

# TransMissions

THE OFFICIAL NEWSLETTER OF THE NATIONAL GRID CORPORATION OF THE PHILIPPINES

SPECIAL ISSUE, Vol. 6 Issue No. 03, June 2018



## One Philippine Grid On The Horizon

**Unifying the country's power grid has always been the aspiration of NGCP, given the benefits a single transmission system would bring to the Filipino people.**

But this dream remained just a dream for the past decades. Despite the technological advancements and innovations in the power industry, and the continued growth of the economy that makes the pursuit of a single grid not only viable, but also necessary, Mindanao remained isolated from Luzon and Visayas.

Fortunately, this aspiration will soon come into fruition, thanks to the concerted efforts of the government, regulators, and the private sector.

Leading the way to realizing a single, unified grid across the Philippines' three major island groups is NGCP, the private company operating the nationwide power transmission system, which brings power from generating plants to distribution utilities who then pass electricity to consumers.

At present, NGCP's transmission facilities in Luzon and Visayas are connected, while its lines in Mindanao are isolated from the grid.

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BRIDGING POWER & PROGRESS

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is a publication of the Corporate Communications and Public Affairs Department.

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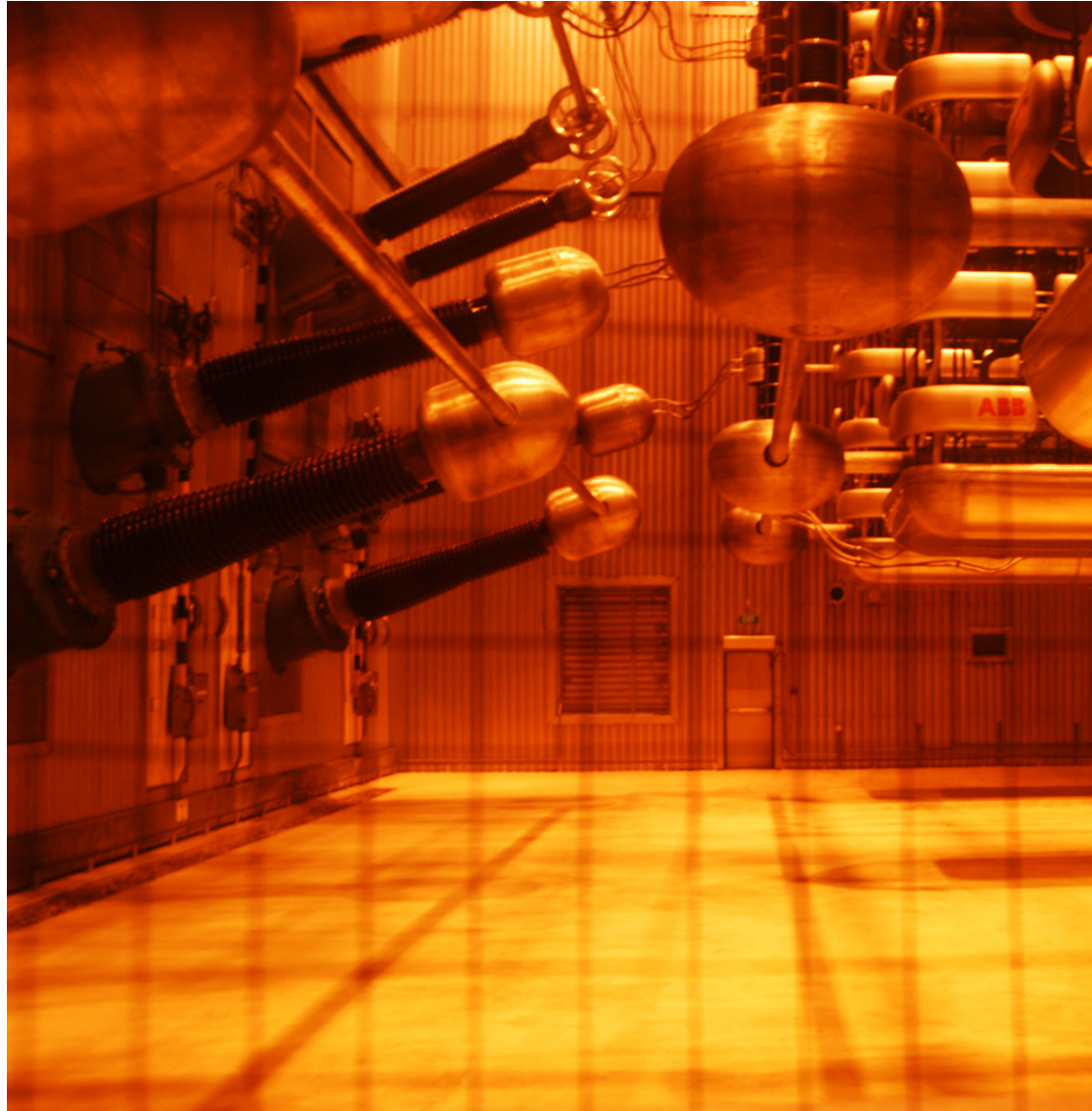


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NGCP earlier vowed to make sure that the MVIP would be “state-of-the-art and sturdy enough to last generations.”

## One Philippine Grid On The Horizon

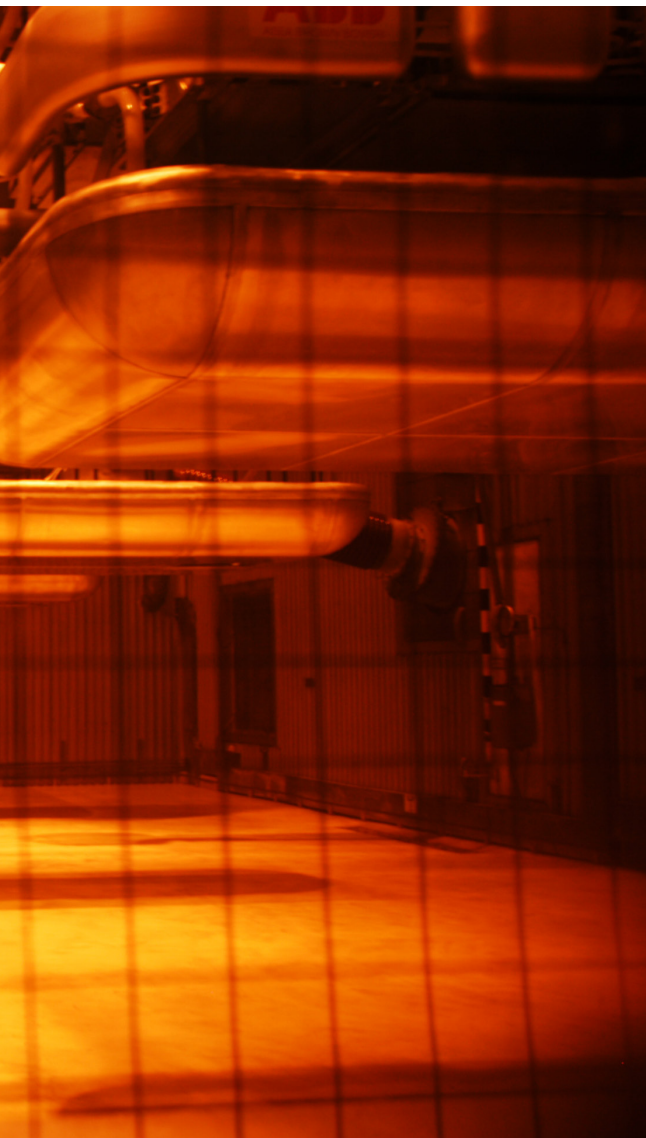
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The company earlier received the go signal from regulators to pursue the interconnection of the country’s three main grids to optimize the operations of hydroelectric power plants in Mindanao and power reserves across the country; to allow power to be shared during periods of shortfall or surplus of power supply; to create a more open, liberalized and competitive market for the future; and open up investment opportunities in the power sector.

For this purpose, NGCP revisited the

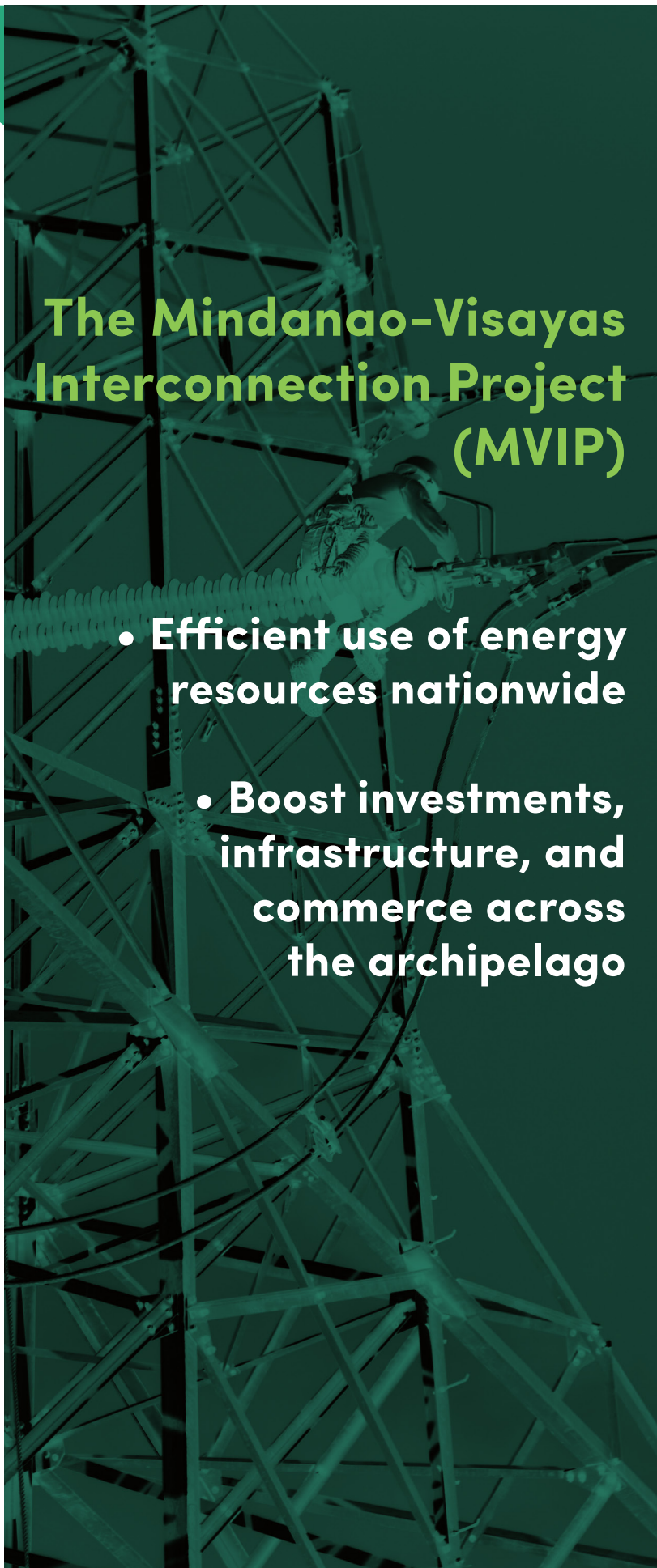
government’s shelved Mindanao-Visayas Interconnection Project (MVIP). After five years of research and planning, the current western route was deemed feasible. The project was given the go-signal by the Energy Regulatory Commission in 2017 and is expected to be completed by December 2020.

The MVIP, which is estimated to cost P52 billion, will entail the laying down of 184 circuit kilometers of submarine cables and 526 circuit kilometers of overhead power lines to connect transmission facilities



## The Mindanao-Visayas Interconnection Project (MVIP)

- Efficient use of energy resources nationwide
- Boost investments, infrastructure, and commerce across the archipelago



in Dapitan, Zamboanga del Norte to those in Santander, Cebu.

The High-Voltage Direct Cables (HVDC) planned for the interconnection shall serve as the main artery that will link Mindanao to the already connected Luzon and Visayas grids. The latter grid system has long been connected through NGCP's Naga-Ormoc HVDC line.

NGCP, however, would have to undertake right-of-way acquisitions for the substations and associated overhead transmission lines. As such, the grid operator is reaching out to the public,

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# One Philippine Grid On The Horizon

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and all national and local government units to collaborate for the successful implementation of the MVIP.

NGCP said in a statement that once the MVIP is completed, the country is expected to benefit from more efficient use of energy resources nationwide. Having reliable power transmission services would help boost investments, infrastructure, and commerce across the archipelago.

Last May 8, 2018, the MVIP was certified by the Energy Investment Coordinating Council, through the Department of Energy, as an Energy Project of National Significance (EPNS) for Commercial Phase under Executive Order 30 signed by President Rodrigo Duterte. This will pave the way for an efficient, effective, and timely implementation of the project, with

the cooperation of all government agencies involved.

NGCP earlier vowed to make make sure that the MVIP would be “state-of-the-art and sturdy enough to last generations.”

Prior to the MVIP, state-owned National Power Corp. conducted feasibility studies as early as 1984 for a unified power grid by linking transmission lines in Leyte to Surigao.

A study conducted by NGCP, however, found the old government-proposed interconnection route unsuitable for submarine cable ground laying because of a significant quantity of live ordinance – torpedoes and high explosive shells – from the Battle of Surigao in 1944, an underwater volcano, fault lines, and seismic hazards, such as unstable rock slabs that can cause landslips and tsunamis.



Besides the submarine cable connecting Mindanao to Visayas, over 185 kilometers of overhead power lines will also be used to connect transmission facilities in the area.

# MVIP AT A GLANCE

## LOAD CENTERS

Visayas 2,143 MW  
Cebu Island 989 MW

Mindanao 2,064 MW  
Davao City 420 MW

## LUZON-VISAYAS CONNECTION

- interconnected in 1998 through the 21-km HVDC submarine cable between Sorsogon and Samar, and 430 kms of overhead lines from Naga City, Camarines Sur to Ormoc, Leyte
- can transfer up to 440 MW of power

## HIGH VOLTAGE DIRECT CURRENT (HVDC)

- The high-voltage direct current system is used to transmit large amounts of electricity, by submarine cable or overhead lines, over long distances with minimal electricity losses.

## OVERHEAD LINES

- The Cebu side will be interconnected by 123.5 kms of overhead lines while substations and facilities in Mindanao will be connected by overhead lines spanning 140 kms.

## CABLE TERMINAL STATION

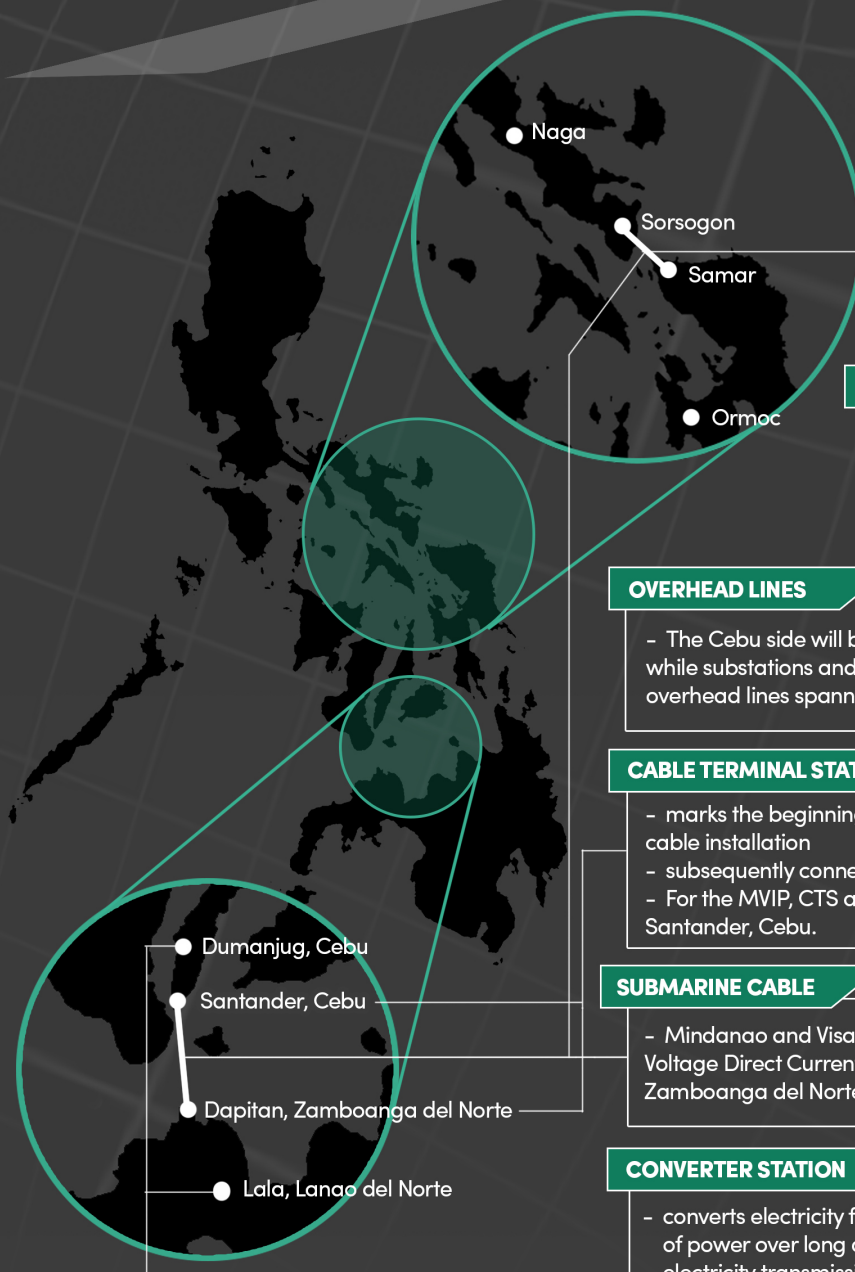
- marks the beginning and termination of the submarine cable installation
- subsequently connected to other land-based power lines from here
- For the MVIP, CTS are in Dapitan, Zamboanga del Norte and Santander, Cebu.

## SUBMARINE CABLE

- Mindanao and Visayas will be interconnected through a 92-km High Voltage Direct Current (HVDC) submarine cable from Dapitan, Zamboanga del Norte to Santander, Cebu.

## CONVERTER STATION

- converts electricity from direct current (DC), used in bulk transmission of power over long distances, to alternating current (AC), used in electricity transmission and distribution
- Converter stations will be in Dumanjug, Cebu and Lala, Lanao del Norte.



## TIMELINE MVIP'S CHRONOLOGY OF EVENTS

Studies conducted by JICA and ADB on the MVIP  
**1980 - 2004**

Updated Feasibility study and completion of Hydrographic Survey (Eastern Route)  
**2011 - 2014**

Conduct of Desktop Study and Hydrographic survey (Western Route)  
**2015 - 2016**

Favorable Results for ZDN - Cebu Interconnection (Western Route)  
**2016**

ERC Approval for MVIP - Western Route  
**2015 - 2017**

# NGCP Seeks Gov't Support for MVIP



**NGCP officials and external partners from the local government units and attached agencies in Cebu came together for the MVIP public consultation and roadshow for Visayas stakeholders.**

**To ensure the success of the project that would link Mindanao to the Luzon-Visayas grid, NGCP began touching base with concerned national government agencies and local government units.**

The country's power transmission operator scheduled a number of meetings with the local governments in the regions where related infrastructure works for the Mindanao-Visayas Interconnection Project (MVIP) are expected to be situated.

NGCP said that it is reaching out to its partners in government from Visayas and Mindanao to disseminate information about the MVIP as well as to seek their support in potential right-of-way acquisition projects it would have to undertake.

NGCP likewise plans to meet with Department of Environment and Natural Resources (DENR) officials also to seek their support in right-of-way acquisitions and in acquiring the necessary permits from the agency.

The MVIP will link Mindanao to the Luzon and Visayas grids by 2020. Regulators gave NGCP the go-signal to proceed with the project last year.

Under the MVIP, NGCP will have to lay down submarine cables from Zamboanga del Norte to Cebu, and put up overhead transmission lines and substations that would necessitate right-of-way acquisitions.

Right-of-way issues have historically been a thorn in the operations of the transmission service provider especially from uncooperative groups which have caused delays in its expansion activities, and repair and maintenance services in the past.

To avoid similar problems with the MVIP, NGCP deemed it crucial to touch base with local executives to solicit support for the project, which is expected to be a boon to the economy once completed.

Among the cities and municipalities NGCP coordinates with for the project are Aloguinsan, Dumanjug, Alegria, Santander, Barili, Naga, Toledo, Carcar, Alcoy, Ginatilan, Samboan, Oslob, Boljoon, Dalaguete, Argao, Alcantara, Ronda, and San Fernando in Cebu; and Dapitan, Lala, Kolabugan, Maigo, Polanco, Aurora, Kauswagan, Pinan, Sergio Osmena Sr., Mahayag, Josefina, Molave, Ramon Magsaysay, Kapatagan, Baroy, Tubod, and Bacolod in Mindanao.



The laying of submarine cables to connect the Negros and Panay islands is only part of the first stage of the Cebu-Negros-Panay (CNP) 230kV backbone project designed to provide energy stability in the region.

# Negros-Panay Transmission Corridor Widened

**NGCP will fully energize the Negros-Panay submarine cable starting first quarter this year to allow the facility to maximize the generation output coming to and from the said regions in the Visayas.**

The country's power transmission operator said in a statement that it will be jacking up the maximum capacity of the Negros-Panay submarine cable to 300 MegaWatts (MW) this year to allow Panay island to export its excess power generation.

At the same time, the increase in the facility's capacity will help provide a more reliable connection between Negros and Panay.

NGCP earlier reinforced the submarine cable as part of the first stage of the Cebu-Negros-Panay (CNP) 230-kiloVolt (kV) backbone project, which was designed to boost energy stability in the region.

The project allowed NGCP to widen its power transmission corridor between the two islands by 210 MW, and improve voltage levels of major substations in Negros island.

The project is crucial in addressing the expected influx of power generation from coal and renewable energy sources.

Negros island is host to a large capacity of solar power as the government earlier increased the installation target of renewable energy facilities from 50 MW to 500 MW.

It also allows the Visayas region to fully maximize its generation output once NGCP completes the interconnection project that would link the Mindanao grid to the Luzon-Visayas grid in 2020.

"With the influx of power sources in Panay and Negros, CNP Stage 1 will maximize the power generated at variable renewable energy plants in Negros island," NGCP said in a statement.

Aside from the submarine cable, other segments of CNP Stage 1 include the double circuit Bacolod-E.B. Magalona overhead transmission line, and the expansion of the Bacolod and Barotac Viejo Substations and the E.B. Magalona Cable Terminal Station.

Applications for the implementation of Stages 2 and 3 of the CNP project were filed with the Energy Regulatory Commission (ERC) last 2016, with Stage 3 approved on September 4, 2017. With anticipated ERC approval of CNP Stage 2, and barring unforeseen circumstances, the final stage of the project is set for completion by 2020.

# ROW Incidents Down Power Lines in Pampanga, Pangasinan

**Right-of-way issues continue to hound the transmission operations of the grid with three separate incidents in Pampanga and Pangasinan causing power interruptions early this year.**

Last January 7, a wayward dump truck hit a sub-transmission pole in Quezon Road, in San Simon in the province of Pampanga. This caused the pole to topple, triggering a power interruption to industries directly connected to NGCP's lines.

Meanwhile, on January 26, a billboard that was constructed too close NGCP's Mexico-Calumpit 69-kiloVolt (kV) line in Sto. Domingo, Minalin in the same province caused the facility to trip.

As a result, the areas served by Pampanga III Electric Cooperative experienced power interruptions. The billboard likewise caught fire, almost affecting nearby structures.

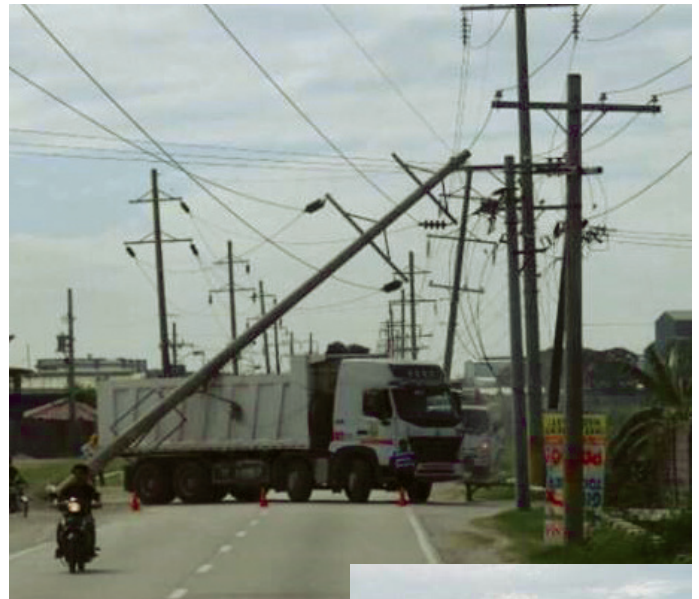
Yet again, on January 27, another truck hit NGCP's Labrador-Bolinao 69-kiloVolt (kV) line in Pangasinan province, cutting power in the area serviced by the Pangasinan I Electric Cooperative.

In the light of the said incidents, the power grid operator called on the public to respect right-of-way clearances to avoid power interruptions and potential dangers to life and to property.

"The clearances are there primarily to protect the integrity of



**NGCP restored power flow through the Gamu-Roxas 69kV line which tripped due to a burned woodpole. Reports from the field indicate that the pole was affected by rice hay burned under the structure in Barculan, Gamu, Isabela.**



**A dump truck hit a transmission pole at Quezon Road, San Simon, Pampanga, toppling down the pole and causing a power interruption affecting the company's directly connected industries. Right: Another truck hit NGCP's Labrador-Bolinao 69kilo-volt (kV) line, cutting power in the area serviced by the Pangasinan I Electric Cooperative on January 27.**



the grid, and to prevent houses, industries, and communities from experiencing power interruptions. More importantly, these clearances are established to prevent injuries and even deaths. When objects such as billboards breach these distances, they don't need to physically touch the line for electricity to jump and flow through the object in breach," NGCP said in a statement.

NGCP prescribes the following right-of-way clearances for its transmission lines: 7.5 meters from the center of a 69kV tower, 15 meters for 115kV towers, 15 meters for 138kV towers, 20 meters for 230kV towers, 25 meters for 350kV towers, and 30 meters for 500kV towers.

NGCP also warned against putting up any structure or doing any construction work near or underneath transmission lines as these might breach ROW clearances and cause unnecessary power interruptions.

Besides construction works and road incidents, NGCP also reminded informal settlers that they face potential risks living underneath or dangerously close to transmission towers. It would be recalled that a fire, which started from a community of informal settlers, toppled Tower 34 of the Biñan-Muntinlupa 230kV line last year causing heavy traffic in the area and putting the lives of residents in danger.

# Grid operator, Gencos Team Up



**The Generators Conferences held across the country provided a venue for idea-sharing and collaboration between NGCP and power generation companies.**

**NGCP continues to foster cooperation in the entire power industry through a series of fora with power generation companies across the country.**

Late last year, NGCP held the Luzon Generators Conference where it hosted power plant operators from the Luzon grid in an effort to promote synergy and to identify measures to improve the security and reliability of the grid.

The country's main power transmission service provider also held separate power generator gatherings in Visayas and Mindanao last year. The conferences in the latter two grids were both the 7th held there.

The said conferences came at the heels of the successful launch of NGCP's First Generators Forum in 2016, which brought together the grid operator and its genco partners across the country.

NGCP organized the events primarily to address issues and concerns in the power grid, as well as to share best practices among the participants.

The conferences likewise served as a venue for NGCP to update the power generators on its current and future plans, especially with upcoming big-ticket projects such as the interconnection of the Visayas and Mindanao grids; and the entry of a number of renewable energy companies looming on the horizon.

"The need for continuous improvement and constant communication with our stakeholders is key for the entire power system to work seamlessly... Our commitment, in turn, is to ensure this conference and our future discussions will result not only in stronger partnerships, but will translate to better service to all our stakeholders," said NGCP.

## NGCP Energizes Santiago-Tuguegarao

**As part of its plan to enhance the North Luzon transmission corridor, NGCP energized its Santiago-Tuguegarao 230-kiloVolt (kV) Transmission Line 2 last September 17, 2017.**

Running 118 kilometers from Santiago, Isabela, to Tuguegarao, Cagayan Valley, the line reinforces Luzon's North Eastern transmission corridor, which is geographically vulnerable to unplanned outages as the area is frequented by typhoons. Together with the Luzon Substation Expansion Project, which entails the upgrade of various substations in Isabela and Cagayan, the newly energized transmission line is part of the bigger Northern Luzon 230kV Looping project, that seeks to improve the overall reliability of the Luzon transmission network.

The Santiago-Tuguegarao line also complies with the N-1 requirement of the Philippine Grid Code, which calls for the improvement of the grid's capability to withstand the loss of a major system component with minimal or no disturbance to the entire network.

"Improving the North Luzon transmission corridor is important because we have been seeing a lot of renewable power sources and a steady load growth in the past years. With the line's energization, we assure more reliability and better quality of power transmission services for our power consumers in Isabela, Cagayan, Kalinga, Apayao, and the rest of the Luzon grid," NGCP stated.

# A Big Year for NGCP

**The country's power transmission operator, NGCP, completed a number of expansion and upgrade projects that are expected to benefit consumers across the country.**

Last year, NGCP energized the 84.71-kilometer long Culasi-San Jose transmission line, which ferries power to Antique Electric Cooperative, Inc. (ANTECO).

The project involved the construction of nine towers and 452 new steel pole structures. The said facilities were put up to strengthen the power highway from NGCP's San Jose and Nabas Substations for the purpose of improving services to ANTECO.

NGCP said that the upgrade of the transmission line will also reduce the duration of power interruptions during scheduled and unscheduled line maintenance activities within the area.

Residents of ANTECO's franchise areas in Culasi, Tibiao, Barbaza, Lauan, Bugasong, Patnongon, Belison, Sibalom, and San Jose in Antique thus should expect a more reliable delivery of power to their province.

Besides Antique, the rest of the Visayas Grid is also expected to benefit from the completion of the project as it would allow Panay Island to accommodate the increasing power supply and demand in the region.

Last year also saw NGCP energize its new 230-kiloVolt (kV) Gas Insulated Switchgear (GIS) at its Las Piñas Substation. This equipment is used in regulating the delivery of power from generators to distributors.

Parallel to the installation of the GIS, NGCP also completed the commissioning of a new 300 MVA transformer at the same substation.

Both form part of NGCP's South Luzon Substation expansion project and is also a major component of



**NGCP's new 230-kiloVolt Gas Insulated Switchgear (GIS) in its Las Piñas Substation will supply the power requirements of Las Piñas, Cavite, Parañaque, Malibay, Pamplona, Imus, Bacoor, and Metro Manila areas. The new GIS, along with a new 300MVA transformer, was energized on May 28 and June 5, 2017, respectively.**

the latter's Dasmariñas-Las Piñas 230kV transmission line project.

NGCP said that these projects will help support growing demand in South Luzon and Metro Manila served by Manila Electric Co. (Meralco).

The new facilities also comply with the N-1 requirement of the Philippine Grid Code, which is the ability of the grid to withstand a major system disturbance to prevent outages.

Aside from the projects in Antique and Metro Manila, NGCP also completed the following in 2017:

In Northern Luzon, the Santiago-Tuguegarao 230kV Line and the relocation of steel towers of San Esteban-Laoag 230kV Line along Sta. Maria River; in Southern Luzon, the Eastern Albay 69kV Project Stage 1 (TL/SS), the Lumban-Bay Transmission Line upgrading, the Luzon Substation Expansion 4 (Daraga Substation), and the Las Piñas Substation Expansion; in the Visayas, the Culasi-San Jose 69kV Line, the upgrading of Panit-an-Nabas 138kV Line, the Ormoc-Tongonan-Isabel 138kV Line, and the Ormoc-Babatngon Substation.



**NGCP aims to complete several transmission line upgrades and expansion projects this year to boost the quality of power transmission nationwide.**

## Grid Braces for more Big-Ticket Projects

**Consumers can expect power delivery services to further improve in the coming months as NGCP has lined up a number of big-ticket projects for the expansion and upgrade of the grid.**

For 2018, NGCP targets to complete 15 critical transmission line upgrade and expansion projects, and proceed with 21 new projects.

NGCP said in a statement that the expansion and upgrade is part of its commitment to provide the public with high quality power transmission services.

"Since 2009, we have dedicated ourselves to the continuous upgrade and improvement of the country's transmission network. We want to make sure that in the coming years, the Philippine transmission network will be at par with global standards," the grid operator said.

For the projects to be completed this year, six are in Luzon, five in the Visayas, and four in Mindanao.

Among the major projects up for completion is the North Luzon Substation Upgrading Project. This is designed to expand the grid's network of substations to accommodate growing demand in the region. In South Luzon, NGCP is working on the complete restoration of all lines and facilities affected by Typhoon Nina.

NGCP has also lined up a number of transmission line and substation projects worth about P73 billion.

Among these projects are the Calaca-Dasmariñas 500kV Transmission Line Project; the Hermosa-Castillejos 500kV Transmission Line project which is a part of the Western Luzon Backbone project; and the Cebu-Negros-Panay 230kV Backbone Project.



**ISECO  
GENERAL  
MANAGER:**  
Engr. Egdon A. Sabio

## INDUSTRY PARTNERS

# Powering Ilocos Sur

**The Ilocos Sur Electric Cooperative (ISECO) is a large cooperative catering the 32 towns and two cities of Ilocos Sur, with 768 barangays and 863 sitios. At present, the franchise is being manned by 306 employees serving a total of 168,232 member consumers. It has five substations with a total combined capacity of 80 MVA and five sub-offices strategically located in the province with the main office at Santiago, Ilocos Sur.**

The company has been consistently categorized as AAA Electric Cooperative since Engr. Egdon A. Sabio took over the reins as General Manager on April 1, 2011. He is a licensed engineer who completed his Bachelor of Science in Electrical Engineering degree at Far Eastern University.

In his 34 years with the Cooperative, he assumed different positions prior to his appointment as General Manager. He was Chief Engineer, Member Services Department Manager, and Area Manager before he was conferred the position of General Manager. Gaining the full trust and support of the Board and fellow employees, his brilliant leadership, marked by tenacity and the will to succeed,

catapulted ISECO to achieving numerous awards from NEA, the latest of which is AAA (100%).

At present, Engr. Egdon A. Sabio is one of the Directors of the Philippine Rural Electric Cooperative Association (PHILRECA) and the National Association of General Managers of Electric Cooperatives (NAGMEC).

### **What are your best practices in running the business?**

We always start the week with a prayer. Management's main thrust is anchored on programs that redound to customer satisfaction, with information hotlines installed in every sub-office for immediate resolution of customers' concerns, and the use of the SMS program on information dissemination.

ISECO operates in compliance with standard response time to every concern raised by its member consumers. In support of this undertaking, the Coop periodically conducts a systematic reflecting program to ensure availability of vehicles when needed, and at the same time, dispose

high maintenance ones to help reduce the O&M expense. Although it is a non-stock, non-profit entity, ISECO also grants patronage refund to all consumers, a way of sharing the company's earnings/savings as a result of good operation.

The Cooperative also takes good care of its workforce and sees to it that harmonious relationships exist among the Board, Management, and staff. It gives due recognition to the efforts of its best performing employees based on the Annual Performance Evaluation and rewards everybody with cash incentives for every triumph achieved. Responding to the growing demands of the industry, ISECO, in partnership with the academic institutions like UP, also administers competency upgrading through trainings and seminars to strengthen and further sharpen the competencies of its human resources in all levels. More importantly, the future retirement benefits of employees have been assured because the Retirement Fund is now fully funded down to the last centavo. This is the result of the regular actuarial valuation being conducted.

ISECO is constantly in search for areas of improvement. It conducts Distribution Impact Studies/Cost Benefit Analyses before it embarks on projects. Relative to this, a transparent procurement system is now being employed to obtain the lowest price available.

### **What are your biggest challenges in the power distribution business and how do you face/solve them?**

To be an industry standards compliant Electric Distribution Utility and to attain customer satisfaction are the two biggest challenges of the time. Customer service was improved by setting explicit targets in all aspects of operation through the Balance Score Card (BSC) submitted to and approved by NEA. Securing power supply contracts (PSC) is also a major challenge in lowering the power rates and needs scientific approaches. In order to have leverage in the competitive selection process (CSP), ISECO joined the successful R1+CAR Power Supply Aggregation which achieved Php 3.3315 per kWh at 100% capacity utilization factor (CUF).

### **What are your medium and long-term expansion/improvement plans?**

Medium term expansion plans based on our extensive planning, in phase with the growing demand and technological advancements, concentrate on putting up two new 10 MVA Substations while we are establishing the full system automation thru SCADA.

Long-term plans on our drawing tables will primarily be the Voltage Upgrading from 13.8kV to 23kV for the long

elongated distribution lines which are not covered by Economic Load Reach. Secondly, we are working closely with the City Government of Vigan, providing them all the necessary assistance in the conceptual planning for the implementation of underground cabling at Vigan City Heritage Village to enhance its safety and also improve the aesthetic image of the area, being one of the Seven Wonder Cities of the World.

### **In the past nine years that NGCP has been handling the transmission grid, what are the improvements you've noticed in the transmission sector?**

There are several noticeable technical improvements in the grid like increased average delivery voltage level due to the 230kV line constructed from San Esteban to Laoag; less unscheduled outages, and capacity uprating of Substation Transformers at Bantay and San Esteban. It is also worth mentioning that personnel of the NGCP nowadays are better equipped with technical know-how in handling the system. Likewise, your officers and focal person are always available to respond to our requests and queries.

### **How has NGCP helped your company and your consumers? How can NGCP further aid you in creating a stronger power system for the country?**

The power advisories and situational updates sent thru SMS are a big help in creating Local Media/LGU awareness. It aids us in coming up with forecasts most beneficial to the Coop during the WESM trading. We also recognize the assistance NGCP readily extends to ISECO each time we conduct testing and commissioning of our Substations. Safety trainings for our linemen and Substation maintenance and testing broadened further the capabilities of our company's technical group. With the assurance of continuous delivery of power to our consumers, daily chores that need electricity will be smoothly done and businesses in the franchise area will operate as usual.

### **What is your message for NGCP as a partner in delivering reliable and affordable power to the Filipino people?**

It is always the Cooperative's objective to keep its member consumers informed. Being the "Super Highway of Electricity", we hope to continue to be apprised deeper so that we may be able to address effectively the queries demanded of us by our consumers. There is a remarkable improvement in your operation, and continuous improvement on technical performance of the grid.

Let us keep the flames of our forged partnership and the drive to excel continue burning in our midst and make a difference in the lives of the Filipino people.

# MTD: NGCP'S Unsung Heroes



Personnel from the Maintenance and Testing Division (MTD) ensure the reliability of the grid's equipment and facilities to maintain the smooth transmission of power.

**At the forefront of ensuring the reliable and continuous delivery of electricity to the public is the grid operator's Maintenance and Testing Division or MTD: a dedicated group tasked with ensuring that substation equipment are up and running 24/7.**

The NGCP's MTD is composed of eight groups strategically located across the country that are called on to perform periodic maintenance, testing, and troubleshooting works on substations.

The MTD, which forms part of NGCP's Operations and Maintenance Group, is made up of highly-skilled engineers, technicians, linemen, and other staff who are on call day and night, even during times of calamities, to make sure that the grid is functioning in tip top condition.

The vital role the MTD plays in the power grid's operations was highlighted last year when, through their efforts, NGCP was able to swiftly restore power earlier than scheduled in the earthquake-affected provinces of Leyte, Samar, Bohol, and Biliran.

The swift repairs made by the MTD ensured that there would be no more grid-induced rotating power interruptions following the July 6 earthquake, given that there was

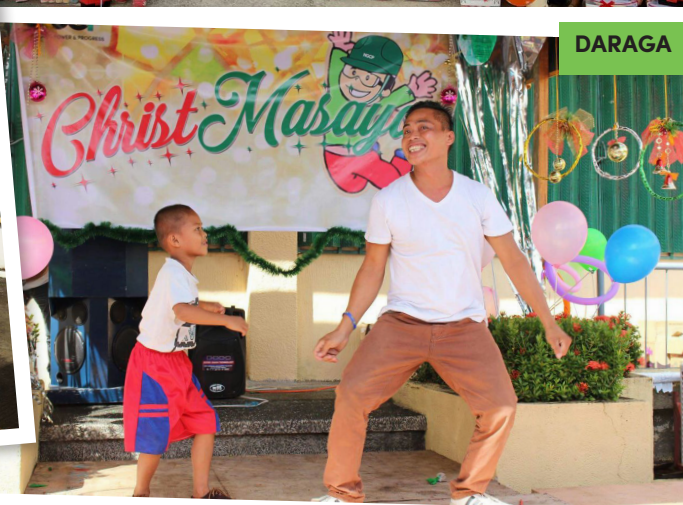
insufficient supply from power plants in the Visayas grid at the time.

Besides ensuring that substations are up and running, MTDs are also tasked with seeing to it that there are no defects in any substation equipment before such facility is commissioned.

This is equally important because if a defect is not remedied at the onset, the problem may cause widespread damage to the entire power grid.

In the coming years, the MTD's role in safeguarding the grid's operations will again be highlighted as NGCP is set to proceed with the Mindanao-Visayas Interconnection Project that would finally connect the country's three major island groups into one grid system. Under the said project, NGCP shall commission a number of new substations and hundreds of kilometers of transmission lines.

"A reliable power grid, supported by our skilled and dedicated substation engineers and staff, plays an important role in maintaining the smooth and continuous supply of power to ensure the well-being of society and productivity of industries. We are proud of our people who help us in our commitment of bridging power and progress," NGCP said.



# NGCP Christmasaya



# NGCP in Photos



## Kalinga Baro

NGCP engaged the Kalinga Indigenous Weavers Association (KINWA ETNIKA) through Project BARO, an initiative to support weaving industries in the country. NGCP, in partnership with the Department of Agriculture – Philippine Fiber Industry Development Authority, provided the 30 weavers of the KINWA ETNIKA with a 5-day basic handloom weaving training on September 11-15 at Bulanao, Tabuk, Kalinga. NGCP also provided the association with 10 weaving looms to increase the productivity of the association.

## Security Summit



NGCP's security department gathered during NGCP's first Security Summit last December 20. The summit aimed to orient partner security agencies of NGCP's standards and performance expectations, prior to their awarding of contracts.



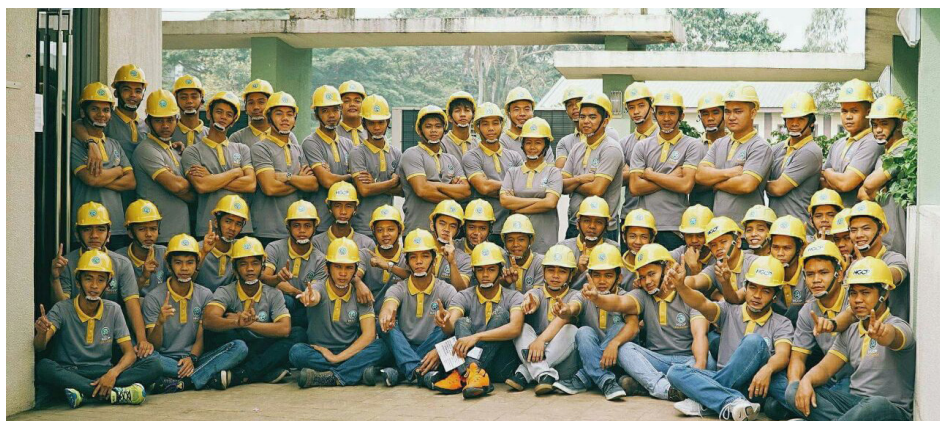
## Lines Cleared

As Mayon Volcano began to erupt and spew out ashes, NGCP quickly mobilized its linemen to conduct cleaning operations for NGCP lines covered by volcanic debris.



## Meet the New Generation of Hard Hat Heroes

Fifty Line Ranger candidates from Luzon, 29 candidates from Visayas, and 30 candidates from Mindanao graduated from NGCP's Line Ranger School Program last October 2017.



# Industry News

## 1 DOE opens bids for oil exploration

The Department of Energy (DOE) is now accepting proposals for petroleum exploration and development contracts to fully harness the country's indigenous resources. DOE Secretary Alfonso Cusi has signed a circular governing the selection process in the awarding of petroleum service contracts (PSCs) and the creation of the review and evaluation committee (REC).

"At any time of the year, anybody can offer... subject it to Swiss Challenge. Unlike in the previous practice, we have to wait for an announcement and bidding process," he said.

In the circular, the DOE said the selection process in the awarding of PSCs to qualified applicants shall be conducted in a transparent, open, competitive, and expeditious manner. The directive allows applicants to nominate the areas of interest in accordance with the procedures or submit offers in pre-determined areas not covered by any application or nomination.

The applications will then be subject to counter offers. The REC, which will be headed by the Energy Resource Development Bureau, will accept, evaluate, and approve or reject the applications based on the compliance to the criteria. The circular sets the criteria for the evaluation, selection, and awarding procedures for the various modes of selection process.

In October, the DOE issued rules on coal operating contracts (COC) under PCECP. This allows applicants to submit proposals for COCs through nomination by publication at any given time. PCECP is a modified Philippine Energy Contracting Round (PECR) to allow the private sector to submit unsolicited proposals to develop coal and petroleum contracts.

PECR is a transparent and competitive system for awarding service contracts which aims to showcase the petroleum and coal exploration opportunities in the country and to attract energy investors to develop the country's indigenous oil and gas resources. (Source: Philippine Star, 24 January 2018)

## 2 ASEAN's first ocean power plant gains ground in Eastern Samar

The San Bernardino Strait inches closer to becoming the launch pad for the Philippines and the Association of Southeast Asian Nations (ASEAN) region's first commercial ocean power plant after the Renewable Energy Management Bureau (REMB) of the Department of Energy (DOE) held a successful public consultation with San Bernardino Ocean Power Corp. (SBOPC) and PNOG Renewables Corporation last October 24 in Capul island, Northern Samar.

The pioneering and transformative project is envisioned to provide reliable and clean power supply to the island of Capul, which is off-grid under the Small Power Utilities Group (SPUG) of the National Power Corporation (NPC). The remote island solely relies on obsolete, costly, and polluting diesel generators for electricity.

Capul Island, under the franchise area of Northern Samar Electric Cooperative (NORSAMELCO) will be the off-taker for an initial 1.5-MegaWatt (MW) power plant with a 1 MegaWatt hour (MWh) storage harnessing the marine current resource in San Bernardino Strait, which separates the islands of Luzon and Samar. Sabella Societe par Actions Simplifiee (Sabella) of France is deploying a resilient marine turbine that will use tidal in-stream energy conversion (TISEC) technology, an ocean power technology mostly adaptable in Philippine waters. The power plant expands to 3 MW with a 1 MWh storage. The capacity of the tidal farm is scalable to supply Calintaan and Matnog in Sorsogon with a target capacity of up to 20 MW for the next three years.

"TISEC could be the technology of choice in ocean renewable energy development in the Philippines," said Antonio A. Ver, president of H&WB, the joint venture partner of Sabella in SBOPC, which earned three Ocean Power Service Contracts awarded by DOE on October 30, 2013. (Source: Manila Bulletin, 19 November 2017)

## 3 Meralco installs EV stations

MANILA Electric Co. and Mitsubishi Motors Philippines Corp. plan to put up electric vehicle charging stations in four locations in the country. "Aligned with the company's goal of pioneering innovative energy solutions, Meralco supports sustainability in transportation via the company's initiatives in helping create an effective and viable electric vehicle ecosystem," Meralco spokesman

Joe Zaldarriaga said. "We have actually partnered with several customers from the government, academe, and business sectors who have ventured into this greener path, with collaborations on EV charging stations development," he said. Meralco, Mitsubishi, and the Departments of Trade and Industry and Environment and Natural Resources recently held a groundbreaking ceremony at the DENR headquarters in Visayas Avenue, Quezon City as a kick-off activity for the construction of four electric vehicle charging stations. (Source: Manila Standard, 4 November 2017)

## 4 BOI approves P26.7B power projects

The Board of Investments (BOI) recently approved the application of nine renewable energy projects valued at P26.7 billion.

The newly approved projects qualified for incentives under the Renewable Energy Act No. 9513 which is covered under the Special Laws List of the 2017 Investment Priorities Plan (IPP). Among the approved projects are the P3.5 billion 15.1-MegaWatt (MW) Siguil hydro power project in Sarangani by Alsons Energy Development Corp., and the P234.5 million 4.7 MW grid-connected PV power generation plant in Valenzuela City by Ecopark Energy of Valenzuela Corp. The Siguil hydro power project is a run-of-river type of hydro project located in Barangay Amsipit and Nomoh, in the municipality of Maasim, Sarangani province.

The hydroplant is scheduled to start operations in August 2020 with 20 personnel on board. In contrast, Ecopark Energy's 4.7 MW grid-connected PV power generation plant, to be set-up in an approximately 4.8 hectare-land located in Bgy. Isla, Valenzuela City, will be connected to the grid through Meralco.

Ormoc Solar Energy Corp. also received the go signal for two of its projects, particularly the P6.6 billion Naic solar power plant in Cavite—a 100.8 MW plant situated between Naic, Tanza, and Trece Martires City— and the P8.25 billion 126 MW solar facility in Pagbilao, Quezon.

Also approved were two projects of Nuevo Solar Energy Corp. in Laguna such as the P1.7 billion 40.3 MW Lumban solar power project and the P1.7 billion 25.2 MW Bangyas solar plant in Calauan. Based on the Department of Energy's renewable energy roadmap 2017-2040, the country expects to have at least 20,000 MW of RE installed by 2040. (Source: Philippine Star, 18 November 2017)

## 6 DoE revises rules for selling liquid fuels

To ensure the quality of liquid fuels and promote fair practices in the market, the Department of Energy (DoE) issued a circular revising rules and regulations covering the business.

The "Promulgating Revised Rules and Regulations Governing the Business of Retailing Liquid Fuels" circular applies to "all persons engaged or intending to engage in" such a business, the DoE said.

If a person intends to enter the business of selling liquid fuels, he or she should secure a valid certificate of compliance (COC) from the DoE's Oil Industry Management Bureau (OIMB) or its counterparts in field offices. The certificate shall be valid for five years.

## 5 SNAP-Magat's hydroelectric plant to begin operations

SN ABOITIZ Power-Magat, Inc.'s (SNAPMagat) 8.5-MegaWatt (MW) Maris Main Canal 1 hydroelectric power plant is set for full commercial operation this month as it completed the commissioning of the facility's two separate units.

"Maris hydro is very special not only because it is the first power plant we built from the ground up. This project was proposed by our Magat operations and maintenance team, and then developed and implemented by our business development group," said Joseph S. Yu, SNAP-Magat president and chief executive officer, in a statement.

Maris hydro is the first power plant built by the SNAP group since it acquired the 380 MW Magat hydro plant when it was privatized in 2007. SNAP-Magat is a joint venture of SN Power of Norway and Aboitiz Power Corp. The SNAP-Magat plant is made up of two units of Kaplan pit type turbines with generator nameplate capacity of 4.25 MW each. The first unit was commissioned on Oct. 24 while the second was commissioned on Nov. 6.

The company said the project was made possible with the cooperation of the National Irrigation Administration, Department of Energy, host communities, and local government units. "During the commissioning, the plant was synchronized to the grid and underwent a series of tests in compliance with the requirements of the Philippine Grid Code," the company said. "SNAP also cascaded protocols with stakeholders in preparation for commercial operation." (Source: Business World, 13 November 2017)

All applicants should submit to the DoE a filled-out and duly notarized application form; a notice of undertaking on liability; certification from distributor/supplier/dealer's agreement; notarized statement indicating that the design and operation of the retail outlet comply with the Philippine National Standard; and payment of fee, among others.

Those who have not obtained or submitted all the requirements to secure a COC under an earlier circular released in 2003 shall be classified as new applicants and be covered by the amended rules.

Failure to comply with the revised rules and submit the necessary documents shall be penalized, depending on the extent of the offense.

The circular will be reviewed periodically relative to the operation of the sector. (Source: Manila Times, 1 December 2017)

# NGCP UNVEILS NEW LOGO



# NGCP

BRIDGING POWER & PROGRESS

# NGCP

The new logo maintains a simpler corporate facade with bold letters that represent power and progress.

The tagline stresses NGCP's focal role of bridging power from sources to distributors and being the primary mechanism for delivering power that progresses the nation.

# NGCP

BRIDGING POWER & PROGRESS

The color green represents growth and the wealth of NGCP's physical and human capital resources. Gray and black connote the company's characteristics: solid, stable, dependable, and sophisticated.

Gray and red, an alternate color scheme of the logo, exude NGCP's corporate characteristics: boldness, vigor, and vibrancy.

# NGCP

BRIDGING POWER & PROGRESS