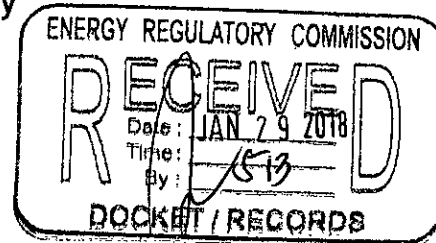


Republic of the Philippines  
**ENERGY REGULATORY COMMISSION**  
San Miguel Avenue, Pasig City

**IN THE MATTER OF THE  
APPLICATION FOR  
APPROVAL OF THE  
EMERGENCY REPLACEMENT  
OF ONE (1) 83-MVA POWER  
TRANSFORMER AT  
URDANETA SUBSTATION,**



ERC Case No. 2018- 006 RC

**MANILA ELECTRIC COMPANY  
(MERALCO),**

*Applicant.*

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**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 installation of one (1) 83 MVA, 115 kV-34.5 kV, three (3)-phase power transformer with On-Load Tap Changer (OLTC) for the replacement of Applicant's Urdaneta Substation's defective Power Transformer Bank No. 3.

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, unless there is basis for a rate-reopening in the current regulatory period, in accordance with the Rules for the Setting of Distribution Wheeling Rates (RDWR) for Distribution Utilities (DUs).

## **BACKGROUND**

6. The Urdaneta Substation is located at EDSA cor. Recoletos Circle cor. Recoletos St., Brgy. Urdaneta Village, Makati City, Metro Manila. The said substation serves Makati City and portions of Taguig City. The Urdaneta Substation has three (3) 115kV-34.5kV power transformer banks.

7. On 05 August 2017, Urdaneta Power Transformer Bank No. 3 was tripped out by transformer differential relay due to insulation failure of the primary phase A power cable. The electrical arc created by the power cable failure triggered a series of events that led to the insulating oil on the overhead conservator tank to leak. This caused a large fire which could no longer be contained by the substation's fire suppression system. Thus, the MERALCO personnel in the said substation immediately called the Makati City Firemen and the latter was able to extinguish the fire from the affected power transformer.

8. On 5 August 2017 and 6 August 2017, the Urdaneta Power Transformer No.3 was subjected to a series of tests so as to determine its condition after the fire incident. Based from the result of the tests, the power transformer was no longer safe to be energized and was declared for replacement due to the following significant findings: High % Insulation Power Factor (IPF) on H-G, X-G, Y-G, and H-Y windings, Low Insulation Resistance and Polarization Index on H-G, X-G, Y-G, and H-Y windings, Burned-out primary bushing turrets, primary power cable, breather, Buchholz relay and other accessories, as well as broken tertiary bushings.

9. Applicant was constrained not to use the defective Urdaneta Power Transformer Bank No. 3 and to temporarily transfer all of its loads to the adjacent bank Urdaneta 83 MVA Power Transformer Bank No. 2. It was not technically feasible to transfer portions of load of Power Transformer Bank No. 3 to Power Transformer Bank No. 1 due to the configuration set-up.

10. As a result of accommodating the loads of the defective transformer, Urdaneta Power Transformer Bank No. 2 was operating above critical level at 73%. The critical loading of the former Power Transformer Bank No. 2 may result to an outage and prolonged and massive interruption in the affected areas. In particular, the supply of electricity to customers in portions of Taguig City, such as but not limited to, Enderun Colleges and Bonifacio Water Corporation and in the City of Makati, such as but not limited to, Ayala Land Inc., Citi Tower Condominium Corp., Citi Center Condominium Corp., Phil Long Distance Tel Co., Tower One and Exchange Plaza Condominium Corp., The World Centre Condominium, Makati Shangrila Hotel, Department of Trade and Industry and Asian Institute of Management, will be adversely affected.

11. Thus, there is a need to replace the defective power transformer with a new 83 MVA Power Transformer in order to avert the prolonged and widespread power interruptions that would have affected customers in the City of Makati and portions of City of Taguig. Subsequently, the new Power Transformer was energized on 10 December 2017.

Shown below are the projected loadings of the affected power transformers with and without the replacement of Urdaneta Power Transformer Bank No. 3.

**Table 1: Without Project**

<b>Parameter Under Consideration</b>	
Loading of Urdaneta 83-MVA Bank No. 2	73.0%
System Loss	1,739,198k Wh

**Table 2: With Project**

<b>Parameter Under Consideration</b>	
Loading of Urdaneta 83-MVA Bank No. 3	46.0%
Loading of Urdaneta 83-MVA Bank No. 2	34.0%
System Loss	1,522,907 kWh

12. In the event of another outage of adjacent power transformer, coupled with the non-replacement of the Urdaneta Bank No. 3, there will be approximately 15.26 MVA unserved demand in the areas. Thus, it was crucial that the new power transformer was immediately installed in Urdaneta Substation.

13. The estimated cost of the emergency replacement including the cost of the 83 MVA, 115 kV – 34.5 kV, three-phase power transformer with OLTC to be installed at Urdaneta Substation is **Sixty Million Two Hundred Sixty Seven Thousand Nine Hundred Thirty Seven and Thirty Three Centavos (Php60,267,937.33)**. This amount also includes costs of neutral reactor, power cables, sealing end terminations, transformer oil, taxes, duties, brokerage, trucking services and installation.

14. 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 Power Transformer Bank No. 3; and
- **Annex “C”** – Judicial Affidavit of Engr. Mario 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 power transformer at the Urdaneta Substation be **APPROVED**.

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

Pasig City, 26 January 2018.

  
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PTR No. 2684871; 01/27/17; Pasig City

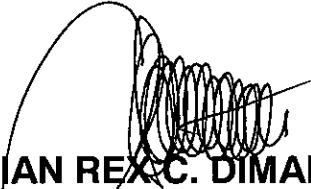
IBP No. 1061089; 01/10/17; RSM

MCLE Compliance No. V-0004608; 6 November 2014



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Republic of the Philippines )  
City of Pasig )) S.S.

**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 Affairs 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 JAN 26 2018 day of \_\_\_\_\_ 2017 at Pasig City, Philippines.

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

**SUBSCRIBED and SWORN** to before me this JAN 26 2018 day of January 2018, affiant having exhibited to me his Social Security System ID bearing the number 33-10900088.

Doc. No. 356 ;  
Page No. 73 ;  
Book No. IV ;  
Series of 2018.

  
**ATTY. CRISTOPHER B. ARPON**  
Notary Public  
for and in Pasig, Pateros, Taguig and San Juan  
Appointment No. 61 (2017-2018) on January 16, 2017  
at Pasig City until December 31, 2018  
Rol No. 41620/ISP No. 023 566 1615/RSM Chapter  
PTR No. 3909809 11618 Pasig City  
MCLE No. VI-000222 7/11/2016  
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