NGCP

TRANSMISSION DEVELOPMENT PLAN 2025-2050

CONTENTS

NGCP AS REGULATED ENTITY

National Grid Corporation of the Philippines (NGCP) is the country's sole Transmission Network Provider (TNP) and System Operator (SO) responsible for system operations, infrastructure development, and operations and maintenance of transmission facilities nationwide. NGCP plays a critical role in the Philippines' power sector by linking power generators and Distribution Utilities (DU), including Directly Connected Customers (DCC), thus ensuring the delivery of electricity to the end-users.

The NGCP achieved a significant milestone through the energization of the Mindanao-Visayas Interconnection Project (MVIP) in January 2024, thus fulfilling its goal of having a unified Philippine Grid. This was followed by the completion of two major transmission backbones in the Visayas: Cebu-Negros-Panay 230 kV Backbone Project (CNP) Stage 3) in March 2024, and the Cebu-Bohol Interconnection Project (CBIP) in December 2024. In Luzon, the Mariveles-Hermosa-San Jose 500 kV Transmission Line was also completed in May 2024. These major transmission backbones and grid interconnection facilities improved the system reliability, strengthened the grid, and accommodated a total of 3,291 MW of generation capacity with more room for additional generation.

PURPOSE OF THE TDP

As mandated under the Electric Power Industry Reform Act of 2001 (EPIRA), NGCP submits an updated Transmission Development Plan (TDP) for approval of the Department of Energy (DOE) on a timely basis each year for integration with the Power Development Plan (PDP) and the Philippine Energy Plan (PEP). The TDP serves as a blueprint for the expansion and improvement of the Philippines' power transmission network and outlines the necessary infrastructure projects and the required investments to support the ongoing energy transition towards clean energy to ensure a reliable, efficient, sustainable and secure power supply to meet the growing demand for electricity. The TDP 2025-2050 Report is an update to the TDP 2024-2050 Report, incorporating additional and updated information, including development strategies for the evolving Philippines' power transmission system over the next 25 years. This aligns with the government's goal of achieving a 35% RE capacity mix by 2030 and 50% by 2040.

The preparation of TDP uses DOE's System Peak Demand (SPD) Forecast and generation capacity additions. It incorporates relevant energy policies and transmission regulations, such as those promoting RE and smart grid technologies. To ensure that the TDP reflects the needs of its stakeholders, NGCP conducts regular consultations with DU, generation companies, and DCC. These consultations provide valuable inputs that are used to update and refine the TDP. Once finalized, the TDP is submitted to the DOE for approval and integration into the PDP and PEP.

The TDP 2025-2050 Report was made accessible to stakeholders through the NGCP website (www.ngcp.ph) before the scheduled stakeholder consultations were conducted nationwide. It serves as the basis for discussions and feedback during the consultations, allowing stakeholders to contribute their valuable insights and recommendations for Grid's development.

This TDP 2025-2050 consists of five Chapters summarized as follows:

Chapter 1: Introduction – outlines NGCP's organizational structure and its crucial role in meeting future energy demand, enhancing grid reliability, integrating RE sources, and attracting investments.

Chapter 2: Meeting Future Demand – provides a comprehensive overview of transmission planning inputs, such as demand forecasts and generation expansion plans, and various information used in planning the transmission development.

Chapter 3: Attracting Investments – presents available transmission capacity for future generation capacity additions up to 2030 and guides prospective non-site-specific power plant developers in selecting suitable locations.

Chapter 4: Project Updates – with newly identified projects and updated project information, including revised Estimated Time of Completion (ETC) dates.

Chapter 5: Integrating Renewable Energy (RE) Sources – provides strategies and solutions for integrating Variable Renewable Energy (VRE) sources, covering emerging technologies supported by various grid integration studies and other grid connection considerations.

NGCP, as the sole Transmission Network Provider (TNP) and System Operator (SO) in the Philippines, plays a crucial role in ensuring a reliable and efficient power grid. Its integrated functions allow NGCP to seamlessly coordinate its activities within the technical group: Planning and Engineering, Operations and Maintenance, and System Operations with valuable support from other functional groups.

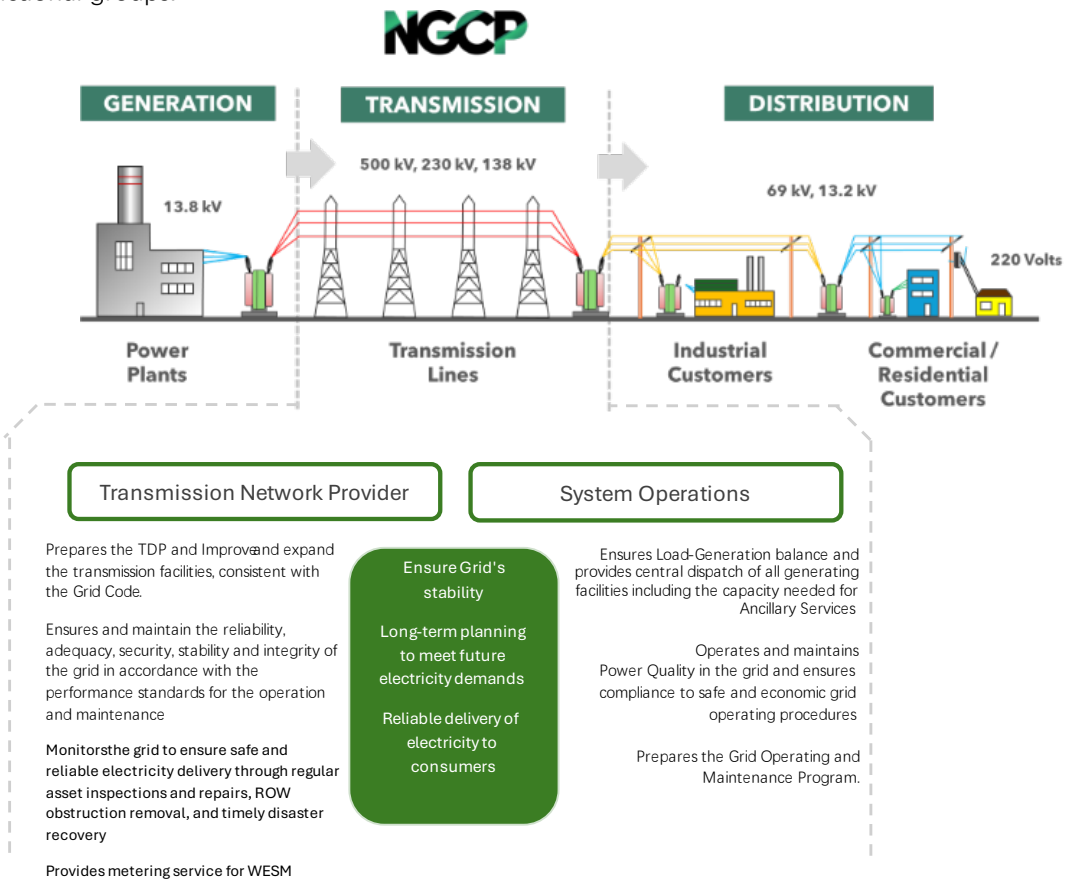


Figure 1.1: NGCP Functions

Despite the challenges posed by the geographic feature of the Philippines as an archipelago, with more than 7,600 islands with rugged and mountainous terrain, NGCP remains committed to finding innovative solutions to interconnect all the islands stage-by-stage whenever these are found to be economically viable, thus ensuring a secured and reliable power supply. A significant milestone in achieving this goal was the successful energization of the Mindanao-Visayas Interconnection Project (MVIP) in January 2024. This project consists of a 184 circuit-kilometer (ckm) High-Voltage Direct Current (HVDC) submarine cable and 806 ckm of overhead transmission lines, linking Mindanao to the Visayas Grid. The MVIP has an initial transfer capacity of 450 MW, with provision to double the maximum transmission capacity to 900 MW in the future.

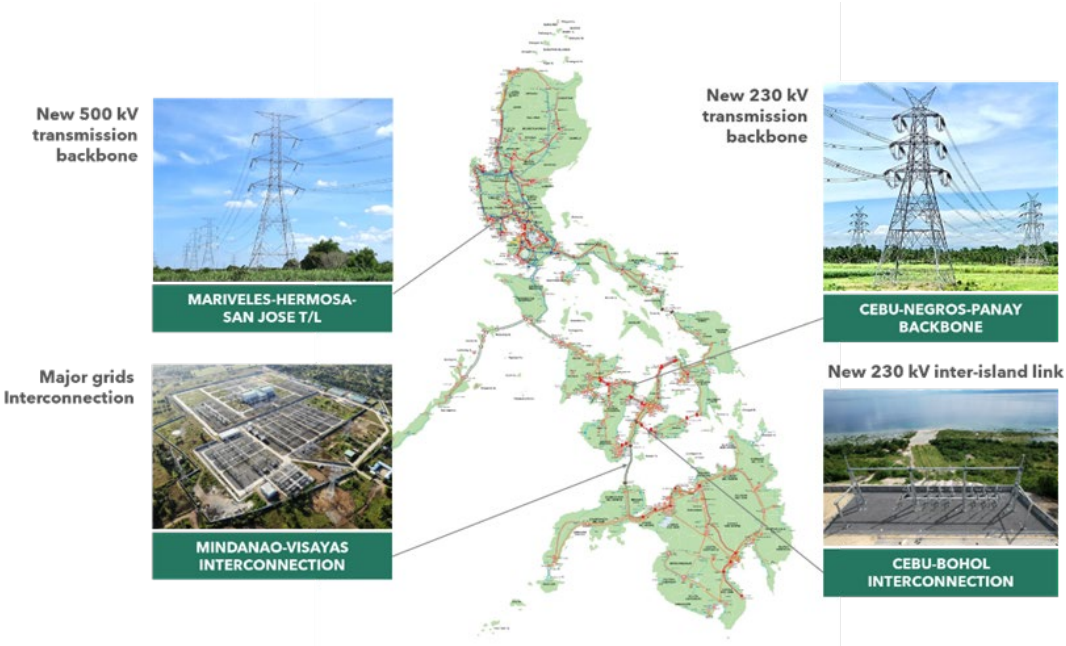


Figure 1.2: Recently Completed Projects

Other completed major projects in 2024 that could cater to the increasing demand for electricity are the Mariveles – Hermosa (Balsik) – San Jose 500 kV and the CNP 230 kV Backbone Project. These transmission backbone projects accommodate generation capacity additions and provide new connection points.

In December 2024, NGCP successfully energized 230 kV CBIP. This project addresses the growing power demand in Bohol, enhances grid resilience, and improves the operational flexibility of the Visayas grid. The completion of this 2x600 MW capacity interconnection has significantly improved power supply security in Bohol by reducing reliance on diesel generators, contributing to lower electricity prices and paving the way for the future 230 kV looped system in the Visayas grid.

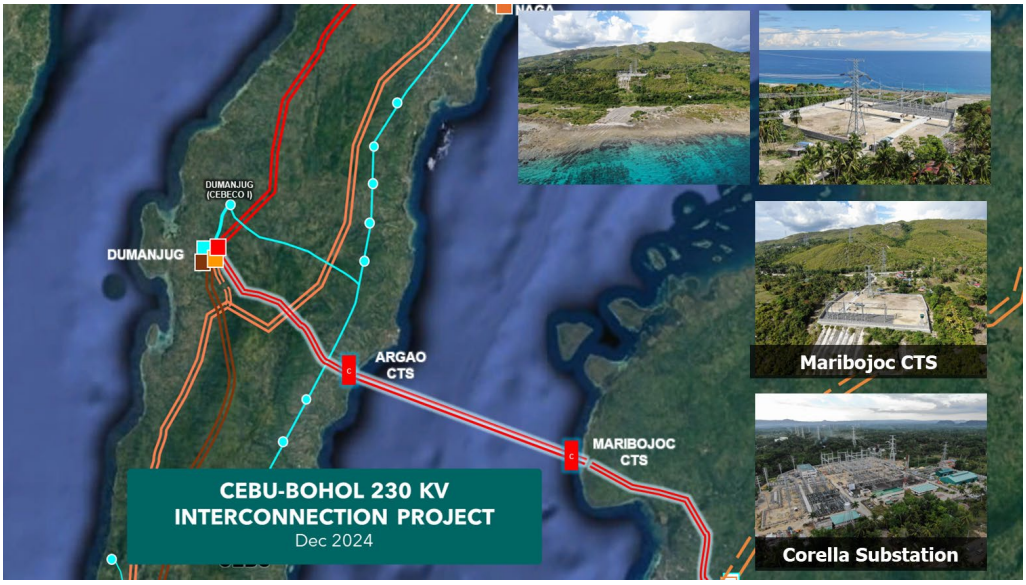


Figure 1.3: Cebu – Bohol Interconnection Project

1.1 TRANSMISSION GRID PERFORMANCE

In the past 15 years, NGCP completed various transmission projects and upgraded the existing facilities that continuously improve the overall performance of the transmission system since taking over the transmission business from the government in 2009. While there are decreases in performance indices year-on-year, overall NGCP performs over and above the targets based on the 3rd Regulatory Period (RP) approved limits. The improvements in the Performance Indicators could be attributed to NGCP's improvement in operation practices, maintenance practices, protocols and the implementation of various projects to upgrade, expand, and improve the transmission system, thus providing efficient System Operations and Power Delivery Services for the overall benefits of the electricity end-users. It is worth noting that

NGCP is a regulated entity under a Performance-Based Regulation (PBR), where it is rewarded for good performance and penalized when there is underperformance.

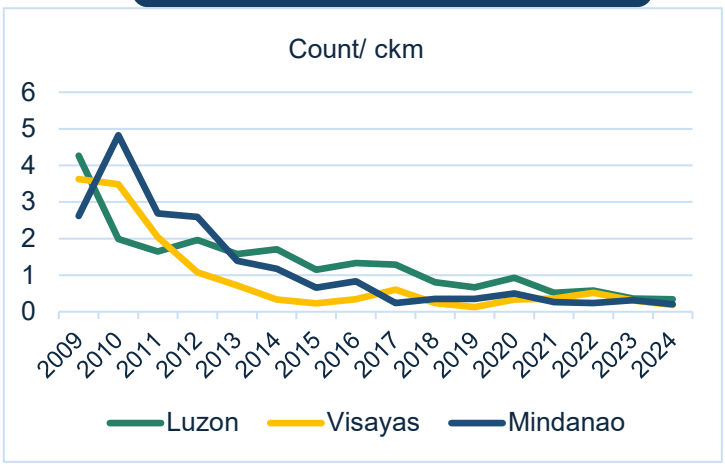
The 2024 performance of the transmission grid covering the period 01 October 2023 – 30 September 2024 is shown in Table 1.1 based on the (ERC)-released amendment of the Rules for the Setting of Transmission Wheeling Rates (RTWR)

.

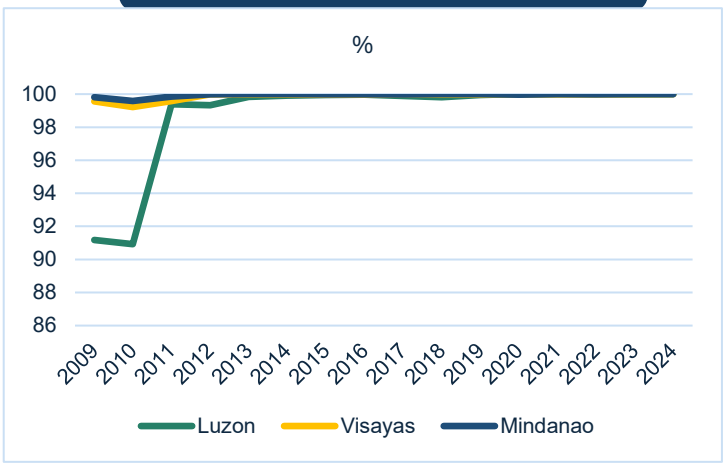
Table 1.1: 2024 Performance of Transmission Grid

Performance Indicator	System Interruption Severity Index, system-min.	Frequency of Tripping, count per 100 ckm	System Availability, %	Frequency Limit Compliance, %	Voltage Limit Compliance, %	Average Forced Outage Duration, System Min.	Ancillary Service Availability Index, %
LUZON	3.5849	0.3412	98.8192	99.8697	99.9991	750.2119	8.6009
VISAYAS	5.4553	0.1869	99.4500	99.9952	99.9977	1,263.6516	29.1581
MINDANAO	0.2575	0.2061	99.3638	99.9283	99.9996	156.0490	49.7040

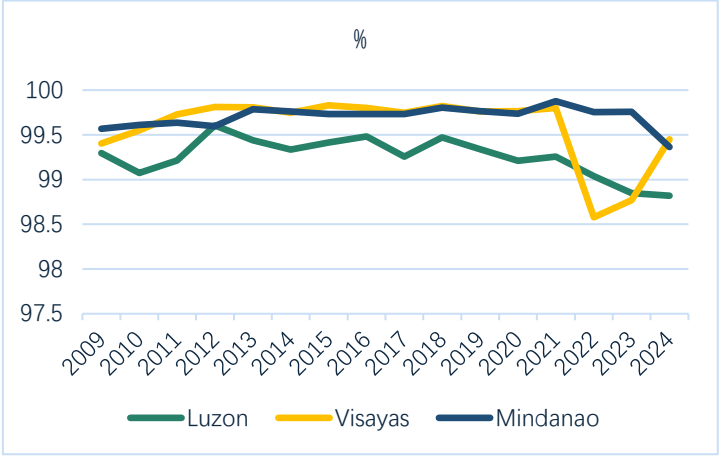
Frequency of Tripping (FOT)



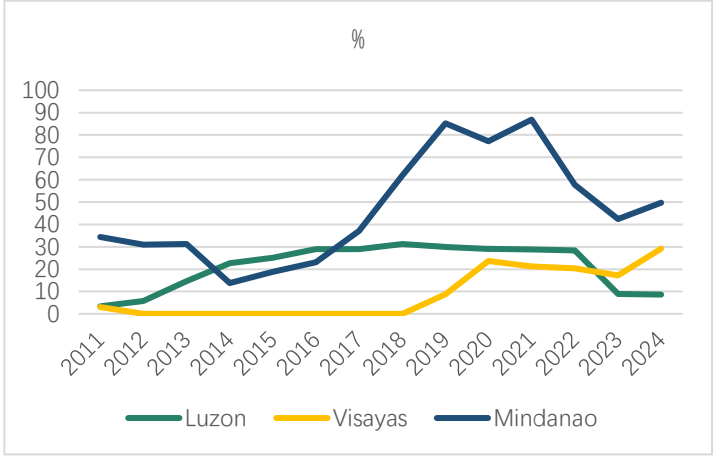
Voltage Limit Compliance (VLC)



System Availability (SA)



Ancillary Service Availability Index (ASAI)



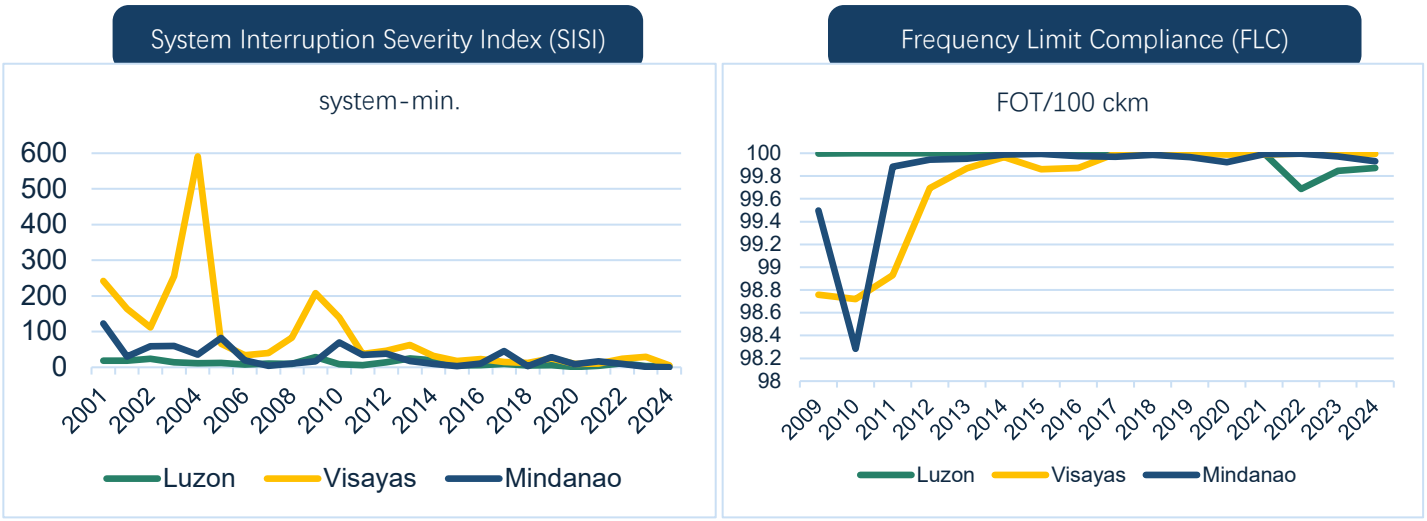


Figure 1.4: Grid Performance Graphs

1.2 NGCP TRANSMISSION ASSET GROWTH

Transmission expansion is crucial to adequately and reliably serve the increase in demand and accommodate the entry of new power plants. As of December 2024, the Philippine transmission grid comprises 23,109 ckm of transmission lines, connecting the grid with 58,653 MVA of substation capacity distributed across 215 substations nationwide. Power Quality is maintained by the 6,791 MVAR of reactors and capacitor banks. The breakdown of the existing Grid facilities is provided in the table below.

Table 1.2: Summary of Existing Facilities as of December 2024

Grid	Transmission Line-Length (ckm)	Substation Capacity (MVA)	Number of Substations	Capacitor (in MVAR)	Reactor (MVAR)
LUZON	9,928.99	38,671.00	83	3,432.5	1,065
VISAYAS	6,710.596	10,846.20	86	388.20	1,205
MINDANAO	6,469.76	9,136.20	46	607.5	92.5
TOTAL	23,109.35	58,653.40	215	4,428.20	2,362.50

From a holistic view of the Philippine power system, the increase in SPD and increase in installed generation capacity in Luzon, Visayas, and Mindanao grids were adequately supported by the completion/energization of NGCP's **5,475 ckm** of new transmission lines and line upgrading projects and **40,495 MVA** of substation expansions including the capacity of new substations. Since NGCP took over grid operations in 2009, the Philippine power system has experienced significant SPD growth of 113% from 2009 to 2024. To accommodate this substantial growth, the total installed generation capacity has also increased by 98%. NGCP's transmission projects have been instrumental in ensuring the reliable and efficient delivery of electricity to meet ever-increasing demand.

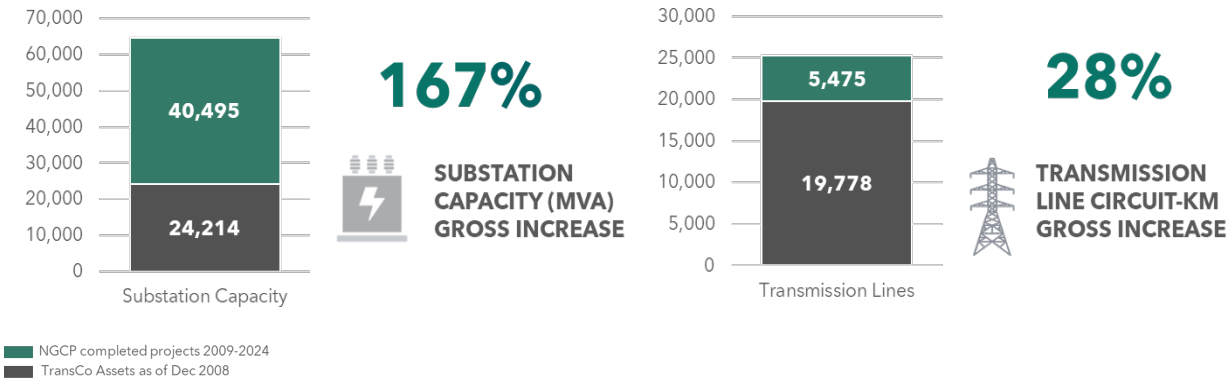


Figure 1.5: Summary of NGCP Capacity Addition from 2009 to 2024

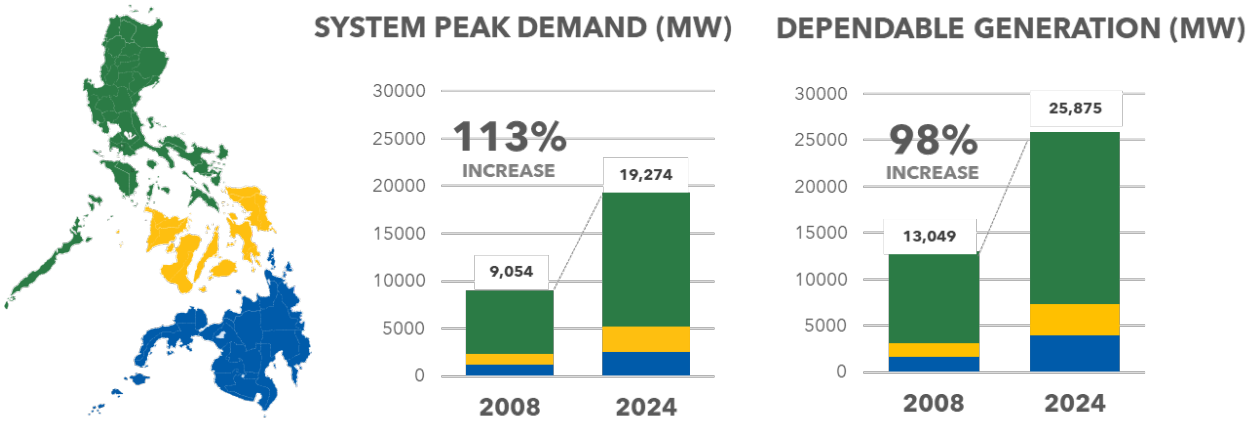


Figure 1.6: Power System Growth increase from 2009 to 2024

It is important to note that ckm, while providing information about the length of existing transmission lines, does not directly correlate with the grid's ability to handle load growth and the entry of generators. The key factors determining transmission line capacity are the voltage level and conductor size of the line. To make this concept more relatable, consider the analogy of highways. A shorter highway can handle more traffic than a longer one if it's wider and has multiple lanes. Similarly, a shorter transmission line can have a higher capacity if it's designed with larger conductors or a higher voltage. Therefore, a 28% increase in ckm does not necessarily indicate limited transmission line capacities.

The increase in total substation capacity directly correlates with load growth. This significant capacity expansion has been possible due to sufficient transmission line capacity. Therefore, to accurately represent grid expansions, both the increase in ckm of transmission lines and the increase in substation capacity must go hand in hand.

Power system expansion planning carefully considers both power generation and transmission. These two aspects are closely linked and require coordinated planning and alignment. The DOE plays a crucial role in Generation Planning, ensuring an adequate power supply by forecasting demand and determining necessary capacity expansion. Before EPIRA, when both generation and transmission functions were under the National Power Corporation, the generation-transmission planning alignment was achievable due to the centralized decision-making in power plant sitting and prioritization. This is now more challenging under the present setup.

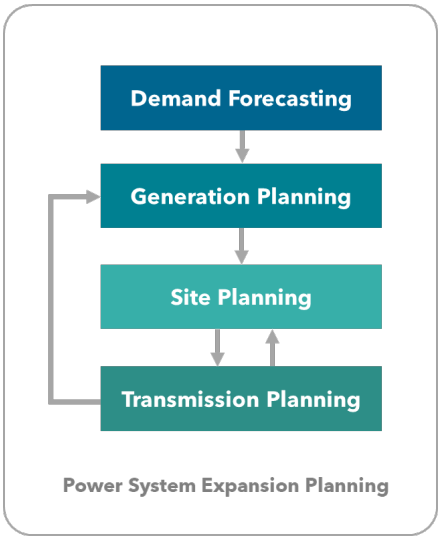


Figure 2.1: Power System Expansion Planning

In the previous years, the generation expansion plan provided to NGCP was more like a compilation of various power plant proposals – committed plants and long list of indicative power plants. However, the recent issuance of the DOE of the Clean Energy Scenario 1 and Clean Energy Scenario 2 provide the details of the required generation capacity additions year on year and with more information on the target capacity per power plant technology. This would also be the needed generation capacity addition level to meet the target level of generation reliability. Also, this would have been the guide for the Philippine power industry as it reflects the optimal mix of generation additions while at the same time achieving the RE installation targets for the country. Site planning is one area for improvement where NGCP can provide the possible sites for power plant connection given readily available transmission capacity of the grid. NGCP can recommend where best to develop the required generation additions of the grid. This way, the existing available transmission capacity can be optimized while new transmission backbone facilities are being built. While there are site-specific power plants, using the available transmission capacity in plant prioritization and having an iterative process for generation and transmission planning presents an opportunity to further improve grid development scenarios.

Furthermore, to ensure open transmission planning as mandated in the EPIRA or RA 9136, NGCP considers stakeholders' suggestions and inputs through annual consultations. DU and DCC are consulted during customer interface meetings for their respective development plans as part of the TDP preparation process.

While transmission infrastructure development is essential, it faces various challenges, such as regulatory approval delays, difficulty in right-of-way (ROW) acquisitions, and securing permits from Local Government Units (LGU), among others. To address these challenges, the DOE collaborates with NGCP and other government entities through the Ad Hoc Committee for Transmission Projects (AHCTP) and regularly discusses to resolve these implementation bottlenecks. To mitigate project timeline concerns, NGCP employs strategies like project staging for relatively big projects, interim connection schemes for incoming power plants, and the installation of System Integrity Protection Scheme (SIPS) for grid security, expedite project completion, and/or mitigate the impact of project deliverability to the electricity end-users.

The two **key inputs** for Transmission Planning are the **Demand Forecast** and **Generation Expansion Plan** provided by the DOE. These inputs are essential in developing the TDP. The demand forecast provides an estimate of future electricity needs, allowing NGCP to anticipate the required transmission facilities while the generation expansion plan outlines planned additions to ensure sufficient power generation capacity. By analyzing these inputs, grid planners determine the required transmission network facilities in the coming years to meet future electricity demand and maintain system reliability and stability, grid security, and power quality throughout the power system.

2.1 SYSTEM PEAK DEMAND (SPD)

The DOE annually provides the SPD forecast which is essential for the preparation of the TDP. In the TDP 2025-2050, the NGCP utilized the most relevant SPD forecasts that reflect the most adequate information to ensure accurate demand projections for grid planning studies. This enables the NGCP to effectively propose and prioritize transmission projects.

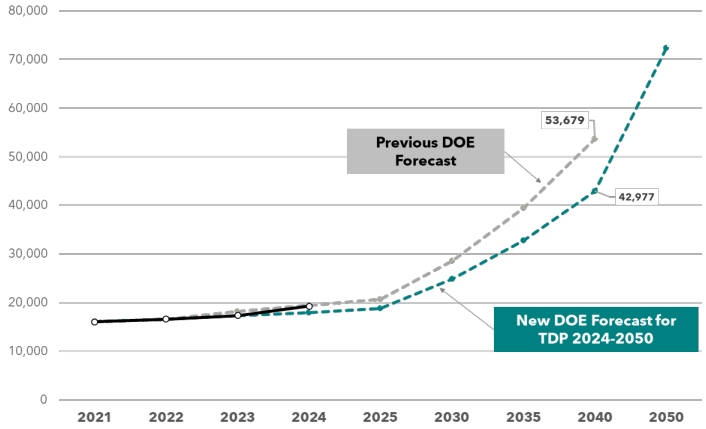


Figure 2.2. DOE Forecast comparison 2021 and 2023

Table 2.1: System Peak Demand Forecast

Area	2025	2030	2035	2040
LUZON	14,769	20,069	27,138	36,101
MERALCO	9,502	11,531	13,978	16,954
1 NCR	6,175	7,494	9,084	11,018
2 North	523	635	770	934
3 South	2,804	3,402	4,124	5,002
North Luzon	4,000	6,469	10,237	15,074
1 Ilocos	294	497	763	1,104
2 Mt. Province	169	273	409	587
3 North Central	429	710	1,165	1,692
4 Cagayan Valley	421	695	1,041	1,537
5 West Central	806	1,303	2,075	3,148
6 South Central	1,813	2,904	4,676	6,875
7 North Tagalog	68	88	108	131
South Luzon	1,267	2,069	2,924	4,073
1 Batangas/Cavite	621	1,025	1,366	1,741
2 Laguna/Quezon	167	250	350	503
3 Bicol	479	795	1,207	1,829
VISAYAS	3,111	4,423	6,280	8,827
1 Panay	542	771	1,094	1,538
2a Cebu	1,483	2,108	2,993	4,208

	Area	2025	2030	2035	2040
2b	Bohol	133	189	268	377
3	Leyte-Samar	456	649	921	1,295
4	Negros	497	706	1,003	1,410
	MINDANAO	2,789	4,138	6,088	8,751
1	North Western	290	475	751	1,140
2	Lanao Area	154	226	324	457
3	North Central	653	997	1,413	1,967
4	North Eastern	183	298	470	709
5	South Eastern	844	1,226	1,864	2,748
6	South Western	664	916	1,267	1,730
	PHILIPPINES	20,669	28,631	39,506	53,679

2.2 GENERATION EXPANSION PLAN

The DOE Energy Outlook has two distinct scenarios for the country's energy transition: Reference Scenario (REF) and Clean Energy Scenario (CES). The REF Scenario reflects the current energy policies while the CES explores the potential of aggressive clean energy targets within the planning horizon.

The DOE's Green Energy Auction Program (GEAP) has also contributed to this capacity expansion. Most of the projects secured through GEAP were included in the list of Committed Power Plant projects as of May 2024.

Table 2.2: DOE Reference Scenarios (*Source: Philippine Energy Plan 2023-2050 Volume 1*)

REFERENCE SCENARIO	CLEAN ENERGY SCENARIO - 1	CLEAN ENERGY SCENARIO - 2
SUPPLY	**SUPPLY: REFERENCE +**	**SUPPLY: REFERENCE +**
• Present development trends and strategies • Existing plants and committed power projects and WESM-registered capacities as of May 2023 • 35% RE share by 2030; 50% by 2050 • Indigenous production targets by 2050 • LNG imports in 2023	• More than 50% RE share by 2050 • Capacity targets under NREP • **19 GW of OSW** • 40-year technical life for coal plants • Additional nuclear capacity of 1,200 MW by 2032, 2,400 MW by 2035 and 4,800 MW by 2050	• More than 50% RE share by 2050 • Capacity targets under NREP • **50 GW of OSW** • 40-year technical life for coal plants • Additional nuclear capacity of 1,200 MW by 2032, 2,400 MW by 2035 and 4,800 MW by 2050
DEMAND	**DEMAND: REFERENCE +**	
• Reduction in economy-wide energy intensity consistent with regional targets o 10% EV penetration rate by 2040 o Current biofuels blending (B2 and E10) o EEC efforts sustained at 5%	• Higher reduction in economy-wide energy intensity • 50% EV penetration rate by 2040 • B5 and E10 biofuels blending by 2026 • EEC rate on oil products and electricity use improve by 10% in 2040-2050 through heightened EE&C activities	

2.3 COMMITTED AND INDICATIVE CAPACITIES

The DOE's monthly publication of Power Sector Initiated Power Projects (PSIPPs) on its website includes information on both committed and indicative power plants. Tables 2.3 and 2.4 below show the DOE's projected committed and indicative capacities as of October 2024, respectively. A committed capacity of 17,248.53 MW is projected to contribute to the grid, with RE sources representing a majority share. Furthermore, the DOE has identified a substantial 94.823 GW of indicative capacity that may potentially connect to the grid in the future, subject to further technical and economic assessment.

Table 2.3: Summary of Committed Power Plants

PHILIPPINES	COMMITTED POWER PLANT PROJECTS (MW)								
Plant Type	2024	2025	2026	2027	2028	2029	2030	TBD	TOTAL
Coal	150.00	350.00	350.00	270.00	135.00	600.00	-	-	1,855.00
Oil-Based	-	75.54	-	-	-	-	-	95.20	170.74
Natural Gas	880.00	440.00	-	-	-	1,100.00	-	3,650.00	6,070.00
RE	476.867	4,619.74	3,199.80	110.00	135.60	-	600.00	10.79	9,152.79
Geothermal	58.22	45.00	6.00	42.00	-	-	-	-	151.22
Hydropower	18.16	92.82	19.90	60.00	48.10	-	600.00	10.79	849.77
Biomass	13.08	37.20	-	-	-	-	-	-	50.28
Solar	387.41	3,672.00	1,821.11	8.00	87.50	-	-	-	5,976.02
Wind	-	772.71	1,352.78	-	-	-	-	-	2,125.49
TOTAL	**1,506.87**	**5,485.28**	**3,549.80**	**380.00**	**270.60**	**1,700.00**	**600.00**	**3,755.99**	**17,248.53**

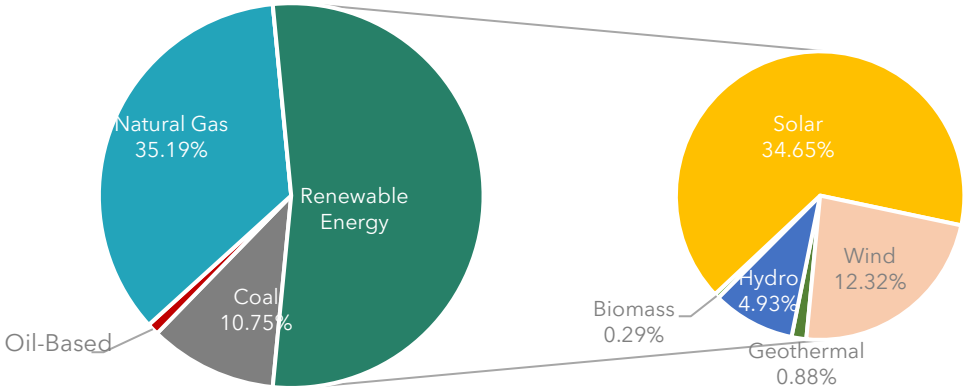


Figure 2.3: Committed Power Plants as of October 2024

Table 2.4: Summary of Indicative Power Plants

PHILIPPINES	INDICATIVE POWER PLANT PROJECTS (MW)											
Plant Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	TBD	TOTAL
Coal	-	-	-	169.00	120.00	-	-	-	-	-	1,400.00	**1,689.00**
Oil-Based	-	-	-	-	-	-	-	-	-	-	60.00	**60.00**
Natural Gas	-	-	-	-	2,510.00	2,250.00	1,128.00	-	-	-	1,260.00	**7,148.00**
RE	52.60	2,111.45	5,447.16	8,826.72	9,179.12	11,107.36	11,362.00	15,056.00	9,117.26	11,746.64	1,920.00	**85,926.31**
Geothermal	*30.00*	-	-	*105.00*	*50.00*	*20.00*	-	-	*120.00*	-	*90.00*	*415.00*
Hydropower	-	*11.30*	-	*1,451.66*	*1,789.50*	*1,130.00*	*2,850.00*	*30.00*	*53.76*	-	-	*7,316.22*
Biomass	-	-	*62.00*	-	*15.00*	*100.00*	-	-	-	-	-	*177.00*
Solar	*22.60*	*1,296.40*	*4,442.61*	*3,141.46*	*919.42*	*256.03*	-	-	-	*2,043.39*	-	*12,121.91*
Wind	-	*803.75*	*942.55*	*4,128.60*	*6,405.20*	*9,601.33*	*8,512.00*	*15,026.00*	*8,943.50*	*9,703.25*	*1,830.00*	*65,896.18*
Total	**52.60**	**2,111.45**	**5,447.16**	**8,995.72**	**11,809.12**	**13,357.36**	**12,490.00**	**15,056.00**	**9,117.26**	**11,746.64**	**4,640.00**	**94,823.31**

Appendix 1 shows the detailed list of DOE's Committed Power Plants with associated transmission projects as of October 2024. Generation projects are tagged if these are included in the DOE's GEAP and have undergone System Impact Study (SIS). It can be noted that the list includes small capacity power plants, which may not actually connect directly to the transmission system. For relatively small capacity power plants connecting to the distribution system, the main impact is a slight reduction in the power being drawn by the DU from NGCP Substations and would not generally require reinforcement in the transmission network. Appendix 2 also shows DOE's list of Indicative Power Plants as of October 2024.

Figure 2.4 below illustrates the projected timeline for these capacity additions alongside peak demand forecasts, providing valuable insights into the country's future power generation potential[1].

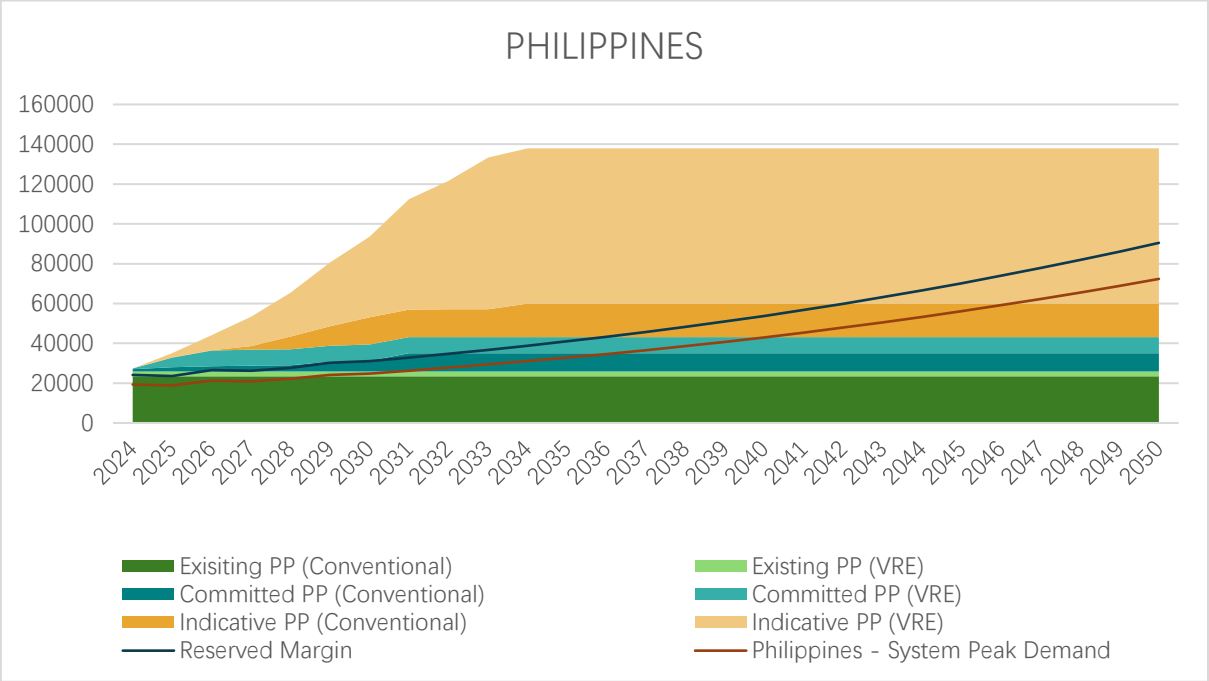


Figure 2.4: Future Power Generation Potential

Projected grid capacity appears adequate until 2035 based on committed power plants' target commissioning dates. However, one of the significant concerns in transmission planning is the low realization rate of committed and indicative power plants. Figure 2.5 shows that from the list of June 2020 PSIPP based on the DOE data, only 28% of the planned power plants have reached commercial operation.

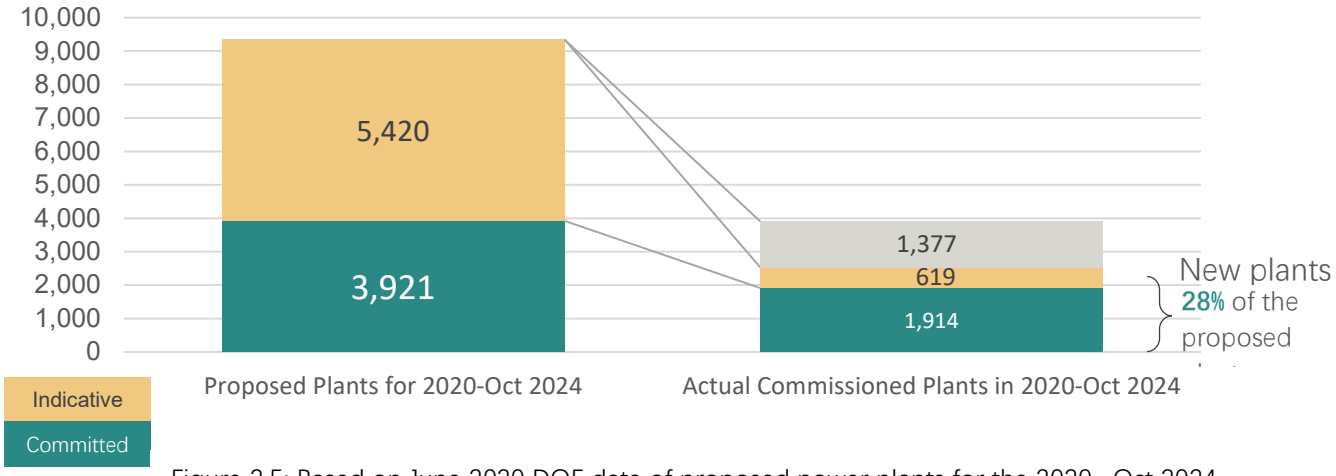


Figure 2.5: Based on June 2020 DOE data of proposed power plants for the 2020- Oct 2024
**excluding projects with commercial operation beyond Oct 2024*

[1] Based on DOE's List of Private Sector Initiated Power Projects as of October 2024

2.4 POWER PLANT DEVELOPMENT FOR GENERATOR CAPACITY REALIZATION

The continuous improvement in NGCP's generation-transmission alignment is intended to contribute to the increase in generator capacity realization. The transmission planning strategy considered is the updating of Available Transmission Capacity (ATC), which was discussed in Chapter 3 – Attracting Investments. The ATC for each year from 2025 up to 2030 are shown each for Luzon, Visayas, and Mindanao Grids, which were affected by the development of transmission infrastructure in various locations in the country. This information is crucial to investors particularly for non-site-specific power plants, as some of the proposed generation capacity additions may possibly connect to the grid through the identified connection points with ATC and can be fully dispatched without the need for transmission reinforcements.

However, for site-specific power plants, such as hydroelectric and geothermal power plants, Offshore Wind (OSW), among others that have long gestation period require that the detailed information are made available to NGCP as early as possible. This is because the required transmission facilities for grid-connection and associated transmission facilities needed for full dispatch usually traverses rugged and mountainous terrains coupled with the difficulty in acquiring ROW and securing related permits which poses a lot of challenges and requires long implementation period.

2.5 N-1 CONTINGENCY PROVISION AND LOOP CONFIGURATION

The single-outage contingency criterion (N-1) has always been the primary basis of NGCP in planning and in preparing the TDP. Since 2009, NGCP planned and completed various projects for transmission capacity expansion and to maintain the N-1 contingency provision.

With the continuing increase in SPD and the development of new power plants in various parts of the grid, the need for more transmission projects to maintain the grid's single-outage contingency (N-1) compliance is urgent. Moreover, establishing transmission backbone loop configuration is crucial to enhance grid resilience. The projects for system reliability and grid resilience are in various stages of implementation; there are projects under preconstruction, procurement, ongoing construction or still in the regulatory approval stage. In addition, the enhanced criteria in the substation site and transmission line route selection to avoid geographic or environmental hazards and the updating of wind speed design for new transmission lines are included in the grid resilience measures already being implemented.

2.6 GRID EQUIPMENT DATA

Grid Equipment Data registration is the process of registering and maintaining data on various equipment within the power transmission network. This data is crucial for effective grid planning, particularly in conducting system studies required in the preparation of the TDP. As stated in the Philippine Grid Code (PGC) under section GCR 4.11, the data relating to the connection point and user development, submitted by the user to the TNP, must be registered according to the following data categories:

- **Forecast Data** – includes the demand and active energy, representing the user's best estimate of projected data for the succeeding years.
- **Estimated Equipment Data (EED)** – includes demand and active energy, representing the User's best estimate of parameters or information based on standard values.
- **Registered Equipment Data (RED)** – contains validated actual values of parameters and information about the equipment that is submitted by the User to the TNP at the connection data including connected project planning data which shall replace any estimated values of parameters and information about the equipment previously submitted.

Chapter 5 of the PGC states that the TNP is primarily responsible for specifying technical studies and planning procedures that will ensure the safety, security and reliability and stability of the grid. Another is to specify the data requirements for a User seeking a new connection or modification of an existing connection to the grid and to specify the data requirements to be used by the TNP in grid planning.

The TNP has the lead responsibility to:

- Analyze the impact of the connection (generating plants, loads, transmission lines and substations)
- Expansion of the grid to ensure its adequacy to meet forecasted demand and new connections
- Identify and evaluate transmission congestion problems that potentially cause restrictions on economic dispatch, increased outages, or significantly higher service costs
- Evaluation of the grid together with the sub-transmission system or distribution system facilities and identify and address possible restrictions to the economic dispatch of generating units.

The PGC also states that the SO, Market Operator and other Users must cooperate with the TNP in maintaining the grid planning data bank. This includes the submission of planning data provided by all relevant grid Users that include the Standard Planning Data and Detailed Planning Data and shall be consolidated and maintained. Users must notify the TNP of any changes to their planning data as soon as possible to update the transmission network model used in various studies. These Standard Planning Data and detailed Planning Data shall be submitted by the Users to TNP based on the abovementioned data categories.

NGCP has already developed EED and RED which are being used in the conduct of Grid Impact and System Impact Studies for new connections composed of Power Plants and other load/direct-connected customers in compliance with the PGC.

The importance of regular on time submission of Grid Equipment Data by grid Users to the TNP to be used in transmission planning are stated below:

1. Updated equipment data translates to an accurate system model that improves transmission planning efficiency; and
2. Accurate assessment of emerging challenges and risks, such as the increasing integration of Variable Renewable Energy (VRE) sources that results to low Short-Circuit Ratio (SCR), reduction of System Inertia, among others by identifying these risks to come up with mitigating measures for grid security.

2.8 PROMOTING RENEWABLE ENERGY (RE)

As set out in the Philippine Energy Plan (PEP) 2023-2050, the government is committed to achieve energy transition for the country with a 35% RE generation target by 2030 and 50% RE generation target by 2040. In 2024, the RE generation of the country reached 22% with bulk share coming from the existing geothermal and hydroelectric power plants. Based on the proposed power plant projects included in the DOE List of PSIPP and considering the huge capacity of Offshore Wind with issued Service Contracts, it is expected that solar PV and wind plants, which are VRE resources, will be the main contributors in increasing the RE generation.

To help realize these goals, in 2018 the government introduced policies and programs, including the Philippine Competitive Renewable Energy Zones (CREZ) followed in 2022 by the GEAP. These government initiatives, supported by DOE's Department Circular 2022-11-0034 that allowed 100% foreign ownership of RE plants, resulted in the increased participation of private sectors in RE development, thus the influx of RE project proposals. Detailed discussions on CREZ and GEAP were provided in Chapter 3 of the TDP 2024-2050.

The GEAP is among the DOE strategies aimed at achieving the RE goals. It was issued on 03 November 2021 through DC No. DC2021-11-0036. It aims to foster greater private sector participation through the transparent and competitive selection process of RE suppliers and to accelerate the development of RE projects, ensuring that projects will be awarded at reasonable costs.

The general objectives and principles behind the CREZ were adapted from the DOE's Department Circular 2018-09-0027, entitled Establishment and Development of CREZ in the Country. The CREZ Process intends to:

- Identify abundant high-quality, economic RE resources

- Reduce RE deployment barriers
- Improve national coordination for power system planning
- Enhance opportunities for RE investment

The increasing integration of VRE in the transmission network has various impending challenges that need to be addressed. These challenges are intermittent operation, grid inertia reduction and voltage fluctuation. The increasing penetration of VRE has the potential to cause significant degradation of the power system performance due to their intermittent nature, which necessitates an increase in the required flexible generation. Concurrently, equal emphasis will be placed on the expansion and modernization of power infrastructure, particularly on transmission network upgrades, to accommodate the integration of renewables and ensure a stable and resilient energy supply.

This necessitates the recognition of ESS as one of the technologies to manage the intermittent operation of the VRE-generating plants' output to ensure stability. Moreover, ESS will be one of the key elements in the proposed Smart Grid Roadmap towards power system modernization.

3.1 AVAILABLE TRANSMISSION CAPACITY (ATC)

The ATC is a critical basis in the energy sector, representing the amount of power that can be transmitted through the transmission network without risking grid stability. This capacity is essential for prospective generator investors when planning and developing power generation projects. ATC is determined by the difference between the total transfer capability and the existing transmission network facilities, assuming no significant upgrades are needed. The identified ATC is only one form of assessment provided in the TDP that could guide Generators to the locations or connection points where their intended capacities can be maximized without the need to wait for transmission reinforcement.

This chapter identifies potential connection points through which new or incoming power plants can interconnect to the grid. These connection points do not require major upgrades to the transmission system within the 2030-time frame. The connection points and corresponding locations are listed in tables for the Luzon, Visayas, and Mindanao grids, providing valuable insights for generation investors. However, this analysis is focused on the transmission planning perspective, which considers the capabilities of the existing grid. Notably, the ATC assessment incorporates the completion of ERC-approved projects but does not account for other factors necessary in generation location, such as:

- Fuel/Resource supply and transportation arrangements
- Topological and geographical characteristics of the site
- Accessibility to the location
- Availability of land suitable for development
- Security measures

The information on ATC aims to support generation investors in making informed decisions regarding project location, size, and technology. Which can aid in the successful development of non-site-specific power generation projects and their integration into the grid. While the conduct of SIS is required to ensure that the integration of a particular generating plant will not compromise the integrity of the grid.

3.2 TRANSMISSION CRITERIA FOR RECOMMENDED CONNECTION POINTS

Figures 3.1, 3.3, and 3.5 outline the recommended connection points and available capacities for generation additions in Luzon, Visayas, and Mindanao grids, respectively. The following criteria are applied in determining the recommended connection points:

1. **No Overloading of Transmission Facilities:** The facilities must not be overloaded during normal operations or under N-1 contingency scenarios (single-point outages).
2. **Voltage Compliance:** Voltages must remain within the prescribed limits defined by the PGC during both normal and N-1 contingency conditions.
3. **Available Termination Points:** There must be available termination points for incoming transmission lines or sufficient space for expansion at existing substations for generator connection.

3.2.1 LUZON GRID

NGCP's continuous expansion efforts have resulted in opportunities for new generation capacities in Luzon. Strategic investments in transmission infrastructures have created significant headroom in Luzon for new power plant takers.

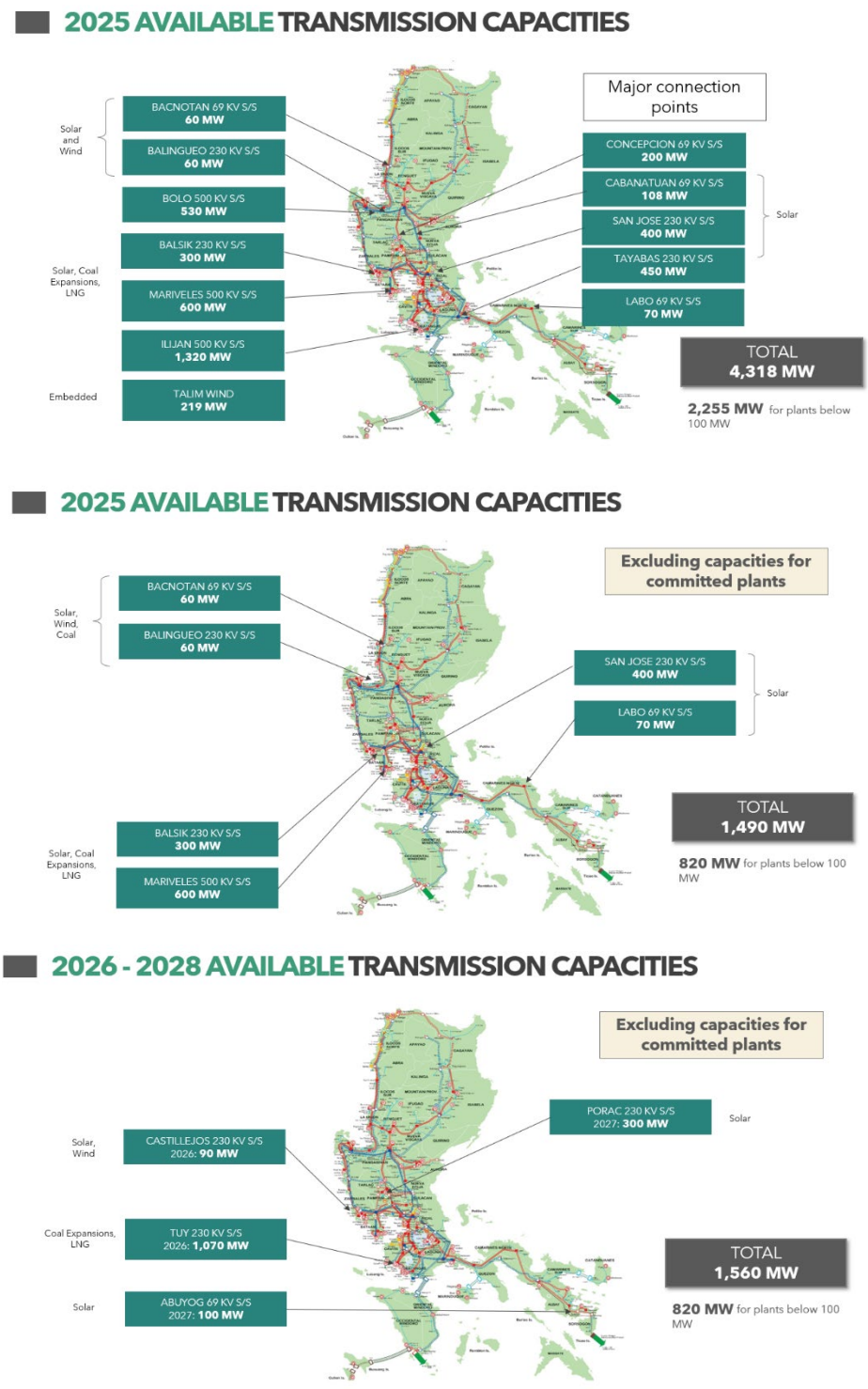


Figure 3.1 Luzon Available Transmission Capacity, 2025-2028

As shown in Figure 3.1, there is an available room amounting up to 1,490 MW in 2025 for generation capacity additions that would require a direct connection. Significantly contributing to this headroom includes the recently completed Mariveles

(Alas-asin) 500 kV Substation at 600 MW, San Jose 230 kV Substation at 400 MW, and Balsik 230 kV Substation at 300 MW. These substations are ideal locations for investments in new generation projects.

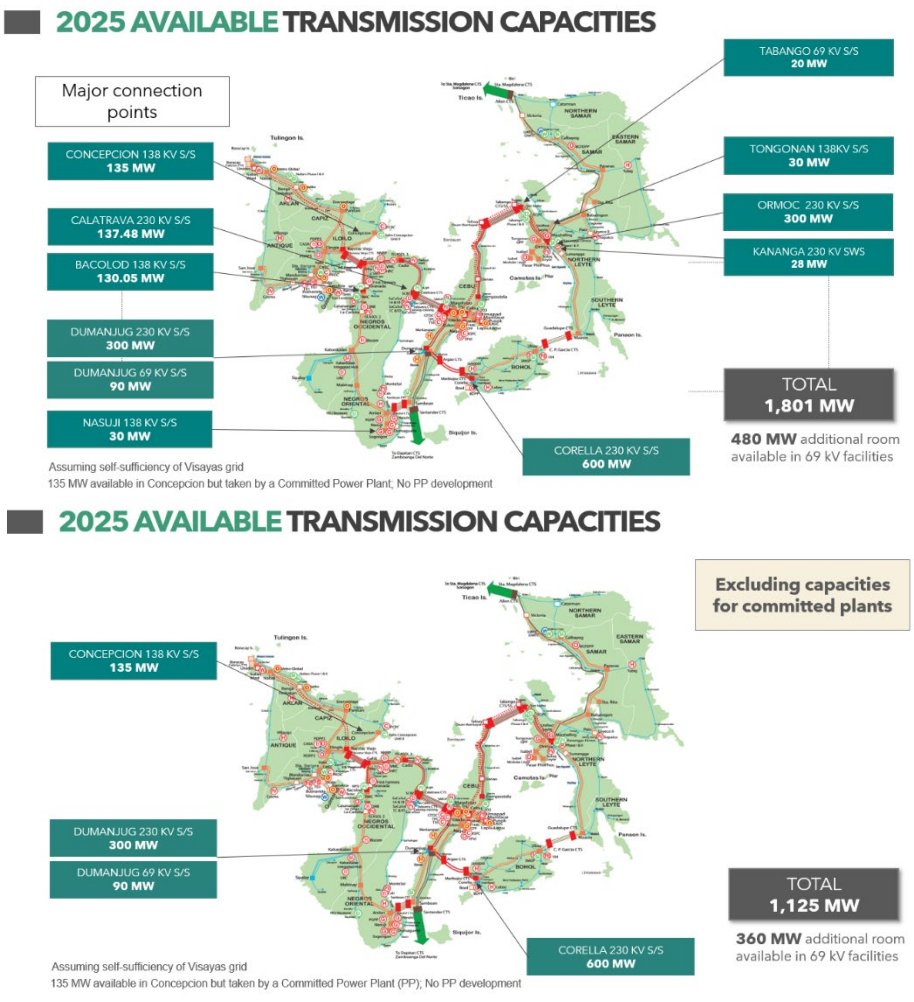
Beyond 2025, NGCP's planned infrastructure development will further increase the available capacity. Significantly contributing to this is the ongoing construction of Tuy 230 kV Substation that adds up to 1,070 MW, while Balaoan 500 kV Substation and Laoag 500/230 kV Substation add up to 2,000 MW and 1,850 MW, respectively.

NGCP encourages investors of all generation technologies, including RE sources, to explore these transmission opportunities in Luzon.

3.2.2 VISAYAS GRID

Bridging the gap between the transmission capacity and generation capacity is crucial in meeting power demand and promoting energy self-sufficiency in the Visayas. With the completion of transmission projects of the NGCP, there is available capacity to support future generation expansion.

As illustrated in Figure 3.3, the completion of Mindanao-Visayas Interconnection Project, Cebu-Bohol 230 kV Interconnection Project, and Cebu-Negros-Panay 230 kV Backbone - Stage 3 has created a total headroom of 1,125 MW in 2025, on top of the capacities allocated for committed power plants. The available transmission capacity allows for new generation capacity additions that require a direct connection. On the other hand, there is an additional 360 MW capacity available in the 69 kV tap connection to accommodate other generation projects.



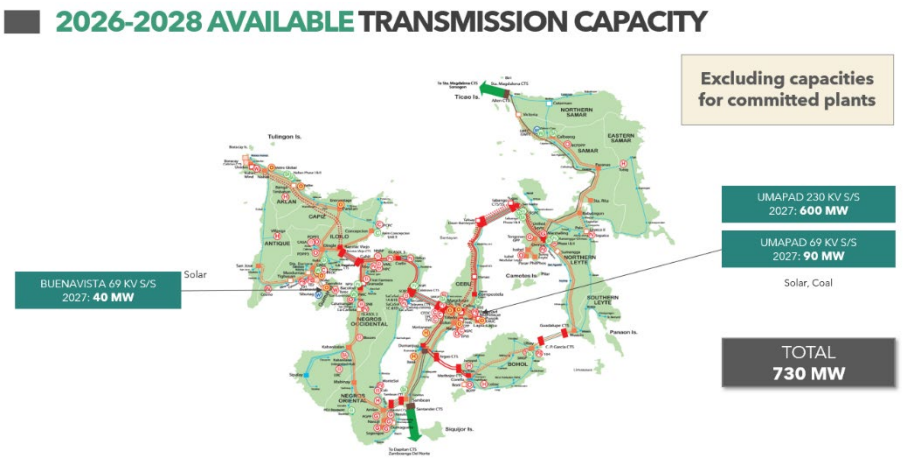


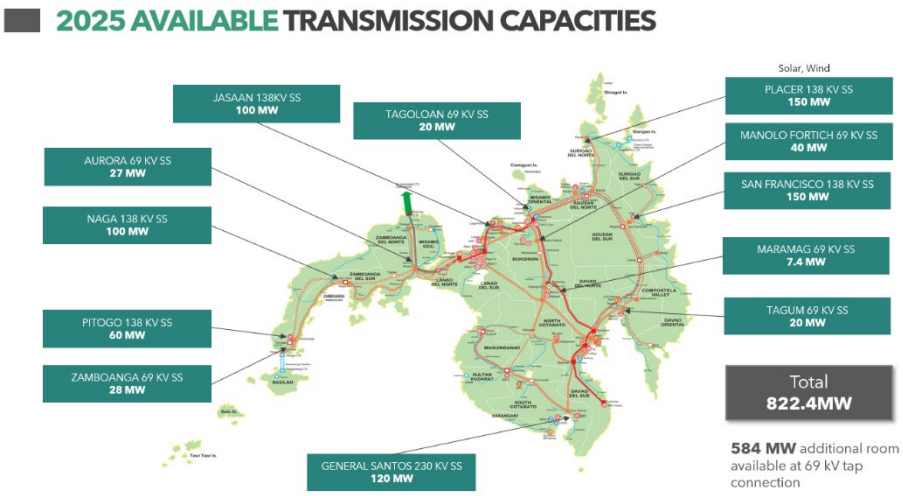
Figure 3.3: Visayas Available Transmission Capacity, 2025-2028

The development and enhancement of transmission infrastructures within the project pipeline of the NGCP are paving the way for further increases in generation capacity beyond 2025. In 2027, the completion of Cebu – Lapu-Lapu Transmission Project and Panay – Guimaras 138 kV Interconnection Project will each provide additional transmission capacities of 690 MW and 40 MW, respectively.

Promoting investment in power generation is essential to fully optimize the available transmission capacity in Visayas. To drive the said initiative forward, the NGCP recognizes the importance of fostering collaborative partnerships with stakeholders across the power industry. In line with this, the entry of diverse generation technologies and the integration of renewable energy sources are encouraged to further strengthen energy security and sustainability.

3.2.3 MINDANAO GRID

Bridging the gap between the transmission capacity and generation capacity is crucial in meeting power demand and promoting energy self-sufficiency in Mindanao Island. With the completion of transmission projects of the NGCP, there is available capacity to support future generation expansion.



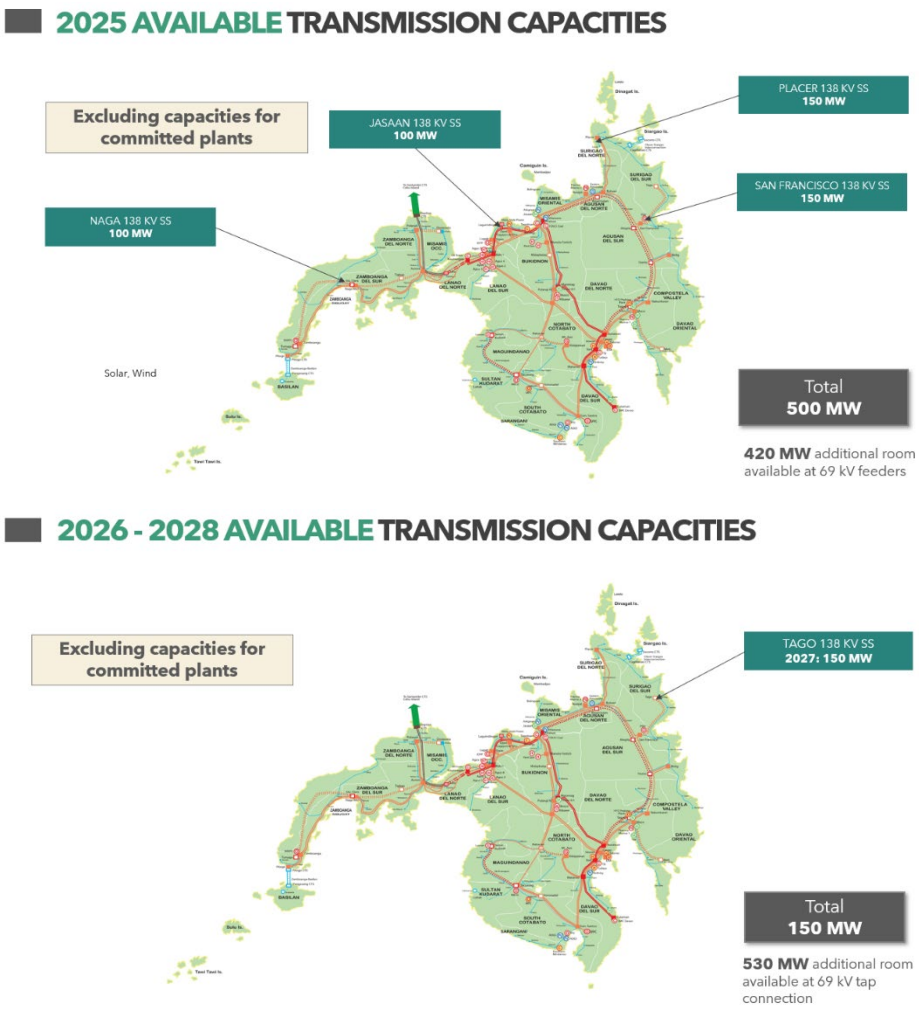


Figure 3.5: Mindanao Available Transmission Capacity, 2025-2028

As illustrated in Figure 3.5, the completion of Mindanao-Visayas Interconnection Project has created a total headroom of 450 MW in 2025, on top of the capacities allocated for committed power plants. The available transmission capacity allows for new generation capacity additions that require a direct connection. On the other hand, there is an additional 450 MW capacity available in the 69 kV tap connection to accommodate other generation projects.

The development and enhancement of transmission infrastructures within the project pipeline of the NGCP are paving the way for further increases in generation capacity beyond 2025. In 2026 and 2027, the completion of Tago 138kV Substation and Tupi 138kV Substation Project will provide additional transmission capacities of both 150 MW respectively.

Promoting investment in power generation is essential to fully optimize the available transmission capacity in Mindanao Island. To drive the said initiative forward, the NGCP recognizes the importance of fostering collaborative partnerships with stakeholders across the power industry. In line with this, the entry of diverse generation technologies and the integration of renewable energy sources are encouraged to further strengthen energy security and sustainability.

3.3 COMMITTED POWER PLANTS STATUS

Committed power plants are power projects that have secured financial backing from investors or bankers that the DOE uses in its PDP to envision the country's power supply. The DOE uses committed power plants to present the capacity that will be

added to the grid over time. These projections help the NGCP in developing the TDP for the country's infrastructure development.

For committed power plants, it is essential that these power plant projects are already in the NGCP's planning horizon, and the necessary SIS are conducted. The SIS is a fundamental prerequisite for project development, determining the plant's connection point to the grid, the grid's capacity to accommodate the new generation, and identifying necessary transmission infrastructure upgrades. The absence of SIS for a significant portion of committed power plant projects raises concerns about their viability and projected commissioning dates. Specifically, 41 committed projects with target commercial operations between 2025 and 2027 remain without SIS. The fact that this deficiency exists in 30% of committed plants with commissioning years up to 2027 strongly suggests a low probability of these projects meeting their promised timelines. This lack of SIS may pose low realization of power plant integration that may affect the reliability and adequacy of future power supply.

Table 3.4: Summary of SIS and FS of Committed Power Plants from 2025-2027[2]

System Impact Study		
Luzon	No. of Projects	Installed Capacity (MW)
With SIS	67	5,617.72
No SIS	33	3,013.79
Exempted	8	378.34
Total	108	9,009.85

Facility Study		
Luzon	No. of Projects	Installed Capacity (MW)
With FS	52	6,313.15
No FS	56	2,696.70
Total	108	9,009.85

Visayas	No. of Projects	Installed Capacity (MW)
With SIS	27	1,569.47
No SIS	5	166.05
Exempted	3	8.70
Total	35	1,744.22

Visayas	No. of Projects	Installed Capacity (MW)
With FS	20	739.30
No FS	15	1,004.92
Total	35	1,744.22

Mindanao	No. of Projects	Installed Capacity (MW)
With SIS	14	644.10
No SIS	3	26.02
Exempted	3	15.45
Total	20	685.57

Mindanao	No. of Projects	Installed Capacity (MW)
With FS	9	244.60
No FS	11	440.97
Total	20	685.57

3.4 CATEGORIES OF GRID CONNECTION

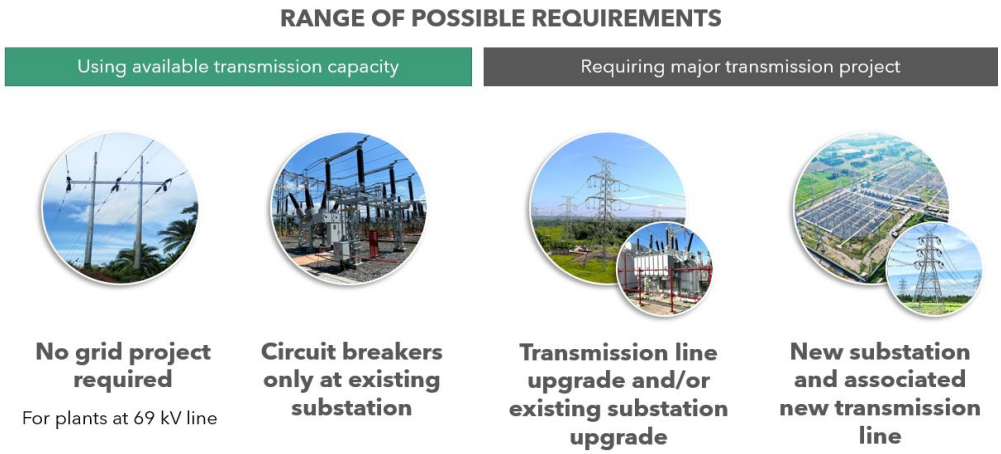


Figure 3.7: Grid Connection Categories

[2] Committed Power Plants as of October 2024

The connection options are categorized based on the complexity of the required infrastructure:

1. **No Grid Project Required –** Small capacity power plant projects can connect to existing 69 kV lines without the need of installing new or additional transmission infrastructure.
2. **Installation of circuit breakers and associated equipment only at existing substations –** For power plant projects requiring only the installation of a circuit breaker and associated equipment at an existing substation.
3. **Installation of circuit breakers, transformers/s and associated equipment at existing substation and/or with T/L upgrades –** For power plant projects requiring both circuit breaker and transformer including associated equipment at an existing substation, along with potential upgrades to the transmission lines.
4. **Construction of a new substation and new transmission backbone –** For large power plant projects requiring construction of a new substation and/or transmission backbone may be necessary.

NGCP's conducted assessment considers the committed generation plants indicated in the DOE PSIPP as of October 31, 2024, as well as the GEA-1 and GEA-2 generating plants, and new build capacities, assuming they are operational based on their scheduled commissioning dates until 2030. This ensures that the ATC calculations are grounded in current and future generation capacity, enabling more accurate predictions for grid integration. For Grid connection categorization, the present analysis is limited to projects planned for commercial operations until 2027. The DOE's list of committed projects in Appendix 1 contains tags specifying their categorization.

Table 3.5: Luzon Committed Power Plants Connection Category

	No Grid project required **(CPR1)** *(for small capacity that can tap to existing 69k line)*	Installation of Circuit Breaker (CB) only at existing substation **(CPR2)**	Installation of CB and Transformer at existing substation and/or with transmission Upgrade **(CPR3)**	Construction of a new substation and new transmission backbone **(CPR4)**
2025	**40 plants** **1,278 MW**	**26 plants** **3,365 MW**	**3 plants** **179 MW**	**10 plants** **1,388 MW**
2026	**6 plants** **148 MW**	**11 plants** **808 MW**	**1 plant** **80 MW**	**9 plants**
2027	**1 plant** **8 MW**	**1 plant** **60 MW**	None	

Table 3.6: Visayas Committed Power Plants Connection Category

No Grid project required **(CPR1)** *(for small capacity that can tap to existing 69k line)*	Installation of Circuit Breaker (CB) only at existing substation **(CPR2)**	Installation of CB and Transformer at existing substation and/or with transmission Upgrade **(CPR3)**	Construction of a new substation and new transmission backbone **(CPR4)**

2025	**18 plants** **208 MW**	**plants** **588 MW**	None	**1 plant** **112 MW**
2026	**6 plants** **101 MW**	**3 plants** **432 MW**	None	**2 plants** **262 MW**
2027	**1 plant** **42 MW**	None	None	None

Table 3.7: Mindanao Committed Power Plants Connection Category

	No Grid project required **(CPR1)** *(for small capacity that can tap to existing 69k line)*	Installation of Circuit Breaker (CB) only at existing substation **(CPR2)**	Installation of CB and Transformer at existing substation and/or with transmission Upgrade **(CPR3)**	Construction of a new substation and new transmission backbone **(CPR4)**
2025	**9 plants** **48 MW**	**9 plants** **328 MW**	None	None
2026	None	None	**1 plants** **40 MW**	None
2027	None	None	None	**1 plant** **270 MW**

The **TDP 2024-2050**, available on the NGCP website (www.ngcp.ph), outlines the planned transmission projects, including key components and implementation timelines. This publicly accessible document offers stakeholders a comprehensive overview of NGCP's long-term infrastructure development strategy.

The **TDP 2025-2050** provides essential updates, revisions that adapt to the dynamic energy sector, and incorporates valuable stakeholder comments and feedback.

The newly identified projects in this report are designed to accommodate the anticipated electricity demand from incoming power plants. These power plants are identified from two primary sources: the DOE's PSIPP, which details committed and indicative power plant projects, and consultations conducted by NGCP with relevant stakeholders. By incorporating these newly identified projects, the TDP ensures that the transmission network will have the necessary capacity to handle increased power generation, while maintaining grid stability and reliability.

4.1 TRANSMISSION PROJECTS CHALLENGES

Transmission projects face a complex web of challenges, often hindering their timely completion and affecting the overall performance of the Grid. Four primary **roadblocks** contribute to these delays: ROW acquisition, regulatory approvals, local permitting, and generation-transmission planning misalignment.

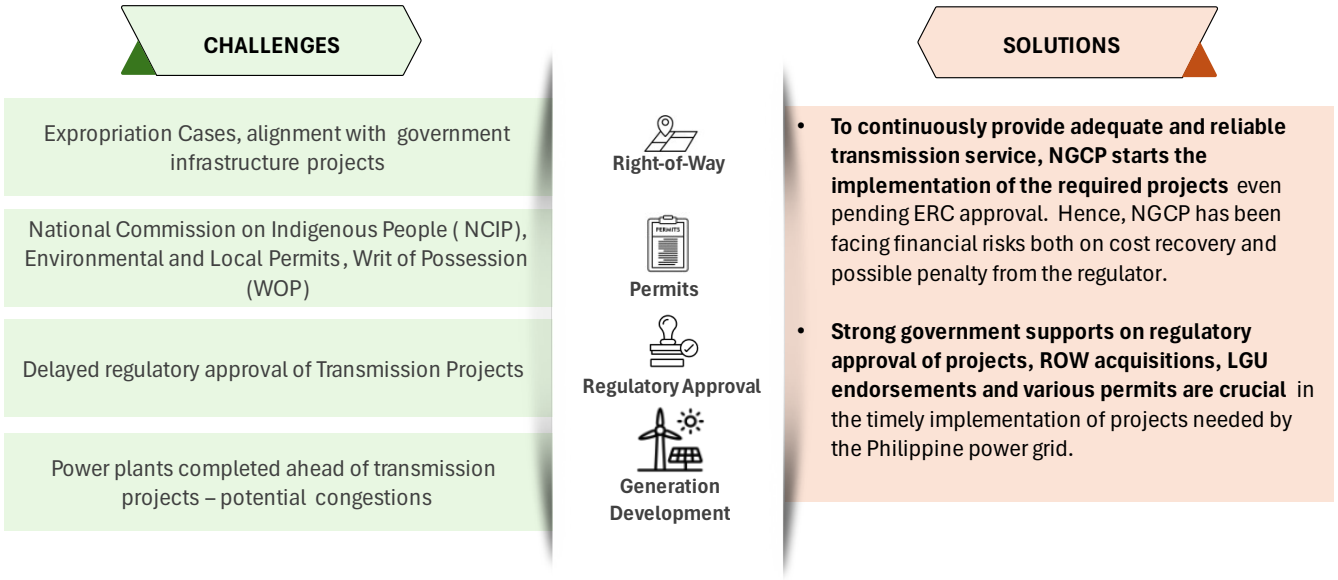


Figure 4.1: Transmission Projects Challenges

4.1.1 Right-of-Way (ROW) ACQUISITION

Transmission lines traverse diverse terrains and frequently cross privately held land. Securing the legal right to construct and maintain these lines necessitates navigating a complex process that includes -

- Negotiations with multiple landowners - This may involve numerous individuals, businesses, and governmental entities, each with distinct interests and concerns. Reaching mutually agreeable terms, including appropriate compensation, can be time-consuming and complex.
- Eminent domain proceedings-While eminent domain may be a necessary recourse in certain situations, this process can be legally challenging, financially burdensome, and may generate significant community resistance.
- Environmental and cultural resource considerations - Transmission line routes must minimize environmental impact and avoid sensitive cultural sites, including areas covered by the NCIP. This requires comprehensive studies, consultations, and often necessitates modifications to proposed routes, thereby extending project timelines and increasing costs; and
- Filing of expropriation cases -There is a ruling from the Supreme Court that filing of expropriation cases to acquire ROW for a particular project requires ERC approval.

4.1.2 REGULATORY APPROVALS

As a regulated entity, the implementation of transmission projects requires approval of the ERC. To be able continuously provide adequate and reliable transmission service on time, NGCP commenced the implementation of projects with pending ERC approval to ensure that necessary projects can be completed on its estimated timeline. Consequently, NGCP has been facing financial risks both on cost recovery and possible penalties from the regulator. The current legal process also prevents NGCP from filing expropriation cases in connection with ROW acquisition without the ERC project approval. As of January 2025, there are 105 transmission projects in the construction or pre-construction phase awaiting regulatory approval.

4.1.3 LOCAL PERMITS

Acquiring local permits is a prerequisite to commence construction of transmission projects, which also poses various challenges. To address the permitting challenges, there is an ongoing collaboration between the DOE, NGCP, and other government entities, such as National Transmission Corporation (TransCo), National Electrification Administration (NEA), ERC, etc. Further, AHCTP facilitates regular discussions to come up with solutions to resolve these implementation bottlenecks.

4.1.4 GENERATION-TRANSMISSION PLANNING MISALIGNMENT

The DOE's 2020 CREZ report highlighted a critical issue; the significant misalignment in development timelines between RE projects and the necessary transmission infrastructure, creating a circular dilemma that poses substantial challenges to the successful and timely deployment of RE projects. This discrepancy stems from the inherent differences in the development timelines of power generation facilities, particularly RE plants, and the transmission networks required to support them.

Globally, the planning and construction phases for power plants, whether conventional or renewable, typically span from 2 to 10 years. However, RE plants, often smaller in scale and utilizing more modular technologies, have the advantage of shorter development cycles, frequently ranging from just 2 to 3 years. This rapid development potential is one of the advantages of RE sources, allowing for quicker deployment compared to conventional power plants. However, this generation development can be hampered if the necessary transmission infrastructure is not yet available and necessary connection point transmission projects could not be completed on time to allow full dispatch of these RE plants.

The transmission infrastructure required to connect these new generation sources to the grid and deliver electricity to consumers faces significantly longer lead times. Transmission planning, which involves complex studies, environmental assessments, regulatory approvals, and ROW acquisition, can take anywhere from 10 to 20 years. NGCP, however, through strategic planning and a focus on collaboration, have been able to achieve an average project completion time of 5 to 10 years, demonstrating significant progress in accelerating the development of critical transmission infrastructure.

This disparity in development timelines creates a circular dilemma that hinders the growth of RE projects. Developers are often reluctant to invest in RE projects without assurance that transmission capacity will be available to transmit the full dispatch of power that they can generate. On the other hand, transmission planning requires confirmed generation projects to justify the necessary investments. This "chicken and egg" scenario can impede RE development, even in regions rich in renewable resources. The CREZ Report highlights this critical issue and stresses the need for improved coordination and planning to align the development timelines of both generation and transmission projects. Addressing this misalignment ensures a smoother and more efficient integration of RE into the grid. If left unresolved, the potential of RE and the achievement of the CES targets could be significantly compromised.

Figure 4.2: CREZ Report on Approximate Planning-Construction Timeline and Circular Dilemma

4.2 ESTIMATED TIME OF COMPLETION (ETC)

There are six project drivers that trigger the need to put up a transmission facility, namely, Load Growth, Generation Entry, System Reliability and Security, Power Quality and Technology, Market Operation Support and Policy Direction. The ETC indicated in the project application to the ERC is based on the criticalness of the project, and the Need Date determined through the conduct of system simulations. These simulations are based on various grid operation scenarios considering the DOE's SPD Forecast and PSIPP for the planning period, which are updated periodically.

Since 2009 when NGCP took over the power transmission business from the government, the typical project implementation cycle is within a five-year duration. For cases where there is an immediate need by customers, e.g., generation-associated projects, directly-connected customers, etc., ETC as filed with the ERC would reflect a more aggressive timeline and deviate from the typical duration of each project milestones. In the NGCP's issuance of the TDP for the period 2009-2022, the project ETCs are re-evaluated and adjusted in the succeeding issuance to account the actual progress/status of each project milestones, including status of ROW.

DOE Policy on Projects' ETC – For new transmission projects in the TDP 2023-2040, the indicated time of completion, whether indicated as estimated or otherwise, shall be "**firm dates for the completion of the projects.**" The DOE further reiterates that for new transmission projects in the TDP 2024-2050, the indicated times of completion are considered firm dates and not subject to changes in subsequent TDPs. The DOE stated also that any adjustments in subsequent TDPs to the Original ETC of a Committed Project are reported solely as a guide to stakeholders.

Consistent with the DOE's direction[3], NGCP submits a monthly Transmission Project Status Report that indicates the subsequent adjustments of ETCs due to various challenges beyond NGCP's control:

1. Regulatory Delays, i.e., delayed issuance of Provisional Authority (PA) for accelerated implementation by the ERC
2. ROW acquisition
3. Legal impediments, such as the issuance of Temporary Restraining Order (TRO) by the Courts
4. Delays in the issuance of construction permits.

[3] Excerpts from NGCP Comments to the DOE-Approved TDP 2023-2040 contained in the 11 February 2025 letter to the DOE.

The detailed implementation "bottlenecks" identified are regularly discussed in the AHCTP meetings with the guidance and active support of the DOE in identifying solutions and way forward activities to minimize possible project completion delays, thus mitigating the risk/impact to the electricity end-users.

Through the Adhoc Committee meetings, NGCP and the DOE align on the adjusted ETC, which appears in the TDP 2023-2040. The subsequent TDP update shall guide the stakeholders on the expected completion of a particular project therein.

NGCP Position on the ETC – The timeline and ETCs of projects are merely proposals based on a "best-case scenario " Therefore, since the ETCs or timelines proposed in NGCP's Capital Expenditures (CAPEX) Application reflect this best-case scenario, they should be considered hard deadlines or firm commitments. Instead, they serve as estimates of a project 's implementation timeline with the assumption that no roadblocks, difficulties, or legal impediments arise.

Accordingly, while NGCP indicated an approximate time of completion for the implementation of various CAPEX Applications, the same is conditioned on the assumption that no difficulties or impediments are encountered, and that the project would be approved timely by the ERC. The proposed timelines are still subject to possible movements depending on the resolution of the concerns on the grounds that may affect the project's implementation.

In view of the challenges encountered in project implementation, NGCP also enhanced the process of establishing the project ETC based on the historical project data and the result of project constraint analysis. The distinct project timelines are established for each of the following set of project constraints examined:

1. Transmission Line Length
2. Substation Required Area
3. Terrain and Level of Urbanization
4. Voltage.

4.3 LUZON GRID

Shown in Table 4.1 are the transmission projects in Luzon Grid with updated information based on recent developments, existing projects with adjusted ETC and new/additional projects to address the system requirements:

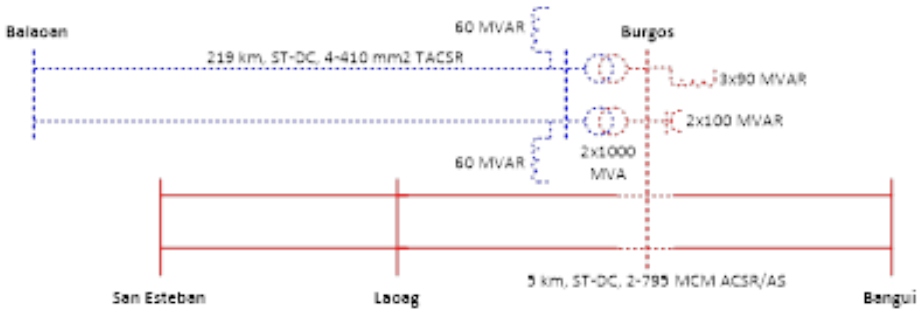
4.3.1 Luzon Grid Project Updates

Table 4.1: List of Luzon Transmission Projects

TRANSMISSION LINE					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
500 kV PROJECTS					
Balaoan – Laoag (Burgos) 500 kV Transmission Line	• Generation entry • ERC-Approved	• Burgos 500 kV SS: 2x1,000 MVA, 500/230 kV Power Transformer, 3x90 MVAR 500 kV Shunt Reactor, 2x90 MVAR 500 kV Line Reactor, 11-500 kV PCB and associated equipment, 2x100 MVAR 230 kV Capacitor Banks and associated equipment, 12-230 kV PCB and associated equipment	• Balaoan – Burgos 500 kV TL: ST-DC, 4-410 mm^2 TACSR, 219 km (2x4,234 MW). • Burgos "Bus-in" to Laoag – Bangui 230 kV TL: ST-DC, 2-795 MCM ACSR/AS, 5 km (2x573 MW) • Bantay "Bus-in" to San Esteban – Pinili 230 kV TL: ST-DC, 1-795 MCM ACSR, 2 km (2x287 MW).	• Ilocos Norte • Ilocos Sur • La Union	• 40,195 M • Aug 2031
• To accommodate the entry of wind farm and Solar PV projects in the Province of Ilocos Norte		• New Bantay 230 kV SS: 2x100 MVA, 230/69 kV Power Transformer, 10-230 kV PCB and			

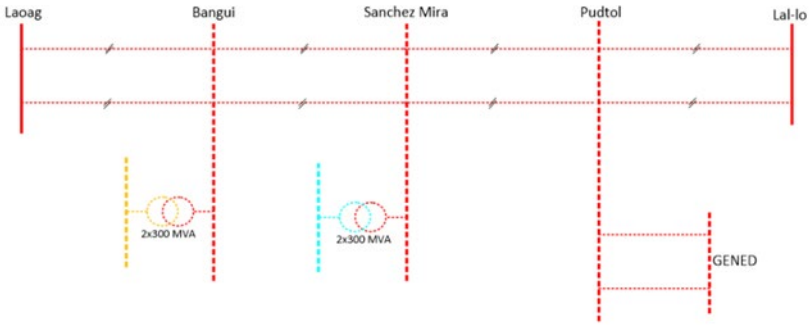
TRANSMISSION LINE

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
• To accommodate these incoming Renewable Energy (RE) plants		Associated equipment, 7-69 kV PCB and associated equipment			



230 kV PROJECTS

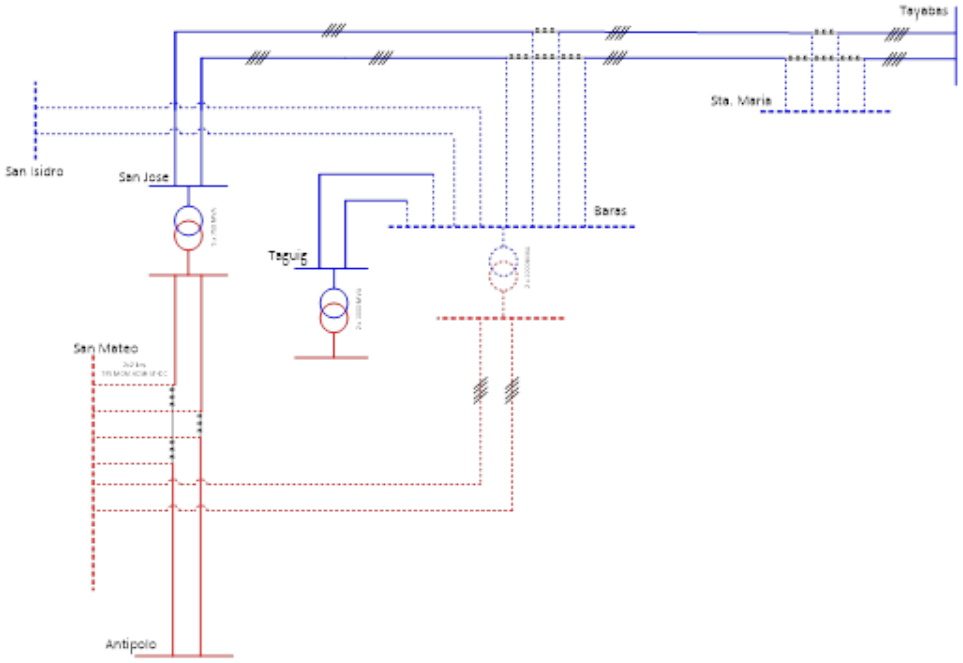
Northern Luzon 230 kV Loop • To provide new transmission corridor to accommodate renewable energy and other power plants in the Northern part of Luzon • To ensure the system reliability and operational flexibility in the Ilocos Region and Cagayan Valley through the 230 kV looping	• Generation Entry • ERC-Approved	• Laoag 230 kV SS: 4-230 kV PCB and associated equipment • Bangui 230 kV SS: 2x300 MVA 230/115 kV Power Transformer, 14-230 kV PCB and associated equipment, 18-115 kV PCB and associated equipment, 4x50 MVAR, 230 kV Shunt Reactor, 4x25 MVAR, 115 kV Capacitor • Sanchez Mira 230 kV SS: 2x300 MVA 230/69 kV Power Transformer, 18-230 kV PCB and associated equipment, 8-69 kV PCB and associated equipment, 4x25 MVAR, 230 kV Shunt Reactor, 4x25 MVAR, 230 kV Capacitor • Pudtol 230 kV SS: 10-230 kV PCB and associated equipment • Lal-lo 230 kV SS: 4-230 kV PCB and associated equipment	• Laoag – Bangui 230 kV TL: ST-DC, 2-795 MCM ACSR/AS, 50 km (2x573 MW) • Lal-lo – Pudtol 230 kV TL: ST-DC, 2-795 MCM ACSR/AS, 38 km (2x573 MW) • Bangui – Sanchez Mira 230 kV TL: ST-DC, 2-795 MCM ACSR/AS, 70 km (2x573 MW) Pudtol – Sanchez Mira 230 kV TL: ST-DC, 2-795 MCM ACSR/AS, 57 km (2x573 MW)	• Ilocos Norte • Apayao • Cagayan	• 34,069 M • May 2030



** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

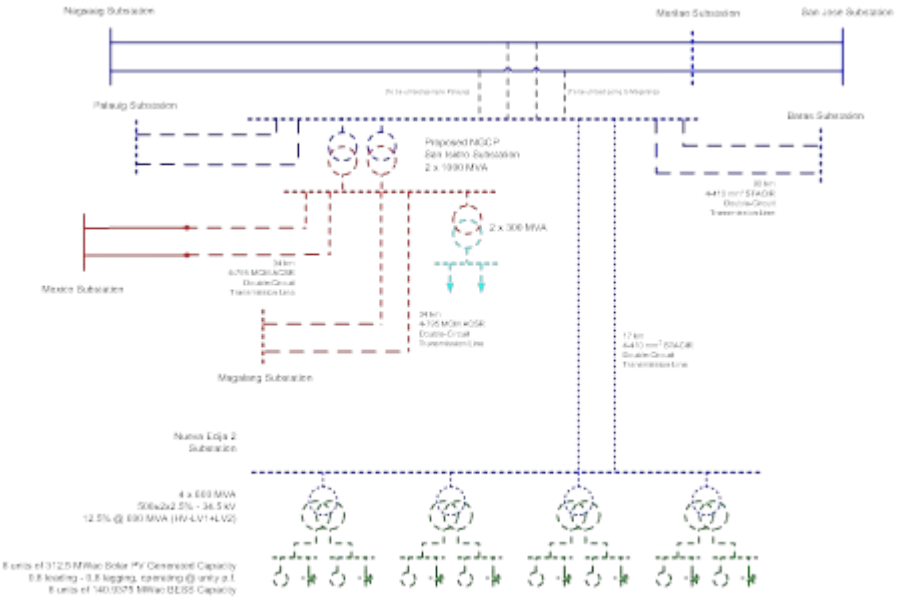
SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
500 kV PROJECTS					
Baras 500 kV Substation • To accommodate the potential renewable energy plants in the province of Rizal to supply the loads of Metro Manila.	• Generation Entry • System Reliability • For Filing	• Baras 500 kV SS: 2x1000 MVA, 500/230 kV Power Transformer, 14-500 kV PCB and associated equipment, 14-230 kV PCB and associated equipment • San Mateo 230 kV SS: 2-230 kV PCB and associated equipment	• Taguig 500 kV TL Diversion to Baras SS: ST-DC, 4-795 MCM ACSR, 1.5 km (2x2494 MW) • San Jose 500 kV TL Diversion to Baras SS: ST-DC, 4-795 MCM ACSR, 1 km (2x2494 MW) • Tayabas/Sta. Maria 500 kV TL Diversion to Baras SS: ST-DC, 4-795 MCM ACSR, 5 km (2x2494 MW) • Baras – San Mateo 230 kV TL: ST- DC, 4-795 MCM ACSR, 25 km (2x1148 MW)	• Rizal	• 16,371 M • Sep 2032
San Isidro 500 kV Substation Project • The project involves the development of a new drawdown substation at San Isidro, Nueva Ecija to accommodate the potential generation and address the load growth in Central Luzon.	• Generation Entry • For Filing	Stage 1: • San Isidro 500 kV SS: 10-500 kV PCB and associated equipment Stage 2: • San Isidro 500 kV SS: 2x1000 MVA, 500/230 kV Power Transformer, 2x300 MVA, 230/69 kV Power Transformer, 2-500 kV PCB and associated equipment, 12-230 kV PCB and associated equipment, 6-69 kV PCB and associated equipment	Stage 1: • San Isidro "Bus-in" to Nagsaag–San Jose 500 kV TL: ST-DC, 4-795 MCM ACSR, 4.6 km (2x2494 MW) • San Isidro "Bus-in" to Nagsaag–San Jose 500 kV TL: ST-DC, 4-410 mm^2 TACSR, 4.6 km (2x4234 MW) Stage 2: • San Isidro – Baras 500 kV TL: ST-DC, 4-410 mm^2 TACSR, 90 km (2x4234 MW) • San Isidro – Magalang 230 kV TL: ST-DC, 2-410 mm^2 TACSR, 34 km (2x974 MW) • San Isidro diversion to Mexico 230 kV TL: ST-DC, 2-410 mm^2 TACSR, 34 km (2x974 MW)	• Nueva Ecija	• 46,105 M • Stage 1: May 2031 • Stage 2: Jul 2034

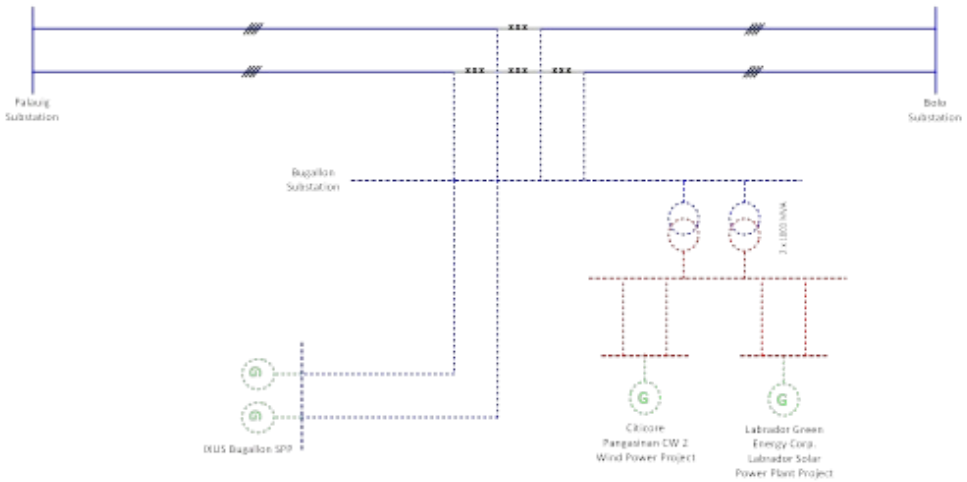


SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
		• Baras 500 kV SS: 2-500 kV PCB and associated equipment	• San Isidro – Gapan 69 kV TL/ San Isidro – San Isidro 69 kV TL: SP/ST-DC, 1-410 mm^2 TACSR, 3 km (2x146 MW)		



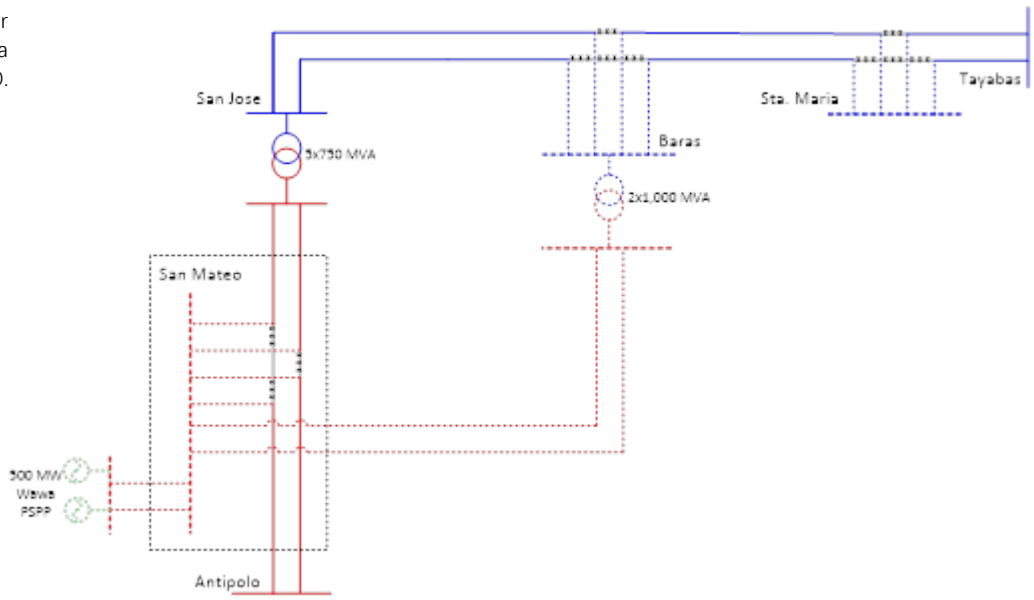
Bugallon 500 kV Substation Project • Aims to accommodate the bulk generated power from Pangasinan to the load centers in central Luzon and Metro Manila	• Generation Entry • For Filing	• Bugallon 500 kV SS: 2x1000 MVA, 500/230 kV Power Transformer, 4x200 MVAR Shunt Capacitor, 14-500 kV PCBs and associated equipment, 12-230 kV PCBs and associated equipment,	• Palauig – Bugallon 500 kV "Bus-in" TL: ST-DC, 4-410 mm^2 TACSR, 1.5 km (2x4234 MW) • Bolo – Bugallon 500 kV "Bus-in" TL: ST-DC, 4-410 mm^2 TACSR, 1.5 km (2x4234 MW)	• Pangasinan	• 10, 691 M • Jan 2033



230 kV PROJECTS

San Mateo 230 kV Substation Project	• Generation Entry • For Filing	• San Mateo 230 kV SS: 10-230 kV PCBs and associated equipment	• San Mateo "Bus-in" to San Jose - Antipolo 230 kV TL:	• Rizal	• 3,886 M • Jun 2032

SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
• The Project will accommodate the entry of 500 MW Wawa Pumped-Storage Power Plant Project. This will also serve as a future drawdown substation of MERALCO.			ST-DC, 4-795 MCM ACSR 2x2 km (2x1148) 		
Luzon Power Circuit Breaker for Grid Connection Project 1 • To accommodate several incoming generating power plants in the Luzon Grid	• Generation Entry • System Reliability • For Filing	• Binga 69 kV SS: 1-69 kV PCB and associated equipment • Botolan 230 kV SS: 4-230 kV PCB and associated equipment • Castillejos 230 kV SS: 2-230 kV PCB and associated equipment • Concepcion 69 kV SS: 1-69 kV PCB and associated equipment • Gamu 230 kV SS: 2-230 kV PCB and associated equipment • Concepcion 69 kV SS: 1-69 kV PCB and associated equipment • Subic 230 kV SS: 3-230 kV PCB (Outdoor GIS Type) and associated equipment • Lal-lo (Magapit) 230 kV SS: 4-230 kV PCB and associated equipment • Lamao 230 kV SS: 3-230 kV PCB and associated equipment • Laoag 115 kV SS: 1-115 kV PCB and associated equipment • Mariveles 230 kV SS: 8-230 kV PCB and associated equipment		• Zambales • Tarlac • Isabela • Cagayan • Bataan	• 5,642 M • Jan 2030
Luzon Power Circuit Breaker for Grid Connection Project 2 • To accommodate several incoming generating power plants in the Luzon Grid	• Generation Entry • System Reliability • For Filing	• Bay 230 kV SS: 1x100 MVA, 230/69 kV Power Transformer (Works only), 1-230 kV PCB and associated equipment, 2-69 kV PCB and associated equipment • Pagbilao 230 kV SS: 8-230 kV PCB and associated equipment • Tayabas 230 kV SS: 8-230 kV PCB and associated equipment		• Laguna • Quezon • Batangas • Ilocos Norte • Pangasinan • Nueva ecija	• 8,543 M • Jan 2030

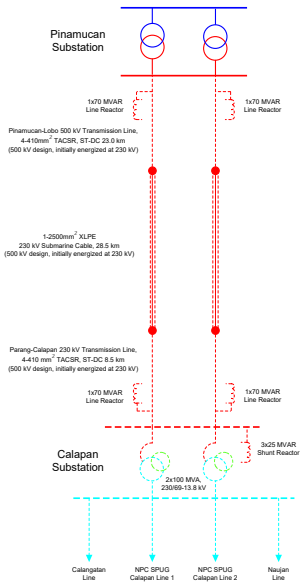
SUBSTATION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
		• Pinamucan 500 kV SS: 4-500 kV PCB and associated equipment • Pinili 230 kV SS: 4-230 kV PCB and associated equipment • Naga 230 kV SS: 4-230 kV PCB and associated equipment • Dasol kV 230 SS: 8-230 kV PCB and associated equipment • Malaya 230 kV CS: 4-230 kV PCB and associated equipment • Sampaloc 230 kV SS: 4-230 kV PCB and associated equipment			
Luzon Power Circuit Breaker for Grid Connection Project 3 • To accommodate several incoming generating power plants in the Luzon Grid	• Generation Entry • System Reliability • For Filing	• Bolo 500 kV SS: 4-500 kV PCB and associated equipment, 4-230 kV PCB and associated equipment • Naga 69 kV SS: 1- 69 kV PCB and associated equipment • Bolo 500 kV SS: 4-500 kV PCB and associated equipment, 4-230 kV PCB and associated equipment • Naga 69 kV SS: 1- 69 kV PCB and associated equipment • San Manuel 69 kV SS: 12-69 kV PCB and associated equipment • Castillejos 230 kV SS: 2-230 kV PCB and associated equipment • Hermosa 69 kV SS: 1-69 kV PCB and associated equipment, 69 kV XLPE Lines (SS Portion) • San Juan 230 kV SS: 2-230 kV PCB and associated equipment • Tuy 69 kV SS: 4-69 kV PCB and associated equipment • Labo 69 kV SS: 1- 69 kV PCB and associated equipment • Lumban 230 kV SS: 4-230 kV PCB and associated equipment • Balingueo 69 kV SS: 2-69 kV PCB and associated equipment • Hermosa 69 kV SS: 1-69 kV PCB and associated equipment • Tuy 69 kV SS: 6-69 kV PCB and associated equipment • Mexico 69 kV SS: 1-69 kV PCB and associated equipment • Gamu 69 kV SS: 2 - 69kV PCB and associated equipment • Tuy 230 kV SS: 4-230 kV and associated equipment • Laoag 230 kV S/S: 2-230 kV and associated equipment		• Various provinces in Luzon	• 1,501 M • Jan 2030

VOLTAGE IMPROVEMENTS

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
230 kV PROJECTS					
Laoag Power Quality Improvement Project • To address the Voltage fluctuations in Laoag which will worsen with the commercial operation of additional wind plants in the area. • To increase the maximum allowable VRE generation dispatch which is limited due to the voltage fluctuation problem.	• System Reliability • For Filing	• Laoag 230 kV SS: 75 MVAR GFM-STATCOM (Synchronous Condensers and Static Synchronous Compensators), 1x25 MVAR Capacitor Bank, 2-230 kV PCB (Gen Purpose) and associated equipment, 1-230 kV PCB and associated equipment		• Laoag	• 2,160 M • Dec 2026

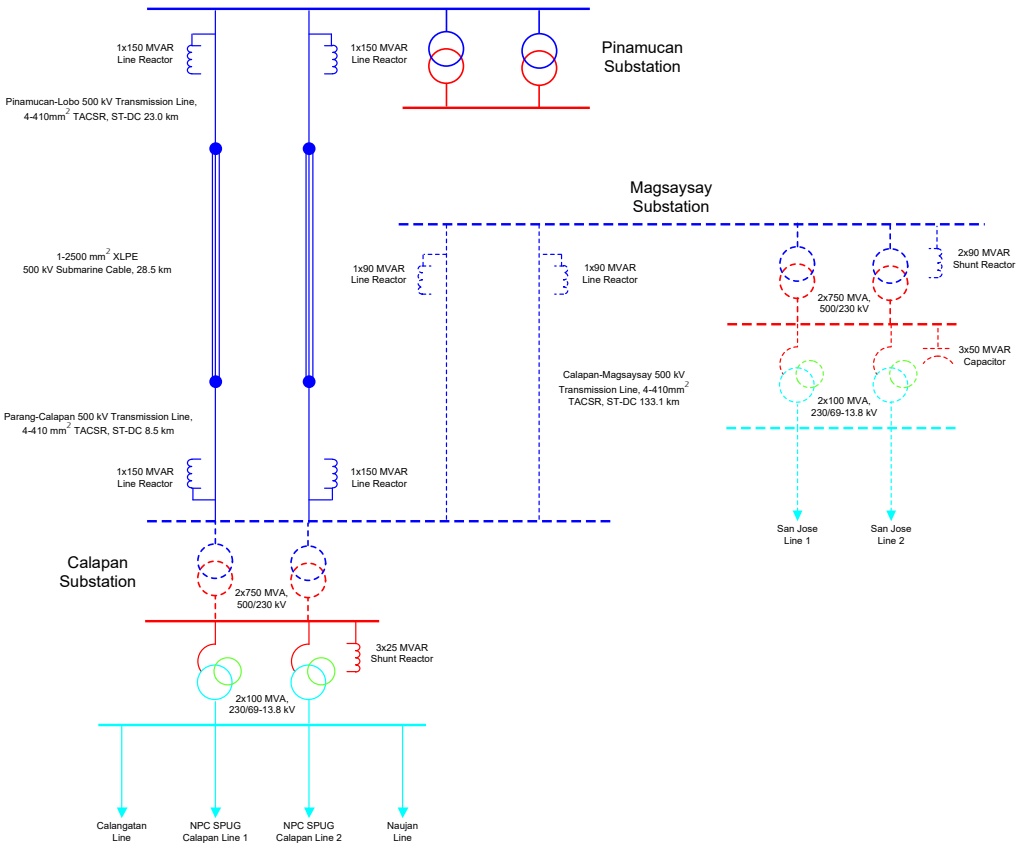
INTERCONNECTION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
500 kV PROJECTS					
Batangas – Mindoro 500kV Interconnection and Backbone Project CEPNS • To link the Mindoro Island to the Luzon Grid through a 28.5 km submarine cable and a 31.5 km overhead transmission line.	• Island Interconnection • Generation Entry • Awaiting ERC Approval	Stage 1: • Pinamucan 230 kV SY: 4-230 kV PCB and associated equipment, 2-70 MVAR 230 kV Line Reactors • Calapan 230 kV SY: 2-100 MVA, 230/69-13.8 kV Transformers, 11-230 kV PCB and associated equipment, 3-25 MVAR 230 kV Shunt Reactor, 2-70 MVAR 230 kV Line Reactor, 10-69 kV PCB and associated equipment	Stage 1: • Pinamucan – Lobo CTS 500 kV TL (initially energized at 230 kV), ST-DC 4-410 mm^2 TACSR, 23 km (2x1,952 MW). • Lobo CTS – Parang CTS 230 kV Submarine Cable, DC, 1-2,500 mm^2 XLPE, 28.5 km (2x600 MW). • Parang CTS – Calapan 230 kV Transmission Line, ST-DC 4-410 mm^2 TACSR, 8.5 km (2x1,952 MW). • Calapan "Cut-in" to NPC SPUG Calapan – Calangatan 69 kV Transmission Line, ST-DC 1-795 MCM ACSR, 4.5 km (2x87 MW). • Calapan "Cut-in" to NPC SPUG Calapan – Naujan 69 kV Transmission Line, ST-DC 1-795 MCM ACSR, 4.0 km (2x87 MW).	• Batangas • Mindoro	• 45,593.74 M • Sep 2027
• To provide a higher transfer capacity to the Batangas-Mindoro link, supporting the connection of solar	Stage 2: • Pinamucan 500 kV SS: 6-500 kV PCB and associated equipment, 2-150	Stage 2: • Calapan – Magsaysay 500 kV TL (initially energized at 230 kV), ST-DC	• Batangas • Mindoro	• 45,062.37M • Dec 2030	



INTERCONNECTION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
and onshore wind power projects as envisioned in the CREZ, and higher potential of offshore wind projects at the area between Mindoro and Panay as identified from the DOE and WBG roadmap		MVAR 500 kV Line Reactor, 2-90 MVAR 500 kV Shunt Reactor • Calapan 500 kV SS: 2-750 MVA, 500/230 kV Transformer, 15-500 kV PCB and associated equipment, 2-150 MVAR 500 kV Line Reactor, 3-90 MVAR 500 kV Shunt Reactor • Magsaysay 500 kV SS: 2-750 MVA, 500/230 kV Transformer, 2-100 MVA, 230/69-13.8 kV Transformer, 10-500 kV PCB and associated equipment, 9-230 kV PCB and associated equipment, 6-69 kV PCB and associated equipment, 2-90 MVAR 500 kV Line Reactor, 2-90 MVAR 500 kV Shunt Reactor, 3-50 MVAR 230 kV Capacitor	4-410 mm^2 TACSR, 133.1 km (2x4,234 MW). • Magsaysay "Cut-in" to San Jose – NPC OMCPC 69 kV Transmission Line, ST-DC 1-795 MCM ACSR, 20.9 km (2x87 MW).		

•



The updated total cost for BMIBP is inclusive of the actual cost incurred in the preconstruction activity of the 230 kV designed BMIP. In addition, the cost increase is due to the upgrade of the voltage level for a higher transmission capacity to cater for the entry of Offshore Wind Projects.

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

Table 4.2: List of Additional Proposed Projects in Luzon for the period 2041-2050

Project Name	Description	Location
TRANSMISSION LINE		
230 kV PROJECTS		
Binga – La Trinidad 230 kV Transmission Line	• To provide Grid reliability During Maximum Dispatch of the generating plants on situated in the Northern part of Luzon	Benguet
SUBSTATION		
230 kV PROJECTS		
Nagsaag 500 kV Expansion	• To accommodate the entry of power plants through the installation of a 3rd 600 MVA 500/230 kV Transformer bank at Naga 500 kV SS	San Manuel, Pangasinan
69 kV PROJECTS		
Mankayan 69 kV Switching Station	• To relieve the undervoltage issues experienced at the La Trinidad-Sagada 69 kV Transmission Line	Mankayan, Benguet

4.3.2 ETC Adjustments

A. ERC-Approved Projects

Table 4.3: ETC Updates on Luzon ERC Approved Projects

	Ongoing Projects	TDP 2024-2050	Revised ETC	Remarks
1	**Tuy 500 kV Substation – stage 1**	Jun 2025	**Jun 2026**	**Overall Accomplishment: 88.77%**
	Tuy – Dasmarinas 500kV TL		**Dec 2025**	• ROW status: 133/135 Workable Tower Sites (TS); TS: 2 TS under expropriation case (EC) • In-between Tower Sites (IBTS): 37 Lots under EC • Awaiting issuance of Writ of Possession (WOP) for 1 TS. 15 TS with recalled WOP, awaiting court decision in the proposed line route.
	Tuy – Sta. Rita 230kV Line Extension		**Jun 2026**	• 29 TS affected by re-routing • 4 TS affected properties controlled by DAR (Department of Agrarian Reform). • Awaiting issuance of Building Permit for the 7 Workable TS
	Calaca/Calatagan – Nasugbu 69kV Line Extension		**May 2025**	• 1 PS under EC.
	Tuy Substation		**May 2025**	• Awaiting completion of the TL portion
	Dasmarinas Substation		**Dec 2025**	• Awaiting completion of the 500kV TL portion
	Sta. Rita Substation		**Jun 2026**	• Awaiting completion of the 230kV TL portion
	Calaca Substation		**Jun 2026**	• Awaiting completion of the 230kV TL portion
2	**New Antipolo 230 kV Substation**	Jun 2025	**Dec 2025**	**Overall Accomplishment: 93.86%** • ROW access issue from Sun Valley Homeowners
3	**Taguig 500 kV Substation**	Dec 2025	**Dec 2026**	**Overall Accomplishment: 37.41%**
	Taguig Bus-in to Muntinlupa – Paco Transmission Line		**Dec 2025**	• ROW status: 25/28 Workable PS • ROW issue on Brgy. Buli, Muntinlupa (2 PS)

	Ongoing Projects	TDP 2024-2050	Revised ETC	Remarks
	Taguig – Baras 500 kV (Land Portion) Transmission Line		**Dec 2026**	• 4 TS under EC • Row Status: Workable TS: 29/53 TS • 4 TS under EC, 20 TS for EC • LGU Permit Issues
	Taguig – Baras 500 kV (Lake Portion) Transmission Line		**Dec 2026**	• ROW status: 24/48 Workable TS; TS: 22 TS under negotiation: 2 TS for filing for EC • IBTS: 77 Lots under negotiation • With re-routing request from Binangonan LGU that will result to conflict with LLDA, DPWH's LLRN and DSHUD Projects
	SS: Taguig 500kV		**Dec 2025**	
4	**Manila (Navotas) 230 kV Substation**	Dec 2026	**Jun 2028**	**Overall Accomplishment: 35.75%**
	SS: Manila (Navotas)		**Sep 2025**	
	TL: Navotas–Marilao		**Jun 2028**	• ROW status:3/118 Workable TS • Awaiting adjustment in Obando area; With proposed rerouting at the fish port area in Navotas • 108 TS under negotiation, 1 TS under EC, 6 TS for EC • IBTS: 249 Lots under negotiation
5	**Tuguegarao – Lal-lo (Magapit) 230 kV Transmission Line**	Sep 2025	**Mar 2026**	**Overall Accomplishment: 93.29%**
	Tuguegarao – Lal-Lo (Magapit) Transmission Line		**Mar 2026**	• ROW status: 160/178 Workable TS; 4 TS under negotiation: 14 TS under EC • IBTS: 530/612 Lots turned-over: 39 lots w/o PTE: 15 Lots under negotiation: 23 Lots under EC: 8 Lots for filing • Serve notice to vacate to 152 defendants
	Tuguegarao SS/Lal-lo (Magapit) Substation		**Mar 2026**	• Ready for energization
6	**Clark – Mabiga 69 kV Transmission Line**	Dec 2025	**Dec 2026**	• Proposed route is the Mc. Arthur highway alignment • Affected by CDC and DOTr Development Projects
7	**South I Luzon Substation Upgrading**	Stage 1: Aug 2025 Stage 2: Aug 2025	**Jul 2026**	**Overall Accomplishment: 79.33%**
	San Juan Substation		**Jul 2026**	• Dependent on the approval of MOA between NGCP and PSALM.
8	**North Luzon Substation Upgrading**	Stage 1: Sep 2025 Stage 2: Dec 2024	**Stage 2: Sep 2025**	**Overall Accomplishment: 97.09%**
	Bacnotan Substation		**Sep 2025**	• Pre-commissioning activities ongoing
9	**Luzon Voltage Improvement Project - 3**	Jun 2025	**Dec 2025**	**Overall Accomplishment: 99.58%**
	Antipolo Substation		**Dec 2025**	• For filing of EC regarding access road going to substation site
10	**Eastern Albay 69 kV Transmission Line, Stage 2**	Apr 2026	**Dec 2026**	
	Sto. Domingo–Tabaco 69 kV Transmission Line		**Dec 2026**	• ROW status: 5.75 TS under negotiation: 3.5 TS under EC: 28.5 TS for filing • IBTS: 11 Lots turned-over: 1 Lot without Permit to Enter (PTE): 238 Lots under negotiation: 19 Lots for filing for EC

B. Recently Approved Projects

The ETC for the following recently approved projects have been adjusted to provide accurate and achievable project completion dates:

Table 4.4: Recently Approved Projects

	Recently Approved Projects	TDP 2024-2050	Revised ETC
1	Northern Luzon 230 kV Loop	Mar 2028	May 2030
2	Bolo – Balaoan 500 kV Transmission Line	Mar 2028	Oct 2030
3	Balaoan – Laoag 500 kV Transmission Line	Mar 2028	Aug 2031
4	Capas 230 kV Substation	Dec 2029	Oct 2029
5	Quezon – Marinduque Interconnection	Dec 2030	Dec 2030

C. Awaiting ERC Approval

For projects that are currently pending approval from the ERC, a key adjustment has been made to the projects' ETC. Specifically, the revised ETC reflects a scenario where the Final Determination (FD) of NGCP MAR for the 5th Regulatory Period (5RP) is issued by the ERC in December 2025. This pivot in the ETC is not yet based on a confirmed approval date but rather serves as a planning assumption. By assuming a December 2025 issuance of 5RP FD which is ERC's approval, the project timelines and resource allocation are determined, allowing for more proactive planning and mitigation of potential delays. It is important to note that this is a hypothetical approval date used for planning purposes, and the actual date of 5RP FD issuance may vary.

Table 4.5: Luzon Ongoing Projects

	Name of the Project	TDP 2024-2050	Revised ETC
1	Western 500 kV Backbone – 2	Jun 2027	May 2028
2	Ilian 500 kV Substation Expansion	Mar 2027	Jun 2027
3	Pinamucan 500 kV Substation	Oct 2027	Feb 2029
4	San Simon 230 kV Substation	May 2027	May 2028
5	Pinili 230 kV Substation	Dec 2026	Apr 2028
6	Nagsaag – Tumana 69 kV Transmission Line	Jul 2026	Nov 2027
7	Abuyog 230 kV Substation	Nov 2026	Mar 2028
8	South Luzon Substation Upgrading 2	Apr 2026	Jun 2027
9	North Luzon Substation Upgrading 2	Jul 2028	Mar 2027

Table 4.6: Luzon New projects with ETC Adjustments

	Name of the Projects	TDP 2024-2050	Proposed ETC
1	Bolo 5th Bank	Jan 2029	Dec 2027
2	Santiago-Magat 230 kV Transmission Line Reconductoring	Dec 2025	Dec 2028
3	Magalang 230 kV Substation	Dec 2027	Dec 2029
4	Pagbilao-Tayabas 500 kV Transmission Line	Mar 2028	Dec 2029
5	Malaya 230 kV Collector Station	Mar2028	Apr 2030
6	Masiit 230 kV Collector Station	Dec 2030	Jun 2031
7	Sta. Maria 500 kV Substation	Dec 2030	Aug 2031
8	Taguig – Silang 500 kV Transmission Line	Feb 2031	Dec 2031
9	Baras 500 kV Substation	2031-2040	Sep 2032
10	Luzon Primary Equipment Substation Upgrading	Nov 2026	Dec 2032
11	Silang 500 kV Substation	Feb 2028	Sep 2029
12	Pasay 230 kV Substation	Dec 2029	Feb 2031

13	Baler 230 kV Substation	Apr 2030	Mar 2031
14	Sampaloc 230 kV Substation	Dec 2028	Mar 2031
15	Plaridel 230 kV Substation	Feb 2030	Dec 2031
16	San Isidro 500 kV Substation	2031-2040	Stage 1: May 2031 Stage 2: Jul 2034
17	Bugallon 500 kV Substation	2031-2040	Jan 2033
18	San Mateo 230 kV Substation	2031-2040	Jun 2032
19	Tanauan 230 kV Substation	Jan 2028	Apr 2032
20	Kawit 230 kV Substation	May 2028	Dec 2032
21	San Fabian 230 kV Substation	Oct 2032	Dec 2033
22	Luzon PCB for Grid Connection (LPCBGC)	Dec 2028	Jan 2030
23	Luzon Voltage Improvement 6	Mar2029	Sep 2029
24	Luzon Voltage Improvement 5	Dec 2030	Jun 2031
25	Camarines Sur-Catanduanes Interconnection	Dec 2030	Oct 2032

Table 4.7: Luzon projects without ETC Adjustments

	Name of the Projects	ETC
1	Bataan – Cavite Transmission Line Feasibility Study	To be assessed
2	Relocation of Steel Poles along Hermosa – Duhat 230 kV Transmission Line	Dec-2025
3	Ambuklao – Binga 230 kV Transmission Line Upgrading Project	Dec-2025
4	Binga – San Manuel 230 kV Transmission Line	Dec-2025
5	Taguig – Taytay 230 kV Transmission Line	Dec-2030
6	La Trinidad – Calot 69 kV Transmission Line	Dec-2028
7	Concepcion – Sta. Ignacia 69 kV Transmission Line	Phase 1: Jul 2026 Phase 2: Oct 2027
8	Tuguegarao – Enrile 69 kV Transmission Line	Oct 2030
9	Daraga – Bitano 69 kV Transmission Line	Dec 2030
10	Marilao 500 kV Substation	Jun 2027
11	Tuy 500/230 kV Substation Project (Stage 2)	Oct 2030
12	Porac 230 kV Substation	Nov 2026
13	Castillejos 230 kV Substation	Dec 2025
14	Dasol 230 kV Substation	Dec 2030
15	Minuyan 115 kV Switching Station	Feb 2030
16	Luzon Voltage Improvement Project 4	Dec 2026
17	Nagsaag – Santiago 500 kV Transmission Line	Oct 2031
18	Pinamucan – Tuy 500 kV Transmission Line	Dec 2031
19	Marilao – Mexico 230 kV Transmission Line	Aug 2032
20	Navotas – Doña Imelda 230 kV Transmission Line	May 2033
21	Cabanatuan –Sampaloc – Nagsaag 230 kV Transmission Line	Jul 2033
22	Tower Resiliency of Bicol Transmission Facilities	Apr 2034
23	Bauang – La Trinidad 230 kV Transmission Line Upgrading	Dec 2031
24	Tagkawayan 500 kV Substation	Feb 2033
25	Palauig 500 kV Substation	Dec 2033
26	Olongapo 230 kV Substation Upgrading	Oct 2033
27	Palawan – Mindoro Interconnection Project (Stage 1)	Feb 2033
28	Baras – Pinamucan 500 kV Transmission Line	2031-2040
29	Bataan – Cavite 500 kV Transmission Line	2031-2040
30	San Isidro – Palauig 500 kV Transmission Line	2031-2040
31	San Jose – San Rafael 230 kV Transmission Line Upgrading	2031-2040
32	Bauang – Balaoan 230 kV Transmission Line Upgrading	2031-2040
33	Cabanatuan – San Rafael - Mexico 230 kV Transmission Line Upgrading	2031-2040

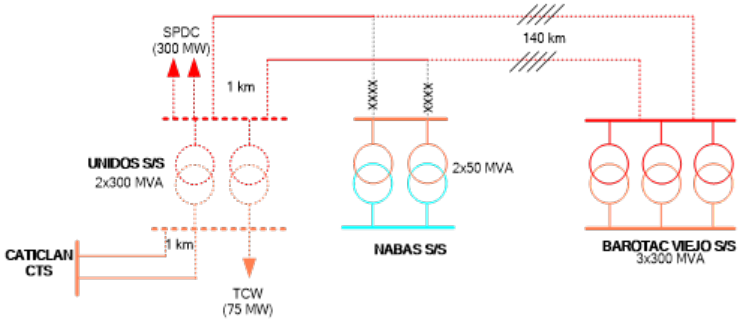
34	Hermosa – Mexico 230 kV Transmission Line Upgrading	2031-2040
35	Calaca – Salong 230 kV Transmission Line 2	2031-2040
36	Taguig – Muntinlupa 230 kV Transmission Line 2	2031-2040
37	Sagada – San Esteban 230 kV Transmission Line	2031-2040
38	Dinadiawan - Santiago 230 kV Transmission Line	2031-2040
39	Baler – Dinadiawan 230 kV Transmission Line	2031-2040
40	Gamu – Santiago 230 kV Reconductoring	2031-2040
41	South Luzon 69 kV Transmission Line Upgrading 1	2031-2040
42	North Luzon 69 kV Transmission Line Upgrading 1	2031-2040
43	Mexico – Clark 69 kV Transmission Line Upgrading	2031-2040
44	Marilao 500 kV Substation Expansion	2031-2040
45	Bacolor 500 kV Substation	2031-2040
46	Dasmariñas 500 kV Substation Upgrading	2031-2040
47	Kalinga 500 kV Substation	2031-2040
48	Taguig EHV Substation Expansion	2031-2040
49	Castillejos 500 kV Expansion	2031-2040
50	Santiago 500 kV Substation Expansion	2031-2040
51	Naga 500 kV Substation Expansion	2031-2040
52	Alas - Asin 500 kV Substation	2031-2040
53	Calatagan 500 kV Substation	2031-2040
54	Balsik 500 kV Substation Expansion	2031-2040
55	San Agustin 230 kV Substation	2031-2040
56	Guagua 230 kV Substation	2031-2040
57	Apalit 230 kV Substation	2031-2040
58	Iriga 230 kV Substation	2031-2040
59	Malvar 230 kV Substation	2031-2040
60	Balanga 230 kV Substation	2031-2040
61	FBGC 230 kV Substation	2031-2040
62	Valenzuela 230 kV Substation	2031-2040
63	Nuvali 230 kV Substation	2031-2040
64	Cabatuan 230 kV Substation	2031-2040
65	North Luzon Substation Upgrading 3	2031-2040
66	South Luzon Substation Upgrading 3	2031-2040
67	Bustos 230 kV Substation	2031-2040
68	Sariaya 230 kV Substation	2031-2040
69	Presentacion 230 kV Substation	2031-2040
70	North Luzon Substation Upgrading 4	2031-2040
71	South Luzon Substation Upgrading 4	2031-2040
72	San Marcelino 230 kV Collector Station	2031-2040
73	Peninsula, Masiit, and Calamba 230 kV Collection Stations	2031-2040
74	Luzon Voltage Improvement Project 7	2031-2040
75	Luzon Voltage Improvement Project 8	2031-2040
76	Kabugao 500 kV Substation	2041-2050
77	Naga – Tublijon 500 kV TL Project	2041-2050
78	La Trinidad – Sagada 230 kV Transmission Line	2041-2050
79	Pasay – Limay 230 kV Transmission Line	2041-2050
80	Capas – Bolo 230 kV Transmission Line	2041-2050
81	Alaminos EHV Substation	2041-2050
82	Matnog 230 kV Substation	2041-2050

4.4 VISAYAS GRID

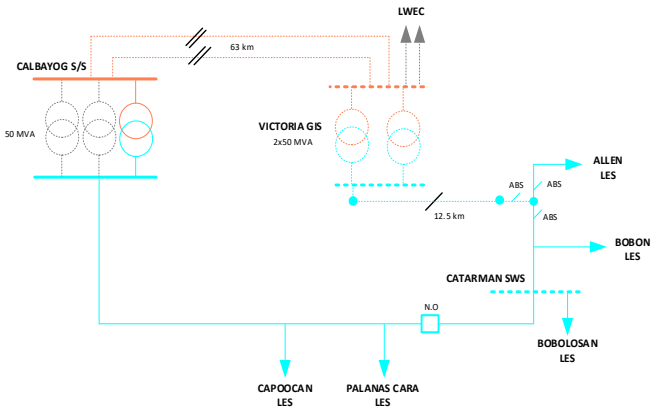
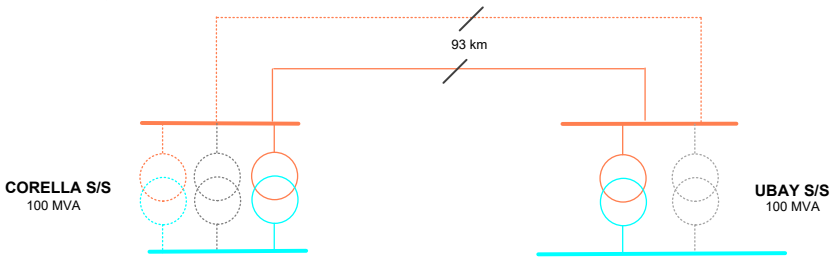
4.4.1 Visayas Grid Project Updates

Table 4.8: List of Visayas Transmission Projects

TRANSMISSION LINE					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
230 kV PROJECTS					
Barotac Viejo – Unidos 230 kV Transmission Line Project • To accommodate the incoming power plants in Northern Panay • To prevent overloading of the 138 kV Transmission corridor in Northern Panay during normal and N-1 conditions	• Generation Entry • Awaiting ERC approval	Stage 1: • Unidos GIS SS (New): 7-230 kV PCB (GIS) and associated equipment; 6- 138 kV PCB (GIS) and associated equipment Stage 2: • Unidos GIS SS (New): 2x300 MVA 230/138-13.8 kV Power Transformers and accessories. • Barotac Viejo SS (Expansion): 4-230 kV PCB and associated equipment	Stage 1: • Bus-in of Unidos SS to Nabas – Caticlan TL (Going to Caticlan): 138 kV TL, ST-DC, 1-795 MCM ACSR, 1 km (2x172 MW) • Bus-in of Unidos SS to Nabas – Caticlan TL (Going to Nabas): 230 kV TL, ST-DC, 4-795 MCM ACSR, 1 km. (2x1,148 MW) • Upgrading of Barotac Viejo – Dingle 138 kV TL, Stringing of 3rd Circuit with 1-410 mm² STACIR Conductor, and reconductoring of existing lines 1 and 2 with 1-410 mm² STACIR Conductor, DC, 37 km. (3x382 MW) Stage 2: • Barotac Viejo – Unidos 230 kV TL (Extension up to Barotac Viejo), STDC, 4-795 MCM ACSR, 140 km. (2x1,148 MW)	• Panay	• 16,260 M • Stage 1: Dec 2029 • Stage 2: May 2033
138 kV PROJECTS					
Calbayog – Allen Transmission Line Project	• Generation Entry and System Reliability • ERC-approved	• Calbayog SS: 3-138 kV PCB and associated equipment • Catarman SWS: 5-69 kV PCB and associated equipment Victoria GIS: 2x50 MVA Power Transformers and accessories (Redeployment of Power Transformers from Paranas SS and Panitan SS), 11-138 kV PCB and associated equipment; 4 - 69 kV PCB and associated equipment	• Calbayog – Victoria 138 kV TL, ST-DC, 2-795 MCM ACSR, 63 km (2x344 MW) • Victoria – Allen 69 kV TL, SP-SC, 1-795 MCM ACSR, 12.5 km (1x86MW) • Victoria 138 kV XLPE U/G, 1C x1000mm² XLPE U/G, 0.12 km • Rerouting of Paranas – Calbayog & Calbayog – Catarman 69 kV Lines,1x336.4 MCM ACSR, SP-SC, 0.5 km	• Samar	• 8,897 M • Dec 2027



TRANSMISSION LINE

Project Name and Justification	Project Driver and Status	Project Components: Substation	Project Components: Transmission Line	Location	Project Cost (Million Pesos) ETC
• To accommodate and provide reliability to the existing and future power plants connected in Ubay area					
Corella – Ubay 138 kV Line 2 Stringing Project	• Generation Entry and System Reliability • Awaiting ERC approval	• Corella SS (Expansion): 1-138kV PCB and associated equipment • Ubay SS (Expansion): 3-138kV PCB and associated equipment, 2- 69kV PCB and associated equipment, transfer of 2x5 MVAR Capacitor Bank from Trinidad LES to Ubay	• Corella – Ubay 138 kV TL 2 138 kV TL, ST-DC2, 1-795 MCM ACSR, 93 km (1x 172 MW)	• Bohol	• 2,121 M • Sep 2030
• To accommodate and provide reliability to the existing and future power plants connected in Ubay area					

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

SUBSTATION

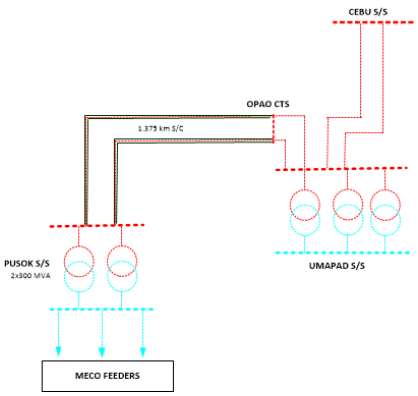
Project Name and Justification	Project Driver and Status	Project Components: Substation	Project Components: Transmission Line	Location	Project Cost (Million Pesos) ETC*
500 kV PROJECTS					
Luzon – Visayas HVDC Bipolar Operation Project	• Generation Entry • Awaiting ERC approval	Luzon • Milaor 500 kV SS: 2x1,000 MVA 500/230-13.8 kV, 2x90 MVAR 500 kV Line Reactor, 2x100 MVAR 230 kV Shunt Capacitor, 12-500 kV PCBs and associated equipment, 12-230 kV PCBs and associated equipment • Naga (Luzon) 230 kV SS (Expansion): 6-230 kV PCBs and associated equipment	Luzon • Swinging of Pagbilao – Milaor 500 kV-designed TL at Milaor Substation - ST-DC, 4-795 MCM ACSR/AS 0.16 km (2x2,494 MW) • Swinging of Pagbilao – Milaor 230 kV TL at Milaor Substation - 4-795 MCM ACSR/AS 0.95 km (2x1,148 MW)	• Quezon • Camarines Sur • Leyte	• 22,463 M • Stage 1: Mar 2028 • Stage 2: Dec 2030

SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
• To provide an additional transfer capacity of 440 MW between Luzon and Visayas Island upon completion of the project • To accommodate additional excess generation, and to maximize the power interchange between Luzon, Visayas, and Mindanao		• Pagbilao 500 kV SS (Expansion): 4-500 kV PCBs and associated equipment • Upgrading of Naga Converter Station to Modular Multi-level Voltage Source Converter: 6 sets of 333 MVA, 1-phase, 60Hz, 230/350-13.8kV, ONAN-ODAF-ODAF, Modular multi-level voltage source converter (MMC-VSC) valve, High Voltage DC Filters and Shunt Capacitors, ±350kV DC, Electrode DC Filters and Shunt Capacitors, 4-350 kV PCB and associated Equipment • Replacement of Old Equipment • Consultancy Services Visayas • Upgrading of Ormoc Converter Station to Modular Multi-level Voltage Source Converter: 6 sets of 333 MVA, 1-phase, 60Hz, 230/350-13.8kV, ONAN-ODAF-ODAF, Modular multi-level voltage source converter (MMC-VSC) valve, High Voltage DC Filters and Shunt Capacitors, ±350kV DC, Electrode DC Filters and Shunt Capacitors, 4-350 kV PCB and associated Equipment • Ormoc 230 kV SS: 2-230 kV PCB and associated Equipment	• Swinging of Pagbilao – Milaor 500 kV Transmission Line at Pagbilao Substation 4-795 MCM ACSR/AS 1.0 km (2x2,494 MW		

230 kV PROJECTS

Lapu-lapu 230 kV Substation Project • To unload the Cebu – Mandaue – Lapu-lapu 138 kV Transmission Corridor and Lapu-lapu GIS Substation. • To provide alternative substation capacity to power consumers in Lapu-lapu and Cordova	• Load Growth and System Reliability • Awaiting ERC approval	• Pusok 230 kV GIS SS (New), 2x300MVA 230/69-13.8 kV Power Transformers, 8-230 kV PCB (GIS), 10-69 kV PCB (GIS). • Opao CTS	• Umapad GIS – Opao CTS 230 kV T/L, SP-DC, 2-410 mm^2 STACIR, 1.591 km (2x1,219 MVA) • Umapad GIS Underground Cable, 1C-1600 mm^2 XLPE, Double Circuit, 0.250 km (2x600 MW) **Submarine Cable** • Opao – Pusok 230 kV S/C, 600 MW per circuit, DC, 1.375 km (2x600 MW)	• Cebu	• 3,935 M • Nov 2027



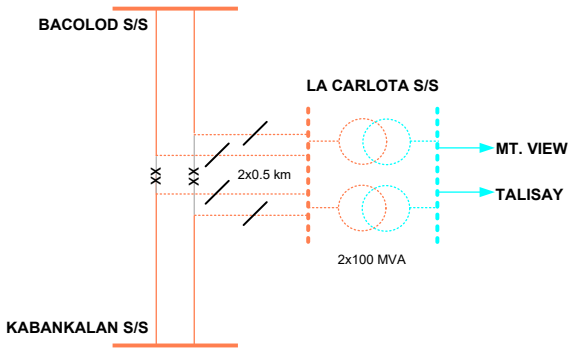
SUBSTATION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
Visayas Substation Upgrading Project • To accommodate the projected demand and avoid overloading of the transformer during N-1	• System Reliability • Awaiting ERC approval	Cebu: • Daanbantayan SS: 150 MVA 230/69 - 13.8 kV Power Transformer, 1-230 kV PCB, 4-69 kV PCB. Leyte • Tabango SS: 1x50 MVA 230/69-13.8 kV Power Transformer, 1-230 kV PCB, 3-69 kV PCB. • Maasin SS: 1x50 MVA 138/69-13.8 kV Power Transformer and accessories Samar: • Calbayog SS: 50 MVA 138/69-13.8 kV Power Transformer, 1-138 kV PCB, 2-69 kV PCB		• Southern Leyte • Leyte • Samar • Cebu	• 1,317 M • Jun 2026
Visayas Substation Upgrading Project 2 • To cater to the load growth in the area and to provide N-1 contingency to the Substations. Replaced transformers will either be redeployed to other Substations or refurbished • To cater the growth in demand in each area and to provide reliability to the customers being served by the substations	• System Reliability • Awaiting ERC approval	Stage 1: Leyte: • Isabel SS: 1x50 MVA 138/69-13.8 kV Power Transformer (1x50 MVA transformer transferred from Calong-calong SS), 3-138 kV PCB, 2-69 kV PCB. (Additional), 9-138 kV PCB, 2-69 kV PCB. (Replacement), Centralized Control Building (CCB), Full upgrading of secondary devices • Tabango SS: 1x50 MVA 230/69-13.8 kV Power Transformer, 2-230 kV PCB, 2-69 kV PCB, CCB, Full upgrading of secondary devices. • Maasin SS: 1x50 MVA 138/69-13.8 kV Power Transformer, 3-138 kV PCB, 9-69 kV PCB, Expansion of Control Room. Samar: • Paranas SS: 2x100 MVA 138/69-13.8 kV Power Transformer (Replacement of 30 MVA and 50 MVA transformers), 9-69 kV PCB, CCB, Full upgrading of secondary devices • Calbayog SS, 1x50 MVA 138/69-13.8 kV Power Transformer, 5-138 kV PCB, 7-69 kV PCB, Full upgrading of secondary devices, CCB. Cebu: • Compostela SS: 2x100 MVA 138/69- 13.8 kV Power Transformer (Replacement of 2x50 MVA transformers), 2-230 kV PCB, 3-69 kV PCB, and Relocation of Warehouse		• Visayas Island	• 14,420 M • Stage 1: Aug 2027 • Stage 2: Oct 2028

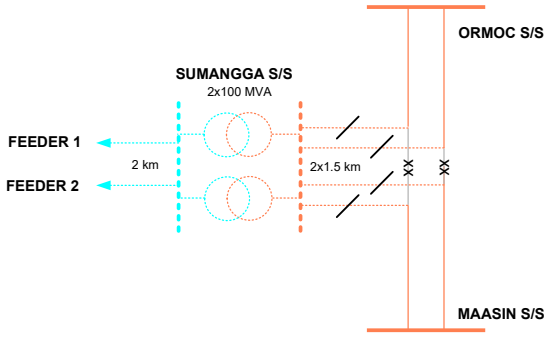
SUBSTATION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
		• Samboan SS: 4-138 kV PCB, 2-69 kV PCB, CCB and Full upgrading of secondary devices • Toledo SS: 3x100 MVA 138/34.5-13.8 kV Power Transformer (Replacement of 3x40 MVA transformers), Transfer of termination of various TL, and CCB • Daanbantayan SS: 1x150 MVA 230/69-13.8 kV Power Transformer, 2-69 kV PCB, CCB. Bohol: • Ubay SS: 1x100 MVA 138/69-13.8 kV Power Transformer, 10-138 kV PCB, 11-69 kV PCB, CCB, and 69 kV line extensions • Corella SS: 1x100 MVA 138/69-13.8 kV Power Transformer, 2-138 kV PCB, 8-69 kV PCB and 69 kV line extensions. Negros: • Kabankalan SS: 2x100 MVA 138/69-13.8 kV Power Transformer (Replacement of 30 and 50 MVA Transformers), 3-138 kV PCB, 4-69 kV PCB, CCB and Telecom Shelter, and Full upgrading of secondary devices • Mabinay SS: 1x50 MVA 138/69-13.8 kV Power Transformer, 4-138 kV PCB, 5-69 kV PCB, CCB and Telecom Shelter, and Full upgrading of secondary devices. Panay: • San Jose SS: 2x50 MVA 138/69-13.8 kV Power Transformer, 6-138 kV PCB, 5-69 kV PCB, Expansion of Control Building • Dingle SS: 2x100 MVA 138/69-13.8 kV Power Transformer (Replacement of 2x50 MVA Transformers), 3-138 kV PCB, 9-69 kV PCB, CCB and Telecom Shelter, and Full upgrading of secondary devices • Barotac Viejo SS: 50 MVA 138/69-13.8 kV Power Transformer (50 MVA Transformer transferred from Iloilo SS), 2-138 kV PCB, 2-69 kV PCB, • Sta. Barbara SS: 1x75 MVA 138/69-13.8 kV Power Transformer (Spare), Upgrading of Secondary Equipment. Cable Stage 2:			

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
SUBSTATION					
		• Panitan SS: 3x100 MVA 138/69-13.8 kV Power Transformer and accessories (Replacement of 2x30 and 50 MVA transformers), 1x7.5 MVAR Power Shunt Capacitor; 8-138 kV PCB (GIS) and associated equipment, CCB and Container Van and Dismantling of existing 69 kV Switchyard; Decommissioning of 8-69 kV PCB • Concepcion SS: 1x100 MVA 138/69- 13.8 kV Power Transformer, 1-138 kV PCB • Calong-calong SS, 3x100 MVA 138/69-13.8 kV Power Transformer (Replacement of 2x50 MVA transformers), 2-138 kV PCB, 13-69 kV PCB, Full upgrading of secondary devices, CCB, Dismantling of existing 69 kV Switchyard, and Calong-calong 69 kV feeder line extensions			
Visayas Substation Upgrading Project 3 • To accommodate the projected demand and avoid overloading of the transformer in Cadiz and Colon Substation • To increase the substation capacity and provide reliability during N-1 condition or outage of one transformer • To accommodate the incoming generation in each area	• Load Growth, • Generation Entry, • System Reliability • Awaiting ERC approval	• Cadiz SS (expansion) 1x150 230/138 kV Power Transformers, 2x100 MVA 138/69-13.8 kV Power Transformers, 1-230 kV, 1-138 kV, 10-69 kV PCB and associated equipment. • Gahit 230 kV SS (expansion) 2-230 kV PCB and associated equipment • Sta. Barbara 138 kV SS (expansion): 2- 138 kV PCB, and associated equipment • Naga 138 kV SS (expansion) 3-138 kV PCB and associated equipment • Colon 138 kV SS (expansion): 2x100 MVA 138/69-13.8 kV Power Transformers and accessories 1-138 kV PCB and associated equipment 2- 69 kV PCB and associated equipment. • Calbayog 69 kV SS (expansion): 1-69 kV PCB and associated equipment PCB, 8-69 kV PCB and 69 kV line extensions.		• Negros Occidental • Iloilo • Cebu Samar	• 4,517 M • Jun 2033
Granada 230 kV Substation Project	• Load Growth • ERC-approved	• Granada SS: 3x300 MVA, 230/69-13.8 kV Power Transformers, 12-230 kV PCB and associated equipment, 10-69 kV PCB and associated equipment	• Granada 230 kV "Bus-in" Lines, ST-DC, 2-795 MCM ACSR, 2x0.50 km (2x573 MW)	• Negros Occidental	• 4,032 M • Oct 2030
138 kV PROJECTS					

SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
La Carlota 138 kV Substation Project • To unload the existing Bacolod-San Enrique 69 kV Transmission Line and Bacolod Substation • To cater to the growing demand and to provide operational flexibility and reliability to the customers in Negros Occidental The project will serve as connection points to accommodate new power plants.	• Load Growth • ERC-approved	• La Carlota SS: 2x100 MVA, 138/69-13.8 kV Power Transformers; 12-138 kV PCB and associated equipment; 4-69 kV PCB and associated equipment.	• La Carlota 138 kV "Bus-in" Lines, ST-DC, 1-795 MCM ACSR, 2x0.50 km (2x172 MW) • La Carlota 69 kV "Cut-in" Lines, SPDC, 1-795 MCM ACSR, 1.5 km (1x86 MW)	• Negros Occidental	• 4,022 M • Jul 2031
Sumangga 138 kV Substation Project • To unload the existing Ormoc-Simangan 69 kV Transmission Line and Ormoc Substation • To cater to the growing demand and to provide operational flexibility and reliability to the customers in Western Leyte • To improve the voltage quality in the area	• Load Growth • ERC-approved	• Sumangga SS: 2x100 MVA, 138/69- 13.8 kV Power Transformers; 10-138 kV PCB and associated eqpt; 5-69 kV PCB and associated eqpt. • Ormoc 138 kV SS: 6-69 kV PCB and associated equipment	• Bus-in to the Ormoc – Maasin 138 kV Transmission Line, ST-DC, 1x795 MCM ACSR, 2x1.5 km • Sumangga 69 kV "Cut-in" Lines, SP-DC, 1-795 MCM ACSR, 1 km	• Negros Occidental	• 4,022 M • May 2031



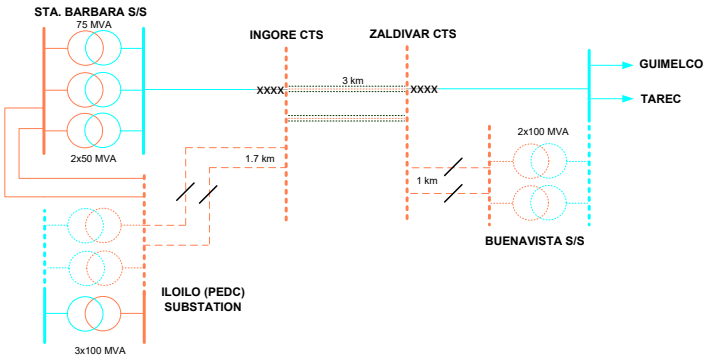


** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

INTERCONNECTION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
138 kV PROJECTS					
Panay – Guimaras 138 kV Interconnection Line 2 Project • To provide reliability to the existing and future power plants and load customers in Guimaras Island	• System Reliability • Awaiting ERC approval	• Iloilo SS: 1-138 kV PCB and associated equipment	• Ingore – Sawang 138 kV S/C: 3-400 mm^2 XLPE, Submarine Cable, Single Circuit, 3 km (1x100 MW)	• Guimaras • Iloilo	• 3,828 M • Dec 2029

INTERCONNECTION				
Project Name and Justification	Project Driver and Status	Project Components	Location	Project Cost (Million Pesos) ETC*
		Substation / Transmission Line		



** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

Table 4.9: List of Additional Proposed Projects in Visayas for the period 2025-2030

Project Name	Description	Location
SUBSTATION		
230 kV PROJECTS		
Visayas PCB for Grid Connection Project 2	• The project involves the expansion of various NGCP Substations in the Visayas region that is intended for the termination of proposed power plants and load customer. This project will enable the generation facilities to be connected to the grid and to be energized	Leyte, Samar, Bohol, Negros and Panay

Table 4.10: List of Additional Proposed Projects in Visayas for the period 2031-2040

Project Name	Description	Location
TRANSMISSION LINE		
138 kV PROJECTS		
Babatngon – Paranas 138 kV Transmission Line Upgrading Project	The project involves the upgrading of a portion of the existing Babatngon – Paranas 138 kV line along San Juanico Strait. The project will increase the transfer capacity between Samar and Leyte Island. Thus, it will accommodate the entry of the wind power plants in Samar Island.	Leyte and Samar

Project Name	Description	Location
SUBSTATION		
230 kV PROJECTS		
Visayas PCB for Grid Connection Project 2	• The project involves the expansion of various NGCP Substations in the Visayas region that is intended for the termination of proposed power plants and load customer. This project will enable the generation facilities to be connected to the grid and to be energized	Leyte, Samar, Bohol, Negros and Panay
Gahit 230 kV Substation Project	• The proposed project involves the upgrading of the Gahit SWS to a drawdown substation. 69 kV Cut-in lines will be	Negros

Project Name	Description	Location
	constructed along the Bacolod – Cadiz 69 kV transmission line. The project aims to accommodate the entry of new powerplants and load customers along the Bacolod-Cadiz 69 kV transmission line. Furthermore, it will provide operational flexibility and reliability to the customers in Negros Occidental.	

4.4.2 ETC Adjustments

A. ERC-Approved Projects

Table 4.11: ETC Updates on Visayas ERC Approved Projects

	Ongoing Projects	TDP 2024-2050	Revised ETC	Remarks
1	**Cebu – Lapu-Lapu 230 kV Transmission Project** *Cebu-Umapad 230kV Transmission Line*	Dec 2025	Dec 2026 **Dec 2026**	**Overall Accomplishment: 65.36%** • ROW status: 45/49 PS/TS Workable ;1 TS under negotiation: 2 TS under EC: 1 TS for filing for EC • IBTS: 127/163 Lots turned-over: 21 Lots under negotiation: 7 Lots under EC: 8 Lots for filing for EC • For the additional 9 PS overhead lines (special towers) from New Umapad CTS to Umapad SS. • With ROW issue on Mandaue Green Corridor • 5 TS for DPWH clearance (4 TS requested to be relocated due to DPWH Flood Control Project) • Other TS (lateral access) ongoing negotiation
2	**Visayas Substation Reliability Project 2**	Dec 2024	**Oct 2025**	**Overall Accomplishment: 99.17%** Ongoing testing and assessment of high voltage equipment
3	**La Carlota 138 kV Substation Project**	Dec 2032	**Jul 2031**	Ongoing Pre-construction activities
4	**Granada 230 kV Substation Project**	Jun 2030	**Oct 2030**	Ongoing Pre-construction activities
5	**Sumangga 138 kV Substation Project**	Dec 2033	**May 3031**	Ongoing Pre-construction activities

C. Awaiting ERC Approval

Table 4.12: Visayas Ongoing Projects

	Name of the Project	TDP 2024-2050	Revised ETC
1	Visayas Substation Upgrading Project	Feb 2025	Jun 2026
2	Lapu-Lapu 230 kV Substation Project	Jul 2026	Nov 2027
3	Visayas Substation Upgrading Project 2 *	Stage 1: Dec 2025 Stage 2: Jun 2027	Stage 1: Aug 2027 Stage 2: Oct 2028

4	Tigbauan 138 kV Substation Project	Stage 1: Energized at 69 kV Stage 2: Aug 2029	Dec 2030
5	Visayas Voltage Improvement Project 2	Stage 1: Dec 2025 Stage 2: Aug 2029	Stage 1: Feb 2028 Stage 2: Dec 2030
6	Visayas Mobile Capacitor Bank Project	May 2026	Sep 2027

Table 4.13: Visayas New projects with ETC Adjustments

	Name of the Projects	TDP 2024-2050	Proposed ETC
1	Visayas PCB for Grid Connection Project	2024-2030	2025-2030
2	Cebu – Leyte 230 kV Interconnection lines 3 and 4 Project	Stage 1: Dec 2029 Stage 2: Dec 2031	Stage 1: Dec 2028 Stage 2: Dec 2031
3	Visayas Substation Upgrading 3 Project	Oct 2027	Jun 2033
4	Babatngon – Palo 230 kV Transmission Line (Initially energized at 138 kV)	Dec 2030	Jun 2029
5	Bool 138 kV Substation Project	Dec 2030	Jan 2031
6	Laray 230 kV Substation Project	Nov 2028	Feb 2031
7	Nivel Hills 230 kV Substation Project	Dec 2030	Dec 2033
8	Barotac Viejo – Natividad 69 kV Transmission Line Project	Feb 2028	Oct 2027
9	Visayas 69 kV TL Upgrading Project	Dec 2025	Jul 2028
10	Panay – Guimaras 138 kV Interconnection Line 2	Jul 2028	Dec 2029
11	Visayas Regional PCB Replacement 1 Project	Dec 2026	Dec 2031
12	Tabango – Biliran 69 kV Transmission Line Project	Sep 2034	Jul 2032
13	Luzon – Visayas HVDC Bipolar Operation Project	Dec 2032	Stage 1: Mar 2028 Stage 2: Dec 2030

Table 4.14: Visayas projects without ETC Adjustments

	Name of the Projects	ETC
1	Panay – Guimaras 138 kV Interconnection Project	Apr-2026
2	Nabas – Caticlan – Boracay Transmission Line Project	Aug-2026
3	Amlan – Dumaguete 138 kV Transmission Line Project	Jan-2026
4	Calbayog – Allen Transmission Line Project	Dec-2027
5	Barotac Viejo – Unidos 230 kV Transmission Line Project	Stage 1: Dec 2029 Stage 2: May 2033
6	Corella – Ubay 138 kV Line 2 Stringing Project	Sep 2030
7	Taft – Oras 138 kV Transmission Line Project (Initially energized at 69 kV)	2025-2030
8	Bobolosan – Mapanas 138 kV Transmission Line Project (Initially Energized at 69 kV)	2025-2030
9	Relocation of Transmission Towers in Leyte Project	2025-2030
10	Visayas Substation Upgrading Project 4	2025-2030
11	Danao 230 kV Substation Project	Aug-2032
12	Banga 138 kV Substation Project	Sep-2032
13	Mandurriao 138 kV Substation Project	Oct-2034
14	Babatngon – Calbayog 230 kV Transmission Line Project	2031-2040
15	Babatngon – Paranas 138 kV Transmission Line Upgrading Project	2031-2040
16	Bacolod - Kabankalan 230 kV Transmission Line Project	2031-2040
17	Barotac Viejo - Sta. Barbara 230 kV Transmission Line Project	2031-2040
18	Bohol - Leyte 230 kV Interconnection Project	2031-2040
19	Calatrava- - Granada 230 kV Transmission Line Project	2031-2040

	Name of the Projects	ETC
20	Cebu - Negros 230 kV Interconnection Line 3 and 4 Project	2031-2040
21	Corella -Ubay 230 kV Transmission Line Project	2031-2040
22	Laray - San Fernando 230 kV Energization Project	2031-2040
23	Maasin - Sogod 230 kV Transmission Line Project	2031-2040
24	Negros - Guimaras 230 kV Backbone Project	2031-2040
25	Panay - Guimaras 230 kV Backbone Project	2031-2040
26	Ormoc - Babatngon 230 kV Transmission Line Project	2031-2040
27	Sta. Rita - Borongan 138 kV Transmission Line Project	2031-2040
28	Bayawan - Sipalay 138 kV Transmission Line Project (Initially energized at 69 kV)	2031-2040
29	Siaton - Bayawan 138 kV Transmission Line Project (Initially energized at 69 kV)	2031-2040
30	Victoria - Catarman 138 kV Transmission Line Project	2031-2040
31	Gahit 230 kV Substation Project	2031-2040
32	San Fernando 230 kV Substation Project	2031-2040
33	Visayas Substation Upgrading Project 5	2031-2040
34	Visayas Regional PCB Replacement Project 2	2031-2040
35	Sta. Rita 138 kV Substation Upgrading Project	2031-2040
36	Visayas Voltage Improvement Project 3	2031-2040
37	Palo – Sogod 230 kV Transmission Line Project	2041-2050
38	Laray – Cordova 230 kV Interconnection Project	2041-2050
39	Pusok – Cordova 230 kV Interconnection Project	2041-2050
40	Catarman – Mapanas - Oras 138 kV Transmission Line Project	2041-2050
41	Borongan – Taft 138 kV Transmission Line Project	2041-2050
42	Siaton – Dumaguete 138 kV Transmission Line Project	2041-2050
43	San Jose – Nabas 138 kV Transmission Line Project	2041-2050
44	Visayas Regional PCB Replacement Project 3	2041-2050
45	Sipalay 138 kV Substation Project	2041-2050
46	Visayas Voltage Improvement Project 4	2041-2050

4.5 MINDANAO GRID

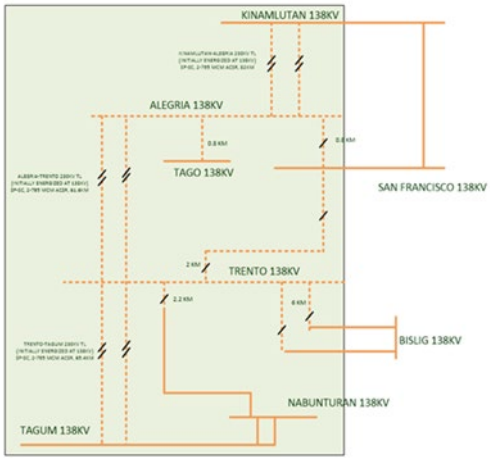
4.5.1 Mindanao Grid Project Updates

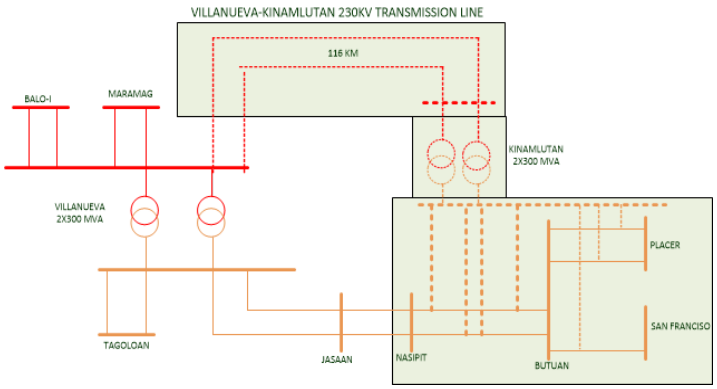
Table 4.15: List of Mindanao Transmission Projects

TRANSMISSION LINE					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
230 kV PROJECTS					
Eastern Mindanao 230 kV Transmission Line Project	• Generation Entry • System Reliability and Security • Awaiting ERC approval • To be initially energized at 138 kV	• Alegria 230 kV SS: 12-138 kV PCB and associated equipment • Trento 230 kV SS: 12-138 kV PCB and associated equipment	• Kinamlutan – Alegria – Trento – Tagum 230 kV TL, ST-DC, 2-795 MCM ACSR, 209 km (2 x 573 MW) • Bislig – Trento 138 kV Line Extension, ST-DC, 1-795 MCM ACSR, 6 km (2 x 172 MW) • Alegria – San Francisco 138 kV Line Extension, SP-SC, 1-795 MCM ACSR, 0.8 km (1 x 172 MW • Tago – Alegria 138 kV Line Extension, SP-SC, 1-795 MCM	• Agusan del Sur • Agusan del Norte • Davao del Sur • Davao de Oro	• 41,839 M • Oct 2032

TRANSMISSION LINE

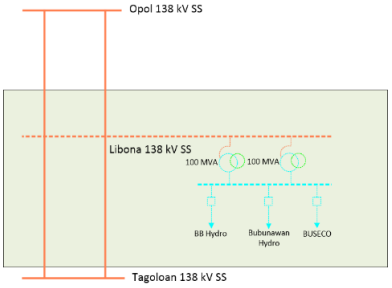
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
• To extend the 230 kV backbone from Agusan del Norte to Agusan del Sur and from Davao del Sur to Davao de Oro • To strengthen the transmission corridor in Eastern Mindanao that is currently in a single-circuit 138 kV configuration .			ACSR, 0.8 km (1 x 172 MW) • San Francisco – Bislig 138 kV Line Bus-in to Trento SS, ST-SC, 1-795 MCM ACSR, 2 km (1 x 172 MW) • Bislig – Nabunturan 138 kV Line Bus-in to Trento 138 kV SS, ST-SC, 1-795 MCM ACSR, 2.2 km (1 x 172 MW)		
Villanueva – Kinamlutan 230kV Transmission Line Project • To increase the power transfer capacity to the existing transmission line • To provide a reliable transmission corridor serving customers of northeastern Mindanao. • To accommodate the anticipated load demand due to the progressive development triggered by the mining industries in Caraga Region • To be initially energized at 138 kV	• Awaiting ERC Approval • System Reliability • Load Growth	• Kinamlutan 230 kV SS, 2x300 MVA, 230/138 kV Power Transformers and accessories, 8-230 kV PCB, 7-138 kV PCB and associated equipment • Butuan 138 kV SS, 2-138 kV PCB and associated equipment • Villanueva 230 kV SS, 4-230 kV PCB, 2-100 MVAR Series Reactors and associated equipment	• Villanueva – Kinamlutan, 230 kV TL, ST-DC, 2-795 MCM ACSR, 157.5 km (2 x 573 MW) • Butuan – Kinamlutan, 138 kV TL, ST-DC, 2-795 MCM ACSR, 0.85 km (2 x 573 MW)	• Misamis Oriental • Agusan Del Norte	• 23,512 M • Dec 2032





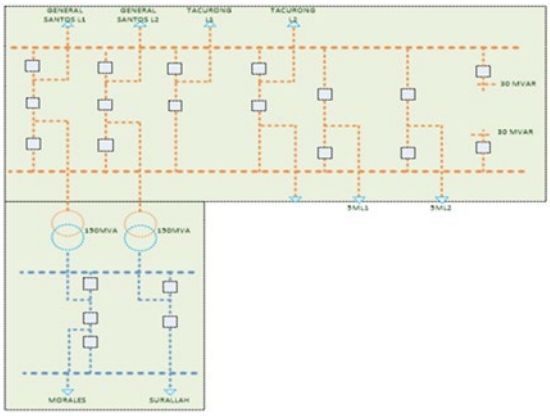
138 kV PROJECTS

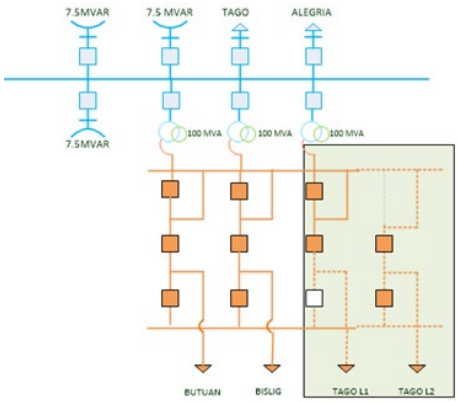
Libona 138 kV Substation Project • To cater the load of BUSECO currently connected at Carmen 69 kV Substation and to accommodate the increasing demand in Misamis Oriental and Bukidnon.	• Load Growth • Generation Entry • For ERC Filing	• Libona 138 kV SS: 2x100 MVA, 138/69 kV Power Transformers and accessories, 10-138 kV PCB, 8-69kV PCB and associated equipment	• Opol – Tagoloan 138 kV Lines Bus-in to Libona 138 kV SS, ST-DC, 1-795 MCM ACSR, 0.5 km (2 x 172 MW)	• Misamis Oriental	• 2,456 M • Sep 2031



TRANSMISSION LINE

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
• Formerly Gango 138 kV Substation Project					
Tupi 138 kV Substation Project • To accommodate the power demand requirements of SOCOTECO 2 and Sagittarius Mines Inc. (SMI) • Formerly Koronadal 138 kV Substation Project	• Load Growth • Awaiting ERC Approval	• Tupi 138 kV SS, 2x150 MVA 138/69 kV Power Transformers, 14-138 kV PCB, 6-69 kV PCB and associated equipment	Tacurong – General Santos 138 kV Lines Bus-in to Tupi 138 kV SS, ST-DC, 1-795 MCM ACSR, 0.5 km (2 x 172 MW)	• South Cotabato	• 2,539 M • Oct 2030
San Francisco – Tago 138 kV Transmission Line Project • To allow the switching of loads during line outages and to solve the power quality and reliability problems in the area • To address the growing demand in Surigao del Sur as well as to provide a more stable and reliable supply to the area including the island of Siargao • Formerly San Francisco – Tandag 138 kV Transmission Line Project	• Load Growth, System Reliability • Awaiting ERC approval	• San Francisco 138 kV SS: 2-138 kV PCB and associated equipment • Tago 138 kV SS: 1x50 MVA 138/69 kV Power Transformer, 6-138 kV PCB, 8-69 kV PCB and associated equipment	• San Francisco – Tago 138 kV TL, ST- DC, 1-795 MCM ACSR/AS, 90 km (2 x 172 MW) • Madrid – Tago 69 kV TL, SP-SC, 1- 336.4 MCM ACSR, 60 km (1 x 56 MW)	• Agusan del Sur • Surigao del Sur	• 5,596 M • Dec 2027
Polanco – Oroquieta 138 kV Transmission Line Project	• Load Growth • Awaiting ERC Approval	• Polanco 138 kV SS: 4-10 MVAR Shunt Capacitors 4-138 kV PCB and associated equipment • Oroquieta 69 kV SWS (New) 2-7.5 MVAR Shunt Capacitors 8 -69 kV PCB and associated equipment • Aurora 69 kV SS: 2-69 kV PCB and associated equipment • Bañadero 69 kV SS: 2-7.5	• Polanco – Oroquieta 138 kV Line (New), ST-DC, 1-795 MCM ACSR/AS, 48 km (2 x 172 MW) • Oroquieta – Villaflor 69 kV Line (New), ST-DC, 1-795 MCM ACSR/AS, 1 km (2 x 86 MW) • Aurora – Villaflor 69 kV Line (Upgrading), SP-SC, 1-795	• Misamis Occidental	• 8,742 M • Apr 2030

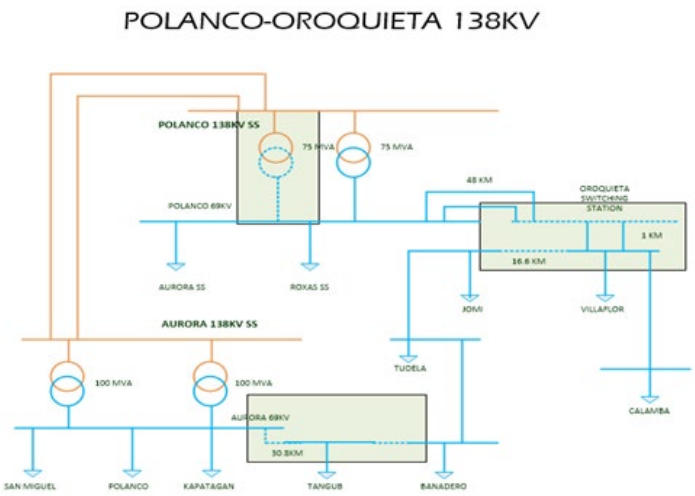




TRANSMISSION LINE

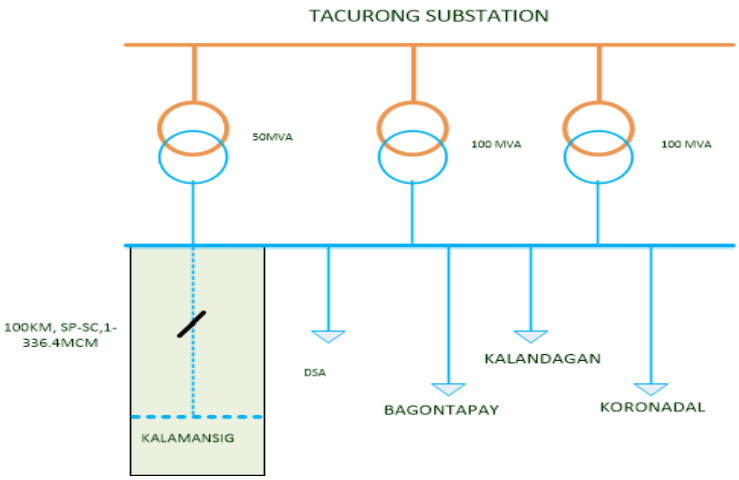
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
		MVAR Shunt Capacitor 2-69 kV PCB and associated equipment • Villaflor 69 kV SS: 2-7.5 MVAR, Shunt Capacitors 2-69 kV PCB, and associated equipment	MCM ACSR/AS, 84 km (1 x 86 MW)		

- The project covers the construction of 48 km 138 kV transmission line from Polanco 138 kV Substation to Oroquieta Switching Station and upgrading of the existing 84 km 69 kV transmission line from Aurora Substation to MOELCI I's Villaflor Substation.
- The project aims to provide reliable and uninterrupted power supply for the province of Misamis Occidental by looping the transmission line serving MOELCI I and MOELCI II to Polanco Substation and by increasing the capacity of the existing Aurora–Calamba 69 kV Transmission Line. The project will also address the low voltage problem in the area.
- To be initially energized at 69 kV.

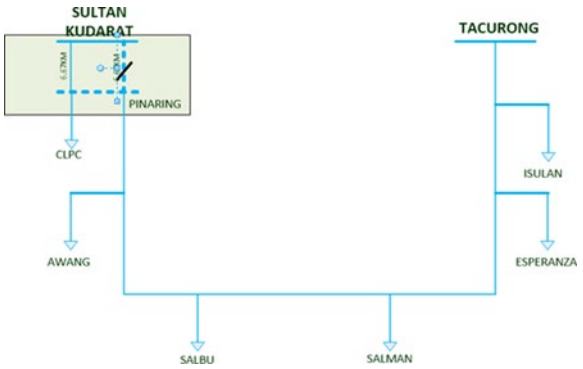


69 kV PROJECTS

Tacurong – Kalamansig 69 kV Transmission Line Project • To allow the towns of Lebak, Kalamansig, Bagumbayan, and Senator Ninoy Aquino in the province of Sultan Kudarat to enjoy cheaper and reliable electricity from the grid. • To end the dependency of consumers from the power generated by diesel power plant of SPUG.	• Load Growth • ERC-approved	• Tacurong 138 kV SS: 1-69 kV PCB and associated equipment • Kalamansig 69 kV SWS: 1x7.5 MVAR 69 kV Capacitor, 3-69 kV PCB and associated equipment	• Tacurong – Kalamansig 69 kV TL, ST/SP-SC, 1-336.4 MCM ACSR, 85 km (1 x 56 MW)	• Sultan Kudarat	• 2,349 M • Dec 2025
Sultan Kudarat – Pinaring 69 kV Transmission Line • To construct new transmission line from Sultan Kudarat SS to Cotabato City that	• Load Growth, System Reliability and Security • Awaiting ERC approval	• Sultan Kudarat 69 kV SS: 3-69 kV PCB and associated equipment • Pinaring 69 kV SWS: 6-69 kV PCB and associated equipment	• Sultan Kudarat – Pinaring 69 kV TL, SP-SC (Upgrading), 1-795 MCM ACSR, 6.67 km (1 x 86 MW) • Sultan Kudarat – Pinaring 69 kV TL, SP-SC (New), 1-795 MCM ACSR, 6.67 km (1 x 86 MW)	• Sultan Kudarat	• 2,249 M • Jun 2030



TRANSMISSION LINE

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC
		Substation	Transmission Line		
will effectively serve customers of Cotabato Light even during N-1 contingency • To upgrade the existing 6.67 km Sultan Kudarat–Pinaring 69 kV line segment of Sultan Kudarat – DSA – Tacurong 69 kV Line to 1-795 MCM ACSR					

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

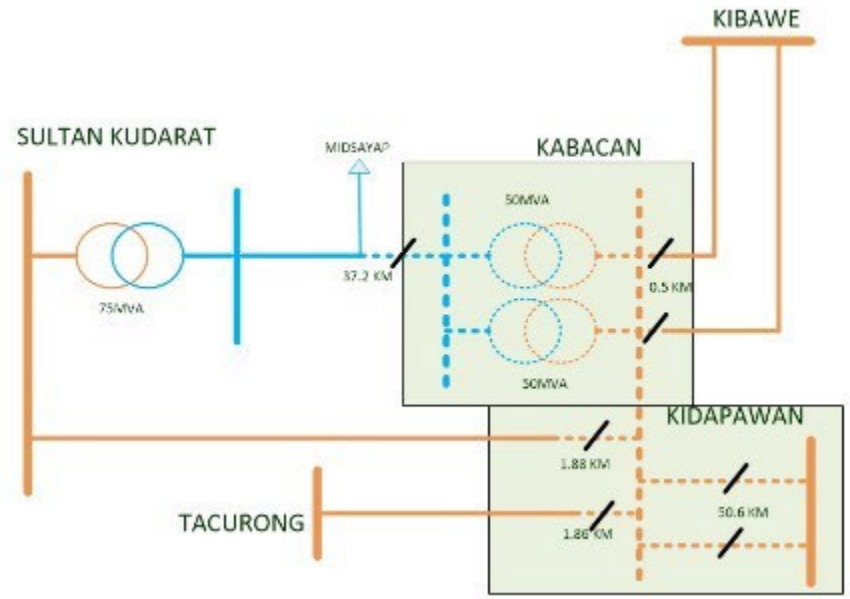
SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
230 kV PROJECTS					
Mindanao Substation Upgrading 2 Project (MSU2P) • To install additional substation capacity to address the growing demand in various substations in the Mindanao grid. • To install PCB for the connection of BESS projects in Jasaan, Maramag SS and Toril SS and for the entry of Power Plant projects such as South Pulangi 255 MW HEPP at Kibawe SS, 3.6 MW Mt. Apo Geothermal Power Plant at Kidapawan SS and 28 MW Sangali Diesel Power Plant at Zamboanga SS.	• System Reliability and Security • Awaiting ERC Approval	• Balo-i 138 kV SS: 1-100 MVA, 138/69 kV Power Transformer, 3-138 kV PCB, 6-69 kV PCB and associated equipment • Tagoloan 138 kV SS: 1-100 MVA, 138/69 kV Power Transformer, 4-138 kV PCB, 8-69 kV PCB and associated equipment • Jasaan 138 kV SS: 1-100 MVA, 138/69 kV Power Transformer, 2-138 kV PCB, 6-69 kV PCB and associated equipment • Kibawe 138 kV SS: 1-50 MVA, 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment • Butuan 138 kV SS: 1-100 MVA, 138/69 kV Power Transformer, 1-138 kV PCB, 1-69 kV PCB and associated equipment • Davao 138 kV SS: 2-150 MVA, 138/69 kV Power Transformer, 3-138 kV PCB, 4-69 kV PCB and associated equipment • Toril 138 kV SS: 2-100 MVA, 138/69 kV Power Transformer, 2-138 kV PCB, 1-69 kV PCB and associated equipment • Bunawan 138 kV SS: 1-300 MVA 230/138 kV Power Transformer, 2-100 MVA, 138/69 kV Power Transformer,		• Lanao Del Norte • Bukidnon • Agusan Del Norte • Misamis Oriental • Davao del Sur • Sultan Kudarat • Zamboanga del Sur • Surigao del Sur	• 7,264.54 M • Feb 2028

SUBSTATION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
		2-230 kV PCB, 4-138 kV PCB, 4-69 kV PCB and associated equipment • Kidapawan 138 kV SS: 1-100 MVA, 138/69 kV Power Transformer, 1-69 kV PCB and associated equipment • General Santos 138 kV SS: 2-100 MVA, 138/69 kV Power Transformer, 4-138 kV PCB, 4-69 kV PCB and associated equipment • Maramag 138 kV SS: 1-69 kV PCB and associated equipment • Zamboanga 138 kV SS: 1-69 kV PCB and associated equipment • Aurora 138 kV SS: 1-100 MVA 138/69 Power Transformer, 2-138 kV PCB, 5-69 kV PCB and associated equipment			
Mindanao Substation Expansion 3 Project (MSE3P) • To maintain the normal thermal capacity of the substation and secure their continuous operation even during N-1 conditions to comply with the criteria of the PGC	• Load Growth • Awaiting ERC Approval	• Pitogo 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 1-138 kV PCB, 1-69 kV PCB and associated equipment • Placer 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment • San Francisco 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment • Matanao 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 1-69 kV PCB and associated equipment • Lala 230 kV SS: 1x50 MVA 230/138 kV Power Transformer, 1-230 kV PCB, 2-138 kV PCB and associated equipment. • Culaman 69 kV SS: 1-69 kV PCB and associated equipment		• Zamboanga del Sur • Surigao del Norte • Agusan del Sur • Davao del Sur	• 1,465 M • Oct 2028
• **Mindanao Substation Rehabilitation Project (MSRP)** • To replace the defective, deteriorated, obsolete, and low fault level PCB in various substations will provide system reliability and power	• Power Quality and System Reliability • ERC-approved	• Aurora 138 kV SS: 1-138 kV PCB, 3-69 kV PCB and associated equipment • Zamboanga 138 kV SS: 3-138 kV PCB, 3-69 kV PCB and associated equipment • Agus 5 138 kV SS: 6-138 kV PCB and associated equipment • Balo-I 138 kV SS: 13-138 kV PCB and associated equipment		• Lanao Del Norte • Misamis Oriental • Bukidnon • Agusan Del Norte • Davao De Sur • Davao Del Norte	• 3,047.13 M • Sep 2025

SUBSTATION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
quality to the grid. • To install two definite-purpose circuit breakers for the connection of capacitor bank in Sultan Kudarat SS		• Lugait 138 kV SS: 5-138 kV PCB, 2-69 kV PCB and associated equipment • Tagoloan 138 kV SS: 3-138 kV PCB, 2-69 kV PCB and associated equipment • Maramag (Pulangi 4) 138 kV SS: 11-138 kV PCB, 1-69 kV PCB and associated equipment • Nasipit 138 kV SS: 2-138 kV PCB and associated equipment • Davao 138 kV SS: 4-138 kV PCB, 2-69 kV PCB and associated equipment • Bunawan 138 kV SS: 5-138 kV PCB and associated equipment • Sultan Kudarat 138 kV SS: 6-69 kV PCB • Maco 138 kV SS: 1-7.5 MVAR, 69 kV, 2-69 kV PCB and associated equipment • General Santos 138 kV SS: 8-69 kV PCB and associated equipment • Tacurong 138 kV SS: 9-69 kV PCB and associated equipment • Nabunturan 138 kV SS: 1x7.5 MVAR Shunt Capacitors, 69 kV, 3-138 kV PCB, 4-69 kV PCB and associated equipment		• Davao de Oro • Agusan Del Sur	
138 kV PROJECTS					
Kabacan 138 kV Substation Project • **Phase 1 – Substation** • **Phase 2 – Transmission Line**	• System Reliability • Awaiting ERC Approval	Phase 1 • Kabacan 138 kV SS: 1x50 MVA 138/69 kV Power Transformer, 11-138 kV PCB, 3-69 kV PCB and associated equipment • Kidapawan 138 kV SS: 2-138 kV PCB and associated equipment • Toril 138 kV SS: 5-138 kV PCB and associated equipment	Phase 2 • Kabacan – Kidapawan 138 kV TL, ST-DC, 1-795 MCM ACSR/AS, 50.6 km (2 x 172 MW) • Kabacan – Villarica 69 kV TL, SP- SC, 1-336.4 MCM ACSR/AS, 37.2 km (1 x 56 MW) • Kibawe 138 kV Line Extension, ST-DC, 1-795 MCM ACSR/AS, 0.5 km (2 x 172 MW) • Tacurong 138 kV Line Extension, ST-SC, 1-795 MCM ACSR/AS, 1.86 km (1 x 172 MW) • Sultan Kudarat 138 kV Line Extension, ST-SC, 1-795 MCM ACSR/AS, 1.88 km (1 x 172 MW)	• Cotabato	• 4,978 M • Phase 1: Aug 2028 • Phase 2: Aug 2028

SUBSTATION

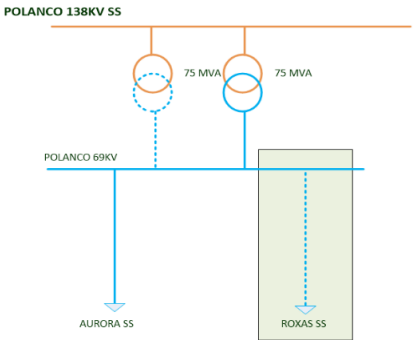
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
• To provide power supply security to the provinces of Sultan Kudarat, North Maguindanao, South Maguindanao, North Cotabato, and South Cotabato during contingency conditions • To provide flexibility and additional reliability to the transmission system, ensuring the continuity of power supply in the concerned areas					
Mindanao Substation Expansion 4 Project (MSE4P) • To install additional substation capacity to address the growing demand in various locations in the Mindanao grid • To comply with the N-1 criterion of the PGC	• Load Growth • Awaiting ERC Approval	• Pitogo SS: 1x100 MVA 138/69 kV Power Transformer, 1-138 kV PCB ,1-69 kV PCB and associated equipment • Naga Min SS: 1x100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment • Polanco 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment • Agus 6 138 kV SS: 1x100 MVA 138/69 kV Power Transformer, 1-138 kV PCB, 3-69 kV PCB and associated equipment • Maramag 138 kV SS: 1x100 MVA, 138/69 kV Power Transformer, 2- 138 kV PCB, 2-69 kV PCB and associated equipment • Maco 138 kV SS: 1x100 MVA 138/69 kV Power Transformer,2-138 kV PCB, 2-69 kV PCB and associated equipment • Culaman 230 kV SS: 1x50 MVA, 230/69 kV Power Transformer, 2-230 kV PCB, 2-69 kV PCB and associated equipment • Sultan Kudarat 138 kV SS: 2-100 MVA, 138/69 kV Power Transformer, 4- 138 kV PCB, 4-69 kV PCB and associated equipment	• Zamboanga Del Sur • Zamboanga Del Norte • Lanao Del Norte • Bukidnon • Davao Del Norte • Davao Occidental • Maguindanao Del Norte • Agusan del Norte	• 2,968 M • Apr 2027

SUBSTATION

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
		• Nasipit 138 kV SS: 1-100 MVA 138/69 kV Power Transformer, 2-138 kV PCB, 2-69 kV PCB and associated equipment			

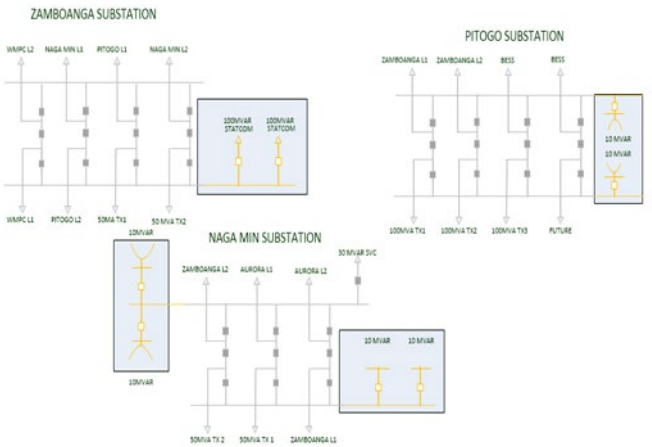
69 kV PROJECTS

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
Polanco – Roxas 69 kV Transmission Line Project • This single-circuit line enhances power supply reliability, ensuring availability during faults or preventive maintenance of the Polanco – Roxas 69 kV Line.	• Load Growth, System Reliability • Awaiting ERC approval	• Polanco 138 kV SS: 1-138 kV PCB and associated equipment.	• Polanco – Magangon 69 kV TL (Upgrading), SP-SC, 1-795 MCM ACSR, 4.0 km. (1x86 MW) • Polanco – ZANECO Polanco 69 kV TL (New), SP-SC, 1-795 MCM ACSR, 6.21 km. (1x86 MW)	• Zamboanga Del Norte	• Dec 2032

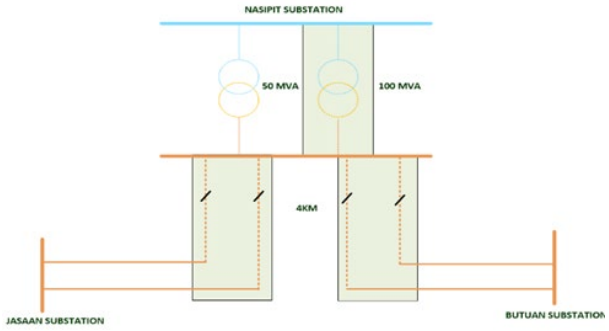
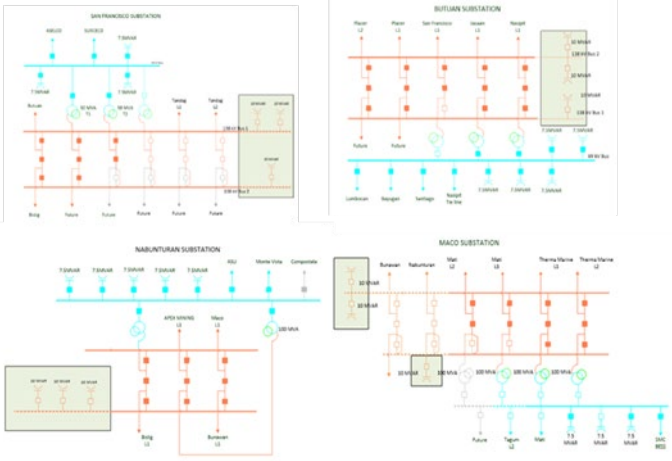


VOLTAGE IMPROVEMENTS

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
138 kV PROJECTS					
Zamboanga Peninsula Voltage Improvement Project (ZPVIP) • To ensure that the voltage level is within the prescribed limits of PGC despite the absence of a local baseload generator in Zamboanga Peninsula • To install voltage compensating devices in the area of Tacurong and Gen. Santos. These will alleviate the imminent voltage problem brought about by the growing demand in the area • To install power circuit breakers intended for the entry of Battery-Energy Storage System	• Power Quality • Awaiting ERC Approval	• Zamboanga 138 kV SS: 1x200 MVAR STATCOM, 3-138 kV PCB, 2-38 kV PCB and associated equipment • General Santos 138 kV SS: 3x30 MVAR Capacitors, 3-138 kV PCB and associated equipment • Tacurong SS: 2x30 MVAR Capacitors, 2-138 kV PCB and associated equipment • Naga Min SS: 4x10 MVAR Capacitors, 4-138 kV PCB and associated equipment • Pitogo SS: 2x10 MVAR Capacitors, 2-138 kV PCB and associated equipment		• Sultan Kudarat • South Cotabato	• 1,925 M • Apr 2027
Nasipit Substation Bus-in Project	• Power Quality • Awaiting ERC Approval	• Nasipit SS: 1-100 MVA Power Transformer, 2-138 kV PCB, 3-69 kV PCB and associated equipment	• Jasaan – Butuan Bus-in Line to Nasipit 138 kV Substation, ST-DC, 1-795 MCM ACSR, 4.3 km (2 x 172 MW)	• Agusan del Norte	• 816 M • Apr 2027

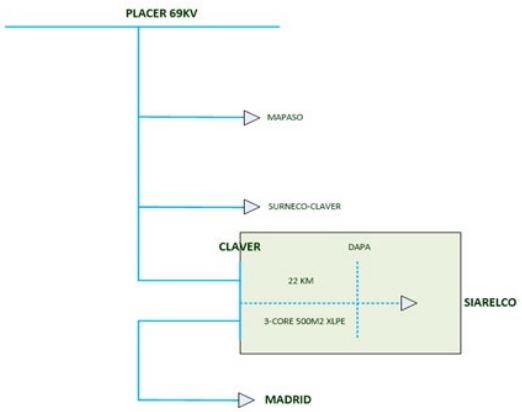


VOLTAGE IMPROVEMENTS

Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
• To maintain the normal voltage in Northeastern Mindanao following an outage of the Nasipit – Butuan 138 kV Single Circuit line segment • To ensure the continuous supply of electricity to CARAGA Region even during N-1 condition to comply with the PGC requirement			• Swinging of TM2 Lines, ST-DC, 2- 795 MCM ACSR, 0.5 km (2 x 172 MW) 		
Eastern Mindanao Voltage Improvement Project (EMVIP)	• Power Quality • Awaiting ERC Approval	• Butuan SS: 3x10 MVAR Shunt Capacitor, 3-138 kV PCB and associated equipment • San Francisco SS: 3x10 MVAR Shunt Capacitor, 3-138 kV PCB and associated equipment • Nabunturan SS: 3x10 MVAR Shunt Capacitor, 3-138 kV PCB and associated equipment • Maco SS: 3x10 MVAR Shunt Capacitor, 3-138 kV PCB and associated equipment • Tandag SS: 1x7.5 MVAR Shunt Capacitors, 1-69 kV PCB and associated equipment • Claver SS: 1x7.5 MVAR Shunt Capacitor, 1-69 kV PCB and associated equipment • Apokon SS: 2x10 MVAR Shunt Capacitor, 2-69 kV PCB and associated equipment • Mati SS: 2x7.5 MVAR Shunt Capacitor, 2-69 kV PCB and associated equipment		• Agusan del Norte • Agusan del Sur • Davao de Oro • Davao del Norte	• 868 M • Nov 2029

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

INTERCONNECTION					
Project Name and Justification	Project Driver and Status	Project Components		Location	Project Cost (Million Pesos) ETC*
		Substation	Transmission Line		
69 kV PROJECTS					
Claver – Siargao 69 kV Interconnection Project (CSIP) • To provide a 69 kV interconnection facility that increases the power transfer towards Siargao Island • To improve the voltage within the franchise area of SIARELCO	• Island Interconnection • Awaiting ERC approval	• Claver 69 kV Switching Station (new): 5-69 kV PCB and associated equipment • Dapa 69 kV Switching Station (new): 7-69 kV PCB and associated equipment 4x2.5 MVAR Shunt Capacitor and associated equipment	• Claver – Dapa 69 kV Submarine Cable: 3-Core, 500 mm^2 XLPE, 42 km (1 x 50 MW)	• Siargao • Surigao Del Sur	• 22,934 M • Jun 2030



** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

Table 4.16: List of Additional Proposed Projects in Mindanao for the period 2031-2040

Project Name	Description	Location
TRANSMISSION LINE		
230 kV PROJECTS		
Lala – Malabang – Sultan Kudarat 230 kV Transmission Line Project	• To provide a new transmission corridor that will complete the 230 kV loop in the western part of Maguindanao Island. To ensure system reliability and operational flexibility in the province of Lanao del Sur and Maguindanao.	Lanao del Norte, Lanao del Sur, Maguindanao
Culaman – General Santos 230 kV Transmission Line Project	• To increase the power transfer capacity to the existing transmission line • To provide a reliable transmission corridor serving customers of southern Mindanao. • To provide new connection points to the generating plants and large loads.	South Cotabato, Davao Del Sur
Bunawan – Tagum 230 kV Transmission Line Project	• To provide a new transmission corridor that mitigates the anticipated thermal overloading of the Bunawan – Nabunturan and Bunawan – Maco – Nabunturan 138 kV TL during an outage of one of the circuits • To strengthen the transmission corridor from Davao City going to the province of Davao de Oro • To accommodate the Asuncion LES of Northern Davao Electric Cooperative (NORDECO) which is currently connected to Nabunturan 138 kV Substation • To reinforce the Maco – Tagum 69 kV Line during N-1 condition	Davao del Sur, Davao Del Norte, Davao de Oro

Project Name	Description	Location
	• To be initially energized at 138 kV	
Eastern Mindanao 230 kV Transmission Line Project	• To extend the 230 kV backbone from Agusan del Norte to Agusan del Sur and from Davao del Sur to Davao de Oro • To strengthen the transmission corridor in Eastern Mindanao that is currently in a single-circuit 138 kV configuration • To support the booming economy of Eastern Mindanao which can be attributed to the mining/quarrying industry and manufacturing establishments • To anticipate the Competitive RE Zone in Agusan del Sur • To be initially energized at 138 kV	Agusan del Sur, Agusan del Norte, Davao del Sur, Davao de Oro
Villanueva – Kinamlutan 230 kV Transmission Line Project	• To increase the power transfer capacity to the existing transmission line • To provide a reliable transmission corridor serving customers of eastern Mindanao. • To accommodate the anticipated load demand due to the progressive development triggered by the mining industries in Caraga Region	Misamis Oriental, Agusan del Norte
138 kV PROJECTS		
Polanco – Oroquieta 138 kV Transmission Line Project (138 kV Energization)	• To energize to a higher voltage to accommodate the growing demand	Zamboanga del Norte, Misamis Occidental
69 kV PROJECTS		
Polanco – Roxas 69kV Transmission Line Project	• This single-circuit line enhances power supply reliability, ensuring availability during faults or preventive maintenance of the Polanco – Roxas 69 kV Line.	Zamboanga Del Norte, Misamis Occidental

Project Name	Description	Location
SUBSTATION		
230 kV PROJECTS		
Mindanao Substation Expansion 8 Project (MSE8P)	• To cater to the load growth and provide N-1 to various SS in Mindanao. Without the project, load dropping and power interruptions can happen during outage and failure of the existing transformers and PCB.	Various Substations in Mindanao
Tumaga 230 kV Substation Project	• To upgrade 69 kV TL from the Tumaga 138 kV SS to Zamboanga City Electric Cooperative, Inc. (ZAMCELCO's) Tumaga and Putik LES • To accommodate the growing demand of Zamboanga City, attributed to the industrial facilities such as canning factories, shipyards, ports, warehouses, manufacturing plants, and airports • To address the imminent thermal overloading of the Zamboanga–Tumaga – Pitogo 69 kV network in Zamboanga City by upgrading the Tumaga – Pitogo 69 kV TL • To complement the implementation of the Lala – Sta Clara – Tumaga 230 kV TL that offers operation stability by having another transmission corridor with a higher power transfer capacity	Zamboanga del Sur
Tigbao 138 kV Substation Project	• To address the thermal overloading of the Aurora 138 kV SS by providing Zamboanga del Sur Electric I Cooperative (ZAMSURECO I) another connection facility from the grid • To accommodate the increasing demand in the area which will inherently overload the existing Aurora 138 kV SS during N-1 condition. However, development inside the said SS is infeasible due to space restrictions.	Zamboanga del Sur

Project Name	Description	Location
138 kV PROJECTS		
Libona 138 kV Substation Project	• To cater the load of BUSECO currently connected at Carmen 69 kV Substation and to accommodate the increasing demand in Misamis Oriental and Bukidnon.	Misamis Oriental
Malaybalay 138 kV Substation Project	• To mitigate imminent thermal overloading of the local distribution utility's existing 69 kV line and the voltage issues it has been experiencing	Bukidnon
69 kV PROJECTS		
Maco – Tagum 69 kV Substation Project	• To upgrade the existing 69 kV transmission line and to construct a new line that directly connects Tagum City to the nearest substation • To solve the imminent overloading of the existing line due to rapid increase in demand of Tagum City • To provide continuous supply of power and operational flexibility even during N-1 condition	Davao del Norte

Project Name	Description	Location
INTERCONNECTION		
69 kV PROJECTS		
Zamboanga – Basilan 69kV Interconnection Project	• To connect the island of Basilan to the Mindanao Grid cheaper source of electricity • To give the province a reliable and efficient power service	Zamboanga, Basilan Island

4.5.2 ETC ADJUSTMENTS

A. ERC-Approved Projects

Table 4.17: ETC Updates on Mindanao ERC Approved Projects

	Ongoing Projects – LUZON	TDP 2024-2050	Revised ETC	Remarks
1	**Tacurong – Kalamansig 69 kV Transmission Line Project**	Jun 2025	**Dec 2025**	**Overall Accomplishment: 91.27%**
	Tacurong SS		**Dec 2025**	• Ready for energization dependent on the completion of TL portion
	Kalamansig SWS		**Dec 2025**	• Ready for energization dependent on the completion of TL portion
	Tacurong-Kalamansig 69kV TL		**Dec 2025**	• ROW status: 727/740 PS/TS Workable • TS: 11 TS under EC: 1 TS for EC
2	**Laguindingan 230 kV Substation**	Feb 2026	**May 2026**	**Overall Accomplishment: 91.27%**
	Laguindingan Bus-in to Balo-i – Villanueva (230kV TL)		**May 2026**	• ROW status: 44/44 TS Workable • Issue on Tower No. 15: No bldg permit yet due to re-classification not yet approved • Interim Scheme to energize Laguindingan SS
3	**Mindanao Substation Rehabilitation Project**	Dec 2024	Sep 2025	**Overall Accomplishment: 97.16%**
	Tagoloan SS			Remaining works: 1-69 KV PCB including Gantry and migration works

B. Awaiting ERC Approval

Table 4.18: Mindanao Ongoing Projects

	Name of the Project	TDP 2024-2050	Revised ETC
1	Mindanao Substation Upgrading 2 Project (MSU2P)	Jul 2028	Feb 2028
2	Mindanao Substation Expansion 3 Project (MSE3P)	Jun 2027	Oct 2028
3	Mindanao Substation Expansion 4 Project (MSE4P)	Apr 2026	Apr 2027
4	Kabacan 138 kV Substation Project	Jan 2029	Aug 2028
5	Nasipit Substation Bus-in Project	Oct 2026	Apr 2027
6	Eastern Mindanao Voltage Improvement Project	Jul 2028	Nov 2029
7	Grid Protection Relay Replacement *	Dec 2025	Jun 2027
8	San Francisco – Tago 138 kV Transmission Line Project	Mar 2027	Dec 2027

Other Projects requiring ETC adjustments due to ROW acquisition, permit processing and awaiting regulatory approvals are as follows:

Table 4.19: Mindanao New Projects with ETC Adjustments

	Name of the Projects	TDP 2024-2050	Proposed ETC
1	Maco – Mati 138 kV Transmission Line Project	Dec 2028	Jun 2029
2	Polanco – Oroquieta 138 kV Transmission Line Project	Feb 2028	Apr 2030
3	Sultan Kudarat – Pinaring 69 kV Transmission Line Project	Jun 2028	Jun 2030
4	Tupi 138 kV Substation Project	Jun 2026	Oct 2030
5	Libona 138 kV Substation Project	Dec 2027	Sep 2031
6	Polanco – Roxas 69 kV Transmsission Line Project	Dec 2026	Dec 2032
7	Villanueva – Kinamlutan 230 kV Transmission Line Project	Jan 2033	Dec 2032
8	Opol Substation Bus-in Project	Sep 2027	May 2028
9	Claver – Siargao Interconnection Project	Dec 2028	Jun 2030

Table 4.20: Mindanao Projects without ETC Adjustments

	Name of the Projects	ETC
1	Bunawan – Tagum 230 kV Transmission Line Project	Mar 2031
2	Sultan Kudarat – Tacurong 230 kV Transmission Line Project	Oct 2033
3	Lala – Sta. Clara – Tumaga 230 kV Transmission Line Project (formerly Lala – Naga – Zamboanga 230 kV Transmission Line Project)	Jul 2034
4	Maco – Tagum 69 kV Substation Project	Dec 2032
5	Lala – Malabang – Sultan Kudarat 230 kV Transmission Line Project	2031-2040
6	Culaman – General Santos 230 kV Transmission Line Project	2031-2040
7	Naga Min – Salug 138 kV Transmission Line Project	2031-2040
8	Bislig – Baganga 138 kV Transmission Line Project	2031-2040
9	Baganga – Mati 138 kV Transmission Line Project	2031-2040
10	Placer – Luna 69 kV Transmission Line Project	2031-2040
11	Opol – Carmen 69 kV Transmission Line Project	2031-2040
12	Davao – Toril 69 kV Transmission Line Project	2031-2040
13	Maco – Mati 69 kV Transmission Line Project	2031-2040
14	Agus 6 – Kiwalan – Lugait 69 kV Transmission Line Project	2031-2040
15	Naga Min – Ipil 69 kV Transmission Line Project	2031-2040
16	Marawi – Malabang 69 kV Transmission Line Project	2031-2040
17	Nabunturan – Monkayo 69 kV Transmission Line Project	2031-2040
18	Placer – Madrid 69 kV Transmission Line Project	2031-2040

	Name of the Projects	ETC
19	SIOM – Sindangan – Salug 69 kV Transmission Line Project	2031-2040
20	San Francisco – Barobo 69 kV Transmission Line 2 Project	2031-2040
21	San Francisco – Tandag 69 kV Transmission Line Project	2031-2040
22	Naga Min – Malangas 69 kV Transmission Line Project	2031-2040
23	Aurora – Kapatagan 69 kV Transmission Line Project	2031-2040
24	Bislig – Barobo 69 kV Transmission Line Project	2031-2040
25	Tumaga – Pitogo 69 kV Transmission Line Project	2031-2040
26	Matanao 230/138 kV Transformer Project	2031-2040
27	Mindanao Substation Expansion 5 Project (MSE5P)	2031-2040
28	Mindanao Substation Expansion 6 Project (MSE6P)	2031-2040
29	Mindanao Substation Expansion 7 Project (MSE7P)	2031-2040
30	Midsayap 138 kV Substation Project	2031-2040
31	Lala – Malabang – Sultan Kudarat 230 kV Transmission Line Project	2041-2050
32	Sultan Kudarat – Tacurong 230 kV Transmission Line Project	2041-2050
33	Matanao – Tacurong 230 kV Transmission Line Project	2041-2050
34	Bunawan – Tagum 230 KV Transmission Line Project	2041-2050
35	Eastern Mindanao 230 KV Transmission Line Project	2041-2050
36	Aurora – Oroquieta 138 kV Transmission Line Project	2041-2050
37	Placer – Tago 138 kV Transmission Line Project	2041-2050
38	General Santos – Maasim 138 kV Transmission Line Project	2041-2050
39	Mindanao Substation Expansion 9 Project (MSE9P)	2041-2050
40	Maasim 138 kV Substation Project	2041-2050

4.7 CERTIFICATE OF ENERGY PROJECTS OF NATIONAL SIGNIFICANCE

NGCP has a consistent practice of utilizing the CEPNS framework as prescribed under the DOE Department Order No. DO2024-04-003 titled “Prescribing the Framework and Guidelines for the Processing of Applications for Certificate of Energy Projects of National Significance (CEPNS)”.

The DOE's CEPNS designation accelerates approvals for key energy projects, driving investments and strengthening the nation's power supply. This streamlined approach supports energy security, fuels economic growth, and promotes sustainable development. Ultimately, CEPNS accelerates the development of essential energy infrastructure.

The DOE recently granted CEPNS to the following transmission projects:

Table 4.21: Transmission Projects with CEPNS (as of 20 February 2025)

Name of the Project	CEPNS No. 2024	Name of the Project	CEPNS No. 2025
1. Luzon- Visayas HVDC Bipolar Operation Project	11-0068	43. South Luzon Substation Upgrading	01-0169
2. Bolo- Balaoan 500 kV Transmission Line	11-0076	44. Silang 500 kV Substation	01-0170
3. Visayas Substation Upgrading Project 3	11-0077	45. Sampaloc 230 kV Substation	01-0171
4. Sta. Maria 500 kV Substation	11-0078	46. Pinamucan – Tuy 500 kV Transmission Line	01-0172
5. Balaoan-Burgos (Laoag) 500 kV Transmission Line	11-0079	47. Luzon Voltage Improvement - 6	01-0173
6. Northern Luzon 230 kV Loop	11-0087	48. Eastern Albay 69 kV Transmission Line	01-0174
7. Panay – Guimaras 138 kV Interconnection Line 2	11-0088	49. Camarines Sur – Catanduanes Interconnection	01-0175
8. Cebu – Leyte 230 kV Interconnection Line 3 and 4	11-0089	50. Visayas Voltage Improvement 2	01-0176
9. Batangas – Mindoro 500 kV Interconnection and Backbone	12-0096	51. Maco – Mati 138 kV Transmission Line	01-0177
10. Kawit 230 kV Substation	12-0097	52. Polanco – Oroquieta 138 kV Transmission Line	01-0178

Name of the Project	CEPNS No. 2024	Name of the Project	CEPNS No. 2025
11. Magalang 230 kV Substation	12-0098	53. Abuyog 230 kV Substation	01-0181
12. Palauig 500 kV Substation	12-0099	54. Luzon Voltage Improvement 5	01-0182
13. Malaya 230 kV Collector Station	12-0104	55. North Luzon Substation Upgrading 2	01-0183
14. Barotac Viejo – Unidos 230 kV Transmission Line	12-0105	56. Plaridel 230 kV Substation	01-0184
15. Calbayog – Allen Transmission Line	12-0106	57. San Fabian 230 kV Substation	01-0185
16. Panay – Guimaras 138 kV Interconnection	12-0107	58. South Luzon Substation Upgrading 2	01-0186
17. Koronadal 138 kV Substation	12-0108	59. Tower Resiliency of Bicol Transmission Facilities	01-0187
18. Laguindingan 230 kV Substation	12-0109	60. Tuy 500/230 kV Substation (Stage 2)	01-0188
		61. Danao 230 kV Substation	01-0189
19. Visayas SS Upgrading 2	12-0110	62. Tabango – Biliran 69 kV Transmission Line	01-0190
20. Granada 230 kV Substation	12-0111	63. Western Luzon 500 kV Backbone (Stage 2)	01-0191
21. La Carlota 138 kV Substation	12-0112	64. Bugallon 500 kV Substation	01-0192
22. Lapu-lapu 230 kV Substation	12-0113	65. Minuyan 115 kV Switching Station	01-0193
23. Nivel Hills 230 kV Substation	12-0114	66. Olongapo 230 kV Substation	01-0194
24. Bolo 5th Bank	12-0118	67. Barotac Viejo-Natividad 69 kV Transmission Line Project	01-0195
25. Bauang – La Trinidad 230 kV Transmission Line Upgrading	12-0119	68. Tacurong-Kalamansig 69kV Transmission Line Project	01-0197
26. Castillejos 230 kV Substation	12-0120	69. Nasipit Substation Bus In	01-0198
27. North Luzon Substation Upgrading	12-0121	70. Villanueva–Kinamlutan 230 kV Transmission Line Project	01-0199
28. Nagsaag – Santiago 500 kV Transmission Line	12-0122	71.. Antipolo 230 kV Substation	02-0202
29. Luzon Primary Equipment Substation Upgrading	12-0123	72. Baler 230 kV Substation	02-0203
30. Mexico – Marilao 230 kV Transmission Line	12-0124	73. Capas 230 kV Substation	02-0204
31. Taguig – Silang 500 kV Transmission Line	12-0125	74. Eastern Mindanao Voltage Improvement	02-0205
32. Tuguegarao – Enrile 69 kV Transmission Line	12-0126	75. Luzon Power Circuit Breaker for Grid Connection	02-0206
33. Cabanatuan – Sampaloc – Nagsaag 230 kV Transmission Line Upgrading	12-0127	76. Pinamucan 500 kV Substation	02-0207
34. Quezon – Marinduque Interconnection	01-0159	77. Relocation of Steel Poles along Hermosa-Duhat 230 kV Transmission Line	02-0208
		78. Tagkawayan 500 kV Substation	02-0209
35. Dasol 230 kV Substation	01-0161	79. Visayas Mobile Capacitor Bank	02-0210
36. Daraga – Bitano 69 kV Transmission Line	01-0162	80. Porac 230 kV Substation	02-0211
37. Tigbauan 138 kV Substation	01-0163	81. Palawan-Mindoro Interconnection (Stage 1)	02-0212
38. Sumangga 138 kV Substation	01-0164	82. Santiago-Magat 230 kV Transmission Line Reconductoring	02-0213
49. Corella – Ubay 138 kV Line 2 Stringing	01-0165	83. San Isidro 500 kV Substation	02-0214
40. Bool 238 kV Substation	01-0166	84. Mandurriao 138 kV Substation	02-0215
41. Banga 138 kV Substation	01-0167	85. Mindanao Substation Upgrading 2	02-0216
42. Visayas 69 kV Transmission Line Upgrading	01-0168	86. Mindanao Substation Expansion 3	02-0217

4.8 OPERATION AND MAINTENANCE PROJECTS

O&M Transmission Development Plan (TDP) Programs

O&M intends to implement the following projects:

- To address the deteriorating and ageing condition of installed assets.
- To comply with existing laws, regulations, policies and standards.
- Aligning with management's vision of a Smart Grid that entails the use and application of new technologies; and
- To ensure the reliable condition of substations and their installed assets by providing appropriate tools and equipment to operation and maintenance personnel.

Substation Reliability Program – includes the replacement and installation of High Voltage Equipment and Secondary Devices, acquisition and replenishment of spares, establishment of Centralized Control and Monitoring System (CCMS) and installation/replacement/upgrading of Substation Automation System (SAS).

Transmission and Sub-Transmission Line Reliability Programs – includes the replacement of ageing structures, high voltage equipment and secondary devices to maintain the desired reliability of various transmission and sub-transmission assets.

Improvement of Substation Facility and Non-Network Asset Program – is designed to improve, upgrade and construct facilities in transmission networks to provide quality service to the customers, strengthen the promotion of safety in the workplace and to adhere to the existing standards for environmental protection and occupational safety.

Tools and Equipment Acquisition Program – includes augmentation and replacement of test and measuring equipment, substation tools and equipment, and transmission line tools, equipment and maintenance vehicles that are necessary in the maintenance of substation equipment and transmission lines.

Below are the timelines for the implementation of the above programs:

Table 4.22: O&M Projects Timeline

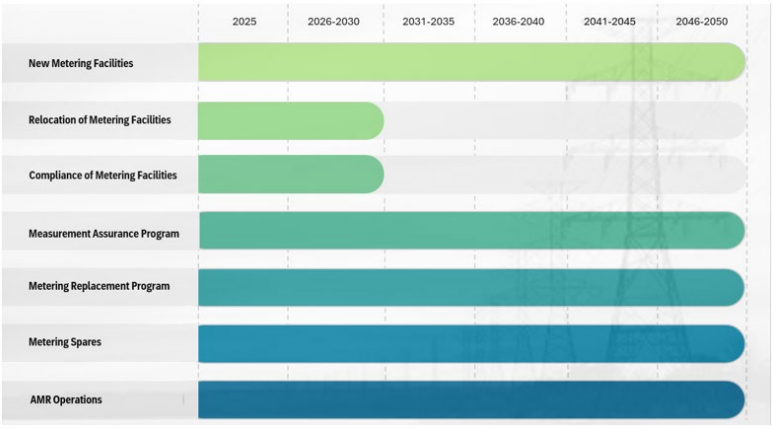
O&M Projects	Estimated Time of Completion					
	5th Reg	6th Reg	7th Reg	8th Reg	9th Reg	10th Reg
	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Substation Reliability Program						
Transmission Line Reliability Program						
Sub-Transmission Line Reliability Program						
Improvement of Substation Facility and Non-Network Asset Program						
Tools and Equipment Acquisition Program						

4.9 REVENUE METERING PROJECTS

NGCP, as a WESM Metering Service Provider (WMSP), is tasked with ensuring that Grid-connected Facilities adhere to the metering requirements outlined in the OATS Rules, WESM Rules and Metering Manual, PGC, PEC, and other relevant guidelines issued by the ERC and DOE. Specifically, this includes ensuring the provision of WESM-compliant metering facilities for loads and generators at the prescribed connection points, as well as the timely delivery of accurate metered data to be used for the billing and settlement systems of NGCP and IEMOP.

To fulfill these obligations, NGCP must consistently carry out metering capital projects, which are divided into the following categories:

Table 4.23: Metering Projects Timeline



Except for the Relocation of Metering Facilities and Compliance of Metering Facilities, which are expected to be fully completed within the 6th Regulatory Period, all other project groups will be implemented continuously until 2050.

4.10 SYSTEM OPERATIONS PROJECTS

The SO CAPEX for the SCADA, telecommunication and protection components of the Power Grid is characterized by the need to cope with the market-driven demand for consolidation of enterprise and operations applications in the Energy Management Systems (EMS), subsequent necessity for bandwidth and interoperability in the communications network and indispensability of redundancy, i.e., N-1 in the protection systems. The importance of integrating embedded variable renewable sources of energy into the Grid has also made it a point to provision readiness in both the SCADA-EMS and telecommunication systems for addressing connectivity and data organization and for the protection system to be able to handle the peculiar power quality management issues.

Another major CAPEX issues of interest are the cyber security and real-time monitoring and control of customer's connection points to comply with the provisions of Grid Code and Regulatory Directions.

Table 4.24: System Operations Projects Timeline

PROJECT LIST	2025	2026-2030	2031-2035	2036-2040	2041-2045	2045-2050
Fiber Optic and Microwave Radio Equipment Replacement						
Teleprotection Equipment Replacement						
Telecom Access and Remote Management Component Replacement						
Power Supply and Auxiliary Equipment Replenishment						
Infra and IT Support Facilities Replacement						
SCADA/EMS Facilities Replacement						
NDME and PQA Replacement						
SCADA Expansion—Added RTUs and Monitoring Points						
Telecom Access for Added Locations, Subscribers and Application Points						
Fiber Optic Expansion						
Cyber Security						
Network and Facilities Management System and IT Support Facilities						
Wide Area Measurement System (WAMS)						
NDME and PQA Expansion Program						
Monitoring and Control of DUs and Generator Monitoring						

4.11 BATTERY ENERGY STORAGE SYSTEM (BESS) FOR CONGESTION RELIEF

Previous TDP determined optimal BESS sites and capacities through load flow analysis ensuring no transmission overloads and maintaining voltage limits withing PGC recommended values during normal and single-outage contingency conditions. NGCP initially identified BESS for AS particularly focusing on the primary reserves due to its rapid response capabilities. Future studies will explore BESS for transmission congestion relief and upgrade deferment.

NGCP has recommended 450 MW of BESS capacity across Luzon, Visayas, and Mindanao grid with current existing capacity of 598.5 MW and proposed capacities of over 2,500 MW. Table 4.24 shows the breakdown of existing and proposed BESS capacity per grid.

Table 4.25: Summary of Recommended, Existing and Proposed BESS

Grid	Site Capacity		Existing BESS (MW)	Proposed BESS (MW) Committed	Proposed BESS (MW) Indicative	With SIS Application (MW)
LUZON	NGCP Recommended	290 MW	370.00	370	150.00	120.00
	Other Sites		189.90	970.00	1,346.60	260.6
VISAYAS	NGCP Recommended	70 MW	40	40	77.5	70
	Other Sites		47.00	270	819.40	360
MINDANAO	NGCP Recommended	90 MW	20.00	20	50.00	20.00
	Other Sites		91.80	200	68	-
Total		**450 MW**	**758.70**	**1870**	**2,511.5**	**830.60**

Addressing transmission congestion commenced in response to DOE Circular 2023-04-0008 that mandates integrating ESS into TDP for congestion relief and upgrade deferral. The NGCP commenced the technical study to identify ESS solutions for congested lines aiming to augment supply especially during peak demand.

WAY FORWARD (ESS AS CONGESTION RELIEF)

For newly identified projects aimed at addressing transmission congestion, NGCP will establish a standardized methodology for determining the appropriate size of ESS for areas experiencing overloading or congestion, particularly within the 69 kV transmission network.

In pursuit of energy security and a sustainable future, the Philippines' National Renewable Energy Program (NREP) targets a 35% share of RE in the power generation mix by 2030 and 50% by 2040. To achieve these goals, the government has introduced key policies and programs, including the Philippine CREZ and the GEAP.

These initiatives have encouraged private sector participation, leading to a surge of RE project proposals.

In 2023, RE accounts for 22% of the country's total power generation, primarily from geothermal and hydropower plants. To meet the 2030 and 2040 targets, substantial expansion in RE capacity is required. Based on the DOE's List of PSIPP and the growing number of OSW projects with issued Service Contracts, solar and wind power plants are expected to be the main contributors to the RE share.

5.1 CHALLENGES IN INTEGRATING HIGH RE PENETRATION

While the projected increase in the penetration of RE resources is encouraging, integrating high levels of VRE presents several challenges that must be addressed to maintain grid stability and reliability, to wit:

- **Variability and Intermittency -** Solar and wind generation fluctuate with weather conditions, requiring advanced forecasting and real-time balancing mechanisms.
- **Transmission Constraints -** The current grid infrastructure may not be adequate to handle abrupt increase of RE capacity, leading to congestion and curtailment.
- **Reduced System Inertia -** High penetration of inverter-based resources (IBRs), especially those employing Grid-Following (GFL) technology, weakens system inertia, increasing the risk of frequency and voltage instability.
- **Grid Protection Challenges -** Traditional grid protection systems must be adapted to accommodate higher levels of VRE; and
- **Economic and Regulatory Barriers -** Investments in infrastructure, energy storage, and regulatory reforms are essential to support RE integration.

5.2 SOLUTIONS TO ADDRESS RE INTEGRATION CHALLENGES

To ensure a stable and reliable grid, the following solutions must be implemented:

- **Grid Infrastructure Enhancement -** To support higher RE penetration, expanding and upgrading the transmission network is essential. Strengthening interconnections between major grids—Luzon, Visayas, and Mindanao—will enable more efficient power sharing. Additionally, developing high-voltage submarine and overhead transmission lines will facilitate the integration of remote RE generation zones into the main grid;
- **Energy Storage Systems -** Energy storage plays a crucial role in mitigating the variability of VRE. The deployment of BESS will help regulate frequency and smooth out power fluctuations. In parallel, exploring pumped hydro storage and other long-duration storage technologies will ensure a reliable power supply during low-RE generation periods.
- **Advanced Grid Technologies -** Modernizing the grid with smart technologies will enhance system flexibility and reliability. Real-time monitoring and adaptive control systems will improve grid responsiveness, while Grid-Forming

(GFM) inverters, Synchronous Condensers and Static Synchronous Compensators (STATCOM) will help maintain voltage and frequency stability; and

- **Flexible Power Generation -** To complement VRE generation, the grid must incorporate fast-ramping and hybrid power plants. Encouraging hybrid RE projects, such as solar + storage or wind + storage, will help provide a more consistent and dispatchable power output.

These strategies collectively support a stable, flexible, and resilient power system capable of accommodating the growing share of RE.

5.3 KEY STUDIES AND PROJECTS SUPPORTING RE INTEGRATION

NGCP is actively considering RE developments in grid planning and operations. Several studies and projects are underway to address the challenges of high RE penetration and develop practical solutions, such as:

1. **Laoag Power Quality Improvement Project** – The increasing integration of VRE sources such as solar and wind power plants in the Laoag Area presents power quality and stability challenges NGCP's assessment identified key issues, including voltage fluctuations and low Short Circuit Ratio, indicating a weak grid. These issues are expected to worsen with the commercial operation of the additional VRE capacity in the area.

   To address these challenges, NGCP conducted a study aimed to mitigate voltage fluctuations caused by wind and solar power, while increasing the VRE dispatch capacity in the area. The study evaluated several options, including conventional STATCOM, GFM-STATCOM, synchronous condenser and GFM-BESS. Among these options, NGCP selected GFM-STATCOM for its ability to provide dynamic reactive power support and strengthen system stability in weak grid conditions. The project is expected to be completed in the first quarter of 2026.

2. **Batangas-Mindoro 500 kV Interconnection and Backbone Project (BMIBP) –** Is another key project which seeks to connect Mindoro Island to the Luzon Grid. This interconnection will provide access to more reliable and competitive generation sources while also supporting the proposed OSW projects in the southern part of Mindoro. The project is expected to be completed by December 2030.

These initiatives highlight NGCP's commitment to integrating RE while ensuring a stable and resilient power system.

5.4 GREEN ENERGY AUCTION PROGRAM (GEAP) UPDATES

The GEAP program, which aims to promote the growth of private sector participation and accelerate the development of RE resources, was launched on November 3, 2021, through Department Circular No. DC2021-11-0036. This program ensures that RE projects are awarded through a transparent and competitive bidding process, which encourages cost-effective RE development.

Since 2022, there have been 3 GEAPs (2 completed and 1 ongoing).

- **GEA-1** - The first round, held on June 17, 2022, generated 1,866.13 MW of RE capacity from various sources, including hydro, biomass, solar, and wind. The winning bidders are set to deliver energy from 2023 to 2025, with prices set at or below the Green Energy Auction Reserve (GEAR) prices established by the ERC.
- **GEA-2** - The second round, conducted on July 3, 2023, resulted in a total of 3,442.756 MW of RE capacity from solar (ground-mounted, roof-mounted, and floating) and onshore wind projects. The winning bidders are expected to deliver energy from 2024 to 2026 at competitive prices.
- **GEA-3** - The third round of GEAP (GEA-3) will involve the development of specific auction policies and guidelines for geothermal and impounding hydroelectric generators, including run-of-river (ROR) and pumped-hydro systems. In addition, the DOE will establish payment settlement policies through the Wholesale Electricity Spot Market (WESM) for non-Feed-in-Tariff (FIT) projects, such as geothermal and hydro.

On November 14, 2024, the DOE released the Notice of Auction and Terms of Reference for GEA-3, inviting qualified energy developers to participate in this initiative. GEA-3 aims to target a total of 4,475 MW of new renewable energy capacity, covering both non-FIT-eligible and FIT-eligible technologies. This initiative will play a crucial role in meeting the country's growing electricity demand while ensuring that future power generation is increasingly sustainable.

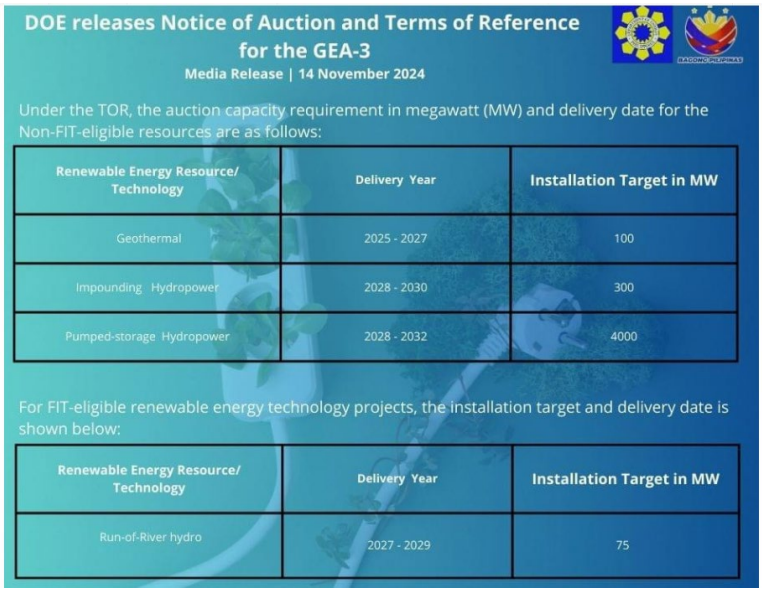


Figure 5.1: Notice of Auction for GEA – 3 Targets

The ongoing success of the GEAP underscores the government's commitment to accelerating the Philippines' transition to renewable energy. Through transparent and competitive bidding processes, the DOE is facilitating the development of a more sustainable energy future. However, to support the high penetration of renewable energy sources and ensure grid stability, significant efforts are required to expand and modernize transmission infrastructure, improve system flexibility, and address the integration challenges posed by intermittent power sources. By continuing to prioritize these efforts, the Philippines can successfully meet its renewable energy targets and strengthen its energy security.

5.5 WAY FORWARD (RE INTEGRATION)

The increasing penetration of VRE has the potential to cause significant degradation of power system performance due to their intermittent nature, which necessitates an increase in the required flexible generation. With a focus on large-scale wind and solar power generation connected to the grid, the rapidly varying power output-dependent on many factors leads to significant challenges for the system operations. BESS is now being widely used to mitigate the effects of integrating RE resources.

While the projected increase in the penetration of RE resources is encouraging, the intermittent nature of RE resources, particularly VRE, poses new challenges to grid planning and operation. This necessitates strengthening the transmission network through expansion and upgrades. The development of strong transmission backbones in the Luzon, Visayas, and Mindanao Grids, as well as significant stretches of interconnection lines through submarine cables, is a critical requirement to ensure efficient energy transmission from various potential RE development zones to the load centers throughout the Philippines.

In 2023, the "Variable Renewable Energy Integration Study" (VREIS) was conducted to determine the available generation capacity for VRE plant connections per grid/sub-grid of Luzon, Visayas, and Mindanao, based on thermal assessment alone.

The study also aimed to recommend the best locations, identify possible bottlenecks in the transmission corridor, and propose the necessary transmission upgrades.

Operational flexibility is also crucial in addressing the additional net-load variability and reduced system inertia caused by VRE. Advanced forecasting to reduce the uncertainty of VRE, the deployment of more flexible and fast-acting ESS, and the application of STATCOM and GFM technologies are among the key options to improve operational flexibility.

The NGCP is already considering RE developments in grid planning and operations. Further studies are being conducted to understand the potential impacts of high penetration levels of RE and to identify solutions that will address RE integration challenges, in line with meeting the target RE generation mix set by the government.

APPENDICES

Table 1.1 Luzon Committed Power Projects

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
COAL-FIRED POWER PLANT (CFPP)						
Mariveles CFPP Phase I - Unit 4 w/ SIS CPR4	150.000	Nov 2024	Mariveles (Alas-asin) 500 kV SS	Mariveles–Hermosa 500 kV TL Hermosa–San Jose 500 kV TL	Completed	2021
Mariveles CFPP Phase I - Unit 5 w/ SIS	350.000	Mar 2029	Mariveles (Alas-asin) 500 kV SS	Mariveles–Hermosa 500 kV TL Hermosa–San Jose 500 kV TL		
Mariveles CFPP Phase I - Unit 6	350.000	Jun 2029	Mariveles (Alas-asin) 500 kV SS	Mariveles–Hermosa 500 kV TL Hermosa–San Jose 500 kV TL		
Masinloc Power Plant - Unit 4 w/ SIS w/ FS CPR4	350.000	Aug 2025	Castillejos 500 kV SS (interim) Palauig 500 kV SS	Western 500 kV Backbone Stage-2 (Masinloc-Castillejos TL as Ph. 1 in 2024)	May 2028 *	2021
Masinloc Power Plant - Unit 5 w/ SIS w/ FS CPR4	350.000	Apr 2026				2021
Total	**1,550.00**					
OIL-BASED/ DIESEL POWER PLANT (DPP)						
SPC – Capas Bunker C-Fired DPP w/ SIS CPR1	11.04	Feb 2025	TARELCO II Facility		N/A	
Total	**11.04**					
NATURAL GAS-FIRED COMBINED CYCLE POWER PLANT (NGCC) GAS TURBINE COMBINED CYCLE POWER PLANTS (GTCC) COMBINED CYCLE POWER PLANTS (CCPP)						
Batangas CCPP - Phase 1, Unit 1 w/ FS CPR2	440.000	Nov 2024	Ilijan 500 kV Switchyard	Ilijan 500 kV Upgrading	N/A	2021
Batangas CCPP - Phase 1, Unit 2 w/ FS CPR2	440.000	Dec 2024	Pinamucan 500 kV SS	Pinamucan 500 kV SS	Feb 2029 *	
Batangas CCPP - Phase 1, Unit 3 CPR2	440.000	Jan 2025	Pinamucan 500 kV SS	Pinamucan 500 kV SS	Feb 2029 *	
Natural Gas-Fired Power Plant	1100.000	Jan 2029	Pinamucan 500 kV SS	Pinamucan-Tuy 500 kV TL	Dec 2031 *	
Energy World Corporation 650 MW Gas Fired CCPP w/ SIS	650.000	TBD	Pagbilao 230 kV SS	Pagbilao 500 kV SS	Completed	
Batangas CCPP - Phase 2	440.000	TBD	Pinamucan 500 kV SS	Pinamucan 500 kV SS	Feb 2029 *	
GCC-Gas Turbine Power Plant Phase 1 - Unit 1 (formerly AOE CFPP Unit 1)	640.000	TBD	Pagbilao 500 kV SS	Pagbilao-Tayabas 500 kV TL	Dec 2029 *	
NGCC-Gas Turbine Power Plant Phase 1 - Unit 2 (formerly AOE CFPP Unit 2)	640.000	TBD	Pagbilao 500 kV SS	Pagbilao-Tayabas 500 kV TL	Dec 2029 *	
NGCC Gas Turbine Power Plant Phase 2 - Unit 1	640.000	TBD	Pagbilao 500 kV SS	Pagbilao-Tayabas 500 kV TL	Dec 2029 *	
NGCC Gas Turbine Power Plant Phase 2 - Unit 2	640.000	TBD	Pagbilao 500 kV SS	Pagbilao-Tayabas 500 kV TL	Dec 2029 *	

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Total	**6,070.00**					
GEOTHERMAL POWER PLANT (GPP)						
Palayan Binary GPP w/ SIS CPR1	29.000	Nov 2024	Bacman 230 kV SS		N/A	
Tiwi Geothermal Binary GPP w/ SIS w/ FS CPR2	17.000	Feb 2025	Tiwi-C 69 kV SS	LPESUP		2022
Tanawon GPP w/ SIS CPR1	21.573	Dec 2024	Bacman 230 kV SS (through Palayan 230 kV Switchyard)		N/A	
Total	**67.573**					
HYDROELECTRIC POWER PLANT (HEPP)						
Likud 2 HEPP	0.560	TBD	IFELCO Facility		N/A	
Ibulao HEPP w/ SIS	4.500	TBD	Bayombong–Lagawe 69 kV TL		N/A	
Colasi HEPP CPR1	4.000	Dec 2024	CANORECO Facility		N/A	
Laguio (Laginbayan) Malaki 1 HEPP CPR1	1.600	Jan 2025	MERALCO Facility		N/A	
Tumauini HEPP	11.300	Jul 2026				
Mariveles HEPP SIS Exempted w/ FS CPR1	0.600	Mar 2025	PENELCO Facility		N/A	
Dupinga HEPP CPR1	4.800	Jun 2025	NEECO II A2 Facility		N/A	
Dipalo HEPP SIS Exempted w/ FS CPR1	4.150	Oct 2025	Nagsaag-Umingan 69 kV TL		N/A	
Sablan 1 HEPP	20.000	Nov 2025	La Trinidad–Calot 69 kV TL		N/A	
Ibulao 1 HEPP w/ SIS CPR1	7.600	2026	Bayombong SS 69 kV Network		N/A	
Kapangan HEPP GEA-1 w/ SIS w/ FS CPR2	60.000	Jun 2027	Bacnotan 69 kV SS		N/A	2024
Asin-Hungduan HEPP w/ SIS w/ FS CPR1	9.800	2028	Bayombong SS 69 kV Network		N/A	
Tublay 3 HEPP SIS Exempted CPR1	1.0	2028				
Wawa Pumped Storage 1 HEPP w/ SIS	600.000	2030	San Mateo 230 kV SS	San Mateo 230 kV SS	2031-2040	
Total	**729.91**	TBD				
BIOMASS POWER PLANT (BPP)						
Trustpower BPP w/ SIS CPR1	5.082	Nov 2024	Mexico-Clark 69 kV TL		N/A	
FQBC Biogas CPR1	1.200	Aug 2025	MERALCO Facility		N/A	
Total	**6.282**					
SOLAR POWER PROJECT (SPP) SOLAR PHOTOVOLTAIC POWER PLANT (SOLAR PV PP)						
Maragondon SPP w/ FS CPR1	48.118	Dec 2024	Dasmarinas 115 kV SS			
Tanauan SPP SIS Exempted w/ FS CPR2	48.118	Dec 2024	Calamba 230 kV SS			2021

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Laoag SPP - Phase 1 w/ SIS w/ FS CPR1	57.8	Dec 2024	Bolo 230 kV SS	Bolo – Balaoan 500 kV TL	Oct 2030 *	
Laoag 2 SPP - Phase 2 w/ SIS w/ FS CPR1	71.4	Dec 2024	Bolo 230 kV SS	Bolo – Balaoan 500 kV TL	Oct 2030 *	
Cordon SPP GEA-2 w/ SIS CPR1	52.800	Jul 2025	Santiago – Aglipay 69 kV TL		N/A	
Ilocos Norte SPP w/ SIS w/ FS CPR2	87.594	Dec 2024	Laoag 115 kV SS		N/A	2023
Bongabon SPP GEA-2 w/ SIS CPR1	18.375	Jul 2025	Cabanatuan – Baler 69 kV TL		N/A	
Naic Rooftop SPP w/ FS CPR1	4.950	Jan 2025	MERALCO Facility		N/A	
Warehouse No. B4 Geomax Compound Solar PV System GEA-2 CPR1	0.180	Dec 2024				
Warehouse #3 C TEKNIK Compound Solar PV System GEA-2 CPR1	0.130	Dec 2024				
Warehouse #5 C Teknik Compound Solar PV System GEA-2 CPR1	0.130	Dec 2024				
Warehouse #4 C Teknik Compound Solar PV System GEA-2 CPR1	0.130	Dec 2024				
Warehouse #6 C Teknik Compound Solar PV System GEA-2 CPR1	0.130	Dec 2024				
Warehouse #1 C Teknik Compound Solar PV System GEA-2 CPR1	0.060	Dec 2024				
Warehouse #18 C Teknik Compound Solar PV System GEA-2 CPR1	0.150	Dec 2024				
Warehouse #19 C Teknik Compound Solar PV System GEA-2 CPR1	0.150	Dec 2024				
Warehouse #2 C Teknik Compound Solar PV System GEA-2 CPR1	0.090	Dec 2024				
Bongabon SPP GEA-2 w/ SIS	30.933	Dec 2024	Cabanatuan – Baler 69 kV TL		N/A	
Gamu SPP w/ SIS w/ FS CPR1	41.244	Dec 2024	Gamu – Roxas 69 kV TL		N/A	
RASLAG IV SPP w/ SIS w/ FS CPR1	26.4	Jan 2025	Mexico – Clark 69 kV TL			
Lumbangan SPP ** w/ SIS w/ FS CPR4	90	Oct 2025	Tuy 69 kV SS	Tuy 500/230 kV SS (Stage 1)	Jun 2026	2023
Palauig SPP w/ SIS w/ FS CPR1	49.5	Jan 2025	Botolon – Candelaria 69 kV TL			
Luntal SPP** w/ SIS w/ FS CPR4	50.000	Oct 2025	Tuy 69 kV SS	Tuy 500/230 kV SS (Stage 1)	Jun 2026	2024

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Santo Domingo SPP w/ SIS w/ FS	44.2	Feb 2025	San Manuel 69 kV SS	NLSUP 2 (San Manuel SS)	Aug 2027 *	2023
Subic New PV SPP w/ SIS w/ FS CPR1	86.199	Feb 2025	SBMA 230 kV SS		N/A	
Talugtug SPP GEA-1 w/ SIS w/ FS CPR3	99.980	Mar 2025	Nagsaag 230 kV SS	Nagsaag – Tumana 69 kV TL	Nov-2027 *	2022
Sta. Barbara 1 SPP GEA-2 w/ SIS w/ FS CPR2	90.000	Apr 2026	Balingueo 69 kV SS	North Luzon SS Upgrading 2		2023
Samal SPP w/ SIS w/ FS CPR1	48.118	Oct 2025	Hermosa 69 kV SS	Mariveles – Hermosa 500 kV TL Hermosa – San Jose 500 kV TL	Completed	
Armenia SPP w/ SIS w/ FS CPR3	34.370	Mar 2025	Single Circuit Tap Connection to Concepcion-Sta. Ignacia Line 2 Interim connection to Concepcion-Camiling 69 kV Line	Concepcion – Sta. Ignacia 69 kV TL North Luzon 230 kV SS Upgrading 2	Jan 2027 Aug 2027 *	2023
Bugallon SPP w/ SIS w/ FS CPR4	530.400	Dec 2025	Bugallon 500 kV SS	Bugallon 500 kV SS	Jan 2033 *	2022
Binalonan SPP (San Manuel 1 SPP) GEA-2 w/ SIS w/ FS CPR3	80.100	Mar 2026	San Manuel 69 kV SS	NLSUP 2 (San Manuel SS)	Aug 2027 *	2023
Bolbok 1 SPP (Tuy Batangas 4 SPP) GEA-2 w/ SIS w/ FS CPR4	50	Mar 2026	Tuy 69 kV SS	Tuy 500 kV SS (Stage 1)	Jun 2026	2023
Bolbok 2 SPP GEA-2 w/ SIS w/ FS CPR4	75	Feb 2026	Tuy 69 kV SS	Tuy 500/230 kV SS (Stage 1) South Luzon 230 kV SS Upgrading 2	Jun 2026 Jun 2027*	2023
Pagbilao 1 SPP GEA-2 w/ SIS w/ FS CPR2	70.000	Feb 2026	Pagbilao 230 kV SS	LPCBGC 2	N/A	2022
Pagbilao 2 SPP GEA-2 w/ SIS w/ FS CPR2	27.000	Feb 2026	Pagbilao 230 kV SS		N/A	-
Santa Rosa Nueva Ecija 2 SSP Phase 1A w/ SIS w/ FS CPR2	33.348	Aug 2025	San Isidro 500 kV SS		N/A	2022
Labrador SPP ** GEA-2 w/ SIS w/ FS CPR4	200.000	Oct 2025	Bugallon 230 kV SS	Bugallon 500 kV SS	Jan 2033	2023
Olongapo SPP w/ SIS w/ FS CPR4	171.850	Oct 2025	Castillejos 230 kV SS	Castillejos 230 kV SS Western Luzon 500 kV Backbone (Stage 2)	Dec 2025 May 2028 *	2023
PAVI Green Naga SPP GEA-1 w/ SIS w/ FS CPR2	40.400	Dec 2025	Naga-Lagonoy 69kV TL	South Luzon SS Upgrading 2	N/A	2022
Concepcion Tarlac 2 SPP GEA-1 w/ SIS CPR2	200.000	Dec 2025	Concepcion 230 kV SS		N/A	2022
Santa Rosa Nueva Ecija 2 SPP Phase 1B GEA-1 w/ SIS w/ FS	108.400	Dec 2025	Nagsaag 230 kV SS	Cabanatuan - Sampaloc - Nagsaag 230 kV TL Upgrading	Jul 2033 *	2023

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Santa Rosa Nueva Ecija 2 SPP Phase 2 GEA-1 w/ SIS w/ FS CPR2	171.600	Dec 2025	Nagsaag 230 kV SS	Cabanatuan – Sampaloc - Nagsaag 230 kV TL Upgrading	Jul 2033 *	
Tayabas SPP GEA-1 w/ SIS w/ FS CPR2	450.000	Dec 2025	Tayabas 230 kV SS	Taguig – Silang 500 kV TL LPCBGC 2	Dec 2031 * Jan 2030	2023
Sapang Balen Solar 1 PP (Phase 1) ** w/ SIS w/ FS CPR4	79.200	Dec 2025	Magalang 230 kV SS	Magalang 230 kV SS	Dec 2029 *	2022
Sapang Balen Solar 1 PP (Phase 2) w/ SIS w/ FS CPR4	79.200	Dec 2025	Magalang 230 kV SS	Magalang 230 kV SS	Dec 2029 *	
PAVI Green San Vicente SPP w/ SIS w/ FS CPR2	28.600	Dec 2025	Labo 69 kV SS	LPCBGC 3	Jan 2030*	2020
Arayat 3A SPP GEA-2 w/ SIS w/ FS CPR1	30.000	May 2026	Mexico – Clark 69 kV TL		Jul 2026 *	
Development of 50MW Ground Mounted SPP GEA-2 CPR1	50.000	Dec 2025	Tuy 69 kV SS		N/A	
San Pablo GEA-2 w/ SIS CPR2 SPP Phase 1	49.400	Dec 2025	Tuguegarao 69 kV SS	Tuguegarao – Enrile 69 kV TL		2020
Limbauan SPP GEA-2 w/ SIS CPR1	28.000	Dec 2025	Tuguegarao – Cabagan 69 kV TL		N/A	
Bugallon SPP GEA-2 w/ SIS w/ FS CPR1	18.560	Dec 2025	Bolo 500 kV SS	San Fabian 230 kV SS Bauang – La Trinidad 230 kV TL Upgrading	Dec 2033 * Dec 2031 *	
Sapang Balen Solar 2 PP ** w/ SIS w/ FS CPR4	246.604	Dec 2026	Magalang 230 kV SS	Magalang 230 kV SS	Dec 2029 *	2022
Pasuquin-Burgos 100MW SPP GEA-2 w/ SIS CPR2	49.000	Jun 2026	Laoag 115 kV SS	Luzon Primary Equipment SS Upgrading LPCBGC 1	Dec 2032 * Jan 2030	2021
Agrosolis SPP SIS Exempted	3.652	Jun 2026	Concepcion 69 kV SS			
Ixus Bugallon SPP ** GEA-2 w/ SIS	274.735	Dec 2026	Bolo 500 kV SS	Bugallon 500 kV SS Project	Jan 2033	2023
San Pablo SPP Phase 2 GEA-2 CPR2	79.040	Dec 2026		-		
Santa Rosa Nueva Ecija 3 SPP GEA-2 w/ SIS w/ FS CPR2	20.000	Dec 2026	Nagsaag 230 kV SS		N/A	
Linglingay SPP GEA-2 w/ SIS CPR2	82.082	Dec 2026	Direct connection to Gamu 69 kV SS			2021
NKS One Floating SPP (Phase 1) GEA-2 w/ SIS w/ FS CPR2	90.00	Dec 2026	Direct connection to NGCP's Lumban 230 kV SS	South Luzon SS Upgrading 2	N/A	2022
NKS One Floating SPP (Phase 2) GEA-2 w/ SIS w/ FS CPR2	100.00	Dec 2026	Direct connection to NGCP's Lumban 230 kV SS		N/A	
Pangasinan Norte SPP CPR1	6.900	Dec 2026	Waived SIS / Embedded –		N/A	

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
			PANELCO III Facility			
Opus SPP GEA-2 w/ SIS w/ FS	149.950	Dec 2026	Pinili 230 kV SS	Pinili 230 kV SS	Apr 2028 *	2023
YH Camarines Norte SPP CPR1	8.000	Dec 2027	Waived SIS / Embedded – CANORECO Facility		N/A	
Nueva Era SPP	87.500	Jan 2028				
Total	4,849.770					
WIND POWER PLANT (WPP)						
Balaoi and Caunayan WPP GEA-1	160.000	Mar 2025	Laoag 115 kV SS	Luzon Primary Equipment SS Upgrading	Dec 2032 *	
Talim WPP CPR1	218.750	Jun 2025	Option 1: Binangonan 115 kV SS	Option 1: None	Option 1: N/A	
			Option 2: Taguig 230 kV SS	Option 2: Taguig 500 kV SS Taguig-Taytay 230 kV	Option 2: Dec 2026 Dec 2030 *	
Tanay WPP* GEA-2 w/ SIS w/ FS	128.000	Nov 2025	Baras 230 kV SS	Baras 500 kV SS	Sep 2032 *	2023
Alabat WPP GEA-2	62.400	Nov 2025	Gumaca-Lopez-Tagkawayan 69 kV TL		N/A	
Rizal WPP GEA-2 w/ SIS CPR4	90.000	Dec 2025	Baras 230 kV SS	Baras 500 kV SS	Sep 2032 *	2023
Caparispisan II WPP GEA-1	70.000	Dec 2025	Laoag 115 kV SS	Luzon Primary Equipment SS Upgrading	Dec 2032 *	
Calatagan WPP GEA-1 w/ SIS	30.000	Dec 2025	Tuy 230 kV SS	Tuy 500/230 kV SS Stage 1	Jun 2026	
Kalayaan 2 WPP w/ SIS w/ FS CPR2	100.800	Jul 2026	San Juan 230 kV SS	LPCBGC 3	Jan 2030 *	2023
Quezon WPP GEA-2 w/ SIS w/ FS CPR4	239.985	Dec 2026	Baras 500 kV SS	Baras 500 kV SS	Sep 2032 *	2023
Camarines Sur WPP GEA-2	49.999	Dec 2026	Naga-Libmanan 69 kV TL		N/A	
Isla WPP** GEA-2 w/ SIS w/ FS CPR4	230.000	Dec 2026	Lumban 230 kV SS		N/A	2023
Pangasinan CW 2 WPP GEA-2	80.000	Dec 2026	Bugallon 500/230 kV SS	Bugallon 500kV SS	2031-2040	2023
Bataan-Zambales CW WP CPR2	100.000	Dec 2026	Balsik 230 kV SS		N/A	2024
Camarines Sur CW WPP	50.000	Dec 2026	Naga 69 kV SS		N/A	
Total	1,609.934					
BATTERY ENERGY STORAGE (BESS) POWER PLANT						
Gamu BESS w/ SIS CPR2	20.000	2024				2020
Gamu BESS Phase 2 w/ SIS CPR2	20.000	2024				
Magapit BESS w/ SIS CPR2	20.000	2024				2020
Magapit BESS Phase 2 w/ SIS CPR2	20.000	2024				
Lumban BESS w/ SIS CPR2	40.000	2024				2021
Lumban BESS Phase 2 w/ SIS CPR2	20.000	2024				
Mexico BESS w/ SIS CPR2	50.000	2025				2021

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Mexico BESS Phase 2 w/ SIS CPR2	20.000	2025				
Mexico SJM B BESS w/ SIS w/ FS CPR2	20.000	2024				2022
Bac-Man ESS w/ SIS w/ FS CPR2	30.000	2024				2023
Bay ESS w/ SIS CPR2	20.000	2025				2024
Mahabang Parang BESS	40.000	TBD				
Daraga BESS	40.000	TBD				
Bauang Battery Energy Storage Project	40.000	TBD				
Labrador BESS	40.000	TBD				
San Rafael BESS	20.000	TBD				
Cabanatuan Battery Energy Storage	40.000	TBD				
Hermosa BESS	40.000	TBD				
Laoag Battery Energy Storage System Project	40.000	TBD				
Navotas Battery Energy Storage System Project	40.000	TBD				
Pagbilao BESS	40.000	TBD				
Bacnotan BESS	40.000	TBD				
Subic BESS	40.000	TBD				
San Jose del Monte BESS	40.000	TBD				
Bolo BESS	40.000	TBD				
Tuguegarao BESS	40.000	TBD				
Bayombong BESS	40.000	TBD				
Calamba BESS	40.000	TBD				
Labo BESS	40.000	TBD				
Naga BESS	40.000	TBD				
San Rafael Battery Energy Storage Phase 2	20.000	TBD				
Sual BESS	60.000	TBD				
Urdaneta Battery Energy Storage System	40.000	TBD				
Dasmarinas BESS	40.000	TBD				
Ilijan BESS	40.000	TBD				
Gumaca BESS	40.000	TBD				
La Trinidad BESS	40.000	TBD				
BCCP Limay BESS Project Phase 2	20.000	TBD				
Angat BESS Project	20.000	TBD				
Total	**1,340**					
TOTAL COMMITTED	**16,174.509**					
TOTAL COMMITTED W/O BESS	**14,794.509**					

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

Table 1.2: Visayas Committed Power Projects

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
COAL-FIRED POWER PLANT (CFPP)						
Palm Concepcion CFPP Unit II w/ SIS	135	Jun 2026	Direct connection to Concepcion 138 kV SS	N/A	N/A	2013
Total	**135**					
OIL-BASED/ DIESEL POWER PLANT (DPP)						
Sulzer DPP w/ SIS CPR1	5.500	Sep 2024	Lapu-lapu 69 kV Lines	N/A	N/A	2022
Caterpillar DPP w/ SIS CPR1	2.000	Sep 2024	Lapu-lapu 69 kV Lines	N/A	N/A	2022
Cummins DPP w/ SIS CPR1	1.000	Sep 2024	Lapu-lapu 69 kV Lines	N/A	N/A	2022
Bohol In-Island DPP w/ SIS CPR1	95.200	TBD	Direct connection to Ubay 138 kV SS	Visayas PCB for Grid Connection Project	2025-2030	2023
Total	**103.70**					
GEOTHERMAL POWER PLANT (GPP)						
Biliran GPP (Phase 1) CPR1	2.000	May 2024	Tap connection along Ormoc – Biliran 69 kV line	N/A	N/A	2016
Bago Binary GPP (formerly Northern Negros GPP) CPR1	5.645	Dec 2024	Direct connection to NNGP 138 kV SS	N/A	N/A	2022
Biliran GPP (Phase 2) w/ SIS CPR1	6.000	Oct 2024	Tap connection along Ormoc – Biliran 69 kV line	N/A	N/A	2023
Mahanagdong Geothermal Brine Optimization PP w/ SIS w/ FS CPR1	28.000	Sep 2025	Direct connect to Kananga SWS	N/A	N/A	2024
Biliran GPP (Phase 3) w/ SIS CPR1	42.000	2027	Tap connection along Ormoc – Biliran 69 kV line	N/A	N/A	2023
Total	**83.645**					
HYDROELECTRIC POWER PLANT (HEPP						
Upper Taft HEPP w/ SIS w/ FS CPR1	14.160	Jun 2024	Tap connection along Paranas – Nato 69 kV TL	N/A	N/A	2024
Bao HEPP	2.000	Jul 2025	Embedded to LEYECO V	N/A	N/A	2023
Igbulo (Bais) HEPP GEA-2 w/ SIS CPR1	8.100	Oct 2024	Tap connection along Sta. Barbara-San Jose 69 kV TL	N/A	N/A	2016
Binalbagan 1 HEPP	5.300	2028	-	N/A	N/A	2024
Total	**29.560**					
BIOMASS COGENRATION POWER PLANT (BCPP)						
8 MW BPP (Expansion) w/ SIS CPR1	8.000	Dec 2024	Tap connection along Dingle – Passi 69 kV TL	N/A	N/A	2022

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
3 MW BPP (3 MW Phase 1) w/ SIS CPR1	3.000	Dec 2024	Tap connection along Mabinay – Bayawan 69 kV TL	N/A	N/A	2020
3 MW BPP (Phase 2: 3MW)	3.000	Dec 2024	Tap connection along Mabinay – Bayawan 69 kV TL	N/A	N/A	2020
70-MW BPP (30-MW Expansion) w/ SIS w/ FS CPR1	30.000	May 2025	Tap connection along Bacolod – Cadiz 69 kV TL	N/A	N/A	2018
Total	**44.000**					
SOLAR POWER PROJECT (SPP)						
SOLAR PHOTOVOLTAIC POWER PLANT (SOLAR PV PP)						
1MW SAMELCO II - Paranas SPP w/ FS CPR1	1.05	Dec 2024	Embedded to SAMELCO II	N/A	N/A	2024
Kananga-Ormoc SPP GEA-1 w/ SIS w/ FS CPR2	300.000	Dec 2025	Direct connection to Ormoc 230 kV SS	Visayas PCB for Grid Connection	2025-2030	2022
Dagohoy SPP w/ SIS w/ FS CPR1	20.622	Feb 2025	Tap connection to Ubay – Trinidad 69 kV TL	N/A	N/A	2024
Calatrava SPP w/ SIS w/ FS CPR2	137.48	Mar 2025	Direct connection to Calatrava 230 kV SS	N/A	N/A	2024
Bacolod SPP w/ SIS w/ FS CPR2	130.05	Aug 2025	Direct connection to Bacolod 138 kV SS	Visayas PCB for Grid Connection Project 2	2025-2030	2024
San Isidro SPP (Phase 1) w/ FS w/ SIS w/ FS CPR4	112	Dec 2025	Direct connection to Tugas 230 kV SS	Cebu-Leyte 230 kV Interconnection Lines 3 and 4	Stage 1: Dec 2028 * Stage 2: Dec 2031 *	2024
Ajuy 1 SPP w/ FS w/ SIS w/ FS CPR1	14.000	Jan 2026	Tap connection along Concepcion-Sara 69 kV TL	N/A	N/A	2023
San Isidro SPP (Phase 2) w/ FS w/ SIS w/ FS CPR4	112	Mar 2026	Direct connection to Tugas 230 kV SS	Cebu-Leye 230 kV Interconnection Lines 3 and 4	Stage 1: Dec 2028 * Stage 2: Dec 2031 *	2024
Luca SPP	80.000	Sep 2026	Direct connection to Barotac Viejo 138 kV SS	Visayas PCB for Grid Connection Project 2	2025-2030	2023
Silay 2a SPP w/ FS w/ SIS w/ FS CPR1	30.000	Dec 2026	Tap connection to CENECO Bacolod-Silay	N/A	N/A	2023

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Silay 2b SPP w/ FS w/ SIS w/ FS CPR1	20.000	Dec 2026	69 kV TL Tap connection to CENECO Bacolod-Silay 69 kV TL	N/A	N/A	2023
1MW SAMELCO - Calbayog SPP CPR1	1.05	Dec 2026	Embedded to SAMELCO	N/A	N/A	2024
Total	**958.252**					
WIND POWER PLANT (WPP)						
Nabas WPP GEA-1 w/ SIS w/ FS CPR1	13.560	May 2025	Tap connection along Nabas – Caticlan 69 kV TL	N/A	N/A	2014
Gemini WPP w/ FS w/ SIS CPR4	200.000	Dec 2026	Direct connection to Calbayog 138 kV SS	Visayas PCB for Grid Connection Project 2	2025-2030	2024
Bago City WPP w/ FS w/ SIS w/ FS CPR4	150.000	Dec 2026	Direct connection to NGCP's proposed La - Carlota 138 kV SS	La Carlota 138 kV SS	Jul 2031 *	2024
Iloilo CW 1 WPP w/ FS w/ SIS CPR2	152.000	Dec 2026	Direct connection to Sta. Barbara 138 kV SS	Visayas PCB for Grid Connection Project	2025-2030	2024
Total	**515.560**					
BATTERY ENERGY STORAGE (BESS) POWER PLANT						
Tabango BESS w/ SIS w/ FS CPR2	20.000	Dec 2024	Direct connect to Tabango 69 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2020
Dingle BESS	20	TBD	Direct connection to Dingle 138 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2021
Samboan BESS	20.000	TBD	Direct connection to Samboan 69 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2020
Compostela BESS	20.000	TBD	Direct connection to Compostela 230 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2021
Nabas BESS	20.000	TBD	Direct connection to Nabas 69 kV SS	Visayas PCB for Grid Connection Project	Dec 2027	2021
Calbayog BESS	20.000	TBD	Direct connection to Calbayog 69 kV SS	Visayas SS Upgrading Project 3	Jun 2033	2021
Tongonan ESS GEA-1	30.000	2024	Direct connection to	N/A	N/A	2023

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Southern Negros ESS w/ SIS w/ FS CPR1	30.000	2024	Tongonan 138 kV SWS Direct connection to Nasuji 138 kV SS	N/A	N/A	2023
Northern Negros ESS w/ SIS w/ FS CPR1	30.000	2026	Direct connection to NNGP 138 kV SWS	N/A	N/A	2023
Tabango BESS Phase 2	20.000	TBD	Direct connection to Tabango 69 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2020
Toledo BESS Phase 2	20.000	TBD	Direct connection to Calong-calong 69 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2020
San Carlos BESS	20.000	TBD	Direct connection to San Carlos 69 kV SWS	Visayas PCB for Grid Connection Project	Dec 2027	2021
Mactan BESS	20.000	TBD	Direct connection to Pusok 69 kV SS	Lapu-lapu 230 kV SS Project	Nov 2027	2020
Ubay BESS Phase 2	20.000	TBD	Direct connection to Ubay 69 kV SS	Visayas SS Upgrading Project 2	Stage 1: Aug 2027 Stage 2: Oct 2028	2021
Total	**310**					
TOTAL COMMITTED	**2,179.72**					
TOTAL COMMITTED W/O BESS	**1,869.72**					

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval was issued in December 2025.*

Table 1.3: Mindanao Committed Power Projects

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
COAL-FIRED POWER PLANT (CFPP)						
Misamis Oriental 2 x 135 MW Circulating Fluidized Bed Coal Fired Thermal PP CPR4	270.000	Mar 2027	Villanueva 138 kV SS		N/A	
Total	**270.000**					
OIL-BASED/DIESEL POWER PLANT (DPP)						
Sangali DPP Phase 1 w/ SIS CPR2	28.000	Jul 2025	Zamboanga 69 kV SS		N/A	
Sangali DPP Phase 2 CPR2	28.000	Sep 2025	Zamboanga 69 kV SS		N/A	
Total	**56.000**					
HYDROELECTRIC POWER PLANT (HEPP)						
Titunod HEPP GEA-1	3.600	2025			N/A	
Liangan HEPP GEA-1	6.000	2025	Agus 6-Kauswagan 69 kV Line		N/A	

Name of the Project	Rated Capacity (MW)	Target Commercial Operation	Connection Point	Associated Transmission Project	ETC/ Completion Date	Declared Committed by the DOE
Apo Agua HEPP GEA-1	2.424	Mar 2025				
Mangima HEPP w/ SIS CPR2	12.000	Feb-25	Manolo Fortich 69 kV SS		N/A	
Maladugao River (Upper Cascade) HEPP w/ SIS CPR1	8.400	Jun-25	FIBECO owned Maramag-Malaybalay-Barandias 69 kV Line		N/A	
Malitbog HEPP GEA-1 CPR1	3.700	Nov-25	Villanueva 69 kV SS		N/A	
Silo-o HEPP GEA-1 CPR1	3.700	Nov-25	Villanueva 69 kV SS		N/A	
Mat-i 1 HEPP GEA-1 CPR1	4.850	Nov 2025	Jasaan – Balingasag 69 kV Line		N/A	
Clarin HEPP GEA-1 CPR1	6.900	Nov 2025	Tap connection along the Aurora-Ozamiz 69 kV TL		N/A	
Osmeña HEPP	1	Jul 2026			N/A	
Bubunawan HEPP	32.000	2028	Libona 138 kV SS		N/A	
Sipangpang HEPP	1.800	TBD			N/A	
Tagpangi HEPP	1.700	TBD			N/A	
Gakaon HEPP	2.230	TBD			N/A	
Total	**90.304**					
SOLAR POWER PROJECT (SPP)						
SOLAR PHOTOVOLTAIC POWER PLANT (SOLAR PV PP)						
General Santos SPP GEA-1 w/ SIS CPR2	120.000	Dec 2025	General Santos 138 kV SS	Culaman–General Santos 230 kV TL Tupi 138 kV SS	2031-2040 Oct 2030 *	
Butuan City 1 SPP w/ FS CPR1	8.000	Dec 2025	Nasipit 69 kV SS		N/A	
Tantangan SPP w/ FS CPR3	40.000	Dec 2026	Tacurong 69 kV SS		N/A	
Total	**168.000**					
BATTERY ENERGY STORAGE (BESS) POWER PLANT						
Pitogo BESS CPR2	60.000	Jul 2025				
Sangali BESS CPR2	20.000	Mar 2025				
Tagum BESS CPR2	20.000	Jan 2025				
Aurora BESS CPR2	20.000	2024				
Tagoloan BESS (Villanueva BESS)	20.000	Oct 2024				
Tagoloan BESS Phase 2	20.000	TBD				
Placer BESS	20.000	TBD				
Maramag BESS	20.000	TBD				
General Santos BESS	20.000	TBD				
Total	**220**					
TOTAL COMMITTED	**804.304**					
TOTAL COMMITTED W/O BESS	**584.304**					

** Regulatory approval is one crucial requirement for meeting the projects' ETC (Estimated Time of Completion) in the TDP. For projects awaiting regulatory approval, it should be noted that the indicated ETC (month-year) assumes that ERC approval (5RP FD) will be issued by December 2025.*

Legend:

GEA-1 - Green Energy Auction-1
GEA-2 - Green Energy Auction-2
w/ SIS - System Impact Study
SIS Exempted - SIS Exempted
w/ FS - Feasibility Study

Connection Point Requirements (CPR)

CPR1 - No Grid Projects required (for small capacity plants that can tap to existing 69 kV Lin es
CPR2 - Projects require Installation of Circuit Breaker only at existing SS
CPR3 - Projects for installation of Circuit Breaker (CB) and transformer (Tx) at existing SS and/or with TL Upgrade
CPR4 - Projects requiring Construction of a new SS and new transmission backbone
* - Awaiting ERC approval
** - With interim connection scheme

Table 2.1 Luzon Indicative Power Projects

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
COAL-FIRED POWER PLANT (CFPP)			
SRPGC CFPP w/ SIS	350.000	Barangay (Brgy.) San Rafael, Calaca, Batangas	TBD
SRPGC CFPP	350.000	Brgy. San Rafael, Calaca, Batangas	TBD
H & WB PCB Supercritical CFPP- Unit 1 w/ SIS	350.000	Jose Panganiban, Camarines Norte	TBD
H & WB PCB Supercritical CFPP- Unit 2 w/ SIS	350.000	Jose Panganiban, Camarines Norte	TBD
Total	**1,400.00**		
OIL-BASED/DIESEL POWER PLANT (DPP)			
Malaya 2 x 30 DPP w/ SIS	60	Malaya, Pililla, Rizal	TBD
Total	**60**		
NATURAL GAS-FIRED COMBINED CYCLE POWER PLANT (NGCC) GAS TURBINE COMBINED CYCLE POWER PLANTS (GTCC) COMBINED CYCLE POWER PLANTS (CCPP)			
GTCC San Francisco Power Plant w/ SIS	1,200	Brgy. Cagsiay 1 & Cagsiay 2, Mauban, Quezon Province	2028
VIRES Natural Gas Floating Power Plant	450	Brgy. Simlong, Batangas City, Batangas	Dec 2029
Pagbilao 4 & 5 GTCC Power Plant w/ SIS	1,310	Brgy. Ibabang Polo, Pagbilao Quezon	Feb 2028
GNPower Sisiman LNG CCPP	1,200	Brgy. Alas-asin & Brgy. Sisiman, Mariveles, Bataan	Dec 2029
GLEDC Luna LNG-Fired CCPP	1,128	Brgy. Nalvo Sur & Brgy.Carisquis, Luna, La Union	2030
Santa Maria NGCC w/ SIS	1,260	Brgy. Santa Rita, Batangas City	TBD
Total	**6,548**		
GEOTHERMAL POWER PLANT (GPP)			
Bacman 4 Botong - Rangas GPP	30	Bacon District, Sorsogon, Sorsogon City	Dec 2024
Labo GPP	105	Tagkawayan, Labo, San Vincente, San Lorenzo Ruiz, Del Gallego (Quezon/ Camarines Norte & Sur)	2027
Mt. Malinao GPP w/ SIS	50	Tiwi, Malinao, Malilipot, Polangui, Tabaco City and Buhi (Albay/Camarines Sur)	2028
Maibarara 3 GPP	20	Laguna/Batangas	2029
Kalinga GPP w/ SIS	120	Lubuagan, Pasil & Tinglayan, Kalinga	2032
Bacman 4 Botong - Rangas GPP	20	Bacon District, Sorsogon, Sorsogon City	TBD
Kayabon GPP	30	Manito, Albay	TBD
Total	**375**		
HYDROELECTRIC POWER PLANT (HEPP)			
Tumauini (Upper Cascade) HEPP	11.300	Tumauini, Isabela	2025
Tinoc 1 HEPP	3.000	Tinoc, Ifugao	2027
Tinoc 2 HEPP	6.500	Tinoc, Ifugao	2027
Tinoc 3 HEPP	5.000	Tinoc, Ifugao	2027
Gened - 1 HEPP	150.000	Pudtol, Apayaw	2027
Ilaguen HEPP w/ SIS	19.000	San Mariano & San Guillermo, Isabela	2027
Lower Siffu HEPP	3.000	Natonin, Mt. Province	2027
Upper Siffu HEPP	2.750	Natonin, Mt. Province	2027
Matuno 1 HEPP w/ SIS	7.400	Ambaguio, Nueva Vizcaya	2027
Matuno 2 HEPP w/ SIS	15.000	Ambaguio, Nueva Vizcaya	2027
Ibulao 2 HEPP w/ SIS	7.400	Kiangan, Ifugao	2027
Lamut HEPP w/ SIS	6.800	Asipulo, Ifugao	2027
Ilaguen 2 HEPP w/ SIS	14.000	Echague, Isabela	2027
Besao 2 HEPP w/ SIS	7.000	Besao, Mt. Province	2027
Chico HEPP	150.000	Tabuk, Kalinga	2027

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Piapi River HEPP	4.500	Real, Quezon	2027
Camiling 1 HEPP	7.000	Mayantoc, Tarlac	2027
Camiling 2 HEPP	4.000	Mayantoc, Tarlac	2027
Coto 1 HEPP w/ SIS	9.000	Masinloc, Zambales	2027
Coto 2 HEPP w/ SIS	3.500	Masinloc, Zambales	2027
Alimit HEPP w/ SIS	120.000	Lagawe, Ifugao	2027
Olilicon HEPP w/ SIS	20.000	Ilagan, Ifugao	2027
Tublay 1 HEPP	1.900	Tublay & La Trinidad, Benguet	2027
Camiling River 3 HEPP	4.200	Mayantoc, Tarlac	2027
Chico River HEPP w/ SIS	52.000	Tabuk, Kalinga	2027
Boga HEPP	1.000	Bauko, Mt. Province	2027
Upper Chico	2.000	Bauko, Mt. Province	2027
Lower Chico HEPP	2.100	Bauko, Mt. Province	2027
Lingod River HEPP	3.000	Gabaldon, Nueva Ecija & San Luis, Aurora	2027
Tublay 2 HEPP	6.000	Tublay, Benguet	2027
Pasil B HEPP w/ SIS	15.684	Pasil, Kalinga	2027
Pasil C HEPP w/ SIS	9.754	Pasil, Kalinga	2027
Tublay 3 HEPP	1.000	Tublay, Benguet	2027
Nabuangan River HEPP	10.000	Conner, Apayao	2027
Kibungan 2 HEPP	40.000	Sugpon, Ilocos Sur	2027
Matuno 2 HEPP w/ SIS	7.900	Bambang, Nueva Vizcaya	2027
Tignoan (Lower) HEPP w/ SIS	8.000	Real, Quezon	2027
Pampang HEPP w/ SIS	26.000	Santa Fe, Nueva Vizcaya	2027
Upper Tabuk HEPP	15.000	Tabuk City, Kalinga	2027
Calanan HEPP w/ SIS	60.000	Tabuk City, Kalinga	2027
Dalimuno HEPP w/ SIS	58.000	Tabuk City, Kalinga	2027
Kennon HEPP	5.000	Tuba, Benguet	2027
ARIIS 2 (NIA Stn 5+437.50) HEPP	0.750	San Manuel, Pangasinan	2027
ARIIS 3 (NIA Stn 5+898.50) HEPP	0.500	San Manuel, Pangasinan	2027
ARIIS 1 (NIA Station 4+283) HEPP	0.900	San Manuel, Pangasinan	2027
Tamdagan HEPP	7.400	Vintar, Ilocos Norte	2027
Tamdagan 2 HEPP	5.150	Vintar, Ilocos Norte	2027
ARIIS 4 (Stn 4+808) HEPP	0.670	San Manuel, Pangasinan	2027
Saltan River Site E HEPP	45.000	Balbalan and Pinukpuk,, Kalinga	2027
Masiway 2 HEPP	9.000	Pantabangan, Nueva Ecjia	2027
Kabayan 2 HEPP w/ SIS	52.000	Kabayan, Benguet	2028
Tinglayan HEPP	22.500	Tinglayan, Kalinga	2028
Gened 2 HEPP w/ SIS	250.000	Kabugao, Apayao	2028
Saltan D River HEPP	49.000	Balbalan & Pinukpuk, Kalinga	2028
ARIS 3 + 611 HEPP	1.000	San Manuel, Pangasinan	2028
Pakil Pumped Storage HEPP w/ SIS	1400.000	Pakil, Laguna	2028
Pantabangan (Pump Storage) HEPP w/ SIS	600.000	Pantabangan, Nueva Ecija	2029
Kibungan Pumped-Storage HEPP	500.000	Kibungan, Benguet	2029
Wawa Pumped Storage 3 HEPP	50.000	Rodriguez, Rizal	2030
Wawa Pumped Storage 2 HEPP	100.000	Rodriguez, Rizal	2030
Alimit-Pumped Storage HEPP	250.000	Lagawe & Mayoyao, Ifugao	2030
San Roque Upper East Pumped Storage HEPP	600.000	Itogon, Benguet	2030
San Roque West Pumped Storage HEPP	400.000	Itogon, Benguet	2030
Dingalan Pumped-Storage HEPP	500.000	Dingalan, Aurora	2030
San Roque Lower East Pumped-Storage HEPP	400.000	Itogon, Benguet	2030
Calanasan 1 HEPP w/ SIS	30.000	Calanasan, Apayao	2031
Total	**6,178.558**		
BIOMASS POWER PLANTS			
12-MW Waste-to-Energy Power Plant Project	12	Pampanga	Dec 2026

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
100.000-MW Manila Waste-to-Energy Facility Project	100	Metro Manila	Mar 2029
Total	**112**		
SOLAR POWER PROJECT (SPP)			
San Marcelino SPP (Phase 3) w/ SIS	96.900	San Marcelino, Zambales	Dec 2025
San Ildefonso SPP w/ SIS	44.000	San Ildefonso, Bulacan	Mar 2025
GIGA ACE 8 SPP w/ SIS	237.600	Palauig, Zambales	Mar 2025
Bato (formerly applied as Bulawen) SPP	28.400	Palauig, Zambales	Apr 2025
San Marcelino SPP w/ SIS	96.900	San Marcelino, Zambales	Jun 2025
Infanta 2 SPP w/ SIS	147.791	Infanta, Pangasinan	Jun 2025
Cabangan SPP w/ SIS	43.750	Brgy. Mabanglit, Cabangan, Zambales	Sep 2025
Capas SPP w/ SIS	22.048	Clark Green City, Capas, Tarlac	Sep 2025
Cawag SPP w/ SIS	120.600	Subic, Zambales	Sep 2025
Sual SPP w/ SIS	49.500	Sual, Pangasinan	Nov 2025
GIGASOL1 SPP w/ SIS	185.898	Botolan, Zambales	Dec 2025
Gamu SPP	59.840	Gamu & Naguilian, Isabela	Dec 2025
Isabela Ground Mounted Solar PV PP w/ SIS	336.826	City of Ilagan, Isabela	Feb 2026
CSFirst Green Infanta SPP (Note: With Integrated BESS of 107.320 MW) w/ SIS	180.540	Infanta and Mabini, Pangasinan	Feb 2026
Terra SPP (Phase 1)	1,785.714	Gapan City, General Tinio & Peneranda, Nueva Ecija and San Miguel & Dona Remedios Trinidad, Bulacan	Feb 2026
San Manuel SPP w/ SIS	67.070	San Manuel, Pangasinan	Mar 2026
SolarAce3 SPP	200.000	Buguey, Cagayan	Mar 2026
Astra SPP w/ SIS	56.250	Curimao, Ilocos Norte	Mar-26
Villaverde Ground-Mounted Solar PV PP w/ SIS	13.360	Villaverde, Nueva Viscaya	Jun 2026
Aringay Solar PV PP	41.280	Aringay & Caba, La Union	Jun 2026
Pasuquin-Burgos SPP w/ SIS	96.500	Pasuquin & Burgos, Ilocos Norte	Jun 2026
Inara SPP Phase 3 w/ SIS	48.825	Tanauan City, Batangas	Aug 2026
Inara SPP Phase 2 w/ SIS	39.375	Tanauan, Batangas	Aug 2026
TITAN I SSP - Phase 1 w/ SIS	240.000	Cambitala & San Juan, Pantabangan, Nueva Ecija	Sep 2026
Burgos Pangasinan SSP w/ SIS	50.100	Burgos, Pangasinan	Oct 2026
Cabuyao 4 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Calamba Floating SSP w/ SIS	82.500	Laguna de Bay	Dec 2026
Fuego SPP w/ SIS	75.173	Pagbilao, Quezon	Dec 2026
Pagbilao Floating SPP w/ SIS	98.700	Offshore of Pagbilao, Quezon	Dec 2026
Cabuyao 3 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Cabuyao 2 Floating Solar PV PP w/ SIS	105.600	Laguna De Bay	Dec 2026
Cabuyao 5 Floating Solar PV PP w/ SIS	105.600	Laguna De Bay	Dec 2026
Victoria 1 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Sta. Rosa Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Cabuyao 1 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Bay 2 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Bay 1 Floating Solar PV PP w/ SIS	105.600	Laguna de Bay	Dec 2026
Balayan SPP	480.000	Balayan & Calaca, Batangas	Jan 2027
Botolan Solar PV PP	57.200	Botolan, Zambales	Feb 2027
Terra SPP (Phase 2)	714.286	Gapan City, General Tinio & Peneranda, Nueva Ecija and San Miguel & Dona Remedios Trinidad, Bulacan	Feb 2027
TITAN I SPP - Phase 2 w/ SIS	240.000	Cambitala & San Juan, Pantabangan, Nueva Ecija	Mar 2027
AC Laguna Floating SPP	210.000	Laguna de Bay	Apr 2027
SolarAce4 Floating SPP	104.850	Laguna de Bay	Apr 2027
AC Subic Floating SPP w/ SIS	210.000	Laguna de Bay	May 2027

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Bagac 1 SPP	121.500	Brgy. Quinawan, Bagac, Bataan	Jun 2027
San Roque SPP	152.000	San Manuel & San Nicolas, Pangasinan and Itogon, Benguet	Jun 2027
Cabiao SPP w/ SIS	261.043	Cabiao, Nueva Ecija	Jun 2027
YH Palawan SPP	8.000	Puerto Princesa City, Palawan	Aug 2027
Laguna Lake-Los Baños SPP w/ SIS	125.000	Laguna De Bay	Sep 2027
Radius SPP w/ SIS	125.000	Laguna de Bay	Sep 2027
Caronsi SPP	50.000	Iguig & Penablanca	Oct 2027
Ingrid2 Floating SPP	104.850	Laguna De Bay	Nov 2027
Hermosa SPP	22.398	Hermosa, Bataan	Dec 2027
San Marcelino Floating SPP w/ SIS	120.295	San Marcelino, Zambales	Dec 2027
GigaWind1 Floating SPP	209.700	Laguna De Bay	Jan 2028
Lal-lo SPP w/ SIS	95.000	Brgy. Maxingal, Lal-lo, Cagayan	Jan 2028
Pantabangan Floating SPP w/ SIS	463.995	Pantabangan, Nueva Ecija	Dec 2028
Tinang Tarlac SPP w/ SIS	217.184	Brgy. Tinang, Concepcion, Tarlac	Jan 2029
La Union SPP w/ SIS	38.850	Municipality of Bacnotan, Province of La Union	Jan 2029
Total	**9,626.991**		
WIND POWER PLANT (WPP)			
Sanchez Mira WPP	50.000	Sanchez Mira, Cagayan	Feb 2025
Koala WPP w/ SIS	150.000	Pakil; Jala-Jala, Laguna and Rizal	Mar 2025
Panda WPP w/ SIS	150.000	Pililla and Jala-Jala; Mabitac and Pangil , Rizal and Laguna	Mar 2025
Tayabas North Wind Energy Project	144.000	Tayabas City and Lucban, Quezon	Sep 2025
Tayabas South Wind Energy Project w/ SIS	187.200	Tayabas, Pagbilao, Quezon	May 2026
Sembrano WPP w/ SIS	93.750	Pililla, Rizal; Mabitac and Pakil, Laguna	Jun 2026
Sorsogon WPP	400.000	Matnog, Bulan, Irosin and Magdalena, Sorsogon	Dec 2026
Ilocos Sur WPP	100.000	Narvacan, Santa, & Bantay; San Quintin and Langiden, Ilocos Sur and Abra	Dec 2026
Botolan WPP	300.000	Botolan & Cabangan, Zambales	Jan 2027
San Miguel Bay WPP w/ SIS	600.000	Provinces of Camarines Sur and Camarines Norte	Jan 2027
Camarines Sur WPP w/ SIS	500.000	Province of Camarines Sur	Mar 2027
Mulanay Wind Farm Project	50.000	Mulanay & Catanauan, Quezon	Mar 2027
Camarines Norte WPP w/ SIS	250.000	Capalonga & Jose Panganiban, Camarines Norte	Jun 2027
Albay WPP	99.000	Guinobatan & Ligao City, Albay	Sep 2027
Dalupiri Island WPP	300.000	Onshore & Offshore of Dalupiri Island, Calayan, Cagayan	Oct 027
Diwata 2 WPP w/ SIS	500.000	General Nakar & Real, Quezon	Oct 2027
Aurora Offshore WPP w/ SIS	600.000	Province of Aurora	Oct 2027
Pasacao-San Fernando Wind Farm Project	300.000	Pasacao, San Fernando, Minalabac, Pamplona & Bula, Camarines Sur	Dec 2027
Presentacion 2 WPP w/ SIS	54.000	Presentacion, Camarines Sur	Dec 2027
Pangasinan CW 1 WPP	50.000	San Manuel, Sison, & Binalonan, Pangasinan	Dec 2027
Prieto Diaz Wind Farm Project	150.000	Prieto Diaz, Sorsogon City, & Gubat, Sorsogon	Dec 2027
Tinambac Wind Farm Project	50.000	Tinambac, Camarines Sur	Dec 2027
Quezon II Plaridel WPP	50.000	Plaridel & Atimonan, Quezon	Mar 2028
Aguilar WPP	99.000	Bugallon & Aguilar, Pangasinan	May 2028

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Kalayaan 4 Wind Energy Project	303.800	Famy, Siniloan, Pakil, & Pangil, Laguna; & Real, Quezon	Jun 2028
San Miguel Bay WPP	500.000	Offshore of Camarines Sur	Jun 2028
Dagupan Offshore WPP w/ SIS	350.000	Provinces of Pangasinan & La Union	Jun 2028
San Miguel Bay Offshore WPP w/ SIS	1000.000	Provinces of Camarines Norte & Camarines Sur	Jun 2028
Romblon WPP	0.900	Romblon, Romblon	Aug 2028
Viento Power Wind Project	100.000	Mauban, Quezon	Sep 2028
Ilocos Norte Offshore WPP	900.000	Province of Ilocos Norte	Oct 2028
Maragondon WPP w/ SIS	200.000	Maragondon, Cavite	Dec 2028
Bongabon WPP w/ SIS	84.500	Rizal & Bongabon, Nueva Ecija	Dec 2028
Taysan Wind Farm Project	50.000	Taysan, Rosario, & Lobo, Batangas	Dec 2028
Baao Wind Energy Project w/ SIS	210.800	Baao, Iriga City, Ocampo, & Bula, Camarines Sur	Jan 2029
Lucena WPP w/ SIS	475.000	Offshore & Onshore of Quezon	Jun 2029
Maragondon Wind Energy Project	86.400	Maragondon, Cavite	Jun 2029
Ilocos Onshore WPP	400.000	Provinces of Abra, Ilocos Norte, & Ilocos Sur	Aug 2029
Bicol WPP w/ SIS	500.000	Provinces of Quezon, Camarines Sur & Camarines Norte	Sep 2029
Frontera Bay WPP w/ SIS	450.000	Offshore of Bataan & Cavite	Oct 2029
Bangui 2 WPP w/ SIS	132.000	Bangui and Dumalneg, Ilocos Norte	Oct 2029
Bugallon WPP	86.630	Bugallon, Pangasinan	Nov 2029
Burgos 4 WPP w/ SIS	100.000	Burgos, Ilocos Norte	Dec 2029
Ilocos WPP	144.000	Burgos, Pasuquin, Ilocos Norte	Dec 2029
Pasuquin WPP w/ SIS	90.000	Pasuquin, Ilocos Norte	Dec 2029
Manila Bay WPP w/ SIS	1248.000	Provinces of Bataan, Cavite, & Batangas	Dec 2029
Calatagan Offshore WPP w/ SIS	1024.000	Offshore & Onshore of Batangas	Dec 2029
Real Ace WPP w/ SIS	387.500	Mauban and Real, Quezon	Dec 2029
Tayabas Bay WPP w/ SIS	275.000	Province of Quezon	Dec 2029
Bulalacao Two WPP	112.000	Bulalacao, Oriental Mindoro	Dec 2029
Baao Two Wind Energy Project	62.000	Bula, Baao, Pili and Ocampo, Camarines Sur	Dec 2029
Real WPP w/ SIS	250.000	Real, Quezon	Dec 2029
Calatagan Offshore Wind Farm w/ SIS	1830.000	Provinces of Batangas and Occidental Mindoro	Jan 2030
Quezon WPP w/ SIS	100.000	Pagbilao & Atimonan, Quezon	Jan 2030
Sual WPP w/ SIS	100.000	Sual, Mabini, & Labrador, Pangasinan	Feb 2030
Bustos WPP w/ SIS	100.000	Bustos, Angat, & San Rafael, Bulacan	Feb 2030
Balayan Bay WPP w/ SIS	100.000	Lemery, Batangas	Feb 2030
Laguna-Quezon WPP w/ SIS	100.000	Lumban & Cavinti, Laguna; Sampaloc and Mauban, Quezon	Feb 2030
Zambales WPP w/ SIS	100.000	San Antonio and Castillejos, Zambales	Mar 2030
Lobo WPP	112.000	Lobo, San Juan, and Rosario, Batangas	Apr 2030
Mariveles Offshore Wind Farm w/ SIS	1500.000	Provinces of Bataan, Cavite, and Batangas	Jun 2030
Doña Remedios Trinidad Bulacan Wind Farm Project	200.000	Doña Remedios, Trinidad, Bulacan	Jun 2030
Lian Wind Farm Project	50.000	Lian, Tuy, and Balayan, Batangas	Jun 2030
Labrador WPP	100.000	Labrador, Pangasinan	Aug 2030
Nasugbu Bay WPP w/ SIS	100.000	Offshore of Batangas	Aug 2030
Nueva Ecija WPP	100.000	San Jose City, Carranglan, and Pantabangan, Nueva	Aug 2030
Laguna WPP w/ SIS	100.000	Kalayaan and Lumban, Laguna; Mauban, Quezon	Aug 2030
Northern Luzon Offshore WPP w/ SIS	2000.000	Offshore of Ilocos Norte	Dec 2030

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Bondoc WPP	2000.000	Onshore and Offshore of Quezon; and Offshore of Masbate	Dec 2030
Zambales South WPP	200.000	San Felipe, San Narciso and San Marcelino ,Zambales	Jan 2031
San Nicolas 1 WPP w/ SIS	100.000	San Nicolas, Pangasinan	Feb 2031
Real WPP w/ SIS	250.000	Real, Quezon	Mar 2031
Mabini WPP w/ SIS	50.000	Mabini, Batangas	Mar 2031
Palayan-Laur WPP w/ SIS	100.000	Laur and Palayan City, Nueva Ecija	Jun 2031
Quezon WPP	100.000	Macalelon and Lopez, Quezon	Jun 2031
Gumaca-Pitogo WPP	100.000	Gumaca and Pitogo, Quezon	Jun 2031
Northern Mindoro Offshore WPP	2000.000	Provinces of Occidental Mindoro and Batangas	Jul 2031
San Juan WPP w/ SIS	100.000	San Juan, La Union	Aug 2031
Limay WPP	100.000	Limay and Mariveles, Bataan	Aug 2031
Bagac Bay Onshore Wind Project	500.000	Bagac, Pilar, Orion and Mariveles, Bataan	Sep 2031
Cavite Offshore Wind Project w/ SIS	994.000	Province of Cavite	Oct 2031
Bulalacao Bay Offshore Wind Energy Project w/ SIS	1200.000	Offshore and Onshore of Oriental Mindoro and Antique	Oct 2031
NOM FL1 Offshore WPP	3038.000	Provinces of Batangas and Occidental Mindoro	Oct 2031
Lubang and Looc Island WPP	800.000	Province of Occidental Mindoro	Oct 2031
Bulalacao One Onshore Wind Energy Project w/ SIS	330.000	Towns of Bulalacao and Magsaysay, Occidental Mindoro	Feb 2032
San Jose WPP w/ SIS	300.000	San Jose City, Lupao and Carranglan, Nueva Ecija	Mar 2032
Claveria Offshore Wind Farm	1600.000	Provinces of Ilocos Norte and Cagayan	Apr 2032
Infanta-Dasol WPP	380.000	Infanta-Dasol, Pangasinan	Apr 2032
Banahaw WPP w/ SIS	247.000	Sariaya and Tayabas City, Quezon	Aug 2032
Mindoro Offshore WPP	1000.000	Onshore and Offshore of Occidental Mindoro and Offshore of Antique and Oriental Mindoro	Sep 2032
Tagkawayan Wind Farm Project	300.000	Tagkawayan, Quezon	Sep 2032
Nueva Ecija 1 WPP	100.000	Carranglan, Pantabangan, and San Jose City, Nueva Ecija	Oct 2032
East Ecija WPP	420.000	Laur, Gabaldon, and General Tinio, Nueva Ecija	Nov 2032
Aparri Bay WPP	600.000	Aparri, Cagayan	Dec 2032
Cagayan West Offshore WPP	1024.000	Province of Cagayan	Dec 2032
132 MW WPP	132.500	Vintar, Bangui, Pasuquin, Ilocos Norte	Jan 2033
Bulalacao WPP w/ SIS	85.500	Bulalacao, Oriental Mindoro	Feb 2033
Balayan Bay Offshore Wind Energy Project	750.000	Province of Batangas	Feb 2033
Pangasinan-Zambales WPP w/ SIS	100.000	Aguilar, Bugallon, and Infanta, Pangasinan; Santa Cruz, Zambales	Feb 2033
Calatagan Onshore WPP	130.000	Calatagan and Balayan, Batangas	Mar 2033
Basiad Bay Offshore WPP w/ SIS	600.000	Province of Camarines Norte	Mar 2033
Pasacao WPP	300.000	Pasacao, Libmanan, and Pamplona, Camarines Sur	Mar 2033
Quezon - Camarines Norte WPP w/ SIS	400.000	Guinayangan and Tagkawayan, Quezon; Santa Elena and Labo, Camarines Norte	May 2033
Offshore Wind Luzon E-1 w/ SIS	555.000	Offshore of Sorsogon	May 2033
Pagbilao Offshore Wind Power	300.000	Offshore of Quezon	Jun 2033
Tayabas Bay WPP	500.000	Province of Quezon	Jun 2033
Bulalacao Offshore Wind Farm Project	3,100.000	Offshore of Oriental Mindoro and Antique	Aug 2033

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Haraya Zambales Onshore Wind Project	370.000	Cabangan, Botolan and San Felipe, Zambales	Aug 2033
Ilocos Norte CW WPP	120.000	Vintar, Piddig, Sarrat, Dingras, Marcos, Laoag City, and Batac City, Ilocos Norte	Sep 2033
Ombra WPP w/ SIS	312.500	Dingalan, Aurora; Doña Remedios Trinidad, Bulacan; and Palayan City, Laur, General Tinio, and Gabaldon, Nueva Ecija	Sep 2033
Pantabangan WPP w/ SIS	156.250	Pantabangan, Nueva Ecija	Nov 2033
Pagsanjan Wind Project	200.000	Pagsanjan, Lumban, Kalayaan, Cavinti and Luisiana,	Dec 2033
Calabanga Wind Project	200.000	Calabanga and Tinambac, Camarines Sur	Dec 2033
Gubat Wind Project w/ SIS	190.000	Casiguran and Gubat. Sorsogon	Dec 2033
Mindoro WPP w/ SIS	500.000	Rizal and San Jose, Occidental Mindoro and Bulalacao, Mansalay and Bongabong, Oriental Mindoro	Dec 2033
Pagudpud WPP	84.000	Pagudpud, Ilocos Norte	Apr 2034
Total	**48,460.23**		
BATTERY ENERGY STORAGE (BESS) POWER PLANT			
Cruz na Daan (CND) BESS w/ SIS	40.600	Balagtas Bypass Road, Mabalasbalas, San Rafael Bulacan	Sep 2025
Ambuklao BESS	40.000	Brgy. Ambuklao, Bokod, Benguet	Mar 2027
Binga BESS	40.000	Itogon, Benguet	Jun 2026
Magat BESS Phase 2	16.000	Ramon, Isabela	Jun 2026
Enerhiya Central BESS w/ SIS	40.000	Concepcion, Tarlac	Dec 2025
Enerhiya Sur II BESS w/ SIS	40.000	Lumban, Laguna	Dec 2025
Enerhiya Sur I BESS w/ SIS	40.000	Lemery and Tuy, Calaca, Batangas	Dec 2025
Enerhiya Sur 3 BESS	40.000	Sta. Rosa, Laguna	Mar 2026
Enerhiya Sur 4 BESS	40.000	Cabuyao, Laguna	Mar 2026
Enerhiya Sur 5 BESS	40.000	Calamba, Laguna	Mar 2026
Labo BESS w/ SIS	20.000	Labo, Camarines Norte	TBD
Lumban BESS w/ SIS	20.000	Lumban, Laguna	TBD
TMO BESS	100.000	Navotas Fishport Complex, Baradero St., North Bay Boulevard, Navotas City	Jun 2026
Malaya BESS	20.000	Malaya, Pililla, Rizal	Dec 2025
Nagsaag BESS	20.000	Nagsaag, Pangasinan	2025
Lumban BESS	20.000	Lumban, Laguna	2025
Laoag BESS w/ SIS	20.000	Laoag, Ilocos Norte	2025
Concepcion BESS w/ SIS	20.000	Concepcion, Tarlac	2026
Labrador BESS	20.000	Labrador, Pangasinan	2026
Currimao BESS w/ SIS	50.000	Currimao, Ilocos Norte	Dec 2027
Pililla BESS	50.000	Pililia, Rizal	Mar 2027
Bay BESS w/ SIS	50.000	Calauan, Laguna	Jun 2027
Panda BESS w/ SIS	150.000	Pililla, Rizal	Jul 2027
Angat Optimization Project	160.000	Brgy. San Lorenzo, Norzagaray, Bulacan	Mar 2028
San Roque Optimization Project	400.000	Brgy. Narra, Municipality of San Manuel and Brgy. San Felipe West, Municipality of San Nicolas, Province of Pangasinan	Jul 2028
Total	**1,496.600**		
TOTAL INDICATIVE	**74,257.379**		
TOTAL INDICATIVE W/O BESS	**72,760.779**		

Table 2.2: Visayas Indicative Power Projects

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
COAL-FIRED POWER PLANT (CFPP)			
Therma Visayas, Inc. CFPP Expansion w/ SIS	169.000	Sitio Looc, Brgy. Bato, Toledo City, Cebu	Sep 2027
Total	**169.000**		
GEOTHERMAL POWER PLANT (GPP)			
Dauin GPP	40.000	Dauin, Negros Oriental	TBD
Total	**40.000**		
HYDROELECTRIC POWER PROJECT (HEPP)			
Malugo HEPP	6.000	Silay City, Negros Occidental	2027
Lower Himogaan HEPP	4.000	Sagay City, Negros Occidental	2027
Bago 1 HEPP	9.600	San Carlos City, Negros Occidental	2027
Bago 2 HEPP	10.000	San Carlos City, Negros Occidental	2027
Aklan Pumped-Storage HEPP w/ SIS	300.000	Malay, Aklan	2030
Maslog HEPP w/ SIS	40.000	Maslog, Eastern Samar	2028
Ilog HEPP w/ SIS	21.600	Mabinay, Negros Oriental	2027
Bago 3 HEPP	15.000	Murcia and Salvador Benedicto, Negros Occidental	2028
Casapa River HEPP w/ SIS	10.000	Maslog, Eastern Samar	2029
Lower Buhid HEPP w/ SIS	20.000	Maydolong, Eastern Samar	2028
Total	**436.200**		
BIOMASS POWER PLANT (BPP)			
15.000-MW Panay BPP	15.000	Barotac Viejo, Iloilo	Aug 2028
Total	**15.000**		
SOLAR POWER PLANT (SPP)			
Biliran SPP	20.000	Biliran, Biliran	Dec 2024
Bohol SPP w/ SIS	17.500	Ubay, Bohol	Jun 2024
Bacolod SPP w/ SIS	130.050	Bacolod City and Brgy. Tabunan, Bago City	Aug 2024
San Miguel SPP w/ SIS	80.000	San Miguel, Leyte	Dec 2024
Vista Alegre SPP w/ SIS	41.600	Bacolod City, Negros Occidental	Jan 2025
Cadiz City SPP w/ SIS	56.000	Cadiz City, Negros Occidental	May 2025
Sagay Solar on water PV Power Plant w/ SIS	101.200	Sagay City, Negros Occidental	Sep 2026
Luca SPP w/ SIS	80.000	Ajuy and Barotac Viejo, Iloilo	Sep 2026
Victorias SPP w/ SIS	85.925	Victorias City, Negros Occidental	Nov 2026
Manapla SPP w/ SIS	120.295	Manapla, Negros Occidental	Nov 2026
All Home All Builders Bacolod SPP	0.240	Negros Occidental, Bacolod, Mandalagan	Dec 2026
Ubay SPP w/ SIS	137.480	Ubay, Bohol	Dec 2026
Barotac Viejo SPP w/ SIS	175.287	Barotac Viejo, Iloilo	Mar 2027
Sikatuna SPP w/ SIS	37.884	Sikatuna and Balilihan, Bohol	Dec 2027
TPC I –San Carlos 2 SPP w/ SIS	49.350	City of San Carlos, Province of Negros Occidental	Feb 2028
Luna SPP w/ SIS	171.110	Cadiz City, Negros Occidental	Mar 2028
Daga SPP w/ SIS	297.264	Cadiz City, Negros Occidental	Jun 2028
Ubay SPP w/ SIS	138.600	Ubay, Bohol	Dec 2028
Medellin SPP w/ SIS	303.600	Medellin and Daanbantayan, Cebu	Jun 2029
Total	**2,043.385**		
WIND POWER PLANT (WPP)			
Sibunag WPP w/ SIS	103.500	Sibunag, Guimaras	Apr 2025
San Isidro WPP w/ SIS	206.250	San Isidro, Northern Samar	Sep 2025
Pulupandan WPP w/ SIS	50.000	Pulupandan, Negros Occidental	Feb 2026
Aklan WPP w/ SIS	75.600	Nabas, Malay, Aklan	Jun 2026
Tanjay WPP w/ SIS	45.000	Bais, Bayawan, Tanjay, Pamplona, Negros Oriental	Jan 2027
Ajuy Wind Farm Project	200.000	Ajuy, Barotac Viejo, and Lemery, Iloilo	Dec 2027

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Ibajay Wind Energy Project w/ SIS	80.600	Nabas and Ibajay, Province of Aklan; and Pandan, Province of Antique	Dec 2027
Negros Occidental Wind Farm Project w/ SIS	300.000	Manapla, Victorias City, E.B. Magalona, and Cadiz City, Negros Occidental	Mar 2028
Lavezares Wind Project w/ SIS	200.000	Lavezares, Rosario, Victoria and Allen, Northern Samar	Mar 2028
Malay WPP	500.000	Malay and Buruanga, Aklan	Oct 2028
Kandungaw WPP	100.000	Badian, and Dalaguete, Cebu	Oct 2028
Caluya WPP	967.000	Offshore and Onshore of Caluya, Antique	Dec 2028
Sibonga Wind Farm Project	50.000	Sibonga, Barili, and Dumanjug, Cebu	Dec 2028
Samar Norte Offshore WPP w/ SIS	650.000	Provinces of Northern Samar	Dec 2028
Ginatilan WPP	100.000	Ginatilan, Samboan, Malabuyoc, and Oslob, Cebu	Sep 2029
Bohol WPP w/ SIS	100.000	Ubay and San Miguel, Bohol	Nov 2029
Malabuyoc WPP	100.000	Malabuyoc, Alegria, Ginatilan, Oslob, and Boljoon, Cebu	Nov 2029
Guimaras 1 Offshore WPP	582.000	Province of Guimaras	Dec 2029
Guimaras Onshore WPP	100.000	Buenavista, San Lorenzo, Sibunag, and Nueva Valencia, Guimaras	Dec 2029
Guimaras-Negros Occidental Offshore WPP	600.000	Provinces of Guimaras and Negros Occidental	Dec 2029
Iloilo-Guimaras Offshore WPP	1000.000	Provinces of Iloilo, Guimaras and Negros Occidental	Dec 2029
Bohol 2 Anda WPP	50.000	Anda, Candijay and Guildulman, Bohol	Dec 2029
Guimaras Strait WPP	600.000	Province of Negros Occidental	Dec 2029
Buenavista WPP w/ SIS	100.000	Buenavista, Guimaras	Jan 2030
Concepcion WPP	100.000	Concepcion, Iloilo	Feb 2030
Iloilo Strait WPP w/ SIS	100.000	Provinces of Iloilo and Guimaras	Feb 2030
Kabankalan WPP w/ SIS	100.000	Kabankalan City, Negros Occidental; Ayungon, Negros Oriental	Feb 2030
Negros WPP w/ SIS	100.000	City of Himamaylan and Binalbagan, Negros Occidental; La Libertad, Jimalalud, Tayasan, and Ayungon, Negros Oriental	Mar 2030
Bais WPP w/ SIS	100.000	Bais and Tanjay, Negros Occidental	Aug 2030
Antique Onshore WPP	150.000	Provinces of Antique and Aklan	Aug 2030
Aklan WPP w/ SIS	100.000	Ibajay, Tangalan, Makato, and Malinao, Aklan	Aug 2030
Guimaras Strait WPP	100.000	Offshore of Ajuy and Concepcion, Iloilo	Sep 2030
Guimaras Strait II WPP w/ SIS	600.000	Offshore of Negros Occidental and Iloilo Provinces	Dec 2030
Haraya IV - Negros Occidental Offshore WPP	1215.000	Province of Negros Occidental	Mar 2031
Oton Bank Offshore WPP	510.000	Provinces of Iloilo and Guimaras	Jun 2031
Bohol 1 WPP	100.000	San Isidro, Catigbian, and Balilihan, Bohol	Aug 2031
San Dionisio WPP	100.000	San Dionisio, Iloilo	Aug 2031
Lemery WPP	100.000	Lemery, Iloilo	Aug 2031
San Lorenzo Bank Offshore WPP	593.000	Provinces of Iloilo, Guimaras, and Negros Occidental	Sep 2031
San Enrique Bank Offshore WPP	500.000	Provinces of Guimaras and Negros Occidental	Sep 2031
GS4 Offshore WPP w/ SIS	910.000	Province of Iloilo	Oct 2031
Pandan Wind Energy Project w/ SIS	62.000	Pandan, Antique	Oct 2031
GS1 Offshore WPP w/ SIS	574.000	Province of Guimaras	Oct 2031
East Panay Offshore WPP	990.000	Provinces of Iloilo and Guimaras	Jan 2032
GS2 Offshore WPP w/ SIS	728.000	Province of Guimaras	Jun 2032
Alegria WPP	100.000	Alegria, Badian, Alcoy, and Dalaguete, Cebu	Jul 2032
Tambobo Bay Wind Energy Project	922.000	Offshore and Onshore of Negros Oriental	Nov 2032

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Iloilo Onshore WPP	200.000	Alimodan, Leon, Tubungan, Igbaras and Miagao;	Mar 2033
Guimbal WPP w/ SIS	200.000	Sibalom and San Remigio, Iloilo and Antique Guimbal, Miagao, Igbaras, Tubungan and Tigbauan, Iloilo	May 2033
Highlands Guimaras WPP	100.000	Sibunag, San Lorenzo and Jordan, Guimaras	Jul 2033
Bais Wind Project w/ SIS	150.000	Bais City, Mabinay and Manjuyod, Negros Oriental	Nov 2033
Total	**16,363.950**		
BATTERY ENERGY STORAGE (BESS) POWER PROJECT			
Enerhiya Delas Islas I BESS w/ SIS	40.000	Amlan, Negros Oriental	Dec 2025
Enerhiya Delas Islas II BESS w/ SIS	40.000	Ormoc, Leyte	Dec 2025
Enerhiya Delas Islas III BESS w/ SIS	40.000	Compostela, Cebu	Dec 2025
Compostela BESS	7.500	Compostela, Cebu	2025
Toledo BESS	20.000	Toledo City, Cebu	2026
Tabango BESS	7.500	Tabango City, Leyte	2027
Dingle BESS	20.000	Dingle City, Iloilo	2027
Ubay BESS	20.000	Ubay City, Bohol	2027
Sta. Barbara BESS	20.000	Sta. Barbara, Iloilo	TBD
Tinampa-an BESS	50.000	Brgy. Tinampa-an, Cadiz City, Negros Occidental	Jun 2027
Cadiz BESS w/ SIS	50.000	Cadiz City, Negros Occidental	Jan 2027
Ormoc BESS w/ SIS	50.000	Ormoc, Leyte	Apr 2027
San Isidro BESS w/ SIS	200.000	Brgy. Palanit, San Isidro, Northern Samar	Dec 2026
Panay BESS w/ SIS	49.900	Brgy. Tabugon, Dingle, Iloilo City	Mar 2026
Calbayog BESS	30.000	Calbayog, Samar	TBD
Daanbantayan BESS	20.000	Daanbantayan, Cebu	TBD
EAUC BESS	30.000	Brgy. Ibo, Mactan Export Processing Zone I (MEPZ I), Lapu-lapu City, Cebu	May 2026
Padayon (CPPC) BESS w/ SIS	20.000	Brgy. Ermita, Cebu City, Cebu	TBD
Naga (Pandora) BESS w/ SIS	20.000	Naga City, Cebu	TBD
Pandora 2 Integrated BESS w/ SIS	42.000	Barangay Colon, Naga City, Cebu	TBD
Santander BESS	30.000	Santander Cebu	TBD
Santa Rita BESS	30.000	Santa Rita, Samar	TBD
Tabango BESS	30.000	Tabango, Leyte	TBD
Bohol BESS w/ SIS	30.000	Brgy. Dampas, Tagbilaran City, Bohol	Mar 2026
Total	**896.900**		
TOTAL INDICATIVE	**19,964.435**		
TOTAL INDICATIVE W/O BESS	**19,067.535**		

Table 2:3: Mindanao Indicative Power Projects

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
COAL-FIRED POWER PLANT (CFPP)			
San Ramon Power, Inc. CFP Station	120.000	ZamboEcozone, Brgy. Talisayan, Zambanga City	Mar 2028
Total	**120.000**		
NATURAL GAS			
GNPower Kauswagan LNG CCPP	600.000	Brgy. Tacub, Kauswagan, Lanao del Norte	Dec 2029
Total	**600.000**		
HYDROELECTRIC POWER PLANT (HEPP)			

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
Culaman HEPP w/ SIS	10.000	Manolo Fortich, Bukidnon	2027
Limbatangon HEPP	9.000	Cagayan de Oro City, Misamis Occidental	2027
Pulanai River HEPP w/ SIS	15.000	Valencia, Bukidnon	2027
Maladugao River (Lower Cascade) HEPP	15.700	Kalilangan & Wao, Bukidnon	2027
Magpet 1 HEPP	18.000	Magpet, North Cotabato	2027
Magpet 2 HEPP	9.500	Magpet, North Cotabato	2027
Casauman HEPP w/ SIS	34.000	Manay, Davao Oriental	2027
Cateel HEPP	29.000	Baganga, Davao Oriental	2027
Bulanog-Batang HEPP	32.500	Iligan City, Lanao del Norte	2027
Agus III HEPP	225.000	Pantar, Lanao del Norte & Baloi/Saguiara, Lanao del Sur	2027
South Pulangi HEPP w/ SIS	250.000	Damulog, Bukidnon	2030
San Isidro HEPP	39.000	Talakag, Bukidnon and Cagayan de Oro City	2032
Bacolod HEPP	8.620	Bacolod, Lanao del Norte	2032
Dimarao HEPP	6.140	Bacolod, Lanao del Norte	2032
Total	**701.460**		
BIOMASS POWER PLANT (BPP)			
50 MW BPP w/ SIS	50.000	Surigao del Sur	Jun 2026
Total	**50.000**		
SOLAR POWER PLANT (SPP)			
Hayes SPP w/ SIS	21.600	Villanueva, Misamis Oriental	Dec 2024
1.212-MWp SUKELCO SPP	1.000	Tacurong Clty, Sultan Kudarat	Dec 2024
Zamboanga del Norte SPP	5.100	La Libertad and Dapitan, Zamboanga del Norte	Jun 2025
The Ark SPP w/ SIS	99.000	Claveria, Misamis Oriental	Jun 2025
Banaybanay Davao Oriental Solar Farm w/ SIS	49.700	Municipality of Banaybanay, Province of Davao Oriental	Sep 2025
Misamis SPP	9.375	Tagoloan, Misamis Oriental	Dec 2025
Tantangan SPP w/ SIS	80.000	Tantangan, South Cotabato	Dec 2026
Gumalang SPP	35.040	Gumalang, Calinan, Davao	Jun 2027
Sinawal SPP w/ SIS	150.72	General Santos City	Sep 2028
Total	**451.535**		
WIND POWER PLANT (WPP)			
Caraga WPP Phase 1 w/ SIS	36.000	Surigao City, San Francisco, Malimono, Sison, Placer and Mainit, Surigao del Norte	Sep 2026
Caraga WPP Phase 2 w/ SIS	36.000	Jabonga, Agusan del Norte	Jun 2029
Mainit WPP w/ SIS	100.000	Mainit, Surigao del Norte	Dec 2029
Lake Mainit WPP w/ SIS	200.000	Malimono and Mainit; Jabonga, Agusan del Norte and Surigao del Norte	Dec 2029
Lanao del Norte WPP	100.000	Matungao and Balaoi, Lanao del Norte	Feb 2030
Katipunan WPP	100.000	Katipunan and Pres. Manuel A. Roxas, Zamboanga Del Norte	Aug 2031
Kauswagan WPP	100.000	Kauswagan, Poona Piagapo, and Munai, Lanao del Norte	Aug 2031
Magsaysay-Carmen WPP	100.000	Magsaysay, Misamis Oriental and Carmen, Agusan del Norte	Aug 2031
Siay WPP	100.000	Siay, Zamboanga Sibugay	Aug 2031
Butuan 1 WPP	100.000	Butuan City, Agusan del Norte	Jul 2032
Camiguin Onshore WPP	100.000	Guinsiliban, Sagay, and Mahinog Camiguin	Jul 2033
Total	**1,072.000**		

Name of the Project	Rated Capacity (MW)	Location	Target Commercial Operation
BATTERY ENERY STORAGE (BESS) POWER PLANT			
Nasipit Hybrid BESS w/ SIS	48.000	Lawis, Sta. Ana, Nasipit, Agusan del Norte	Jun 2026
Kibawe BESS	50.000	Kibawe, Bukidnon	Jul 2027
Toril BESS w/ SIS	20.000	Toril, Davao	TBD
Total	**118.000**		
TOTAL INDICATIVE	**3,112.995**		
TOTAL INDICATIVE W/O BESS	**2,994.995**		

Legend:
w/ SIS – With System Impact Study

APPENDIX 3: PROSPECTIVE POWER PLANTS

Table 3.1 Luzon Prospective Power Projects

Proponent	Name of the Project	Type of Generating Plant	Capacity (MW)	Year of Entry
Manila Electric Company (MERALCO)	Various MERALCO Projects From 2022-2023 (Batch 1)	Load		2022, 2023
MERALCO	Various MERALCO Projects From 2022 to 2023 (Batch 2)	Load		2022-2023
MERALCO	MERALCO Delivery Point SS and Subtransmission Line Projects (Plaridel 230/69 kV Delivery Point SS)	Load		2024
MERALCO	MERALCO Delivery Point SS and Subtransmission Line Projects (Reliability Improvement of Batangas City 69 kV System)	Load		2023
MERALCO	Development of Santo Niño 115 kV–34.5 kV GIS	Load		2024
MERALCO	Development of San Jose–Regalado 115 kV Line	Load		2024
Liansheng SIS	PENELCO's Spot Load (Liansheng Manufacturing Corp.)	Steel Plant	70 MW	2022
Realsteel Corporation (RSC)	210 MW Steel Plant	Steel Plant	Phase 1: 131 MW Phase 2: 210 MW	Phase 1: 2025 Phase 2: 2027
Pan Pacific Renewable Power Phils. Corp. (PPRPPC)	220 MW Calanasan 2 HEPP	Hydro	220 MW	2029
Pan Pacific Renewable Power Phils. Corp. (PPRPPC)	2,000 MW Maton Pumped Storage HEPP	Hydro	2000 MW	2032
San Miguel Electric Corporation (SMELC)	850 MW Navotas LNG Power Plant	Natural Gas	850 MW	2025
Millennium Energy Inc. (MEI)	342 MW (6x57 MW) Multi-Fuel Gas Turbine Units at Millennium Gas Turbine Power Plant	Natural Gas	342 MW	2024
Solar Philippines Commercial Rooftop Project, Inc. (SPCRPI)	300 MW Botolan Hybrid Power Plant Project	Solar	300 MW	2023
Solar Power Utilities Generator Corporation (SPUGC)	45 MWac Bato SPP	Solar	45 MW	2023
GRM Cagayan Valley, Inc. (GRM)	48 MW Cagayan Valley SPP	Solar	48 MW	2023
2 Barracuda Energy Corporation (2BEC)	150 MW Bay Floating SPP	Solar	150 MW	2024
Pristine Green Fuel Solutions Corp. (PGFSC)	10 MW Sunshine SPP	Solar	10 MW	2023
Energence Renewable Energy Corporation (EREC)	35 MW Clark SPP	Solar	35 MW	2024
Nortesol Incorporated (NORTESOL)	250 MWp (202.8 MWac) San Pedro Floating SPP	Solar	202.8 MW	2023
SolarAce2 Energy Corp. (S2EC)	150.119 MWp (120.295 MWac) SolarAce2 SPP	Solar	120.295 MW	2025
Infineum 4 Energy, Inc. (Infineum)	317.883 MWdc (250.894 MWac) Mapanuepe Floating SSPP	Solar	250.894 MW	2024
Tera Renewables 3 Corporation (TR3C)	169.585 MWp (140.917 MWac) Infanta 1 SPP	Solar	140.917 MW	2024
Metro Solar Power Solutions, Inc. (MSPSI)	65.003 MWdc (53.760 MWac) Metro Pililla SPP	Solar	53.76 MW	2025

Proponent	Name of the Project	Type of Generating Plant	Capacity (MW)	Year of Entry
Xyris Energy Corporation (XEC)	89.226 MWp (75.768 MWac) Linglingay SPP	Solar	75.768 MW	2026
Tera Renewables 7 Corporation (TR7C)	451.384 MWp (333.389 MWac) Labrador 1 SPP	Solar	333.389 MW	2026
Ixus Solar Energy Corporation (ISEC)	302.392 MWp (225 MWac) Aguilar SPP	Solar	225 MW	2027
CSFirst Green Agri-Industrial Development, Inc. (CGAIDI)	196.001 MWp (140.420 MWac) Dasol SPP with Integrated 82.56 MW (82.56 MWh) BESS	Solar	140.420 MW	2026
Casilagan Solar Power Corporation (CSPC)	45.001 MWP / 35.200 MWAC San Juan SPP	Solar	35.2 MW	2025
Telos Energy Development Corporation (TEDC)	45.619 MWP (38.400 MWAC) Telos Iba 1 SPP	Solar	38.4 MW	2025
Northern Palawan Power Generation Corporation (NPPGC)	50.003 MWp / 41.400 MWac Nazareno SPP	Solar	41.40 MW	2025
Suncastle Energy Resources Inc. (SERI)	516.100 MWP / 495.000 MWAC Suncastle Baao Solar Farm Project	Solar	495 MW	2027
Iligansolar Inc. (ISI)	71.999 MWP / 57.2 MWAC Botolan Solar PV PP	Solar	57.2 MW	2027
Solar Philippines Commercial Rooftop Project, Inc. (SPCRPI)	600 MW Calamba Hybrid Power Plant	Solar/BESS	300 MW	2025
Solar Philippines Commercial Rooftop Projects, Inc. (SPCRPI)	1200 MW Iba-Palauig Hybrid Power Plant Project	Solar/BESS	1200 MW	2025
SMC Global Light and Power Corp. (SGLPC)	178.724 MWac Solar and 116.45 MW BESS Lucanin Hybrid	Solar/BESS	178.724 MW	2024
Earth Sol Power Corp. (ESPC)	500 MW Bagac Bay Offshore Wind Energy Facility	Offshore Wind	500 MW	2027
Cleantech Global Renewables Inc. (CTGRI)	125 MW Kalayaan 4 North WPP	Wind	125 MW	2026
Cleantech Global Renewables Inc. (CTGRI)	125 MW Kalayaan 4 South WPP	Wind	125 MW	2027
EDC Bayog Burgos Wind Power Corporation (EBBWPC)	60 MW Burgos 1 WPP	Wind	60 MW	2026
EDC Pagali Burgos Wind Power Corporation (EPBWPC)	120 MW Burgos 2 WPP	Wind	120 MW	2026
Energy Development Corporation (EDC)	100 MW Burgos 3 WPP	Wind	100 MW	2026
Energy Logics Philippines, Inc. (ELPI)	130.50 MW Pasuquin WPP	Wind	130.5 MW	2024
3 Barracuda Energy Corporation (3BEC)	200 MW (500 MWh) Bugallon ESS	BESS	200 MW	2027
SMGP BESS Power Inc. (SBPI)	80.000 MW / 340.000 MWH Mariveles BESS	BESS	80 MW	2025

Table 3.2 Visayas Prospective Power Projects

Proponent	Name of the Project	Type of Generating Plant	Capacity (MW)	Year of Entry
Reliance Energy Development Inc. (REDI)	300 MW San Carlos (CCGT) PP	Natural Gas	300 MW	2024
Solar Philippines Visayas Corporation (SPVisC)	300 MW Medellin Hybrid	Solar	300 MW	2023
Total Power, Inc. (TPI)	280 MWp (224 MWac) San Isidro SPP	Solar	224 MW	2023

Proponent	Name of the Project	Type of Generating Plant	Capacity (MW)	Year of Entry
Freya Renewables Inc. (FRI)	196.700 MWP / 150.000 MWAC Daanbantayan SPP	Solar	150 MW	2027
Taft Solar Energy Corporation (TSEC)	20.155 MWP / 17.500 MWAC Taft SPP	Solar	17.5 MW	2025

Table 3.3 Mindanao Prospective Power Projects

Proponent	Name of the Project	Type of Generating Plant	Capacity (MW)	Year of Entry
Cagayan Electric Power and Light Company, Inc. (CEPALCO)	160 MW Additional Load at CEPALCO's Connection Point in NGCP Tagoloan 138 kV SS	Load	160 MW	2022
Davao Light and Power Company (DLPC)	121 MW Gatungan Steel Plant	Steel Plant	121 MW	2023
Malita Power Inc. (MPI)	Additional 28 MW Sangali DPP	Diesel	28 MW	2024
Silangan Mindanao Mining Co., Inc. (SMMCI)	Direct Connection of SMMCI to NGCP's Placer SS	Load	19.4 MW	2024
Sagittarius Mines, Inc. (SMI)	Direct Connection of Tampakan Copper-Gold Project to NGCP's SS	Load	87 MW	2025
CapitalONE Davao Solar, Inc. (CODSI)	40.090 MWp / 35.200 MWac Capital1 Davao SPP	Solar	35.2 MW	2025
Pilipinas Crosthwait Energy Corporation (PCEC)	40 MWp (34.37 MWac) Manolo Fortich SPP	Solar	34.37 MW	2025
TPI Azimuth Corp. (TAC)	180.004 MWP/ 150.000 MWAC Bluefin SPP	Solar	150 MW	2026
Alabel Solar Energy Corporation (ASEC)	98.010 MWp / 74.800 MWac Bawing SPP	Solar	74.8 MW	2026

AHCTP	Ad Hoc Committee for Transmission Projects
AS	Ancillary Services
ATC	Available Transmission Capacity
BESS	Battery Energy Storage System
BMIBP	Batangas-Mindoro Interconnection and Backbone Project
BPP	Biomass Power Plant/Project
Brgy	Barangay
CANORECO	Camarines Norte Electric Cooperative, Inc.
CAES	Cost of Alternative Energy Source
CAPEX	Capital Expenditures
CB	Circuit Breaker
CBIP	Central Negros Electric Cooperative, Inc.
CENECO	Cebu-Bohol Interconnection Project
CES	Clean Energy Scenario
CCPP	Combined Cycle Power Plant
CHP	Combined Cogeneration Power Plant
CFPP	Coal-Fired Power Plant
CII	Critical Information Infrastructure
CNP	Cebu-Negros-Panay
CREZ	Competitive Renewable Energy Zones
CPR	Connection Point Requirements
CPR1	No Grid Project Required (for 69kV line)
CPR2	Circuit breakers only at Existing Substation
CPR3	Transmission Line upgrade and/or Existing Substation Upgrade
CPR4	New Substation and Associated New Transmission Line
CTs	Current Transformers
CVTs	Capacitive Voltage Transformers
DAR	Department of Agrarian Reform
DCC	Directly Connected Customers
DICT	Department of Information and Communications Technology
DOE	Department of Energy
DOTR	Department of Transportation
DPP	Diesel Power Plant
DPWH	Department of Public Works and Highways
DSHUD	Department of Human Settlements and Urban Development
DU	Distribution Utilities
EC	Expropriation Case
EED	Estimated Equipment Data
EMS	Energy Management Systems
ETC	Estimated Time of Completion
EPIRA	Electric Power Industry Reform Act
ERC	Energy Regulatory Commission
ESS	Energy Storage System
FES	Flexible Energy Storage Systems
FIBECO	First Bukidnon Electric Cooperative, Inc.
FIT	Feed-in-Tariff
FS	Green Energy Auction
GEA	Feasibility Study
GEAP	Green Energy Auction Program
MERALCO	Manila Electric Company
MVIP	Mindanao-Visayas Interconnection Project
N-1	Single-outage contingency criterion
NCIP	National Commission on Indigenous Peoples
NEA	National Electrification Administration
NEECO II	Nueva Ecija II Electric Cooperative, Inc.
NGCC	Natural Gas-Fired Combined Cycle Power
NIST	Plant/Project
NOA	National Institute of Standards and Technology
NREP	Notice of Auction
PA	Provisional Authority
PAP	National Renewable Energy Program
PASS	Person Affected by the Project
PBR	Pre assessment Stage
PANELCO	Performance-Based Regulation
PENELCO	Pangasinan III Electric Cooperative, Inc.
PEP	Philippine Energy Plan
PDP	Power Development Plan
PFDA	Philippine Fisheries Development Authority
PGC	Philippine Grid Code
PS	Pole Site
PSALM	Power Sector Assets and Liabilities Management Corporation
PSIPP	Power Sector Initiated Power Projects
PTE	Permit to Enter
OP	Office of the President
OTCA	Online Transmission Connection Application
OT	Operational Technology
RE	Renewable Energy
REIS	Renewable Energy Integration Study
RED	Registered Equipment Data
REF	Reference Scenario
ROR	Run-of-River
ROW	Right-of-Way
RP	Regulatory Period
RTWR	Rules for the Setting of Transmission Wheeling Rates
SAMELCO I	Samar I Electric Cooperative, Inc.
SAMELCO II	Samar II Electric Cooperative, Inc.
SB	Sangguniang Barangay
SCADA	Supervisory Control and Data Acquisition
SCR	Short-Circuit Ratio
SIS	System Impact Study
SIPS	System Integrity Protection Scheme
SO	System Operator
SPD	System Peak Demand
SPP	Solar Power Plant/Project
Solar PV	Solar Photovoltaic
SS	Substation
STATCOM	Synchronous Condensers and Static Synchronous Compensators
TARELCO II	Tarlac II Electric Cooperative Inc.
TDP	Transmission Development Plan
TL	Transmission Line
TNP	Transmission Network Provider

GEAR	Green Energy Auction Reserve
GEDR	Grid Equipment Data Registration
GFL	Grid-Following
GFM	Grid-Forming
GIS	Gas Insulated Substation
GPP	Geothermal Power Plant/Project
GTCC	Gas-Turbine Combined Cycle Power Plants
HVDC	High-Voltage Direct Current
HEPP	Hydro Electric Power Plant
IAP	Integrated Action Plan
IBTS	In-Between Tower Sites
ICS	Industrial Control System
IBRs	Inverter-Based Resources
IFELCO	Ifugao Electric Cooperative, Inc.
IT	Information Technology
LGU	Local Government Units
LLDA	Laguna Lake Development Authority
LLRN	Laguna Lakeshore Road Network
LNG	Liquified Natural Gas
LOA	Letter of Acceptance
LPCBGC	Luzon PCB for Grid Connection
TOR	Term of Reference
TransCO	National Transmission Corporation
TRO	Temporary Restraining Order
TS	Tower Site
Tx	Transformer
VoLL	Value of Lost Load
VOM	Visayas Operation and Maintenance
VRE	Variable Renewable Energy
VREIS	Variable Renewable Energy Integration Study
VSO	Visayas System Operations
WESM	Wholesale Electricity Spot Market
WFP	Wind Farm Project
WOP	Writ of Possession
WMSP	WESM Metering Service Provider
WPP	Wind Power Plant/Project
ZANECO	Zamboanga del Norte Electric Cooperative, Inc.

AAPPENDIX 5: CONTACT DETAILS

For all inquiries regarding the TDP, you may contact any of the following:

Eufemio C. Buluran, Jr.
Transmission Planning Senior Manager
Luzon System Planning Division
Planning and Engineering
ecbuluran@ngcp.ph

Michael R. Baylosis
Transmission Planning Manager
Visayas System Planning Division
Planning and Engineering
mrbaylosis@ngcp.ph

Fernando S. Javier
Transmission Planning Senior Manager
Mindanao System Planning Division
Planning and Engineering
fsjavier@ngcp.ph

Vicente N. Loria
Transmission Development Senior Manager
Transmission Development Division
Planning and Engineering
vnloria@ngcp.ph

Germiniano S. Caseria III
O&M Planning Manager
O&M Planning Division
Operation and Maintenance
gscaseria@ngcp.ph

Armando C. Nicdao
Metering Assets and Services Management Manager
Metering Assets and Services Management Division
Operation and Maintenance
acnicdao@ngcp.ph

Mark Angelo A. Silvala
Infrastructure and Integrated Development Manager
Infrastructure and Integrated Development Division
System Operations
masilvala@ngcp.ph