Republic of the Philippines
ENERGY REGULATORY COMMISSION
Pasig City

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

ERC CASE NO. 2023-036 RC

MANILA ELECTRIC COMPANY (MERALCO),
Applicant.
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Promulgated:
May 09, 2023

NOTICE OF VIRTUAL HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on 02 May 2023, Manila Electric Company (MERALCO) filed an *Application* dated 30 March 2023, seeking the Commission's approval of the emergency replacement of one (1) 83-MVA power transformer at New Marilao Substation.

The pertinent allegations of the *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 therein.

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, 110 kV-34.5 kV, three (3)-phase power transformer with On-Load Tap Changer (OLTC) with an available spare at its New Marilao Substation to replace the defective Power Transformer Bank No. 3 and repurchase of one (1) 83 MVA spare power transformer.

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:
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> xxx
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> 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 New Marilao Substation is located at M. Villarica Road in Marilao, Bulacan, where it serves the power requirements of customers in the Municipality of Marilao. The New Marilao Substation has one (1) 110kV-34.5kV power transformer bank.

8. On 31 January 2023, the New Marilao Power Transformer Bank No. 3 was tripped out due to an internal fault which was manifested by the activation of the transformer differential relay, Buchholz relay, and oil flow relay.

9. The New Marilao Power Transformer Bank No.3, a Siemens 83MVA 110-34.5kV, was first energized last 15 December 2010. Upon tripping, MERALCO was constrained to temporarily transfer all its loads to the adjacent banks, namely: Saog Bank No. 1, San Jose Bank No. 3, Sta. Maria Bank Nos. 2 and 3, North Caloocan Bank No. 1 and Meycauayan Bank No. 2.

10. On 31 January 2023, 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: a) Accumulation of high level combustible gases as showed in Buchholz relay (i.e. Hydrogen, Acetylene, Ethylene, Ethane, Carbon Monoxide, and Methane); b) Accumulation of the same gases in the extracted oil from the transformer main tank, which were indicative of a high energy fault sustained by the transformer; c) The ratio test results were found to be no longer within the expected tolerance based on IEEE Standards which is also being used by MERALCO as reference on Electrical tests; d) The winding resistance test results were relatively lower than the initial commissioning values; and e) High excitation current was observed which tripped the Electrical Test equipment.

11. As a result of accommodating the loads of the defective transformer, the Meycauayan Bank No. 2 and Sta. Maria Bank No. 3 were both operating at critical levels of 85% and 80%, respectively. Similarly, because of the accommodation of the loads of the New Marilao Power Transformer Bank No. 3, the following banks registered the following actual loadings: Sta. Maria Bank No. 2 was at 63% loading, Saog Bank No. 1 at 65%, San Jose Bank No. 3 at 64%, and North Caloocan Bank No. 1 at 59%.

12. The critical loading of the Meycauayan Bank No. 2 and Sta. Maria 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 the Municipality of Marilao, such as, but not limited to, the Philippine Arena, Royale Cold Storage Marilao, Vitarich Corp., Alpha Alleanza Mfg. Inc., Philippine Packaging Corp.,

and Sterling Business Park as well as other areas in the Province of Bulacan, such as Bocaue, San Jose Del Monte, Sta. Maria, and Meycauayan.

13. Considering the imminent risks posed by the prolonged critical loading of the adjacent power transformers, namely: the Meycauayan Bank No. 2 and Sta. Maria Bank No. 3, MERALCO was constrained to replace the defective New Marilao Power Transformer Bank No. 3 with an available spare 83 MVA, 110 kV-34.5 kV Power Transformer and the same was energized on 17 February 2023.

14. The projected loadings of the affected power transformers with and without the replacement of the New Marilao Power Transformer Bank No. 3 are as follows:

Parameter Under Consideration	Parameters	
	Without Project	With Project
Loading of New Marilao 83 MVA Bank No. 3	-	63%
Loading of existing Saog 83 MVA Bank No. 1	65%	54%
Loading of existing San Jose 83-MVA Bank No. 3	64%	61%
Loading of existing Sta. Maria 83 MVA Bank No. 2	63%	57%
Loading of existing Sta. Maria 83-MVA Bank No. 3	80%	59%
Loading of existing North Caloocan 83 MVA Bank No. 1	59%	54%
Loading of existing Meycauayan 83-MVA Bank No. 2	85%	68%
Annual System Loss	13,415,080 kWh	11,311,770 kWh

15. It is well to highlight that an outage of the Meycauayan Bank No. 2 and Sta. Maria Bank No. 3 will cause widespread power interruptions to the detriment of customers in the affected areas served by these power transformers. Considering the imminent risks posed by shifting the loads to the adjacent power transformers (Meycauayan Bank No. 2 and Sta. Maria Bank No. 3), MERALCO was constrained to undertake an immediate solution.

16. To ensure the long-term reliability and stability of the power system, MERALCO will repurchase a spare 83 MVA Power Transformer to ensure that any unexpected failure on any power transformer with the same rating can be quickly addressed thereby minimizing the downtime and associated costs therefrom. In addition, this can help prevent potential disruptions to the power supply of customers that may experience unexpected failure, which can have a negative impact on industries, businesses and households that rely on a stable source of electricity.

17. The total cost of the emergency replacement of the power transformer with OLTC at the New Marilao Substation including the purchase of a spare 83 MVA Power Transformer

is Sixty Three Million Nine Hundred Seventy Six Thousand Seven Hundred Thirty and 54/100 (PhP63,976,730.54) Pesos.

18. 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 New Marilao Substation be APPROVED and that MERALCO be allowed to repurchase a spare 83 MVA Power Transformer to replace the one installed in the New Marilao Substation.

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

The Commission hereby sets the instant *Application* for 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 No. 09, Series of 2020[1] and Resolution No. 01, Series of 2021[2] (ERC Revised Rules of Practice and Procedure):

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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.

Date and Time	Platform	Activity
27 June 2023 (Tuesday) at nine o'clock in the morning (9:00 A.M.)	**MS Teams or Zoom Application**	Determination of compliance with the jurisdictional requirements, and Expository Presentation
04 July 2023 (Tuesday) at nine o'clock in the morning (9:00 A.M.)		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 initial virtual hearing, via electronic mail (e-mail) at docket@erc.ph, and 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, and copy furnishing the Legal Service through legal@erc.ph, a verified Petition to Intervene at **least five (5) calendar days** prior to the date of the initial virtual hearing. The verified Petition to Intervene must follow the requirements under Rule 9 of the ERC Revised Rules of Practice and Procedure, indicate therein the docket number and title of the case, and state 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 docket@erc.ph, and 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. Rule 9 of the ERC Revised Rules of Practice and Procedure shall govern. 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.

All interested parties filing their Petition to Intervene, Opposition or Comment are required to submit the hard copies thereof through personal service, registered mail or ordinary mail/private courier, **within five (5) working days** from the date that the same were electronically submitted, as reflected in the acknowledgment receipt e-mail sent by the Commission.

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.

Finally, all interested persons may be allowed to join the scheduled initial 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 Commissioners **ALEXIS M. LUMBATAN, CATHERINE P. MACEDA, FLORESINDA G. BALDO-DIGAL,** and **MARKO ROMEO L. FUENTES,** Energy Regulatory Commission, this 9th day of May 2023 in Pasig City.

MONALISA C. DIMALANTA
Chairperson and CEO

LS: MVM / LSP / MCCG

ERC
Office of the Chairperson and CEO
MCD2023-003236