

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)
33-MVA POWER
TRANSFORMER AT
TAGAYTAY SUBSTATION**

ERC CASE NO. 2019-005 RC

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

Transmitted
FEB 21 2019

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NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on 14 January 2019, the Manila Electric Company (MERALCO) filed an *Application* dated 11 January 2019, seeking for the approval of its emergency replacement of one (1) 33-MVA, 110 kV–13.8 kV, three (3)-phase power transformer with On-Load Tap Changer (OLTC) at the Tagaytay 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 replacement of one (1) 33 MVA, 110 kV–13.8 kV, three (3)-phase power transformer with On-Load Tap Changer (OLTC) at the

Tagaytay Substation for the replacement of the defective Power Transformer Bank No. 1.

4. 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.
5. 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

6. The Tagaytay Substation is located at Nasugbu Highway, Brgy. Maharlika West, Tagaytay City, Cavite and serves the entire City of Tagaytay, including portions of the municipalities of Indang, Silang, Amadeo, and Trece Martires, Cavite. The Tagaytay Substation has one (1) 33 MVA, 110kV-13.8kV power transformer bank.
7. On 14 November 2018, the lone Tagaytay Power Transformer Bank No. 1 was tripped out by the transformer differential relay, with targets at phases A and B, due to the turn-to-turn short on the H1H2 windings. The power transformer was immediately subjected to a series of tests on the same day. Results of the tests revealed that the transformer had low percentage (%) turns ratio, measured on the H1H2-X0X2 windings, compared with the H2H3-X0X3 and H1H3-X0X1 windings. Similarly, it was found out that the excitation tests could not be conducted between the H1H2 and H2H3 windings.
8. Furthermore, the Transformer Fault Gas Analysis done on 15 November 2018 for both the gas and oil samples taken from the Buchholz relay showed high values of combustible gas such as Acetylene (C₂H₂), Hydrogen (H₂), Methane (CH₄), Carbon Monoxide (CO) and Ethane (C₂H₆).
9. Given these adverse test results, Applicant was constrained to replace the defective Tagaytay Power Transformer Bank No. 1 and to temporarily transfer its loads to the adjoining transformer banks with 110kV-13.8kV, namely, the Silang 33 MVA Bank No. 1 and Tagaytay West Bank No. 1
10. The set-up caused the Silang Bank No.1 and Tagaytay West Bank No. 1 to operate above critical level at 93.0% and 89.0%, respectively.
11. With the critical loading of said power transformers, any outage thereof would have resulted to prolonged and massive interruption in the municipalities/towns of Indang, Amadeo, Silang, Cavite, Tagaytay City, and Trece Martires, Cavite. In particular, an outage would have critically affected the supply of electricity to vital customers in said

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areas, such as the Bangko Sentral ng Pilipinas Training Facility, Philippine Public Safety College, Filinvest Land, Inc., Ayala Land Inc., Alveo Land Corp., and Globe Telecom Inc.

12. Considering the imminent risks posed by shifting the loads to the adjoining power transformers, MERALCO was constrained to undertake an interim solution. Thus, on 19 November 2018, Applicant replaced the defective Tagaytay Power Transformer No. 1 with a 41 MVA, 110kV-13.8kV power transformer pulled out from the Los Baños Substation. This temporary solution was done to relieve the critical loading of the Silang and Tagaytay West power transformer banks.
13. Since this is only an interim solution, the 41 MVA Power Transformer shall be returned to Los Baños Substation as soon as the new 33 MVA, 110kV-13.8kV Power Transformer arrives.
14. Shown below are the projected loadings of the affected power transformers with and without the replacement of the defective 33 MVA Tagaytay Power Transformer.

Table 1: Without Project

Parameter Under Consideration	
Loading of Silang Bank No. 1	93.0%
Loading of Tagaytay West Bank No.1	89.0%
System Loss	18,377,060 kWh

Table 2: With Project

Parameter Under Consideration	
Loading of Tagaytay Bank No.1	77.0%
Loading of Silang Bank No.1	68.0%
Loading of Tagaytay West Bank No.1	80.0%
System Loss	13,080,423 kWh

15. In view of the foregoing, there was an urgent need to implement the emergency project to replace the 33 MVA Power Transformer in the Tagaytay Substation.
16. The total cost for the emergency replacement of the power transformer at the Tagaytay Substation is FORTY FOUR MILLION SEVEN HUNDRED FIFTY SIX THOUSAND FOUR HUNDRED SEVENTEEN & 04/100 PESOS (Php 44,756,417.04).
17. In further support of the Application, attached hereto are the following documents:

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- 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 Tagaytay 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 Tagaytay Substation be APPROVED.

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

The Commission has set the *Application* for determination of compliance with the jurisdictional requirements, expository presentation, pre-trial conference, and presentation of evidence on **20 March 2019 (Wednesday), at ten o’clock in the morning (10:00 A.M.), at the 15th Floor, ERC Hearing Room, 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 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 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

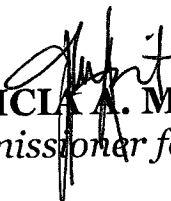
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Opposition or Comment is required, but the document, letter, or writing should contain the following:

- 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 Applicant that they be furnished with the same, prior to the date of the initial hearing. MERALCO 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 and CEO, **AGNES VST DEVANADERA**, and the Honorable Commissioners **ALEXIS M. LUMBATAN**, **CATHERINE P. MACEDA**, and **PAUL CHRISTIAN M. CERVANTES**, Energy Regulatory Commission, this 12th day of February 2019 in Pasig City.


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


LS: LED/ARS/GLO