25
Mindanao	2027	11	19	7	81	138	138	25
Mindanao	2027	11	19	8	89	138	138	25
Mindanao	2027	11	19	9	102	138	138	25
Mindanao	2027	11	19	10	108	138	138	25
Mindanao	2027	11	19	11	112	138	138	25
Mindanao	2027	11	19	12	110	138	138	25
Mindanao	2027	11	19	13	110	138	138	25
Mindanao	2027	11	19	14	115	138	138	25
Mindanao	2027	11	19	15	113	138	138	25
Mindanao	2027	11	19	16	112	138	138	25
Mindanao	2027	11	19	17	95	138	138	25
Mindanao	2027	11	19	18	103	138	138	25
Mindanao	2027	11	19	19	101	138	138	25
Mindanao	2027	11	19	20	102	138	138	25
Mindanao	2027	11	19	21	101	138	138	25
Mindanao	2027	11	19	22	95	138	138	25
Mindanao	2027	11	19	23	92	138	138	25
Mindanao	2027	11	19	24	87	138	138	25
Mindanao	2027	11	20	1	85	138	138	25
Mindanao	2027	11	20	2	82	138	138	25
Mindanao	2027	11	20	3	81	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	20	4	79	138	138	25
Mindanao	2027	11	20	5	79	138	138	25
Mindanao	2027	11	20	6	79	138	138	25
Mindanao	2027	11	20	7	75	138	138	25
Mindanao	2027	11	20	8	85	138	138	25
Mindanao	2027	11	20	9	94	138	138	25
Mindanao	2027	11	20	10	97	138	138	25
Mindanao	2027	11	20	11	100	138	138	25
Mindanao	2027	11	20	12	101	138	138	25
Mindanao	2027	11	20	13	103	138	138	25
Mindanao	2027	11	20	14	105	138	138	25
Mindanao	2027	11	20	15	104	138	138	25
Mindanao	2027	11	20	16	103	138	138	25
Mindanao	2027	11	20	17	102	138	138	25
Mindanao	2027	11	20	18	111	138	138	25
Mindanao	2027	11	20	19	104	138	138	25
Mindanao	2027	11	20	20	102	138	138	25
Mindanao	2027	11	20	21	99	138	138	25
Mindanao	2027	11	20	22	93	138	138	25
Mindanao	2027	11	20	23	89	138	138	25
Mindanao	2027	11	20	24	85	138	138	25
Mindanao	2027	11	21	1	83	138	138	25
Mindanao	2027	11	21	2	81	138	138	25
Mindanao	2027	11	21	3	82	138	138	25
Mindanao	2027	11	21	4	77	138	138	25
Mindanao	2027	11	21	5	79	138	138	25
Mindanao	2027	11	21	6	78	138	138	25
Mindanao	2027	11	21	7	75	138	138	25
Mindanao	2027	11	21	8	78	138	138	25
Mindanao	2027	11	21	9	83	138	138	25
Mindanao	2027	11	21	10	86	138	138	25
Mindanao	2027	11	21	11	89	138	138	25
Mindanao	2027	11	21	12	91	138	138	25
Mindanao	2027	11	21	13	91	138	138	25
Mindanao	2027	11	21	14	93	138	138	25
Mindanao	2027	11	21	15	92	138	138	25
Mindanao	2027	11	21	16	92	138	138	25
Mindanao	2027	11	21	17	94	138	138	25
Mindanao	2027	11	21	18	107	138	138	25
Mindanao	2027	11	21	19	103	138	138	25
Mindanao	2027	11	21	20	101	138	138	25
Mindanao	2027	11	21	21	98	138	138	25
Mindanao	2027	11	21	22	94	138	138	25
Mindanao	2027	11	21	23	89	138	138	25
Mindanao	2027	11	21	24	85	138	138	25
Mindanao	2027	11	22	1	83	138	138	25
Mindanao	2027	11	22	2	80	138	138	25
Mindanao	2027	11	22	3	77	138	138	25
Mindanao	2027	11	22	4	78	138	138	25
Mindanao	2027	11	22	5	79	138	138	25
Mindanao	2027	11	22	6	83	138	138	25
Mindanao	2027	11	22	7	77	138	138	25
Mindanao	2027	11	22	8	89	138	138	25
Mindanao	2027	11	22	9	103	138	138	25
Mindanao	2027	11	22	10	112	138	138	25
Mindanao	2027	11	22	11	117	138	138	25
Mindanao	2027	11	22	12	116	138	138	25
Mindanao	2027	11	22	13	116	138	138	25
Mindanao	2027	11	22	14	121	138	138	25
Mindanao	2027	11	22	15	118	138	138	25
Mindanao	2027	11	22	16	114	138	138	25
Mindanao	2027	11	22	17	111	138	138	25
Mindanao	2027	11	22	18	119	138	138	25
Mindanao	2027	11	22	19	112	138	138	25
Mindanao	2027	11	22	20	109	138	138	25
Mindanao	2027	11	22	21	104	138	138	25
Mindanao	2027	11	22	22	98	138	138	25
Mindanao	2027	11	22	23	93	138	138	25
Mindanao	2027	11	22	24	88	138	138	25
Mindanao	2027	11	23	1	85	138	138	25
Mindanao	2027	11	23	2	82	138	138	25
Mindanao	2027	11	23	3	80	138	138	25
Mindanao	2027	11	23	4	80	138	138	25
Mindanao	2027	11	23	5	83	138	138	25
Mindanao	2027	11	23	6	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	23	7	81	138	138	25
Mindanao	2027	11	23	8	91	138	138	25
Mindanao	2027	11	23	9	104	138	138	25
Mindanao	2027	11	23	10	115	138	138	25
Mindanao	2027	11	23	11	117	138	138	25
Mindanao	2027	11	23	12	117	138	138	25
Mindanao	2027	11	23	13	118	138	138	25
Mindanao	2027	11	23	14	123	138	138	25
Mindanao	2027	11	23	15	121	138	138	25
Mindanao	2027	11	23	16	117	138	138	25
Mindanao	2027	11	23	17	117	138	138	25
Mindanao	2027	11	23	18	121	138	138	25
Mindanao	2027	11	23	19	114	138	138	25
Mindanao	2027	11	23	20	113	138	138	25
Mindanao	2027	11	23	21	108	138	138	25
Mindanao	2027	11	23	22	101	138	138	25
Mindanao	2027	11	23	23	97	138	138	25
Mindanao	2027	11	23	24	90	138	138	25
Mindanao	2027	11	24	1	86	138	138	25
Mindanao	2027	11	24	2	83	138	138	25
Mindanao	2027	11	24	3	81	138	138	25
Mindanao	2027	11	24	4	81	138	138	25
Mindanao	2027	11	24	5	84	138	138	25
Mindanao	2027	11	24	6	88	138	138	25
Mindanao	2027	11	24	7	80	138	138	25
Mindanao	2027	11	24	8	94	138	138	25
Mindanao	2027	11	24	9	110	138	138	25
Mindanao	2027	11	24	10	117	138	138	25
Mindanao	2027	11	24	11	122	138	138	25
Mindanao	2027	11	24	12	121	138	138	25
Mindanao	2027	11	24	13	122	138	138	25
Mindanao	2027	11	24	14	127	138	138	25
Mindanao	2027	11	24	15	126	138	138	25
Mindanao	2027	11	24	16	112	138	138	25
Mindanao	2027	11	24	17	116	138	138	25
Mindanao	2027	11	24	18	122	138	138	25
Mindanao	2027	11	24	19	118	138	138	25
Mindanao	2027	11	24	20	117	138	138	25
Mindanao	2027	11	24	21	113	138	138	25
Mindanao	2027	11	24	22	106	138	138	25
Mindanao	2027	11	24	23	100	138	138	25
Mindanao	2027	11	24	24	95	138	138	25
Mindanao	2027	11	25	1	89	138	138	25
Mindanao	2027	11	25	2	85	138	138	25
Mindanao	2027	11	25	3	84	138	138	25
Mindanao	2027	11	25	4	82	138	138	25
Mindanao	2027	11	25	5	86	138	138	25
Mindanao	2027	11	25	6	87	138	138	25
Mindanao	2027	11	25	7	82	138	138	25
Mindanao	2027	11	25	8	94	138	138	25
Mindanao	2027	11	25	9	108	138	138	25
Mindanao	2027	11	25	10	117	138	138	25
Mindanao	2027	11	25	11	123	138	138	25
Mindanao	2027	11	25	12	121	138	138	25
Mindanao	2027	11	25	13	125	138	138	25
Mindanao	2027	11	25	14	127	138	138	25
Mindanao	2027	11	25	15	124	138	138	25
Mindanao	2027	11	25	16	120	138	138	25
Mindanao	2027	11	25	17	116	138	138	25
Mindanao	2027	11	25	18	121	138	138	25
Mindanao	2027	11	25	19	115	138	138	25
Mindanao	2027	11	25	20	115	138	138	25
Mindanao	2027	11	25	21	110	138	138	25
Mindanao	2027	11	25	22	103	138	138	25
Mindanao	2027	11	25	23	96	138	138	25
Mindanao	2027	11	25	24	89	138	138	25
Mindanao	2027	11	26	1	86	138	138	25
Mindanao	2027	11	26	2	84	138	138	25
Mindanao	2027	11	26	3	82	138	138	25
Mindanao	2027	11	26	4	82	138	138	25
Mindanao	2027	11	26	5	83	138	138	25
Mindanao	2027	11	26	6	87	138	138	25
Mindanao	2027	11	26	7	83	138	138	25
Mindanao	2027	11	26	8	92	138	138	25
Mindanao	2027	11	26	9	107	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	26	10	113	138	138	25
Mindanao	2027	11	26	11	117	138	138	25
Mindanao	2027	11	26	12	115	138	138	25
Mindanao	2027	11	26	13	118	138	138	25
Mindanao	2027	11	26	14	120	138	138	25
Mindanao	2027	11	26	15	119	138	138	25
Mindanao	2027	11	26	16	119	138	138	25
Mindanao	2027	11	26	17	116	138	138	25
Mindanao	2027	11	26	18	121	138	138	25
Mindanao	2027	11	26	19	117	138	138	25
Mindanao	2027	11	26	20	115	138	138	25
Mindanao	2027	11	26	21	110	138	138	25
Mindanao	2027	11	26	22	104	138	138	25
Mindanao	2027	11	26	23	98	138	138	25
Mindanao	2027	11	26	24	93	138	138	25
Mindanao	2027	11	27	1	88	138	138	25
Mindanao	2027	11	27	2	85	138	138	25
Mindanao	2027	11	27	3	81	138	138	25
Mindanao	2027	11	27	4	80	138	138	25
Mindanao	2027	11	27	5	79	138	138	25
Mindanao	2027	11	27	6	82	138	138	25
Mindanao	2027	11	27	7	80	138	138	25
Mindanao	2027	11	27	8	87	138	138	25
Mindanao	2027	11	27	9	96	138	138	25
Mindanao	2027	11	27	10	104	138	138	25
Mindanao	2027	11	27	11	109	138	138	25
Mindanao	2027	11	27	12	109	138	138	25
Mindanao	2027	11	27	13	110	138	138	25
Mindanao	2027	11	27	14	114	138	138	25
Mindanao	2027	11	27	15	115	138	138	25
Mindanao	2027	11	27	16	109	138	138	25
Mindanao	2027	11	27	17	106	138	138	25
Mindanao	2027	11	27	18	116	138	138	25
Mindanao	2027	11	27	19	113	138	138	25
Mindanao	2027	11	27	20	109	138	138	25
Mindanao	2027	11	27	21	107	138	138	25
Mindanao	2027	11	27	22	101	138	138	25
Mindanao	2027	11	27	23	94	138	138	25
Mindanao	2027	11	27	24	89	138	138	25
Mindanao	2027	11	28	1	82	138	138	25
Mindanao	2027	11	28	2	83	138	138	25
Mindanao	2027	11	28	3	77	138	138	25
Mindanao	2027	11	28	4	76	138	138	25
Mindanao	2027	11	28	5	75	138	138	25
Mindanao	2027	11	28	6	75	138	138	25
Mindanao	2027	11	28	7	72	138	138	25
Mindanao	2027	11	28	8	75	138	138	25
Mindanao	2027	11	28	9	82	138	138	25
Mindanao	2027	11	28	10	91	138	138	25
Mindanao	2027	11	28	11	87	138	138	25
Mindanao	2027	11	28	12	93	138	138	25
Mindanao	2027	11	28	13	90	138	138	25
Mindanao	2027	11	28	14	100	138	138	25
Mindanao	2027	11	28	15	100	138	138	25
Mindanao	2027	11	28	16	95	138	138	25
Mindanao	2027	11	28	17	95	138	138	25
Mindanao	2027	11	28	18	105	138	138	25
Mindanao	2027	11	28	19	107	138	138	25
Mindanao	2027	11	28	20	104	138	138	25
Mindanao	2027	11	28	21	104	138	138	25
Mindanao	2027	11	28	22	101	138	138	25
Mindanao	2027	11	28	23	95	138	138	25
Mindanao	2027	11	28	24	91	138	138	25
Mindanao	2027	11	29	1	80	138	138	25
Mindanao	2027	11	29	2	75	138	138	25
Mindanao	2027	11	29	3	77	138	138	25
Mindanao	2027	11	29	4	72	138	138	25
Mindanao	2027	11	29	5	79	138	138	25
Mindanao	2027	11	29	6	81	138	138	25
Mindanao	2027	11	29	7	76	138	138	25
Mindanao	2027	11	29	8	86	138	138	25
Mindanao	2027	11	29	9	101	138	138	25
Mindanao	2027	11	29	10	108	138	138	25
Mindanao	2027	11	29	11	115	138	138	25
Mindanao	2027	11	29	12	114	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	11	29	13	115	138	138	25
Mindanao	2027	11	29	14	119	138	138	25
Mindanao	2027	11	29	15	123	138	138	25
Mindanao	2027	11	29	16	119	138	138	25
Mindanao	2027	11	29	17	114	138	138	25
Mindanao	2027	11	29	18	120	138	138	25
Mindanao	2027	11	29	19	119	138	138	25
Mindanao	2027	11	29	20	115	138	138	25
Mindanao	2027	11	29	21	111	138	138	25
Mindanao	2027	11	29	22	108	138	138	25
Mindanao	2027	11	29	23	99	138	138	25
Mindanao	2027	11	29	24	92	138	138	25
Mindanao	2027	11	30	1	89	138	138	25
Mindanao	2027	11	30	2	84	138	138	25
Mindanao	2027	11	30	3	81	138	138	25
Mindanao	2027	11	30	4	82	138	138	25
Mindanao	2027	11	30	5	82	138	138	25
Mindanao	2027	11	30	6	81	138	138	25
Mindanao	2027	11	30	7	82	138	138	25
Mindanao	2027	11	30	8	86	138	138	25
Mindanao	2027	11	30	9	94	138	138	25
Mindanao	2027	11	30	10	103	138	138	25
Mindanao	2027	11	30	11	107	138	138	25
Mindanao	2027	11	30	12	106	138	138	25
Mindanao	2027	11	30	13	109	138	138	25
Mindanao	2027	11	30	14	113	138	138	25
Mindanao	2027	11	30	15	112	138	138	25
Mindanao	2027	11	30	16	109	138	138	25
Mindanao	2027	11	30	17	111	138	138	25
Mindanao	2027	11	30	18	117	138	138	25
Mindanao	2027	11	30	19	113	138	138	25
Mindanao	2027	11	30	20	109	138	138	25
Mindanao	2027	11	30	21	110	138	138	25
Mindanao	2027	11	30	22	102	138	138	25
Mindanao	2027	11	30	23	96	138	138	25
Mindanao	2027	11	30	24	90	138	138	25
Mindanao	2027	12	1	1	91	138	138	25
Mindanao	2027	12	1	2	88	138	138	25
Mindanao	2027	12	1	3	86	138	138	25
Mindanao	2027	12	1	4	85	138	138	25
Mindanao	2027	12	1	5	87	138	138	25
Mindanao	2027	12	1	6	90	138	138	25
Mindanao	2027	12	1	7	83	138	138	25
Mindanao	2027	12	1	8	95	138	138	25
Mindanao	2027	12	1	9	109	138	138	25
Mindanao	2027	12	1	10	116	138	138	25
Mindanao	2027	12	1	11	120	138	138	25
Mindanao	2027	12	1	12	119	138	138	25
Mindanao	2027	12	1	13	120	138	138	25
Mindanao	2027	12	1	14	122	138	138	25
Mindanao	2027	12	1	15	119	138	138	25
Mindanao	2027	12	1	16	115	138	138	25
Mindanao	2027	12	1	17	113	138	138	25
Mindanao	2027	12	1	18	119	138	138	25
Mindanao	2027	12	1	19	114	138	138	25
Mindanao	2027	12	1	20	111	138	138	25
Mindanao	2027	12	1	21	107	138	138	25
Mindanao	2027	12	1	22	102	138	138	25
Mindanao	2027	12	1	23	94	138	138	25
Mindanao	2027	12	1	24	89	138	138	25
Mindanao	2027	12	2	1	85	138	138	25
Mindanao	2027	12	2	2	83	138	138	25
Mindanao	2027	12	2	3	81	138	138	25
Mindanao	2027	12	2	4	80	138	138	25
Mindanao	2027	12	2	5	83	138	138	25
Mindanao	2027	12	2	6	86	138	138	25
Mindanao	2027	12	2	7	82	138	138	25
Mindanao	2027	12	2	8	87	138	138	25
Mindanao	2027	12	2	9	102	138	138	25
Mindanao	2027	12	2	10	108	138	138	25
Mindanao	2027	12	2	11	112	138	138	25
Mindanao	2027	12	2	12	113	138	138	25
Mindanao	2027	12	2	13	113	138	138	25
Mindanao	2027	12	2	14	118	138	138	25
Mindanao	2027	12	2	15	116	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	2	16	111	138	138	25
Mindanao	2027	12	2	17	112	138	138	25
Mindanao	2027	12	2	18	119	138	138	25
Mindanao	2027	12	2	19	112	138	138	25
Mindanao	2027	12	2	20	110	138	138	25
Mindanao	2027	12	2	21	106	138	138	25
Mindanao	2027	12	2	22	100	138	138	25
Mindanao	2027	12	2	23	93	138	138	25
Mindanao	2027	12	2	24	89	138	138	25
Mindanao	2027	12	3	1	84	138	138	25
Mindanao	2027	12	3	2	83	138	138	25
Mindanao	2027	12	3	3	82	138	138	25
Mindanao	2027	12	3	4	79	138	138	25
Mindanao	2027	12	3	5	81	138	138	25
Mindanao	2027	12	3	6	84	138	138	25
Mindanao	2027	12	3	7	79	138	138	25
Mindanao	2027	12	3	8	91	138	138	25
Mindanao	2027	12	3	9	106	138	138	25
Mindanao	2027	12	3	10	113	138	138	25
Mindanao	2027	12	3	11	119	138	138	25
Mindanao	2027	12	3	12	118	138	138	25
Mindanao	2027	12	3	13	117	138	138	25
Mindanao	2027	12	3	14	124	138	138	25
Mindanao	2027	12	3	15	124	138	138	25
Mindanao	2027	12	3	16	118	138	138	25
Mindanao	2027	12	3	17	114	138	138	25
Mindanao	2027	12	3	18	121	138	138	25
Mindanao	2027	12	3	19	117	138	138	25
Mindanao	2027	12	3	20	112	138	138	25
Mindanao	2027	12	3	21	110	138	138	25
Mindanao	2027	12	3	22	103	138	138	25
Mindanao	2027	12	3	23	94	138	138	25
Mindanao	2027	12	3	24	89	138	138	25
Mindanao	2027	12	4	1	87	138	138	25
Mindanao	2027	12	4	2	78	138	138	25
Mindanao	2027	12	4	3	78	138	138	25
Mindanao	2027	12	4	4	75	138	138	25
Mindanao	2027	12	4	5	77	138	138	25
Mindanao	2027	12	4	6	77	138	138	25
Mindanao	2027	12	4	7	78	138	138	25
Mindanao	2027	12	4	8	87	138	138	25
Mindanao	2027	12	4	9	96	138	138	25
Mindanao	2027	12	4	10	106	138	138	25
Mindanao	2027	12	4	11	108	138	138	25
Mindanao	2027	12	4	12	108	138	138	25
Mindanao	2027	12	4	13	109	138	138	25
Mindanao	2027	12	4	14	113	138	138	25
Mindanao	2027	12	4	15	113	138	138	25
Mindanao	2027	12	4	16	109	138	138	25
Mindanao	2027	12	4	17	108	138	138	25
Mindanao	2027	12	4	18	117	138	138	25
Mindanao	2027	12	4	19	113	138	138	25
Mindanao	2027	12	4	20	109	138	138	25
Mindanao	2027	12	4	21	106	138	138	25
Mindanao	2027	12	4	22	100	138	138	25
Mindanao	2027	12	4	23	79	138	138	25
Mindanao	2027	12	4	24	80	138	138	25
Mindanao	2027	12	5	1	78	138	138	25
Mindanao	2027	12	5	2	74	138	138	25
Mindanao	2027	12	5	3	77	138	138	25
Mindanao	2027	12	5	4	75	138	138	25
Mindanao	2027	12	5	5	73	138	138	25
Mindanao	2027	12	5	6	73	138	138	25
Mindanao	2027	12	5	7	74	138	138	25
Mindanao	2027	12	5	8	75	138	138	25
Mindanao	2027	12	5	9	82	138	138	25
Mindanao	2027	12	5	10	89	138	138	25
Mindanao	2027	12	5	11	93	138	138	25
Mindanao	2027	12	5	12	94	138	138	25
Mindanao	2027	12	5	13	94	138	138	25
Mindanao	2027	12	5	14	93	138	138	25
Mindanao	2027	12	5	15	94	138	138	25
Mindanao	2027	12	5	16	93	138	138	25
Mindanao	2027	12	5	17	92	138	138	25
Mindanao	2027	12	5	18	110	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	5	19	102	138	138	25
Mindanao	2027	12	5	20	105	138	138	25
Mindanao	2027	12	5	21	101	138	138	25
Mindanao	2027	12	5	22	96	138	138	25
Mindanao	2027	12	5	23	87	138	138	25
Mindanao	2027	12	5	24	83	138	138	25
Mindanao	2027	12	6	1	80	138	138	25
Mindanao	2027	12	6	2	75	138	138	25
Mindanao	2027	12	6	3	77	138	138	25
Mindanao	2027	12	6	4	72	138	138	25
Mindanao	2027	12	6	5	79	138	138	25
Mindanao	2027	12	6	6	81	138	138	25
Mindanao	2027	12	6	7	76	138	138	25
Mindanao	2027	12	6	8	86	138	138	25
Mindanao	2027	12	6	9	101	138	138	25
Mindanao	2027	12	6	10	108	138	138	25
Mindanao	2027	12	6	11	115	138	138	25
Mindanao	2027	12	6	12	114	138	138	25
Mindanao	2027	12	6	13	115	138	138	25
Mindanao	2027	12	6	14	119	138	138	25
Mindanao	2027	12	6	15	123	138	138	25
Mindanao	2027	12	6	16	119	138	138	25
Mindanao	2027	12	6	17	114	138	138	25
Mindanao	2027	12	6	18	120	138	138	25
Mindanao	2027	12	6	19	119	138	138	25
Mindanao	2027	12	6	20	115	138	138	25
Mindanao	2027	12	6	21	111	138	138	25
Mindanao	2027	12	6	22	108	138	138	25
Mindanao	2027	12	6	23	99	138	138	25
Mindanao	2027	12	6	24	92	138	138	25
Mindanao	2027	12	7	1	90	138	138	25
Mindanao	2027	12	7	2	85	138	138	25
Mindanao	2027	12	7	3	82	138	138	25
Mindanao	2027	12	7	4	79	138	138	25
Mindanao	2027	12	7	5	85	138	138	25
Mindanao	2027	12	7	6	89	138	138	25
Mindanao	2027	12	7	7	82	138	138	25
Mindanao	2027	12	7	8	92	138	138	25
Mindanao	2027	12	7	9	108	138	138	25
Mindanao	2027	12	7	10	115	138	138	25
Mindanao	2027	12	7	11	121	138	138	25
Mindanao	2027	12	7	12	119	138	138	25
Mindanao	2027	12	7	13	122	138	138	25
Mindanao	2027	12	7	14	127	138	138	25
Mindanao	2027	12	7	15	123	138	138	25
Mindanao	2027	12	7	16	120	138	138	25
Mindanao	2027	12	7	17	118	138	138	25
Mindanao	2027	12	7	18	127	138	138	25
Mindanao	2027	12	7	19	116	138	138	25
Mindanao	2027	12	7	20	115	138	138	25
Mindanao	2027	12	7	21	109	138	138	25
Mindanao	2027	12	7	22	102	138	138	25
Mindanao	2027	12	7	23	95	138	138	25
Mindanao	2027	12	7	24	91	138	138	25
Mindanao	2027	12	8	1	86	138	138	25
Mindanao	2027	12	8	2	81	138	138	25
Mindanao	2027	12	8	3	82	138	138	25
Mindanao	2027	12	8	4	82	138	138	25
Mindanao	2027	12	8	5	78	138	138	25
Mindanao	2027	12	8	6	78	138	138	25
Mindanao	2027	12	8	7	79	138	138	25
Mindanao	2027	12	8	8	85	138	138	25
Mindanao	2027	12	8	9	97	138	138	25
Mindanao	2027	12	8	10	105	138	138	25
Mindanao	2027	12	8	11	108	138	138	25
Mindanao	2027	12	8	12	108	138	138	25
Mindanao	2027	12	8	13	109	138	138	25
Mindanao	2027	12	8	14	115	138	138	25
Mindanao	2027	12	8	15	113	138	138	25
Mindanao	2027	12	8	16	111	138	138	25
Mindanao	2027	12	8	17	110	138	138	25
Mindanao	2027	12	8	18	119	138	138	25
Mindanao	2027	12	8	19	114	138	138	25
Mindanao	2027	12	8	20	112	138	138	25
Mindanao	2027	12	8	21	114	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	8	22	106	138	138	25
Mindanao	2027	12	8	23	99	138	138	25
Mindanao	2027	12	8	24	93	138	138	25
Mindanao	2027	12	9	1	83	138	138	25
Mindanao	2027	12	9	2	80	138	138	25
Mindanao	2027	12	9	3	78	138	138	25
Mindanao	2027	12	9	4	78	138	138	25
Mindanao	2027	12	9	5	79	138	138	25
Mindanao	2027	12	9	6	83	138	138	25
Mindanao	2027	12	9	7	80	138	138	25
Mindanao	2027	12	9	8	88	138	138	25
Mindanao	2027	12	9	9	102	138	138	25
Mindanao	2027	12	9	10	109	138	138	25
Mindanao	2027	12	9	11	115	138	138	25
Mindanao	2027	12	9	12	111	138	138	25
Mindanao	2027	12	9	13	114	138	138	25
Mindanao	2027	12	9	14	119	138	138	25
Mindanao	2027	12	9	15	118	138	138	25
Mindanao	2027	12	9	16	115	138	138	25
Mindanao	2027	12	9	17	114	138	138	25
Mindanao	2027	12	9	18	120	138	138	25
Mindanao	2027	12	9	19	114	138	138	25
Mindanao	2027	12	9	20	111	138	138	25
Mindanao	2027	12	9	21	107	138	138	25
Mindanao	2027	12	9	22	101	138	138	25
Mindanao	2027	12	9	23	95	138	138	25
Mindanao	2027	12	9	24	91	138	138	25
Mindanao	2027	12	10	1	90	138	138	25
Mindanao	2027	12	10	2	87	138	138	25
Mindanao	2027	12	10	3	84	138	138	25
Mindanao	2027	12	10	4	80	138	138	25
Mindanao	2027	12	10	5	84	138	138	25
Mindanao	2027	12	10	6	85	138	138	25
Mindanao	2027	12	10	7	84	138	138	25
Mindanao	2027	12	10	8	94	138	138	25
Mindanao	2027	12	10	9	107	138	138	25
Mindanao	2027	12	10	10	113	138	138	25
Mindanao	2027	12	10	11	118	138	138	25
Mindanao	2027	12	10	12	117	138	138	25
Mindanao	2027	12	10	13	124	138	138	25
Mindanao	2027	12	10	14	126	138	138	25
Mindanao	2027	12	10	15	122	138	138	25
Mindanao	2027	12	10	16	120	138	138	25
Mindanao	2027	12	10	17	116	138	138	25
Mindanao	2027	12	10	18	122	138	138	25
Mindanao	2027	12	10	19	120	138	138	25
Mindanao	2027	12	10	20	116	138	138	25
Mindanao	2027	12	10	21	112	138	138	25
Mindanao	2027	12	10	22	106	138	138	25
Mindanao	2027	12	10	23	98	138	138	25
Mindanao	2027	12	10	24	93	138	138	25
Mindanao	2027	12	11	1	90	138	138	25
Mindanao	2027	12	11	2	85	138	138	25
Mindanao	2027	12	11	3	85	138	138	25
Mindanao	2027	12	11	4	85	138	138	25
Mindanao	2027	12	11	5	84	138	138	25
Mindanao	2027	12	11	6	84	138	138	25
Mindanao	2027	12	11	7	86	138	138	25
Mindanao	2027	12	11	8	88	138	138	25
Mindanao	2027	12	11	9	99	138	138	25
Mindanao	2027	12	11	10	104	138	138	25
Mindanao	2027	12	11	11	110	138	138	25
Mindanao	2027	12	11	12	107	138	138	25
Mindanao	2027	12	11	13	109	138	138	25
Mindanao	2027	12	11	14	116	138	138	25
Mindanao	2027	12	11	15	115	138	138	25
Mindanao	2027	12	11	16	112	138	138	25
Mindanao	2027	12	11	17	109	138	138	25
Mindanao	2027	12	11	18	119	138	138	25
Mindanao	2027	12	11	19	113	138	138	25
Mindanao	2027	12	11	20	109	138	138	25
Mindanao	2027	12	11	21	108	138	138	25
Mindanao	2027	12	11	22	101	138	138	25
Mindanao	2027	12	11	23	95	138	138	25
Mindanao	2027	12	11	24	89	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	12	1	85	138	138	25
Mindanao	2027	12	12	2	84	138	138	25
Mindanao	2027	12	12	3	79	138	138	25
Mindanao	2027	12	12	4	77	138	138	25
Mindanao	2027	12	12	5	76	138	138	25
Mindanao	2027	12	12	6	77	138	138	25
Mindanao	2027	12	12	7	77	138	138	25
Mindanao	2027	12	12	8	81	138	138	25
Mindanao	2027	12	12	9	83	138	138	25
Mindanao	2027	12	12	10	88	138	138	25
Mindanao	2027	12	12	11	93	138	138	25
Mindanao	2027	12	12	12	95	138	138	25
Mindanao	2027	12	12	13	99	138	138	25
Mindanao	2027	12	12	14	99	138	138	25
Mindanao	2027	12	12	15	101	138	138	25
Mindanao	2027	12	12	16	98	138	138	25
Mindanao	2027	12	12	17	99	138	138	25
Mindanao	2027	12	12	18	113	138	138	25
Mindanao	2027	12	12	19	112	138	138	25
Mindanao	2027	12	12	20	108	138	138	25
Mindanao	2027	12	12	21	108	138	138	25
Mindanao	2027	12	12	22	102	138	138	25
Mindanao	2027	12	12	23	95	138	138	25
Mindanao	2027	12	12	24	90	138	138	25
Mindanao	2027	12	13	1	84	138	138	25
Mindanao	2027	12	13	2	80	138	138	25
Mindanao	2027	12	13	3	81	138	138	25
Mindanao	2027	12	13	4	80	138	138	25
Mindanao	2027	12	13	5	81	138	138	25
Mindanao	2027	12	13	6	84	138	138	25
Mindanao	2027	12	13	7	78	138	138	25
Mindanao	2027	12	13	8	94	138	138	25
Mindanao	2027	12	13	9	107	138	138	25
Mindanao	2027	12	13	10	116	138	138	25
Mindanao	2027	12	13	11	121	138	138	25
Mindanao	2027	12	13	12	119	138	138	25
Mindanao	2027	12	13	13	122	138	138	25
Mindanao	2027	12	13	14	127	138	138	25
Mindanao	2027	12	13	15	126	138	138	25
Mindanao	2027	12	13	16	122	138	138	25
Mindanao	2027	12	13	17	117	138	138	25
Mindanao	2027	12	13	18	123	138	138	25
Mindanao	2027	12	13	19	119	138	138	25
Mindanao	2027	12	13	20	115	138	138	25
Mindanao	2027	12	13	21	111	138	138	25
Mindanao	2027	12	13	22	105	138	138	25
Mindanao	2027	12	13	23	98	138	138	25
Mindanao	2027	12	13	24	92	138	138	25
Mindanao	2027	12	14	1	88	138	138	25
Mindanao	2027	12	14	2	82	138	138	25
Mindanao	2027	12	14	3	83	138	138	25
Mindanao	2027	12	14	4	82	138	138	25
Mindanao	2027	12	14	5	79	138	138	25
Mindanao	2027	12	14	6	87	138	138	25
Mindanao	2027	12	14	7	81	138	138	25
Mindanao	2027	12	14	8	90	138	138	25
Mindanao	2027	12	14	9	107	138	138	25
Mindanao	2027	12	14	10	115	138	138	25
Mindanao	2027	12	14	11	118	138	138	25
Mindanao	2027	12	14	12	118	138	138	25
Mindanao	2027	12	14	13	122	138	138	25
Mindanao	2027	12	14	14	125	138	138	25
Mindanao	2027	12	14	15	126	138	138	25
Mindanao	2027	12	14	16	123	138	138	25
Mindanao	2027	12	14	17	120	138	138	25
Mindanao	2027	12	14	18	125	138	138	25
Mindanao	2027	12	14	19	121	138	138	25
Mindanao	2027	12	14	20	119	138	138	25
Mindanao	2027	12	14	21	116	138	138	25
Mindanao	2027	12	14	22	109	138	138	25
Mindanao	2027	12	14	23	103	138	138	25
Mindanao	2027	12	14	24	99	138	138	25
Mindanao	2027	12	15	1	93	138	138	25
Mindanao	2027	12	15	2	88	138	138	25
Mindanao	2027	12	15	3	85	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	15	4	86	138	138	25
Mindanao	2027	12	15	5	87	138	138	25
Mindanao	2027	12	15	6	89	138	138	25
Mindanao	2027	12	15	7	86	138	138	25
Mindanao	2027	12	15	8	97	138	138	25
Mindanao	2027	12	15	9	111	138	138	25
Mindanao	2027	12	15	10	116	138	138	25
Mindanao	2027	12	15	11	116	138	138	25
Mindanao	2027	12	15	12	116	138	138	25
Mindanao	2027	12	15	13	116	138	138	25
Mindanao	2027	12	15	14	123	138	138	25
Mindanao	2027	12	15	15	122	138	138	25
Mindanao	2027	12	15	16	117	138	138	25
Mindanao	2027	12	15	17	116	138	138	25
Mindanao	2027	12	15	18	122	138	138	25
Mindanao	2027	12	15	19	116	138	138	25
Mindanao	2027	12	15	20	113	138	138	25
Mindanao	2027	12	15	21	110	138	138	25
Mindanao	2027	12	15	22	103	138	138	25
Mindanao	2027	12	15	23	97	138	138	25
Mindanao	2027	12	15	24	94	138	138	25
Mindanao	2027	12	16	1	89	138	138	25
Mindanao	2027	12	16	2	85	138	138	25
Mindanao	2027	12	16	3	83	138	138	25
Mindanao	2027	12	16	4	82	138	138	25
Mindanao	2027	12	16	5	83	138	138	25
Mindanao	2027	12	16	6	86	138	138	25
Mindanao	2027	12	16	7	85	138	138	25
Mindanao	2027	12	16	8	95	138	138	25
Mindanao	2027	12	16	9	108	138	138	25
Mindanao	2027	12	16	10	116	138	138	25
Mindanao	2027	12	16	11	120	138	138	25
Mindanao	2027	12	16	12	117	138	138	25
Mindanao	2027	12	16	13	121	138	138	25
Mindanao	2027	12	16	14	130	138	138	25
Mindanao	2027	12	16	15	127	138	138	25
Mindanao	2027	12	16	16	122	138	138	25
Mindanao	2027	12	16	17	119	138	138	25
Mindanao	2027	12	16	18	123	138	138	25
Mindanao	2027	12	16	19	119	138	138	25
Mindanao	2027	12	16	20	115	138	138	25
Mindanao	2027	12	16	21	114	138	138	25
Mindanao	2027	12	16	22	106	138	138	25
Mindanao	2027	12	16	23	100	138	138	25
Mindanao	2027	12	16	24	94	138	138	25
Mindanao	2027	12	17	1	90	138	138	25
Mindanao	2027	12	17	2	87	138	138	25
Mindanao	2027	12	17	3	84	138	138	25
Mindanao	2027	12	17	4	80	138	138	25
Mindanao	2027	12	17	5	84	138	138	25
Mindanao	2027	12	17	6	85	138	138	25
Mindanao	2027	12	17	7	84	138	138	25
Mindanao	2027	12	17	8	94	138	138	25
Mindanao	2027	12	17	9	107	138	138	25
Mindanao	2027	12	17	10	113	138	138	25
Mindanao	2027	12	17	11	118	138	138	25
Mindanao	2027	12	17	12	117	138	138	25
Mindanao	2027	12	17	13	124	138	138	25
Mindanao	2027	12	17	14	126	138	138	25
Mindanao	2027	12	17	15	122	138	138	25
Mindanao	2027	12	17	16	120	138	138	25
Mindanao	2027	12	17	17	116	138	138	25
Mindanao	2027	12	17	18	122	138	138	25
Mindanao	2027	12	17	19	120	138	138	25
Mindanao	2027	12	17	20	116	138	138	25
Mindanao	2027	12	17	21	112	138	138	25
Mindanao	2027	12	17	22	106	138	138	25
Mindanao	2027	12	17	23	98	138	138	25
Mindanao	2027	12	17	24	93	138	138	25
Mindanao	2027	12	18	1	89	138	138	25
Mindanao	2027	12	18	2	86	138	138	25
Mindanao	2027	12	18	3	86	138	138	25
Mindanao	2027	12	18	4	83	138	138	25
Mindanao	2027	12	18	5	81	138	138	25
Mindanao	2027	12	18	6	82	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	18	7	83	138	138	25
Mindanao	2027	12	18	8	92	138	138	25
Mindanao	2027	12	18	9	99	138	138	25
Mindanao	2027	12	18	10	104	138	138	25
Mindanao	2027	12	18	11	109	138	138	25
Mindanao	2027	12	18	12	109	138	138	25
Mindanao	2027	12	18	13	112	138	138	25
Mindanao	2027	12	18	14	113	138	138	25
Mindanao	2027	12	18	15	116	138	138	25
Mindanao	2027	12	18	16	113	138	138	25
Mindanao	2027	12	18	17	110	138	138	25
Mindanao	2027	12	18	18	119	138	138	25
Mindanao	2027	12	18	19	116	138	138	25
Mindanao	2027	12	18	20	112	138	138	25
Mindanao	2027	12	18	21	109	138	138	25
Mindanao	2027	12	18	22	105	138	138	25
Mindanao	2027	12	18	23	98	138	138	25
Mindanao	2027	12	18	24	92	138	138	25
Mindanao	2027	12	19	1	88	138	138	25
Mindanao	2027	12	19	2	84	138	138	25
Mindanao	2027	12	19	3	79	138	138	25
Mindanao	2027	12	19	4	77	138	138	25
Mindanao	2027	12	19	5	75	138	138	25
Mindanao	2027	12	19	6	75	138	138	25
Mindanao	2027	12	19	7	76	138	138	25
Mindanao	2027	12	19	8	78	138	138	25
Mindanao	2027	12	19	9	87	138	138	25
Mindanao	2027	12	19	10	92	138	138	25
Mindanao	2027	12	19	11	92	138	138	25
Mindanao	2027	12	19	12	92	138	138	25
Mindanao	2027	12	19	13	91	138	138	25
Mindanao	2027	12	19	14	95	138	138	25
Mindanao	2027	12	19	15	95	138	138	25
Mindanao	2027	12	19	16	93	138	138	25
Mindanao	2027	12	19	17	96	138	138	25
Mindanao	2027	12	19	18	105	138	138	25
Mindanao	2027	12	19	19	104	138	138	25
Mindanao	2027	12	19	20	102	138	138	25
Mindanao	2027	12	19	21	98	138	138	25
Mindanao	2027	12	19	22	96	138	138	25
Mindanao	2027	12	19	23	89	138	138	25
Mindanao	2027	12	19	24	84	138	138	25
Mindanao	2027	12	20	1	81	138	138	25
Mindanao	2027	12	20	2	79	138	138	25
Mindanao	2027	12	20	3	77	138	138	25
Mindanao	2027	12	20	4	76	138	138	25
Mindanao	2027	12	20	5	78	138	138	25
Mindanao	2027	12	20	6	78	138	138	25
Mindanao	2027	12	20	7	77	138	138	25
Mindanao	2027	12	20	8	88	138	138	25
Mindanao	2027	12	20	9	97	138	138	25
Mindanao	2027	12	20	10	103	138	138	25
Mindanao	2027	12	20	11	108	138	138	25
Mindanao	2027	12	20	12	103	138	138	25
Mindanao	2027	12	20	13	102	138	138	25
Mindanao	2027	12	20	14	100	138	138	25
Mindanao	2027	12	20	15	102	138	138	25
Mindanao	2027	12	20	16	102	138	138	25
Mindanao	2027	12	20	17	104	138	138	25
Mindanao	2027	12	20	18	109	138	138	25
Mindanao	2027	12	20	19	102	138	138	25
Mindanao	2027	12	20	20	99	138	138	25
Mindanao	2027	12	20	21	96	138	138	25
Mindanao	2027	12	20	22	91	138	138	25
Mindanao	2027	12	20	23	83	138	138	25
Mindanao	2027	12	20	24	80	138	138	25
Mindanao	2027	12	21	1	81	138	138	25
Mindanao	2027	12	21	2	77	138	138	25
Mindanao	2027	12	21	3	76	138	138	25
Mindanao	2027	12	21	4	74	138	138	25
Mindanao	2027	12	21	5	75	138	138	25
Mindanao	2027	12	21	6	77	138	138	25
Mindanao	2027	12	21	7	80	138	138	25
Mindanao	2027	12	21	8	85	138	138	25
Mindanao	2027	12	21	9	96	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	21	10	105	138	138	25
Mindanao	2027	12	21	11	106	138	138	25
Mindanao	2027	12	21	12	108	138	138	25
Mindanao	2027	12	21	13	110	138	138	25
Mindanao	2027	12	21	14	111	138	138	25
Mindanao	2027	12	21	15	109	138	138	25
Mindanao	2027	12	21	16	110	138	138	25
Mindanao	2027	12	21	17	107	138	138	25
Mindanao	2027	12	21	18	114	138	138	25
Mindanao	2027	12	21	19	111	138	138	25
Mindanao	2027	12	21	20	105	138	138	25
Mindanao	2027	12	21	21	103	138	138	25
Mindanao	2027	12	21	22	97	138	138	25
Mindanao	2027	12	21	23	91	138	138	25
Mindanao	2027	12	21	24	87	138	138	25
Mindanao	2027	12	22	1	83	138	138	25
Mindanao	2027	12	22	2	80	138	138	25
Mindanao	2027	12	22	3	76	138	138	25
Mindanao	2027	12	22	4	77	138	138	25
Mindanao	2027	12	22	5	77	138	138	25
Mindanao	2027	12	22	6	80	138	138	25
Mindanao	2027	12	22	7	82	138	138	25
Mindanao	2027	12	22	8	91	138	138	25
Mindanao	2027	12	22	9	103	138	138	25
Mindanao	2027	12	22	10	110	138	138	25
Mindanao	2027	12	22	11	116	138	138	25
Mindanao	2027	12	22	12	118	138	138	25
Mindanao	2027	12	22	13	117	138	138	25
Mindanao	2027	12	22	14	120	138	138	25
Mindanao	2027	12	22	15	122	138	138	25
Mindanao	2027	12	22	16	121	138	138	25
Mindanao	2027	12	22	17	116	138	138	25
Mindanao	2027	12	22	18	117	138	138	25
Mindanao	2027	12	22	19	115	138	138	25
Mindanao	2027	12	22	20	111	138	138	25
Mindanao	2027	12	22	21	108	138	138	25
Mindanao	2027	12	22	22	100	138	138	25
Mindanao	2027	12	22	23	93	138	138	25
Mindanao	2027	12	22	24	88	138	138	25
Mindanao	2027	12	23	1	83	138	138	25
Mindanao	2027	12	23	2	80	138	138	25
Mindanao	2027	12	23	3	78	138	138	25
Mindanao	2027	12	23	4	76	138	138	25
Mindanao	2027	12	23	5	77	138	138	25
Mindanao	2027	12	23	6	78	138	138	25
Mindanao	2027	12	23	7	79	138	138	25
Mindanao	2027	12	23	8	87	138	138	25
Mindanao	2027	12	23	9	102	138	138	25
Mindanao	2027	12	23	10	111	138	138	25
Mindanao	2027	12	23	11	117	138	138	25
Mindanao	2027	12	23	12	115	138	138	25
Mindanao	2027	12	23	13	115	138	138	25
Mindanao	2027	12	23	14	121	138	138	25
Mindanao	2027	12	23	15	121	138	138	25
Mindanao	2027	12	23	16	119	138	138	25
Mindanao	2027	12	23	17	112	138	138	25
Mindanao	2027	12	23	18	118	138	138	25
Mindanao	2027	12	23	19	115	138	138	25
Mindanao	2027	12	23	20	111	138	138	25
Mindanao	2027	12	23	21	108	138	138	25
Mindanao	2027	12	23	22	101	138	138	25
Mindanao	2027	12	23	23	95	138	138	25
Mindanao	2027	12	23	24	89	138	138	25
Mindanao	2027	12	24	1	86	138	138	25
Mindanao	2027	12	24	2	83	138	138	25
Mindanao	2027	12	24	3	80	138	138	25
Mindanao	2027	12	24	4	80	138	138	25
Mindanao	2027	12	24	5	79	138	138	25
Mindanao	2027	12	24	6	80	138	138	25
Mindanao	2027	12	24	7	82	138	138	25
Mindanao	2027	12	24	8	88	138	138	25
Mindanao	2027	12	24	9	102	138	138	25
Mindanao	2027	12	24	10	109	138	138	25
Mindanao	2027	12	24	11	114	138	138	25
Mindanao	2027	12	24	12	116	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	24	13	119	138	138	25
Mindanao	2027	12	24	14	121	138	138	25
Mindanao	2027	12	24	15	119	138	138	25
Mindanao	2027	12	24	16	117	138	138	25
Mindanao	2027	12	24	17	113	138	138	25
Mindanao	2027	12	24	18	117	138	138	25
Mindanao	2027	12	24	19	114	138	138	25
Mindanao	2027	12	24	20	111	138	138	25
Mindanao	2027	12	24	21	107	138	138	25
Mindanao	2027	12	24	22	101	138	138	25
Mindanao	2027	12	24	23	99	138	138	25
Mindanao	2027	12	24	24	94	138	138	25
Mindanao	2027	12	25	1	84	138	138	25
Mindanao	2027	12	25	2	81	138	138	25
Mindanao	2027	12	25	3	78	138	138	25
Mindanao	2027	12	25	4	75	138	138	25
Mindanao	2027	12	25	5	75	138	138	25
Mindanao	2027	12	25	6	72	138	138	25
Mindanao	2027	12	25	7	72	138	138	25
Mindanao	2027	12	25	8	71	138	138	25
Mindanao	2027	12	25	9	74	138	138	25
Mindanao	2027	12	25	10	75	138	138	25
Mindanao	2027	12	25	11	77	138	138	25
Mindanao	2027	12	25	12	79	138	138	25
Mindanao	2027	12	25	13	78	138	138	25
Mindanao	2027	12	25	14	75	138	138	25
Mindanao	2027	12	25	15	78	138	138	25
Mindanao	2027	12	25	16	78	138	138	25
Mindanao	2027	12	25	17	82	138	138	25
Mindanao	2027	12	25	18	92	138	138	25
Mindanao	2027	12	25	19	91	138	138	25
Mindanao	2027	12	25	20	90	138	138	25
Mindanao	2027	12	25	21	85	138	138	25
Mindanao	2027	12	25	22	80	138	138	25
Mindanao	2027	12	25	23	76	138	138	25
Mindanao	2027	12	25	24	73	138	138	25
Mindanao	2027	12	26	1	86	138	138	25
Mindanao	2027	12	26	2	83	138	138	25
Mindanao	2027	12	26	3	80	138	138	25
Mindanao	2027	12	26	4	77	138	138	25
Mindanao	2027	12	26	5	76	138	138	25
Mindanao	2027	12	26	6	77	138	138	25
Mindanao	2027	12	26	7	77	138	138	25
Mindanao	2027	12	26	8	82	138	138	25
Mindanao	2027	12	26	9	86	138	138	25
Mindanao	2027	12	26	10	91	138	138	25
Mindanao	2027	12	26	11	92	138	138	25
Mindanao	2027	12	26	12	95	138	138	25
Mindanao	2027	12	26	13	96	138	138	25
Mindanao	2027	12	26	14	98	138	138	25
Mindanao	2027	12	26	15	96	138	138	25
Mindanao	2027	12	26	16	94	138	138	25
Mindanao	2027	12	26	17	95	138	138	25
Mindanao	2027	12	26	18	103	138	138	25
Mindanao	2027	12	26	19	100	138	138	25
Mindanao	2027	12	26	20	93	138	138	25
Mindanao	2027	12	26	21	90	138	138	25
Mindanao	2027	12	26	22	89	138	138	25
Mindanao	2027	12	26	23	89	138	138	25
Mindanao	2027	12	26	24	86	138	138	25
Mindanao	2027	12	27	1	81	138	138	25
Mindanao	2027	12	27	2	79	138	138	25
Mindanao	2027	12	27	3	77	138	138	25
Mindanao	2027	12	27	4	76	138	138	25
Mindanao	2027	12	27	5	78	138	138	25
Mindanao	2027	12	27	6	78	138	138	25
Mindanao	2027	12	27	7	77	138	138	25
Mindanao	2027	12	27	8	88	138	138	25
Mindanao	2027	12	27	9	97	138	138	25
Mindanao	2027	12	27	10	103	138	138	25
Mindanao	2027	12	27	11	108	138	138	25
Mindanao	2027	12	27	12	103	138	138	25
Mindanao	2027	12	27	13	102	138	138	25
Mindanao	2027	12	27	14	100	138	138	25
Mindanao	2027	12	27	15	102	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	27	16	102	138	138	25
Mindanao	2027	12	27	17	104	138	138	25
Mindanao	2027	12	27	18	109	138	138	25
Mindanao	2027	12	27	19	102	138	138	25
Mindanao	2027	12	27	20	99	138	138	25
Mindanao	2027	12	27	21	96	138	138	25
Mindanao	2027	12	27	22	91	138	138	25
Mindanao	2027	12	27	23	83	138	138	25
Mindanao	2027	12	27	24	80	138	138	25
Mindanao	2027	12	28	1	71	138	138	25
Mindanao	2027	12	28	2	69	138	138	25
Mindanao	2027	12	28	3	67	138	138	25
Mindanao	2027	12	28	4	66	138	138	25
Mindanao	2027	12	28	5	67	138	138	25
Mindanao	2027	12	28	6	71	138	138	25
Mindanao	2027	12	28	7	74	138	138	25
Mindanao	2027	12	28	8	81	138	138	25
Mindanao	2027	12	28	9	89	138	138	25
Mindanao	2027	12	28	10	96	138	138	25
Mindanao	2027	12	28	11	101	138	138	25
Mindanao	2027	12	28	12	105	138	138	25
Mindanao	2027	12	28	13	105	138	138	25
Mindanao	2027	12	28	14	107	138	138	25
Mindanao	2027	12	28	15	107	138	138	25
Mindanao	2027	12	28	16	105	138	138	25
Mindanao	2027	12	28	17	103	138	138	25
Mindanao	2027	12	28	18	112	138	138	25
Mindanao	2027	12	28	19	112	138	138	25
Mindanao	2027	12	28	20	108	138	138	25
Mindanao	2027	12	28	21	106	138	138	25
Mindanao	2027	12	28	22	101	138	138	25
Mindanao	2027	12	28	23	94	138	138	25
Mindanao	2027	12	28	24	89	138	138	25
Mindanao	2027	12	29	1	88	138	138	25
Mindanao	2027	12	29	2	85	138	138	25
Mindanao	2027	12	29	3	81	138	138	25
Mindanao	2027	12	29	4	80	138	138	25
Mindanao	2027	12	29	5	80	138	138	25
Mindanao	2027	12	29	6	83	138	138	25
Mindanao	2027	12	29	7	82	138	138	25
Mindanao	2027	12	29	8	90	138	138	25
Mindanao	2027	12	29	9	104	138	138	25
Mindanao	2027	12	29	10	110	138	138	25
Mindanao	2027	12	29	11	115	138	138	25
Mindanao	2027	12	29	12	117	138	138	25
Mindanao	2027	12	29	13	118	138	138	25
Mindanao	2027	12	29	14	122	138	138	25
Mindanao	2027	12	29	15	120	138	138	25
Mindanao	2027	12	29	16	118	138	138	25
Mindanao	2027	12	29	17	116	138	138	25
Mindanao	2027	12	29	18	116	138	138	25
Mindanao	2027	12	29	19	114	138	138	25
Mindanao	2027	12	29	20	111	138	138	25
Mindanao	2027	12	29	21	107	138	138	25
Mindanao	2027	12	29	22	100	138	138	25
Mindanao	2027	12	29	23	96	138	138	25
Mindanao	2027	12	29	24	88	138	138	25
Mindanao	2027	12	30	1	96	138	138	25
Mindanao	2027	12	30	2	92	138	138	25
Mindanao	2027	12	30	3	88	138	138	25
Mindanao	2027	12	30	4	88	138	138	25
Mindanao	2027	12	30	5	89	138	138	25
Mindanao	2027	12	30	6	90	138	138	25
Mindanao	2027	12	30	7	83	138	138	25
Mindanao	2027	12	30	8	87	138	138	25
Mindanao	2027	12	30	9	90	138	138	25
Mindanao	2027	12	30	10	95	138	138	25
Mindanao	2027	12	30	11	101	138	138	25
Mindanao	2027	12	30	12	101	138	138	25
Mindanao	2027	12	30	13	102	138	138	25
Mindanao	2027	12	30	14	106	138	138	25
Mindanao	2027	12	30	15	103	138	138	25
Mindanao	2027	12	30	16	103	138	138	25
Mindanao	2027	12	30	17	99	138	138	25
Mindanao	2027	12	30	18	113	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.

ANNEX F Three Year Projected Hourly Levels of AS Requirement for Mindanao

GRID	YEAR	MONTH	DAY	HOUR	REGULATING RESERVE (MW)	CONTINGENCY RESERVE (MW)	DISPATCHABLE RESERVE (MW)	BLACK START (Min MW per Restoration Highway)
Mindanao	2027	12	30	19	109	138	138	25
Mindanao	2027	12	30	20	107	138	138	25
Mindanao	2027	12	30	21	104	138	138	25
Mindanao	2027	12	30	22	101	138	138	25
Mindanao	2027	12	30	23	96	138	138	25
Mindanao	2027	12	30	24	89	138	138	25
Mindanao	2027	12	31	1	87	138	138	25
Mindanao	2027	12	31	2	84	138	138	25
Mindanao	2027	12	31	3	80	138	138	25
Mindanao	2027	12	31	4	79	138	138	25
Mindanao	2027	12	31	5	80	138	138	25
Mindanao	2027	12	31	6	78	138	138	25
Mindanao	2027	12	31	7	78	138	138	25
Mindanao	2027	12	31	8	79	138	138	25
Mindanao	2027	12	31	9	84	138	138	25
Mindanao	2027	12	31	10	89	138	138	25
Mindanao	2027	12	31	11	92	138	138	25
Mindanao	2027	12	31	12	94	138	138	25
Mindanao	2027	12	31	13	96	138	138	25
Mindanao	2027	12	31	14	99	138	138	25
Mindanao	2027	12	31	15	99	138	138	25
Mindanao	2027	12	31	16	99	138	138	25
Mindanao	2027	12	31	17	97	138	138	25
Mindanao	2027	12	31	18	105	138	138	25
Mindanao	2027	12	31	19	105	138	138	25
Mindanao	2027	12	31	20	98	138	138	25
Mindanao	2027	12	31	21	98	138	138	25
Mindanao	2027	12	31	22	94	138	138	25
Mindanao	2027	12	31	23	92	138	138	25
Mindanao	2027	12	31	24	90	138	138	25

NOTE: RR Requirement is equivalent to the hourly average per month of the 4% Demand Projection, based on Plexos Profiles using DOE's 2020-2040 Annual Peak Demand for Luzon, Visayas and Mindanao Grids, dated August 24, 2020. CR and DR are based on Net Capacity of the projected highest and second highest generating unit, respectively, for succeeding years.