

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

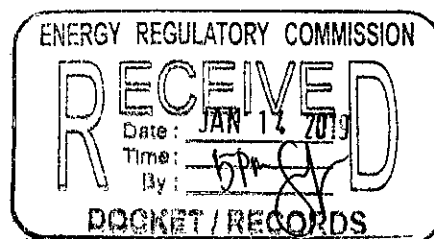
**IN THE MATTER OF THE  
APPLICATION FOR  
APPROVAL OF THE  
EMERGENCY REPLACEMENT  
OF ONE (1) 33-MVA POWER  
TRANSFORMER AT  
TAGAYTAY SUBSTATION,**

ERC Case No. 2019- 005 RC

**MANILA ELECTRIC COMPANY  
(MERALCO),**

*Applicant.*

X-----X



**APPLICATION**

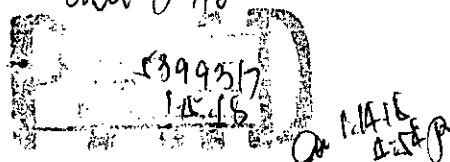
Applicant **MANILA ELECTRIC COMPANY (MERALCO)**, through the undersigned counsel, most respectfully avers: that –

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 (C<sub>2</sub>H<sub>2</sub>), Hydrogen (H<sub>2</sub>), Methane (CH<sub>4</sub>), Carbon Monoxide (CO) and Ethane (C<sub>2</sub>H<sub>6</sub>).

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 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**

<b>Parameter Under Consideration</b>	
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**

<b>Parameter Under Consideration</b>	
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:

- **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.

Pasig City, 11 January 2019.



**FRANCIS DINO S. ANTONIO**

Roll of Attorneys No. 48145

PTR No. 5229236; 1/9/19; Pasig City

IBP No. 66245; 1/9/19; RSM

MCLE Compliance No. VI-0003791; 3 November 2017



**HAZEL ROSE B. SEE**

Roll of Attorneys No. 48265

PTR No. 5229237; 1/9/19; Pasig City

IBP No. 06460(LIFETIME); 01/16/07; QC

MCLE Compliance No. VI-0000253; 11 July 2016



**ADRIAN REX C. DIMALANTA**

Roll of Attorneys No. 61149

PTR No. 5229240; 1/9/19; Pasig City

IBP No. 66248; 1/9/19; PPLM

MCLE Compliance No. VI-0000233; 11 July 2016



**ISAGANIS CORUÑA II**

Roll of Attorneys No. 63123

PTR No. 5229243; 1/9/19; Pasig City

IBP No. 66250; 1/9/19; RSM

MCLE Compliance No. VI-0007787; 6 April 2018

7th Floor Lopez Building, Ortigas Avenue

Barangay Ugong, Pasig City

Telephone Number 1622-2260; Fax No. 1622-3550

Email address: [regulatory.legal.admin@meralco.com.ph](mailto:regulatory.legal.admin@meralco.com.ph)

Republic of the Philippines )  
City of Pasig ) S.S.  
**CITY OF MAKATI**

**VERIFICATION**  
**AND CERTIFICATION ON NON-FORUM SHOPPING**

I, **JOSE RONALD V. VALLES**, Filipino, of legal age, married, with office address at 7<sup>th</sup> Floor, Lopez Building, Ortigas Avenue, Barangay Ugong, Pasig City, after being sworn in accordance with law, hereby depose and say that—

1. I am the Vice President and Head, Regulatory Management Office, of Applicant **Manila Electric Company (MERALCO)**. In such capacity, I have caused the preparation and filing of the foregoing Application;


2. Moreover, I have been authorized by the Board of Directors of MERALCO to certify that Applicant has not heretofore filed any similar action, pleading or application involving the same issues before the Supreme Court, the Court of Appeals or any other lower courts or administrative bodies. A copy of the Secretary's Certificate authorizing me to cause the preparation of the instant Application and sign this Verification and Certification is attached hereto as Annex "D";

3. I have read and understood the allegations contained therein and the same are true and correct based on my personal knowledge and authentic records made available to me in the ordinary course of business of MERALCO;

4. To the best of my knowledge, no similar action or proceeding is pending before the Supreme Court, the Court of Appeals, the lower courts or administrative bodies;

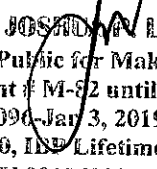
5. If I should hereafter learn that a similar action has been filed before the Supreme Court, the Court of Appeals, the lower courts or administrative bodies, I undertake to report such fact to this Honorable Commission within five (5) days from notice of such fact.

**IN WITNESS WHEREOF**, I have hereunto affixed my signature this \_\_\_\_ day of January 2019 at Pasig City, Philippines.

  
**JOSE RONALD V. VALLES**  
*Affiant*

**SUBSCRIBED and SWORN** to before me this JAN 11 day of January 2019, affiant having exhibited to me his Social Security System ID bearing the number 33-10900088.

Doc. No. 109;  
Page No. 29;  
Book No. 12;  
Series of 2019.

  
**ATTY. JOSHUA N. LAPUZ**  
Notary Public for Makati City  
Appointment # M-82 until 12/31/2019  
PTR No. 7333090-Jan 3, 2019, Makati City  
Roll No. 45790, INP Lifetime Roll #04897  
MCLE No. V-0019692/April 15, 2016  
G/F Fedman Suites, 199 Salcedo Street  
Legaspi Village, Makati City