

Republic of the Philippines
ENERGY REGULATORY COMMISSION
Pasig City

**IN THE MATTER OF THE
APPLICATION FOR
APPROVAL OF THE
EMERGENCY
REPLACEMENT OF ONE
83-MVA POWER
TRANSFORMER AT
MAKATI SUBSTATION**

ERC CASE NO. 2022-059 RC

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

Promulgated:
September 07, 2022

NOTICE OF VIRTUAL HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on 31 August 2022, the Manila Electric Company (MERALCO) filed an *Application* dated 01 August 2022, seeking the Commission's approval of the emergency replacement of one (1) 83-MVA power transformer at its Makati Substation.

The pertinent allegations in the said *Application* are hereunder quoted, as follows:

xxx

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) at its Makati Substation to replace the defective Power Transformer Bank No. 1.

4. The Application is filed pursuant to Section 10 of Republic Act No. 11659, otherwise known as "An Act Amending Commonwealth Act No. 146 Otherwise Known as the Public Service Act, as Amended", which provides:

"Section 10. Section 20 of Commonwealth Act No. 146, as amended, is hereby further amended to read as follows:

x x x

(b) To establish, construct, maintain, or otherwise operate new units or extend existing facilities or make any other addition to or general extension of the service: Provided, That only assets that are useful and necessary for the provision of the public service shall form part of the rate base as determined and approved by the Administrative Agency: Provided, further, That construction of such asset and implementation of such project may be allowed for emergency and other extraordinary cases: Provided, finally, That the public service provider files for approval of such extension or construction of facilities within sixty (60) days from implementation of the project, and without prejudice to the final determination by the Administrative Agency if the said asset is useful and necessary for inclusion in the rate base."

5. Moreover, the instant Application is consistent with 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, 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

7. The Makati Substation is located at Pablo Ocampo Extension, Sta. Cruz, Makati City, Metro Manila, where it serves the power requirements of customers in Makati City. The Makati Substation has one (1) 115kV-34.5kV power transformer bank.

8. On 30 May 2022, the Makati Power Transformer Bank No. 1 was tripped out by transformer differential relay with the actuation of Buchholz and pressure relief devices due to internal fault. Based on the retrieved relay data, it showed that the fault occurred in the transformer Phase B primary winding with a fault magnitude of 1.24kA. Furthermore, the operation of Transformer Bank No. 1's Pressure Relief Device, Buchholz Relays of Main Tank, and Turrets validated the occurrence of an internal fault. Power Transformer Bank No.1, a Siemens 83MVA 115-34.5kV, was first energized last 08 December 2019. Upon tripping, MERALCO was constrained to temporarily transfer all its loads to the adjacent banks, namely: the Kamagong Bank Nos. 1 and 2 and the New Rockwell Bank Nos. 3 and 4.

9. From 30 to 31 May 2022, the transformer was subjected to a series of tests to determine its condition after the incident. The test results on the power transformer showed that it was no longer safe to be re-energized and was declared for replacement due to the following significant findings: "Gas accumulated at the Buchholz relay showed high level of combustible gases including Hydrogen, Acetylene, Ethylene, and Methane". The same gases were also evident in the extracted oil from the transformer main tank and transformer turret which were indicative of a high energy fault sustained by the transformer.

10. Furthermore, transformer electrical tests showed that the ratio for all taps on all phases was no longer within the expected tolerance based on IEEE Standards which is also being used by MERALCO as reference. The winding resistance for all taps on all phases obtained was also relatively low compared to the initial commissioning values. High excitation current was also observed on all phases causing the Insulation Power Factor test equipment to trip at relatively low voltage of less than 1 kV which indicates the possibility of turn-to-turn short. Given these circumstances, Applicant was constrained not to re-energize the defective Makati Power Transformer Bank No. 1.

11. As a result of accommodating the loads of the defective transformer, the Kamagong Bank Nos. 1 and 2 were both operating at 70% loading levels, while the New Rockwell Bank Nos. 3 and 4 are at 74% and 61% loading levels, respectively.

12. The critical loading of the Kamagong Bank Nos. 1 and 2 and the New Rockwell Bank No. 3 may result to an outage which will cause prolonged and massive interruption in the said areas thereby affecting the supply of electricity of customers in Makati City, such as, but not limited to, the Makati City Hall, Century City Mall Makati, Century Diamond Tower, Centuria Medical Development,

SM Jazz Mall, St. Clare’s Medical Center, Cash & Carry Mall, e-PLDT Vitro Makati, Angelus Medical Clinic Inc., and Avida Towers Asten.

13. Considering the imminent risks posed by the prolonged critical loading of the adjacent power transformers, namely: the Kamagong Bank Nos. 1 and 2 and the New Rockwell Bank No. 3, MERALCO was constrained to replace the defective Makati Power Transformer Bank No. 1 with an available 83 MVA, 115 kV-34.5 kV Power Transformer initially intended to be used for the development of the Aseana Smart Substation project, and the same was energized on 05 July 2022.

14. The projected loadings of the affected power transformers with and without the replacement of the Makati Power Transformer Bank No. 1 are as follows:

Parameter Under Consideration	Parameters	
	Without Project	With Project
Loading of existing New Rockwell 83-MVA Bank No. 3	74.37%	50.20%
Loading of existing Kamagong 83-MVA Bank No. 1	70.29%	51.45%
Loading of existing Kamagong 83-MVA Bank No. 2	70.75%	51.18%
Loading of existing New Rockwell 83-MVA Bank No. 4	60.84%	56.40%
Loading of Makati 83-MVA Bank No. 1	-	66.24%
System Loss	7,054,851 kWh	6,105,728 kWh

15. In the event of another outage of the adjacent power transformers, coupled with the non-replacement of the Makati Power Transformer Bank No. 1, there will be massive power interruptions to the detriment of customers in the affected area. Thus, it was crucial that the new power transformer be immediately installed at the Makati Substation.

16. The total cost of the emergency replacement of the power transformer with OLTC at the Makati Substation is **Fifty Million Eight Hundred Sixty Thousand Seven Hundred Eighty-One Pesos (PhP50,860,781.00).**

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 Power Transformer Bank No. 1; and

- Annex “C” – Judicial Affidavit of Engr. Bienvenido H. De Guzman Jr., 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 Makati Substation be **APPROVED**.

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

The Commission has set the instant *Application* for hearing for the determination of compliance with the jurisdictional requirements, expository presentation, pre-trial conference, and presentation of evidence on the following dates and online platform for the conduct thereof, pursuant to Resolution 09, Series of 2020,¹ dated 24 September 2020, and Resolution No. 01, Series of 2021, dated 17 December 2020 (ERC Revised Rules of Practice and Procedure):²

Date	Platform	Activity
21 October 2022 (Friday) at two o'clock in the afternoon (2:00 PM)	Microsoft Teams Application	Determination of compliance with the jurisdictional requirements and Expository Presentation
28 October 2022 (Friday) at two o'clock in the afternoon (2:00 PM)		Pre-trial Conference and Presentation of Evidence

Any interested stakeholder may submit its comments and/or clarifications **at least one (1) calendar day** prior to the scheduled virtual hearing, via electronic mail (e-mail) at doCKET@erc.ph, copy furnish the Legal Service through legal@erc.ph. The Commission shall give priority to the stakeholders who have duly submitted their respective comments and/or clarifications, to discuss the same and propound questions during the course of the expository presentation.

Moreover, all persons who have an interest in the subject matter of the instant case may become a party by filing with the Commission via e-mail at doCKET@erc.ph, copy furnish the Legal Service through

¹ A Resolution Adopting the Guidelines Governing Electronic Applications, Filings and Virtual Hearings Before the Energy Regulatory Commission.
² A Resolution Adopting the Revised Rules of Practice and Procedure of the Energy Regulatory Commission.

legal@erc.ph, a verified Petition to Intervene **at least five (5) calendar days** prior to the date of the initial virtual hearing and subject to the requirements under Rule 9 of the ERC Revised Rules of Practice and Procedure, indicating therein the docket number and title of the case and stating the following:

- 1) The petitioner's name, mailing address, and e-mail 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.

Likewise, all other persons who may want their views known to the Commission with respect to the subject matter of the case may file through e-mail at doctet@erc.ph, copy furnish the Legal Service through legal@erc.ph, their Opposition or Comment thereon **at least five (5) calendar days** prior to the initial virtual hearing and subject to the requirements under Rule 9 of the ERC Revised 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, mailing address, and e-mail address of such person;
- 2) A concise statement of the Opposition or Comment; and
- 3) The grounds relied upon.

Any of the persons mentioned in the preceding paragraphs may access the copy of the *Application* on the Commission's official website at www.erc.gov.ph.

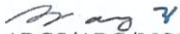
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Finally, all interested persons may be allowed to join the scheduled virtual hearings by providing the Commission, thru legal.virtualhearings@erc.ph, their respective e-mail addresses and indicating therein the case number of the instant *Application*. The Commission will send the access link/s to the aforementioned hearing platform **within five (5) working days** prior to the scheduled hearings.

WITNESS, the Honorable Chairperson and CEO **MONALISA C. DIMALANTA**, and Commissioners **ALEXIS M. LUMBATAN**, **CATHERINE P. MACEDA**, and **MARKO ROMEO L. FUENTES**, Energy Regulatory Commission, this 07th day of September 2022 in Pasig City.

FOR AND BY AUTHORITY
OF THE COMMISSION:


FLORESINDA G. BALDO-DIGAL
Commissioner 


LS: ADGS/ARG/MCCG