

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

2012 JUN 14 4:02

IN THE MATTER OF THE
 APPLICATION FOR THE
 APPROVAL OF THE OPOL
 SUBSTATION PROJECT, WITH
 PRAYER FOR THE ISSUANCE OF
 A PROVISIONAL AUTHORITY

ERC CASE NO. 2012-066 RC

NATIONAL GRID CORPORATION
 OF THE PHILIPPINES (NGCP),

Applicant.

x-----x

DOCKETED
 Date: JUN 13 2012
 W

ORDER

On April 24, 2012, the National Grid Corporation of the Philippines (NGCP) filed an application for the approval of the Opol Substation Project, with prayer for the issuance of a provisional authority.

In the said application, NGCP alleged, among others, the following:

1. It is a corporation created and existing under the laws of the Philippines, with principal office address at NGCP Building, Quezon Avenue corner BIR Road, Diliman, Quezon City. It is the corporate vehicle of the consortium which was awarded the concession to assume the power transmission functions of the National Transmission Corporation (TRANSCO) pursuant to Republic Act No. (R.A. 9136), otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA).

STATEMENT OF THE CASE

2. One of its functions and responsibilities enumerated in Section 9 of the EPIRA is to *"improve and expand its transmission facilities, consistent with the Grid Code and the Transmission Development Plan (TDP) to be promulgated pursuant to this Act, to adequately serve generation*

transmission service and/or ancillary services through the transmission system: Provided, That TRANSCO shall submit any plan for expansion or improvement of its facilities for approval by the ERC." (Emphasis supplied).

3. In accordance with its mandate to ensure and maintain the quality, reliability, adequacy, security, stability and integrity of the Grid, it seeks authority from this Commission to immediately implement the Opol Substation Project (Project), which aims, among others to accommodate the expected significant load growth in Misamis Oriental.

STATEMENT OF FACTS

Brief Background

4. The Province of Misamis Oriental is located in Northern Mindanao bordered by the Provinces of Bukidnon, Agusan and Lanao del Norte. It is host to several industries namely, among others, metal, chemical, mineral, rubber and food processing, commercial fishing, farming, tourism and light industry. A notable economic infrastructure in the area is the construction of the Laguindingan International Airport. It is expected to operate in the year 2012 which will result in the significant economic and load growth in Misamis Oriental.
5. The Province is drawing power, among others, from NGCP's Lugait Substation through the 60 km Lugait-Carmen 69 kV Line. It was constructed sometime in 1966. With the projected economic progress and load growth, both the line and substation would no longer meet the increasing demand requirements in the next few years.
6. In its Third (3rd) Reset Application docketed as ERC Case No. 2009-180 RC, the Commission has already approved a project that will address the overloading to the existing units during single outage contingency in the Lugait Substation together with other substations, namely: Nuling, Tindalo, Aplaya, Bunawan and Aurora Substations under the project name: "Mindanao Substation Reliability Project – 1 (MSRP-I)." Specifically for the Lugait Substation, the Commission has approved the installation of an additional 1x75 MVA, 138/69-13.8 kV power transformer and a 1-138 kV and 2-69 kV PCB.
7. To better remedy the expected low voltage problems and load growth, NGCP decided to link strategic point of Lugait-Carmen 69 kV Line to Lugait-Tagoloan 138 kV double circuit line through the proposed Opol 138 kV Substation Project (Project) as a replacement to the Lugait Substation reinforcement. This Project would better accommodate customer loads and eliminate possible overloading and voltage problems along the Lugait-Carmen 69 kV Line and in the Lugait Substation.

A copy of the "Opol Substation Project" with attachments prepared by NGCP's Planning and Engineering Group is hereto attached as Annex "A."

8. The Project has already been included in NGCP's 2011 Transmission Development Plan.

Project Description

9. The proposed components and description of the Project are as follows:

Project Component	Project Description
Substation	
Opol 138 kV Substation	3-138 kV PCB and Associated Equipment
(Substation)	3-69 kV PCB and Associated Equipment
	75 MVA, 138/69-13.8 kV Transformer
Transmission Line	
Cut-in to Lugait-Tagaloan 138 kV Line	Line 1: 138 kV, ST-DC1, 1-795MCM, 7.0 km
	Line 2: 138 kV, ST-DC1, 1-795MCM, 7.0 km
Cut-in to Lugait-Carmen 69 kV Line	Line 1: 69 kV, SP-SC, 1-336.4MCM, 0.1 km
	Line 2: 69 kV, SP-SC, 1-336.4MCM, 0.1 km
The 75 MVA transformer and its associated 1-138 kV and 2-69 kV PCB will be supplied from the 3RP Mindanao Substation Reliability Project-1 (MSRP-1). These were originally intended for Lugait Substation.	

10. The proposed Project shall be a conventional type with switch bays initially arranged in ring-bus breaker configuration for "cut-in" connection scheme. It may be reconfigured into one-and-a-half (1/2) for eventual "bus-in" connection scheme for added reliability when additional transformer is installed in the future. Also, this includes a 2-138 kV and 1-69 Power Circuit Breakers and associated equipment. The 1x75 MVA, 138/69-13.8 kV power transformer and accessories as well as its associated 1-138 kV and 2-69 kV PCB including its associated equipment will be supplied under the Mindanao Substation Reliability Project – 1. Only the installation and hauling cost for the transformer and its associated equipment will be included in this Application.
11. A 138 kV transmission line will be initially linked to the existing Lugait-Tagaloan 138 kV transmission line which is one of the circuits of the existing Balo-i-Tagoloan 138 kV double circuit steel tower transmission line. This will require the construction of two lines (Line 1 and Line 2), each has a length of 7.0-km, that will utilize Steel Tower in a Double Circuit configuration to be constructed initially with single circuit strung or ST-DC1, 1-795 MCM ACSR, 138 kV transmission lines. The adoption of ST-DC1 structures will facilitate the eventual "bus-in" connection of the existing 138 kV Balo-i-Tagoloan ST-DC T/L for added reliability. The proposed Project will also be connected through "cut-in" connection to the existing Lugait-Carmen 69 kV Line through the construction of two (Line 1 and Line 2) 0.10-km, Steel Pole, Single Circuit or SP-SC, 1-336.4 MCM ACSR, 69 kV transmission lines.

Proposed Site and Cost Estimate of the Project

12. In this application, it proposes to implement the Project on a 4 hectare land located along a national highway at Brgy. Awang, Opol which is

meters above sea level. Being accessible. It will be easier for it to deliver the materials during the construction and perform inspection and maintenance activities of the facilities during operation. Also, the site strategically located near the load centers in the vicinity of Cagayan de Oro City.

13. The estimated cost of the Project is PhP603,729,575.00 and time of completion is in 2015.
14. In 2012, the peak load of the existing Lugait-Carmen 69 kV Line will already be ninety percent (90%) of its rated capacity. By 2014, the peak load of the said line will already be one hundred three percent (103%) of its rated power transfer capacity. Similarly, based on the system simulation, the bus voltages of Lumbo/Laguindingan, ABI, Opol, Canitoan, and CDO/Carmen Load End Substations in 2012-2020 will be below the allowable of 0.95 per unit as prescribed by the Philippine Grid code (PGC). Due to voltage drops at different connection points, load centers far from the power source often suffer from low voltage. The total amount of power to be curtailed during peak condition to avoid overloading of the Lugait-Carmen 69 kV Line and voltage violations in respective areas ranges from 11.93 MW up to 37.72 MW in the period 2012 to 2020.
15. Upon energization of the Project targeted in February 2015, the Lugait-Carmen 69 kV Line will have a peak thermal loading of less than 49% of the rated capacity, with the overloading delayed by 19 years in 2034. Moreover, the per unit values of bus voltages at the load and substations will be improved and are already within the 0.95 – 1.05 per unit range under the Voltage Limit Compliance prescribed by the PGC.

Prayer for Provisional Authority

16. It moves for the issuance of a provisional approval pending final decision of the application in order for the project to be immediately implemented. Considering the necessity to construct drawdown substation to accommodate load growth and ensure power quality to the electricity consumers in Misamis Oriental, the implementation of Project must commence as scheduled. As such, pre-construction activities are needed to be undertaken in 2012 in order to meet the target completion in February 2015. Hence, the need to file an application with prayer for issuance of Provisional Authority (PA) before the Energy Regulatory Commission (ERC) to be able to implement the project within the target need date established in the system study.
17. A copy of the Judicial Affidavit of Engr. Vicente N. Loria, the Division Head of the Project Planning and Development Division of NGCP in support thereof is hereto attached as Annex "B".
18. It most prays of the Commission that:
 - a. Issue, immediately upon filing of the application, a provisional authority for the implementation of the Opol Substation Project; and

- b. Approve, after notice and hearing, the application for the implementation of the Opol Substation Project and render judgment making provisional approval permanent.

Finding the said application sufficient in form and substance with the required fees having been paid, the same is hereby set for jurisdictional hearing, expository presentation, pre-trial conference and evidentiary hearing on **July 12, 2012 (Thursday) at ten o'clock in the morning (10:00 A.M.) at the ERC Hearing Room, 15th Floor, Pacific Center Building, San Miguel Avenue, Pasig City.**

NGCP is hereby directed to cause the publication of the attached Notice of Public Hearing, at its own expense, twice (2x) for two (2) successive weeks in two (2) newspapers of general circulation in the Philippines, with the date of the last publication to be made not later than ten (10) days before the date of the scheduled initial hearing. It is also directed to inform the consumers, by any other means available and appropriate, of the filing of the instant application, its reasons therefor, and of the scheduled hearing thereon.

Let copies of the application, this Order and the attached Notice of Public Hearing be furnished 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.

Likewise, let copies of this Order and the attached Notice of Public Hearing be furnished the Office of the Mayor of Quezon City for the appropriate posting thereof on its bulletin board.

NGCP is hereby directed to furnish all those making requests therefor with copies of the application and its attachments, subject to reimbursement of reasonable photocopying costs.

On the date of the initial hearing, NGCP must submit to the Commission its written Compliance with the jurisdictional requirements attaching therewith, methodically arranged and duly marked, the evidences on the actual posting and publication of the Notice of Public Hearing consisting of a certification issued to that effect, signed by the afore-mentioned Mayor or his duly authorized representative, bearing the seal of his office, and the affidavits of the Editors or Business Managers of the newspapers where the said Notice of Public Hearing was published together with the complete issues of the said newspapers, and such other proofs of compliance with the requirements of the Commission.

NGCP and all interested parties are directed 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:

- a) A summary of admitted facts and proposed stipulation of facts;
- b) The issues to be tried or resolved;
- c) The documents or exhibits to be presented, stating the purposes and proposed markings therefore; and
- d) The number and names of the witnesses, with their written testimonies in an individual affidavit form, to be attached to the Pre-trial Brief.

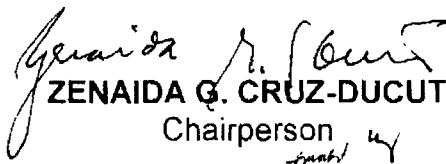
Failure of NGCP to submit the required Pre-trial Brief and Judicial Affidavits of its witnesses within the prescribed period shall be a ground for cancellation of the scheduled hearing, and the resetting of which shall be six (6)

As part of the pre-trial conference, NGCP must also be prepared to make an expository presentation of its 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, June 6, 2012.

FOR AND BY AUTHORITY
OF THE COMMISSION:


ZENAIDA G. CRUZ-DUCUT
Chairperson
fnah

Copy Furnished:

1. **Attys. Mark Anthony S. Actub, Raycell D. Baldovino and Ari Vergil P. Fabros**
Counsels for Applicant
National Grid Corporation of the Philippines (NGCP)
NGCP Building, Quezon Avenue cor. BIR Road
Diliman, Quezon City, Metro Manila
2. **THE OFFICE OF THE SOLICITOR GENERAL**
234 Amoroso Street, Legaspi Village, Makati City
Metro Manila
3. **THE COMMISSION ON AUDIT**
Don Mariano Marcos Avenue
Diliman, Quezon City, Metro Manila
4. **THE COMMITTEE ON ENERGY**
House of the Senate
GSIS Building, Roxas Blvd., Pasay City, Metro Manila
5. **THE COMMITTEE ON ENERGY**
House of Representatives
Batasan Hills, Quezon City, Metro Manila
6. **OFFICE OF THE CITY MAYOR**
Quezon City

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

**IN THE MATTER OF THE
APPLICATION FOR THE APPROVAL
OF THE OPOL SUBSTATION
PROJECT, WITH PRAYER FOR THE
ISSUANCE OF A PROVISIONAL
AUTHORITY**

ERC CASE NO. 2012-066 RC

**NATIONAL GRID CORPORATION OF
THE PHILIPPINES (NGCP),
Applicant.**

x-----x

D O C K E T E D
Date: JUN 13 2012
By: *CN*

NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on April 24, 2012, the National Grid Corporation of the Philippines (NGCP) filed with the Commission an application for the approval of the Opol Substation Project, with prayer for the issuance of a provisional authority.

In the said application, NGCP alleged, among others, the following:

1. It is a corporation created and existing under the laws of the Philippines, with principal office address at NGCP Building, Quezon Avenue corner BIR Road, Diliman, Quezon City. It is the corporate vehicle of the consortium which was awarded the concession to assume the power transmission functions of the National Transmission Corporation (TRANSCO) pursuant to Republic Act No. (R.A. 9136), otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA).

STATEMENT OF THE CASE

2. One of its functions and responsibilities enumerated in Section 9 of the EPIRA is to *"improve and expand its transmission facilities, consistent with the Grid Code and the Transmission Development Plan (TDP) to be promulgated pursuant to this Act, to **adequately serve generation companies, distribution utilities and suppliers requiring transmission service and/or ancillary services through the transmission system:** Provided, That TRANSCO shall submit any plan for expansion or improvement of its facilities for approval by the ERC."* (Emphasis supplied).
3. In accordance with its mandate to ensure and maintain the quality, reliability, adequacy, security, stability and integrity of the Grid, it seeks authority from this Commission to immediately implement the Opol Substation Project (Project), which aims, among others to accommodate the expected significant load growth in Misamis Oriental.

STATEMENT OF FACTS

Brief Background

4. The Province of Misamis Oriental is located in Northern Mindanao bordered by the Provinces of Bukidnon, Agusan and Lanao del Norte. It is host to several industries namely, among others, metal, chemical, mineral, rubber and food processing, commercial fishing, farming, tourism and light industry. A notable economic infrastructure in the area is the construction of the Laguindingan International Airport. It is expected to operate in the year 2012 which will result in the significant economic and load growth in Misamis Oriental.
5. The Province is drawing power, among others, from NGCP's Lugait Substation through the 60 km Lugait-Carmen 69 kV Line. It was constructed sometime in 1966. With the projected economic progress and load growth, both the line and substation would no longer meet the increasing demand requirements in the next few years.
6. In its Third (3rd) Reset Application docketed as ERC Case No. 2009-180 RC, the Commission has already approved a project that will address the overloading to the existing units during single outage contingency in the Lugait Substation together with other substations, namely: Nuling, Tindalo, Aplaya, Bunawan and Aurora Substations under the project name: "Mindanao Substation Reliability Project – 1 (MSRP-1)." Specifically for the Lugait Substation, the Commission has approved the installation of an additional 1x75 MVA, 138/69-13.8 kV power transformer and a 1-138 kV and 2-69 kV PCB.
7. To better remedy the expected low voltage problems and load growth, NGCP decided to link strategic point of Lugait-Carmen 69 kV Line to Lugait-Tagoloan 138 kV double circuit line through the proposed Opol 138 kV Substation Project (Project) as a replacement to the Lugait Substation reinforcement. This Project will help

problems along the Lugait-Carmen 69 kV Line and in the Lugait Substation.

A copy of the "Opol Substation Project" with attachments prepared by NGCP's Planning and Engineering Group is hereto attached as Annex "A."

8. The Project has already been included in NGCP's 2011 Transmission Development Plan.

Project Description

9. The proposed components and description of the Project are as follows:

Project Component	Project Description
Substation	
Opol 138 kV Substation	3-138 kV PCB and Associated Equipment
(Substation)	3-69 kV PCB and Associated Equipment
	75 MVA, 138/69-13.8 kV Transformer
Transmission Line	
Cut-in to Lugait-Tagaloan 138 kV Line	Line 1: 138 kV, ST-DC1, 1-795MCM, 7.0 km
	Line 2: 138 kV, ST-DC1, 1-795MCM, 7.0 km
Cut-in to Lugait-Carmen 69 kV Line	Line 1: 69 kV, SP-SC, 1-336.4MCM, 0.1 km
	Line 2: 69 kV, SP-SC, 1-336.4MCM, 0.1 km
The 75 MVA transformer and its associated 1-138 kV and 2-69 kV PCB will be supplied from the 3RP Mindanao Substation Reliability Project-1 (MSRP-1). These were originally intended for Lugait Substation.	

10. The proposed Project shall be a conventional type with switch bays initially arranged in ring-bus breaker configuration for "cut-in" connection scheme. It may be reconfigured into one-and-a-half (1/2) for eventual "bus-in" connection scheme for added reliability when additional transformer is installed in the future. Also, this includes a 2-138 kV and 1-69 Power Circuit Breakers and associated equipment. The 1x75 MVA, 138/69-13.8 kV power transformer and accessories as well as its associated 1-138 kV and 2-69 kV PCB including its associated equipment will be supplied under the Mindanao Substation Reliability Project – 1. Only the installation and hauling cost for the transformer and its associated equipment will be included in this Application.
11. A 138 kV transmission line will be initially linked to the existing Lugait-Tagoloan 138 kV transmission line which is one of the circuits of the existing Baloi-Tagoloan 138 kV double circuit steel tower transmission line. This will require the construction of two lines (Line 1 and Line 2), each has a length of 7.0-km, that will utilize Steel Tower in a Double Circuit configuration to be constructed initially with single circuit strung or ST-DC1, 1-795 MCM ACSR, 138 kV transmission lines. The adoption of ST-DC1 structures will facilitate the eventual "bus-in" connection of the existing 138 kV Baloi-1-Tagoloan ST-DC T/L for added reliability.

"cut-in" connection to the existing Lugait-Carmen 69 kV Line through the construction of two (Line 1 and Line 2) 0.10-km, Steel Pole, Single Circuit or SP-SC, 1-336.4 MCM ACSR, 69 kV transmission lines.

Proposed Site and Cost Estimate of the Project

12. In this application, it proposes to implement the Project on a 4 hectare land located along a national highway at Brgy. Awang, Opol which is 15.50 km west of its Carmen Substation with an elevation of 156 meters above sea level. Being accessible. It will be easier for it to deliver the materials during the construction and perform inspection and maintenance activities of the facilities during operation. Also, the site strategically located near the load centers in the vicinity of Cagayan de Oro City.
13. The estimated cost of the Project is Php603,729,575.00 and time of completion is in 2015.
14. In 2012, the peak load of the existing Lugait-Carmen 69 kV Line will already be ninety percent (90%) of its rated capacity. By 2014, the peak load of the said line will already be one hundred three percent (103%) of its rated power transfer capacity. Similarly, based on the system simulation, the bus voltages of Lumbo/Laguindingan, ABI, Opol, Canitoan, and CDO/Carmen Load End Substations in 2012-2020 will be below the allowable of 0.95 per unit as prescribed by the Philippine Grid code (PGC). Due to voltage drops at different connection points, load centers far from the power source often suffer from low voltage. The total amount of power to be curtailed during peak condition to avoid overloading of the Lugait-Carmen 69 kV Line and voltage violations in respective areas ranges from 11.93 MW up to 37.72 MW in the period 2012 to 2020.
15. Upon energization of the Project targeted in February 2015, the Lugait-Carmen 69 kV Line will have a peak thermal loading of less than 49% of the rated capacity, with the overloading delayed by 19 years in 2034. Moreover, the per unit values of bus voltages at the load and substations will be improved and are already within the 0.95 – 1.05 per unit range under the Voltage Limit Compliance prescribed by the PGC.

Prayer for Provisional Authority

16. It moves for the issuance of a provisional approval pending final decision of the application in order for the project to be immediately implemented. Considering the necessity to construct drawdown substation to accommodate load growth and ensure power quality to the electricity consumers in Misamis Oriental, the implementation of Project must commence as scheduled. As such, pre-construction activities are needed to be undertaken in 2012 in order to meet the target completion in February 2015. Hence, the need to file an application with prayer for issuance of Provisional Authority (PA) before the Energy Regulatory Commission (ERC) to be able to implement the project within the target need date established in the system study

17. A copy of the Judicial Affidavit of Engr. Vicente N. Loria, the Division Head of the Project Planning and Development Division of NGCP in support thereof is hereto attached as Annex "B".

18. It most prays of the Commission that:

- a. Issue, immediately upon filing of the application, a provisional authority for the implementation of the Opol Substation Project; and
- b. Approve, after notice and hearing, the application for the implementation of the Opol Substation Project and render judgment making provisional approval permanent.

The Commission has set the application for jurisdictional hearing, expository presentation, pre-trial conference and evidentiary hearing on **July 12, 2012 (Thursday) at ten o'clock in the morning (10:00 A.M.) at the ERC Hearing Room, 15th Floor, Pacific Center Building, San Miguel Avenue, Pasig City.**

All persons who have an interest in the subject matter of the proceeding may become a party by filing, at least five (5) days prior to the initial hearing and subject to the requirements in the ERC's Rules of Practice and Procedure, a verified petition with the Commission giving the docket number and title of the proceeding and stating: (1) the petitioner's name and address; (2) the nature of petitioner's interest in the subject matter of the proceeding, and the way and manner in which such interest is affected by the issues involved in the proceeding; and (3) a statement of the relief desired.

All other persons who may want their views known to the Commission with respect to the subject matter of the proceeding may file their opposition to the application or comment thereon at any stage of the proceeding before the applicant concludes the presentation of its evidence. No particular form of

contain the name and address of such person and a concise statement of the opposition or comment and the grounds relied upon.

All such persons who may wish to have a copy of the application may request the applicant, prior to the date of the initial hearing, that they be furnished with a copy of the application. The applicant is hereby directed to furnish all those making such request with copies of the application and its attachments, subject to reimbursement of reasonable photocopying costs. Likewise, any such person may examine the application and other pertinent records filed with the Commission during the usual office hours.

WITNESS, the Honorable Chairperson, **ZENAIDA G. CRUZ-DUCUT**, and the Honorable Commissioners, **MARIA TERESA A.R. CASTAÑEDA**, **JOSE C. REYES**, **ALFREDO J. NON** and **GLORIA VICTORIA C. YAP-TARUC**, Energy **Regulatory Commission**, this 6th day of June, 2012 at Pasig City.


ATTY. FRANCIS SATURNINO C. JUAN
Executive Director III