

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.**  
X-----X

**DOCKETED**  
Date: APR 25 2018  
By: [Signature]

**NOTICE OF PUBLIC HEARING**

**TO ALL INTERESTED PARTIES:**

Notice is hereby given that on 29 January 2018, an *Application* dated 26 January 2018 was filed by applicant Manila Electric Company (MERALCO) seeking the Commission's approval of its emergency replacement of one (1) 83-MVA power transformer at Urdaneta Substation.

**MERALCO alleged the following in its *Application*:**

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 Ulong, 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

*kw*

(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

**ERC CASE NO. 2018-006 RC**  
**NOTICE OF PUBLIC HEARING/20 MARCH 2018**  
**PAGE 3 OF 5**

---

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	1,739,198 kWh

**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.

The Commission has set the *Application* for determination of compliance with the jurisdictional requirements, expository presentation, Pre-trial Conference, and presentation of evidence on **3 July 2018 at nine o'clock in the morning (9:00 A.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 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

10

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 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 Applicant that it be furnished with the same, prior to the date of the initial hearing. 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 and CEO **AGNES VST DEVANADERA**, and the Honorable Commissioners **GLORIA VICTORIA C. YAP-TARUC**, **ALFREDO J. NON** and **GERONIMO D. STA. ANA**, Energy Regulatory Commission, this 20th day of March 2018 in Pasig City.

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

  
LS:SLAN/KTB/APV