

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

**IN THE MATTER OF THE  
APPLICATION FOR  
APPROVAL OF THE  
EMERGENCY  
REPLACEMENT OF ONE (1)  
100-MVA POWER  
TRANSFORMER AT  
PAMPLONA SUBSTATION**

**ERC CASE NO. 2019-037 RC**

**MANILA ELECTRIC  
COMPANY (MERALCO),  
Applicant.  
x ----- x**

Received:  
**JUN 21 2019**

**NOTICE OF PUBLIC HEARING**

**TO ALL INTERESTED PARTIES:**

Notice is hereby given that on 23 May 2019, Manila Electric Company (MERALCO) filed an *Application* dated 21 May 2019, seeking the approval of its emergency replacement of one (1) 100-MVA power transformer at Pamplona Substation.

The pertinent portions of the said *Application* are hereunder quoted as follows:

1. Applicant is a private corporation duly organized and existing under the laws of the Republic of the Philippines, with principal office located at Lopez Building, Ortigas Avenue, Barangay Ugong, Pasig City. It may be served with notices and other processes of this Honorable Commission through its undersigned counsel at the address indicated herein.
2. Applicant has a legislative franchise to construct, operate and maintain an electric power distribution system for the conveyance of electric power to the end-users in the cities and municipalities of Metro Manila, Bulacan, Cavite and Rizal, and certain cities/municipalities/barangays in Batangas, Laguna, Quezon and Pampanga, pursuant to Republic Act No. 9209.

3. Applicant seeks the Honorable Commission's approval of its emergency CAPEX project for the replacement of the defective Pamplona Power Transformer Bank No. 1.
4. The two main project components of the emergency project are: (a) temporary installation of an 83 MVA, 115 kV-34.5 kV, three (3)-phase power transformer; and (b) permanent installation of a new 100 MVA, 115 kV-34.5 kV, three (3)-phase power transformer.
5. The Application is filed pursuant to the Honorable Commission's Resolution No. 26, Series of 2009, entitled: "*Resolution Amending the Rules for Approval of Regulated Entities' Capital Expenditure Projects*". Emergency Capital Expenditure projects are those that require immediate implementation during an event that is not a force majeure or fortuitous event in order to maintain safe, reliable, secure and efficient operation of the power system.
6. However, for purposes of recovering the capital cost of the said emergency project through Applicant's rates, the same will go through the process of evaluation by the Honorable Commission during the regulatory reset process in accordance with the Rules for the Setting of Distribution Wheeling Rates (RDWR) for Distribution Utilities (DUs).

#### **BACKGROUND**

7. The Pamplona Substation is located at Aria St., Sitio Kubokob, Brgy. Pamplona II, Las Piñas City and serves the entire City of Las Piñas, including portions of Bacoor City and Parañaque City. The Pamplona Substation has two (2) 115 kV-34.5 kV power transformer banks: one (1) 100 MVA power transformer bank, and one (1) 83 MVA power transformer bank.
8. On 17 March 2019, the Pamplona 100 MVA Power Transformer Bank No. 1 was tripped out by the transformer differential relay with Phase C target due to turn-to-turn short on the HOH1 winding. The power transformer was immediately subjected to a series of tests on the same day. Results of the tests revealed that the transformer failed the transformer turns ratio (TTR) test due to high exciting current on HOH1 winding. Additional test conducted showed low insulation resistance between the primary and secondary (H-X) windings.
9. Furthermore, Transformer Fault Gas Analysis done on the gas and oil samples taken from the Buchholz relay and main tank respectively, showed high concentration combustible gas Acetylene (C<sub>2</sub>H<sub>2</sub>) which confirmed the occurrence of high current discharge in the power transformer.
10. Given these adverse test results, Applicant was constrained to replace the defective Pamplona Power Transformer Bank No. 1, and to temporarily transfer its loads to the adjoining transformer banks with 115 kV-34.5 kV rating, namely, the

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Pamplona Bank No. 2, BF-Parañaque Bank No. 1, Bacoor Bank No. 1, Central Business Park 1 Island A (“CBP1A”) Bank No. 1, Ayala Alabang Bank No. 2 and Sun Valley Bank No. 1.

11. This set-up caused the following banks to operate at critical loading level: Pamplona Bank No. 2 at 83%, BF Parañaque Bank No. 1 at 78%, CBP1A Bank No. 1 at 78%, and Sun Valley Bank No. 1 at 74% respectively.
12. With the critical loading of said power transformers, any outage thereof would have resulted to the prolonged and massive interruption in the cities of Las Piñas, Bacoor and Parañaque. In particular, an outage would critically affect the supply of electricity to vital customers in said areas, such as the Manuela Corporation, Republic Steel Tube Inc., Golden Arches Development Corporation, and Neltex Development Co. Inc.
13. Considering the imminent risks posed by shifting the loads to the adjoining power transformers, MERALCO was constrained to undertake an interim solution. Thus, on 23 March 2019, Applicant replaced the defective Pamplona Power Transformer No. 1 with an available 83 MVA, 115 kV-34.5 kV Power Transformer intended for the Development of Binangonan 115kV – 34.5kV Substation Project. This temporary solution was done to relieve the critical loading of abovementioned banks. The replacement transformer was then energized on 10 April 2019.
14. However, there is still a need to replace the temporary 83 MVA Power Transformer installed at the Pamplona Bank No. 1 with a new 100 MVA Power Transformer given the load requirements of the area. Although the temporary solution was sufficient to maintain electricity supply to the customers, the current loading of the 83 MVA Power Transformer is already at a critical loading level of 73%. Hence, a 100 MVA Power Transformer would be the best solution to ensure adequate capacity and better reliability in the area.
15. Furthermore, since this is only an interim solution, the 83 MVA Power Transformer should be returned to the Binangonan 115kV-34.5kV Substation Project as soon as possible in order to serve its intended purpose.
16. Shown below are the projected loadings of the affected power transformers with and without the replacement of the defective 100 MVA Pamplona Power Transformer.

**Table 1: Without Project**

<b>Parameter Under Consideration</b>	
Loading of Pamplona Bank No. 2	83%
Loading of BF-Parañaque Bank No. 1	78%

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Loading of Bacoor Bank No. 1	66%
Loading of CBP1A Bank No. 1	78%
Loading of Ayala Alabang Bank No. 2	60%
Loading of Sun Valley Bank No. 1	74%
System Loss	1,241,189 kWh

**Table 2: With Project**

<b>Parameter Under Consideration</b>	
Loading of Pamplona Bank No. 1	60%
Loading of Pamplona Bank No. 2	60%
Loading of BF-Parañaque Bank No. 1	73%
Loading of Bacoor Bank No. 1	55%
Loading of CBP1A Bank No. 1	65%
Loading of Ayala Alabang Bank No. 2	49%
Loading of Sun Valley Bank No. 1	63%
System Loss	1,111,750 kWh

17. In view of the foregoing, there was an urgent need to implement the emergency project to replace the 100 MVA Power Transformer in the Pamplona Substation.
18. The cost for the temporary installation of power transformer is **PESOS: FOUR MILLION ONE HUNDRED ELEVEN THOUSAND FOUR HUNDRED EIGHTY-FOUR & 62/100 (PhP 4,111,484.62)**. The same includes the installation of the available 83-MVA, 115 kV–34.5 kV, three-phase power transformer and costs for transformer oil and trucking services.
19. The cost for permanent installation of power transformer is **PESOS: SIXTY-SIX MILLION EIGHT HUNDRED SIXTY-TWO THOUSAND ONE HUNDRED SEVEN & 5/100 (PhP 66,862,107.05)**. This includes the cost of new 100 MVA, 115 kV–34.5 kV, three-phase power transformer and costs for transformer oil, taxes, duties, brokerage, trucking services and installation.
20. Thus, the total cost for the emergency replacement of power transformer in Pamplona Substation is **PESOS: SEVENTY MILLION NINE HUNDRED SEVENTY-THREE THOUSAND FIVE HUNDRED NINETY-ONE & 67/100 (PhP70,973,591.67)**.

21. In further support of the Application, attached hereto are the following documents:

- **Annex “A”** – Emergency CAPEX Project Information Summary with supporting documents: (i) Technical and Economic Analysis, (ii) Cost Estimates; (c) Expenditure Summary; (iii) Cost Benefit Analysis Calculation; and (iv) Gantt Chart;
- **Annex “B”** – Documents showing the results of tests conducted on Pamplona Power Transformer Bank No. 1; and
- **Annex “C”** – Judicial Affidavit of Engr. Mario Angelito A. delos Reyes, Manager and Head of Applicant’s Substation Services Asset Management Office.

**PRAYER**

**WHEREFORE**, it is respectfully prayed to this Honorable Commission that the Applicant’s emergency replacement of the power transformer at the Pamplona Substation be **APPROVED**.

Other reliefs just and equitable under the premises are likewise prayed for.

The Commission has set the *Application* for compliance with the jurisdictional requirements, expository presentation, Pre-trial Conference, and presentation of evidence on **24 July 2019 (Wednesday) at two o’clock in the afternoon (02:00 P.M.), at the ERC Hearing Room, 15<sup>th</sup> Floor Pacific Center Building, San Miguel Avenue, Pasig City.**

All persons who have an interest in the subject matter of the instant case may become a party by filing with the Commission a verified Petition to Intervene at least five (5) days prior to the initial hearing and subject to the requirements under Rule 9 of the 2006 ERC Rules of Practice and Procedure, indicating therein the docket number and title of the case and stating the following:

- 1) The petitioner’s name and address;
- 2) The nature of the 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.

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All other persons who may want their views known to the Commission with respect to the subject matter of the case may file their Opposition or Comment thereon at any stage of the proceeding before Applicant rests its case, subject to the requirements under Rule 9 of the 2006 ERC Rules of Practice and Procedure. No particular form of Opposition or Comment is required, but the document, letter, or writing should contain the following:

- 1) The name and address of such person;
- 2) A concise statement of the Opposition or Comment; and
- 3) The grounds relied upon.

All such persons who wish to have a copy of the *Application* may request from the Applicant that they be furnished with the same, prior to the date of the initial hearing. The Applicant is hereby directed to furnish all those making such request with copies of the *Application* and its attachments, subject to the reimbursement of reasonable photocopying costs. Any such person may likewise examine the *Application* and other pertinent records filed with the Commission during the standard office hours.

**WITNESS**, the Honorable Chairperson **AGNES VST DEVANADERA**, and the Honorable Commissioners **CATHERINE P. MACEDA** and **PAUL CHRISTIAN M. CERVANTES**, Energy Regulatory Commission, this 6<sup>th</sup> day of June in Pasig City.

  
**JOSEFINA PATRICIA A. MAGPALE-ASIRIT**  
*Oversight Commissioner for Legal* 

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