

Republic of the Philippines
ENERGY REGULATORY COMMISSION
San Miguel Avenue, Pasig City



**IN THE MATTER OF THE
APPLICATION FOR THE
APPROVAL OF THE
IMPLEMENTATION OF THE
CEBU-BOHOL 230 kV
INTERCONNECTION
PROJECT AND NABAS-
CATICLAN-BORACAY
TRANSMISSION PROJECT,
WITH PRAYER FOR
PROVISIONAL AUTHORITY,**

ERC CASE NO. 2017-093 RC

**NATIONAL GRID
CORPORATION OF THE
PHILIPPINES,**

Applicant.

X-----X

DOCKETED
Date: MAR 19 2018
By: _____

ORDER

On 13 October 2017, the National Grid Corporation of the Philippines (NGCP) filed an *Application* dated 09 October 2017 (Application) for approval of the implementation of the Cebu-Bohol Interconnection Project and the Nabas-Caticlan-Boracay Transmission Project, with prayer for provisional authority.

NGCP alleged the following in its *Application*:

The Applicant

1. NGCP is a corporation created and existing under the laws of the Philippines, with principal office address at NGCP Building, Quezon Avenue corner B.I.R. Road, Diliman, Quezon City. It is the concessionaire, which was granted the rights and obligation to construct, install, finance, manage, improve, expand, operate, maintain, rehabilitate, repair, refurbish, and replace the Transmission Assets pursuant to R.A. 9136, otherwise known as the "*Electric Power Industry Reform Act of 2001*" (EPIRA). It may be served with notices and other processes of this Honorable Commission through its counsel at the address indicated below.

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2. Pursuant to R.A. 9511,¹ NGCP was granted the franchise to operate, manage and maintain, and in connection therewith, to engage in the business of conveying or transmitting electricity through a high-voltage backbone system of interconnected transmission lines, substations and related facilities, system operations, and other activities that are necessary to support the safe and reliable operation of the transmission system ² and is authorized to charge its customers at the rates approved by the Honorable Commission.

3. This Application is filed pursuant to, Section 9 (d) of the EPIRA which directs NGCP to submit any plan for expansion or improvement of its facilities for approval by the Honorable Commission. Hence, NGCP seeks authority from the Honorable Commission for the immediate implementation of the herein described capital expenditure projects.

4. The subject projects will support the increasing demand for electricity of Bohol and Boracay's load customers, and improve the reliability of the electrical system of the Visayas Grid.

**I. CEBU-BOHOL 230 KV
INTERCONNECTION PROJECT**

5. The Cebu, Leyte and Bohol Islands are radially interconnected through the Cebu-Leyte 230 kilovolts (kV) and Leyte-Bohol 138 kV submarine cables. The Leyte-Bohol 138 kV submarine cable has a limited capacity of only 90 megawatts (MW).

6. Bohol is highly dependent on power coming from Leyte. Although Bohol hosts several hydro- and oil-based power plants, their aggregate capacities are not sufficient to supply Bohol's total demand. It is estimated that by year 2020, the demand of Bohol will reach 89 MW and by year 2021 will further increase to 95 MW. Thus, transmitting the needed power from the Leyte Island will absolutely overload the Leyte-Bohol 138 kV submarine cable.

7. Shown in the table below is the actual demand (2015-2016) and forecasted demand of Bohol from 2017 to 2025.

| Bohol Island, Actual and Forecast Demands, in MW | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|
| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| 62 | 70 | 72 | 77 | 83 | 89 | 95 | 102 | 109 | 116 | 124 |

¹ An Act Granting the National Grid Corporation of the Philippines a Franchise to Engage in the Business of Conveying or Transmitting Electricity Through High Voltage Back-bone System or Interconnected Transmission Lines, Substations and Related Facilities, and For Other Purposes;
² Id, Section 1;

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8. To avoid the expected overloading of the Leyte-Bohol submarine cable, NGCP proposes to interconnect the Cebu and Bohol Islands through a 230 kV submarine cable. With the interconnection, the overloading of Leyte-Bohol 138 kV submarine cable will be avoided, and will provide the Bohol Island with another source of power coming from the Island of Cebu.
9. The proposed 230 kV interconnection will have the following components:
 - a. Sibonga CTS – Loon CTS: 4x1600mm² 230kV XLPE, Submarine Cable, 30 km;
 - b. Sibonga S/S – Sibonga CTS: ST-DC, 4x795MCM ACSR, 230 kV Overhead line, 2 km;
 - c. Loon CTS – Corella S/S: ST-DC, 4x795MCM ACSR, 230 kV Overhead line, 17 km;
 - d. Corella S/S: 2x300 MVA, 230/138kV;
 - e. Sibonga S/S: 6x230kV PCB + Associated Equipment;
 - f. Corella S/S: 8x230kV PCB and 2x138kV PCB + Associated Equipment;
 - g. Sibonga S/S: 2x40MVAR 230kV Reactor; and
 - h. Corella S/S: 2x40MVAR 230kV Reactor.
10. The estimated cost of the proposed project is PhP8,139.26Mn, with an implementation period of 50 months. The Cebu-Bohol 230kV Interconnection Project is exhaustively discussed in the *ERC Documentary Requirements on the Proposed Cebu-Bohol 230 kV Interconnection Project* attached as **Annex “A.”**

II. NABAS-CATICLAN-BORACAY TRANSMISSION LINE PROJECT

11. The demand of the Island of Boracay is served only by the Nabas Substation through the single-circuit Nabas-Caticlan-Boracay 69 kV overhead line and submarine cable system. However, the demand in Boracay is projected to increase, which can no longer be accommodated by the Caticlan-Boracay 69 kV line.
12. Shown below are the historical and projected non-coincident peak demands of the load-end substations (LES) in Caticlan and Boracay Island:

Historical Peak Demand³ of Loads Being Served by Nabas Substation, in MW

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Boracay | 10.6 | 13.2 | 15.7 | 16.2 | 20.4 | 21.6 | 19.4 | 22.6 | 25.5 |
| Caticlan | | | | | | | 2.6 | 2.7 | 3.0 |
| TOTAL | 10.6 | 13.2 | 15.7 | 16.2 | 20.4 | 21.6 | 22.0 | 25.3 | 28.5 |

³ Based on actual meter reading;

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Peak Demand Forecast⁴ of Loads Connected to the Existing 69 kV Line, in MW

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Boracay | 30.4 | 35.7 | 39.7 | 43.7 | 52.9 | 55.8 | 58.9 | 62.0 | 65.3 |
| Caticlan | 4.6 | 5.1 | 5.6 | 6.1 | 6.6 | 7.2 | 7.8 | 8.5 | 9.2 |
| TOTAL | 35.0 | 40.8 | 45.3 | 49.8 | 59.5 | 63.0 | 66.7 | 70.5 | 74.5 |

| Monitored Facilities | | | 2017 | 2018 | 2019 | 2020 | 2021 and beyond |
|------------------------------|--------|----|------|------|------|------|---|
| Nabas S/S 50 MVA T1&T2 | Normal | MW | 18 | 21 | 24 | 21 | S Y S T E M C O L L A P S E |
| | | % | 35 | 43 | 49 | 43 | |
| | N-1 | MW | 36 | 42 | 48 | 42 | |
| | | % | 70 | 86 | 98 | 86 | |
| Nabas-Caticlan 69 kV TL | Normal | MW | 36 | 42 | 47 | 51 | |
| | | % | 61 | 74 | 84 | 94 | |
| | N-1 | MW | - | - | - | - | |
| | | % | - | - | - | - | |
| Caticlan - Boracay 69 kV S/C | Normal | MW | 30 | 36 | 40 | 44 | |
| | | % | 84 | 102 | 116 | 131 | |
| | N-1 | MW | - | - | - | - | |
| | | % | - | - | - | - | |
| Manoc-manoc LES 30 MVA | Normal | MW | 30 | 36 | 40 | 44 | |
| | | % | 109 | 130 | 146 | 163 | |
| | N-1 | MW | - | - | - | - | |
| | | % | - | - | - | - | |

| Projected Power Curtailment | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--------------------------------|------|------|------|------|------|------|------|------|------|
| ¹³ Normal Condition | 5 | 11 | 15 | 19 | 28 | 31 | 34 | 37 | 40 |
| N-1 Condition | 35 | 41 | 45 | 50 | 60 | 63 | 67 | 71 | 75 |

13. As shown in the abovementioned data, the demand of Boracay Island will already exceed the capacities of the existing transformer in Manoc-manoc LES in the year 2017, and Caticlan - Boracay 69 kV submarine cable by 2018. The same simulation also clearly shows that by 2021, the cumulative demand of the load-end substations in Caticlan and Boracay will already exceed the capacity of the 69 kV line from Nabas Substation which will result to system collapse.
14. To avoid the system collapse, NGCP proposes to construct an additional transmission line and substation facilities to cater the growing demand of Boracay Island.
15. The proposed 138kV transmission line has the following components:
 - a. Caticlan CTS – Boracay SS: 1 circuit XLPE Submarine Cable of 100 MW capacity at 138kV, 2 km;

⁴ Based on the coincident demand forecast as of May 2017;

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- b. Caticlan: 1 circuit XLPE Underground Cable of 100 MW capacity at 138kV, 8 km;
 - c. Boracay: 1 circuit XLPE Underground Cable of 50 MW capacity at 69kV, 1 km;
 - d. Nabas – Caticlan: ST/SP-DC, 1x795 MCM ACSR, 138 kV overhead line, 14km;
 - e. Boracay S/S: 1x100 MVA, 138/69kV and 2 x 50 MVA, 69/13.2 kV;
 - f. Nabas S/S: 2x138kV PCB + Associated Equipment; and
 - g. Boracay S/S: 1x138 kV PCB and 4x69kV PCB + Associated Equipment.
16. The estimated cost of the proposed project is PhP4,269.302Mn, with an implementation period of 35 months. The Nabas-Caticlan-Boracay Transmission Line Project is discussed in the *ERC Documentary Requirements on the Proposed Nabas-Caticlan-Boracay Transmission Line Project* attached as **Annex “B.”**

Justifications for the Issuance of Provisional Approval

17. NGCP is mandated to plan and construct transmission facilities to ensure reliable transmission service to its customers. Thus, it needs adequate transmission capacity to foster economic growth and serve growing demand of the load customers. Considering that planning, site development, right-of-way concerns and construction of the transmission facilities would take more than 3 years to develop and complete, it is critical for NGCP to act immediately and address issues early by undertaking the abovementioned projects.
18. A system collapse is imminent and will be experienced as early as 2021, if the projects are not undertaken. It must be emphasized that the implementation periods of the projects are 50 and 35 months for the Cebu-Bohol and Nabas-Caticlan-Boracay, respectively. Thus, it is necessary for NGCP to immediately commence the implementation of the proposed projects.
19. In support of this application, NGCP submits the Judicial Affidavit of Engr. Christian B. Ereño, Head of the Visayas System Planning Division, Transmission Planning Department of NGCP attached as **Annex “C.”**

PRAYER

WHEREFORE, premises considered, NGCP most respectfully prays that this Honorable Commission:

1. Immediately **ISSUE** an Order **PROVISIONALLY AUTHORIZING** the implementation of Cebu-Bohol 230 kV

Interconnection and Nabas-Caticlan-Boracay Transmission Line Projects; and

2. After notice and hearing, **APPROVE** the Application for the implementation of the Cebu-Bohol 230 kV Interconnection and Nabas-Caticlan-Boracay Transmission Line Projects.

NGCP prays for other equitable relief.

On 02 March 2018, Applicant filed a *Motion to Set Case for Initial Hearing* dated 01 March 2018 (Motion) praying that the instant case be set for hearing. Finding said Motion in order, the Commission grants the same.

Accordingly, finding the instant *Application* sufficient in substance with the required fees having been paid, the same is hereby set for hearing on the following dates:

| DATE AND TIME | VENUE | PURPOSE |
|---|---|---|
| 18 April 2018 (Wednesday) at ten o'clock in the morning (10:00 A.M.) | Metro Center, Tagbilaran City, Bohol | Determination of jurisdictional requirements and Expository Presentation. |
| 19 April 2018 (Thursday) at ten o'clock in the morning (10:00 A.M.) | ERC Visayas Field Office, St. Mary's Drive, Banilad, Cebu City | Expository Presentation. |
| 26 April 2018 (Thursday) at ten o'clock in the morning (10:00 A.M.) | Paradise Garden Resort and Convention, Boracay Island, Malay, Aklan | Expository Presentation. |
| 04 May 2018 (Thursday) at ten o'clock in the morning (10:00 A.M.) | ERC Hearing Room, 15F Pacific Center Building, San Miguel Avenue, Ortigas Center, Pasig City | Expository Presentation, Pre-trial Conference, and Presentation of Evidence. |

Accordingly, NGCP is hereby directed to:

- 1) Cause the publication of the attached Notice of Public Hearing in two (2) newspapers of nationwide circulation

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in the Philippines at its own expense, twice (2x) within two (2) successive weeks, the dates of publication not being less than seven (7) days apart and the date of the last publication to be made not later than ten (10) days before the date of the scheduled initial hearing;

- 2) Furnish with copies of this Order and the attached Notice of Public Hearing the Offices of the Provincial Governors of Cebu, Bohol and Aklan, the City Mayors of Quezon City, Cebu City and Tagbilaran City, and the Municipal Mayor of Nabas, Aklan, and the Local Government Unit (LGU) legislative bodies of Quezon City, Cebu City, Tagbilaran City, and Nabas, Aklan for the appropriate posting thereof on their respective bulletin boards;
- 3) Inform of the filing of the *Application*, its reasons therefor, and of the scheduled hearing thereon, the consumers within the affected franchise area, by any other means available and appropriate;
- 4) Furnish with copies of this Order and the attached Notice of Public Hearing, the Office of the Solicitor General (OSG), the Commission on Audit (COA), and the Committees on Energy of both Houses of Congress. They are hereby requested, if they so desire to send their duly authorized representatives at the scheduled hearing; and
- 5) Furnish with copies of the *Application* and its attachments all those making requests therefor, subject to reimbursement of reasonable photocopying costs.

On the date of the initial hearing, Applicant must submit to the Commission its written compliance with the aforementioned jurisdictional requirements attaching therewith, methodically arranged and duly marked the following:

- 1) The evidence of publication of the attached Notice of Public Hearing consisting of affidavits of the Editors or Business Managers of the newspapers where the said Notice of Public Hearing was published, and the complete issues of the said newspapers;
- 2) The evidence of actual posting of this Order and the attached Notice of Public Hearing consisting of

certifications issued to that effect, signed by the aforementioned Governors, Mayors, and LGU legislative bodies or their duly authorized representatives, bearing the seals of their offices;

- 3) The evidence of other means employed by Applicant to inform of the filing of the *Application*, its reasons therefore, and of the scheduled hearing thereon, the consumers within the affected franchise area;
- 4) The evidence of receipt of copies of this Order and the attached Notice of Public Hearing by the Office of the Solicitor General (OSG), the Commission on Audit (COA), and the Committees on Energy of both Houses of Congress;
- 5) The evidence of receipt of copies of the *Application* and its attachments by all those making requests therefor, if any; and
- 6) Such other proofs of compliance with the requirements of the Commission.

Applicant and all interested parties are also required to submit, at least five (5) days before the date of initial hearing and Pre-Trial Conference, their respective Pre-Trial Briefs containing, among others:

- 1) A summary of admitted facts and proposed stipulation of facts;
- 2) The issues to be tried or resolved;
- 3) The documents or exhibits to be presented, stating the purposes and proposed markings therefore; and
- 4) The number and names of the witnesses, with their written testimonies in a Judicial Affidavit form attached to the Pre-trial Brief.

Failure of Applicant to comply with the above requirements within the prescribed period shall be a ground for cancellation of the scheduled hearing, and the resetting of which shall be six (6) months from the said date of cancellation.

Applicant must also be prepared to make an expository presentation of the instant *Application*, aided by whatever communication medium that it may deem appropriate for the purpose, in order to put in plain words and explain, for the benefit of the consumers and other concerned parties, what the *Application* is all about and the reasons and justifications being cited in support thereof.

SO ORDERED.

Pasig City, 08 March 2018.

FOR AND BY AUTHORITY
OF THE COMMISSION:


AGNES VST DEVANADERA
Chairperson and CEO

150 M/
LS: ESP/APV



Copy furnished:

1. Office of the General Counsel
National Grid Corporation of the Philippines
Attention: Attys. Luis Manuel U. Bugayong, Mark Anthony Actub, and Raycel Baldovino
NGCP Building, Quezon Avenue, corner BIR Road, Diliman, Quezon City
2. National Transmission Commission (TRANSCO)
Attention: Attys. Noel Z. De Leon, Leon T. Tapel, Jr., Nyerson Dexter Tito Q. Tualla and
Donna L. Caloza-Aleria
TRANSCO Main Building, Quezon Avenue corner BIR Road, Diliman Quezon City
3. Office of the Solicitor General
134 Amorsolo Street, Legaspi Village, Makati City
4. Commission on Audit
Commonwealth Avenue Quezon City
5. Senate Committee on Energy
GSIS Bldg. Roxas Blvd., Pasay City
6. House Committee on Energy
Batasan Hills, Quezon City
8. Office of the Mayor
Quezon City

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9. Office of the Sangguniang Panglungsod
Quezon City
10. Office of the Mayor
Cebu City, Cebu
11. Office of the Sangguniang Panlungsod
Cebu City, Cebu
12. Office of the Mayor
Tagbilaran City, Bohol
13. Office of the Sangguniang Panlungsod
Tagbilaran City, Bohol
14. Office of the Mayor
Nabas, Aklan
15. Office of the Sangguniang Bayan
Nabas, Aklan
16. Office of the Provincial Governor
Province of Cebu
17. Office of the Sangguniang Panlalawigan
Province of Cebu
18. Office of the Provincial Governor
Province of Bohol
19. Office of the Sangguniang Panlalawigan
Province of Bohol
20. Office of the Provincial Governor
Province of Aklan
21. Office of the Sangguniang Panlalawigan
Province of Aklan
22. Office of the President
Philippine Chamber of Commerce and Industry (PCCI)
3rd Floor, Chamber and Industry Plaza (CIP)
1030 Campus Avenue corner Park Avenue
McKinley Town Center, Fort Bonifacio, Taguig City
23. Regulatory Operation Services (ROS)
Energy Regulatory Commission
17F Pacific Center Bldg, San Miguel Avenue,
Ortigas Center, Pasig City

W. G.