

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



**IN THE MATTER OF THE
APPLICATION FOR
APPROVAL OF ITS CAPITAL
EXPENDITURE PROGRAM
FOR REGULATORY YEAR
(RY) 2017,**

ERC CASE NO. 2016 -189 RC

**ANGELES ELECTRIC CORP.
(AEC),**

Applicant.

X-----X

D O C K E T E D
Date: **FEB 06 2017**
By: *[Signature]*

NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on 23 November 2016, Angeles Electric Corp. (AEC) filed an *Application* seeking the Commission's approval of its Capital Expenditure Program for Regulatory Year 2017.

AEC alleged the following in its *Application*:

1. Applicant AEC is a Distribution Utility (DU) duly organized and existing under Philippine law, with principal office address at Don Juan Nepomuceno corner Doña Teresa Street, Nepo Mart Complex, Angeles City; franchised to construct, own, operate and maintain an electric distribution system in Angeles City, Pampanga; represented herein by its President, Geromin T. Nepomuceno.
2. AEC belongs to the Fourth Entry Group under the Rules for Setting Distribution Wheeling Rates (RDWR). AEC entered the RDWR during the Second Regulatory Period (2nd RP) from October 1, 2011 to September 30, 2015. Thereafter, AEC was supposed to enter into its 3rd RP from October 1, 2015 to September 30, 2019. But the Commission suspended the implementation of the RDWR. Thus, AEC was prevented from filing its Regulatory Reset Application for the 3rd RP.
3. Ordinarily, AEC's Capital Expenditure (CAPEX) Program is incorporated as part of its Regulatory Reset Application. Considering that the Commission suspended the

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 2 OF 10

implementation of the RDWR pending its revisions, AEC was prevented from filing its Regulatory Reset Application, including its CAPEX Program, for the 3rd RP.

4. In order that AEC could continue to provide a safe, adequate, continuous and reliable power distribution service to its existing and future customers, AEC is constrained to apply for the approval of its CAPEX program on a year-to-year basis until the implementation of the RDWR is revived. Hence, AEC is filing its capital expenditure program for the Regulatory Year (RY) 2017, to wit:

Network Capex	Description	Estimated Cost
A.1	Proposed 40/50 MVA Cutcut Substation	151,286,725.03
A.2	Reconductoring of 13.8 kV Primary Lines	19,817,668.74
A.3	Upgrading of Calibu Feeder Breakers from 15 kAIC to 40 kAIC	14,633,925.75
A.4	Design and Construction of Electric Power Distribution System (EPDS) for Infinity Place, Angeles City	4,977,020.05
A.5	Installation of 69kV Disconnect Switches	1,754,586.48
	Sub-Total	192,469,926.05

Other Network Capex	Description	Estimated Cost
B.1	Procurement of Pole-Mounted Type Distribution Transformers of Various Capacities to Cater to Load Growth	19,815,717.80
B.2	Procurement of Pole-Mounted Type Distribution Transformers of Various Capacities to	39,196,564.19

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 3 OF 10

	Reduce Distribution Transformer (DT) Technical Losses	
B.3	Procurement of Wire/Conductor Requirements of Various Sizes	8,088,584.23
B.4	Procurement of Kilowatt-hour Meters and Instrument Transformers (Current and Potential Transformers)	16,532,873.40
B.5	Replacement of Old Mechanical Kilowatt-hour Meters to Electronic Type	25,750,000.00
B.6	Replacement of current transformers (600V/low voltage) with high admittance	600,600.00
B.7	Procurement of Shunt Capacitors for Power Factor Improvement	2,034,000.00
	Sub-Total	112,018,339.62

Non-Network Capex

	Description	Estimated Cost
C.1	Implementation of Electric Distribution Geographic Information System (GIS)	19,552,934.00
C.2	Purchase of Five Position Meter Testing Bench	10,123,437.50
C.3	Standard Site and Equipment Identification and Labeling System	6,116,428.57

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 4 OF 10

C.4	Procurement of Hytera Smart Dispatch Software	366,000.00
C.5	Information Technology Equipment	3,478,270.00
C.6	Procurement of Middlelink and Protection Modules for Synergi Electric Power Engineering Software	642,857.14
C.7	Structures & Improvements	2,719,777.58
Sub-Total		42,999,704.79
Grand Total		347,487,970.47

5. AEC estimates the rate impact of its CAPEX program for RY 2017 at Po.1548/kWh, to wit:

RATE IMPACT				
	REGULATORY YEAR 2017			TOTAL
	1	2	3	
	NETWORKS	OTHER NETWORKS	NON NETWORKS	
Total Project Cost	192,469,926.05	112,018,339.62	42,999,704.79	347,487,970.47
Add: Working Capital (7.8% of OPEX per Final Determination)	1,501,265.42	87,374.30	33,539.77	1,622,179.50
Total Asset Base Subject to Return	193,971,191.47	112,105,713.93	43,033,244.56	349,110,149.97
Return on Rate Base/WACC	14.97%	14.97%	14.97%	14.97%
Return on Capital	29,037,487.36	16,782,225.38	6,442,076.71	52,261,789.45
OPEX	19,246,992.61	1,120,183.40	429,997.05	20,797,173.05
Regulatory Depreciation	4,897,194.42	3,710,330.75	6,275,191.04	14,882,716.22
Corporate Income tax	0.00	0.00	0.00	0.00
Other Taxes	1,443,524.45	840,137.55	322,497.79	2,606,159.78
Annual Revenue	54,625,198.83	22,452,877.07	13,469,762.59	90,547,838.50

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 5 OF 10

Requirement				
--------------------	--	--	--	--

Forecasted Energy Sales 2017, kWh	584,995,917	584,995,917	584,995,917	584,995,917
Rate Impact Php/kWh	0.0934	0.0384	0.0230	0.1548

6. AEC submits the following documents in support of this application:

Annexes		
A.1		
	A.1.1	Power Transformer Details
	A.1.2	Technical Specifications
	A.1.3	Single Line Diagram
	A.1.4	Detailed Cost Estimates
	A.1.5	Equipment Layout
	A.1.6	Gantt Chart Schedule
	A.1.7	Project Formulation and Technical Analysis Details
A.2		
	A.2.1	Memorandum from the Distribution Manager to the Engineering Staff regarding AEC Transmission and Distribution Conductors Standard
	A.2.2	Primary Line Power Flow Re-routing Illustrations
	A.2.3	Description of Reconductoring Projects per Job Survey Report
	A.2.4	Job Survey Reports of the Reconductoring Projects
	A.2.5	Sketches of the Reconductoring Projects
	A.2.6	Gantt Chart schedule for the Reconductoring Projects
	A.2.7	Project Cost Estimates
	A.2.8	Project Formulation and Technical Analysis Details
	A.2.9	Synergi Electric Power System Software Simulation Results for Reconductoring Projects
	A.2.10	Reconductoring Forecast
A.3		
	A.3.1	Single Line Diagram for Calibu Substation Upgrade Project
	A.3.2	Cost Estimate and Technical Specifications
	A.3.3	Proposed Gantt Chart Schedule
	A.3.4	Result of Fault Level at Substation Area
	A.3.5	Quotations
	A.3.6	Technical Proposal and Description
	A.3.7	Breaker Upgrade Proj Formulation
	A.3.8	Fault Analysis and Protection Coordination
A.4		
	A.4.1	Job Survey Report for Infinity Place EPDS Project (Proposed and Alternative)
	A.4.2	EPDS Design for Infinity Place Project (Proposed and Alternative)

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 6 OF 10

	A.4.3	Details of Cost Estimate for Infinity Place EPDS Project (Overhead - Proposed and Alternative)
	A.4.4	Gantt Chart Schedule for Infinity Place EPDS Project
	A.4.5	Project Formulation and Technical Analysis Details
	A.4.6	Details of Cost Estimate for Infinity Place EPDS Project (Underground)
	A.5	
	A.5.1	Single Line Diagram for the proposed installation of 69kV DS
	A.5.2	Characteristics and Dimensions
	A.5.3	Detailed Cost Estimates
	A.5.4	Synergi Electric Power System Software Simulated System Loss Results on Different 69 kV Line Configurations and routes available by implementing the project
	A.5.5	Gantt Chart Schedule
	A.5.6	Quotations
	A.5.7	Project Formulation and Technical Analysis Details
	B.1	
	B.1.1	Determination of the Number and Sizes of Distribution Transformers for Purchase in year 2017 to Cater to Load Growth
	B.1.2	Comparative Winding and Core Losses, Amorphous Metal vs Silicon Steel Transformer Cores
	B.1.3	Detailed Cost Estimates, Amorphous Metal Core DTs vs Silicon Steel Core DTs
	B.1.4	Cost Analysis
	B.2	
	B.2.1	List of Distribution Transformers Loaded 40-60% based on Load-Check Results
	B.2.2	Historical and Forecasted (with and without the project) Distribution System Losses
	B.2.3	Cost Summary - Replacement of Silicon Core DTs with Amorphous Core DTs to Reduce Distribution Transformer (DT) Technical Losses
	B.2.4	Comparative Winding and Core Losses, Amorphous vs Silicon Steel Transformer Cores
	B.2.5	Cost Analysis
	B.3	
	B.3.1	Detailed Worksheet, Wire/Conductor Requirements for RY 2017
	B.4	
	B.4.1	Historical and Forecasted New Customers and Projected Primary Metering Customer for RY 2017
	B.4.2	Statistical Data, AEC Contestable Customers
	B.4.3	Worksheet Details, Proposed Purchase of Kilowatt-hour Meters and Instrument Transformers for RY 2017
	B.5	
	B.5.1	Single-phase Customers located at Northville and

ERC CASE NO. 2016-189 RC
NOTICE OF PUBLIC HEARING/ 25 JANUARY 2017
PAGE 7 OF 10

		Xevera
	B.5.2	Single-phase Customers located at Holy Angel Village, Telabastagan, and Essel Park
	B.5.3	Details of Proposed Number of Units of Kilowatthour Meters
	B.5.4	Gantt Chart
	B.5.5	Inventory of existing electromechanical meters and Forecasted period to replace electromechanical meter with electronic type
B.6		
	B.6.1	List of Customers with High Admittance CT Results after In-service Test
	B.6.2	Summary Reports of Phase Angle and CT Integrity Test Reports
	B.6.3	Estimated kwh Consumption with Project vis-a-vis without Project
	B.6.4	Gantt Chart
B.7		
	B.7.1	Proposed Locations of Shunt Capacitors
	B.7.2	Worksheets used in determining the number and sizes of capacitors to be installed.
	B.7.3	Comparative Line Loss
	B.7.4	Economic Cost Analysis
	B.7.5	Proposal for the Supply and Delivery of Shunt Capacitors
C.1		
	C.1.1	Pacific Data Resources (Asia) Inc. Project Proposal (Proposed)
	C.1.2	Micro Image International Corporation Project Proposal (Alternative 1)
	C.1.3	Paperless Trail, Inc. Project Proposal (Alternative 2)
	C.1.4	Summary of Costing (Pacific Data Resources (Asia) Inc.)
C.2		
	C.2.1	Existing Single Position Meter Test Bench
	C.2.2	Quotation and Picture of Proposed/Preferred Five Position Test Console with Accuracy of 0.1% for 1-phase and 3-phase
	C.2.3	Quotation and Picture of Alternative Four Position Test Console with Accuracy of 0.04% for 1-phase and 3-phase, WECO 8000 Meter Test Station (Radian Research, Inc. OPT 4 Model 2350 Four Position)
	C.2.4	Quotation and Picture of Alternative Six Position Meter Test Bench, WECO 8000 Meter Test Station (Radian Research, Inc. Model 4150 OPT-6)
	C.2.5	Cost Analysis: Proposal vs Alternatives
	C.2.6	Comparison between the Proposed 5-position MTE PRS 400.3PLUS Meter Test Bench and the 4-position WECO/Radian Research Model 2350 Meter Test Bench
C.3		

	C.3.1	Existing Site and Equipment Identification and Labeling System using Aluminum Pole Plates and Stickers
	C.3.2	Quotation of Proposed/Preferred Site and Equipment Identification and Labeling System using Paint Tagging by Data Pacific
	C.3.3	Quotation of Site and Equipment Identification and Labeling System using Paint Tagging by Micro Image
	C.3.4	Quotation of Site and Equipment Identification and Labeling System using Paint Tagging by Paperless Trail, Inc.
	C.3.5	Proposed SEIL
	C.4	
	C.4.1	(Bennettel - Wireless Engineering - Data Infrastructure) Project Proposal (Proposed)
	C.5	
	C.5.1	Agile Quotation
	C.5.2	Firewall Quotation
	C.5.3	Macro Quotation 1
	C.5.4	Macro Quotation 2
	C.5.5	Power Supply Quotation
	C.5.6	UPS Quotation
	C.5.7	Price Comparison
	C.5.8	Detailed Cost Estimates
	C.6	
	C.6.1	Proposal
	C.7	
	C.7.1	Existing Set-up
	C.7.2	Proposed Layout
	C.7.3	Project Cost Estimate

PRAYER

WHEREFORE, AEC respectfully prays that after due notice and hearing, the Honorable Commission issue a decision authorizing AEC to implement its CAPEX Program for RY 2017.

The Commission has set the *Application* for determination of compliance with the jurisdictional requirements, expository presentation, Pre-trial Conference, and presentation of evidence on **09 March 2017 (Thursday) at ten o'clock in the morning (10:00 A.M.), at AEC's principal office at Don Juan Nepomuceno corner Doña Teresa Street, Nepo Mart Complex, Angeles 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 interest is affected by the issues involved in the proceeding; and
- 3) A statement of the relief desired.

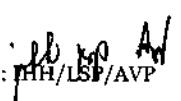
All other persons who may want their views known to the Commission with respect to the subject matter of the case may file their Opposition or Comment thereon at any stage of the proceeding before Applicant rests its case, subject to the requirements under Rule 9 of the 2006 Rules of Practice and Procedure. 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 they 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 Chairman **JOSE VICENTE B. SALAZAR**, and the Honorable Commissioners **ALFREDO J. NON**, **GLORIA VICTORIA C. YAP-TARUC**, **JOSEFINA PATRICIA A. MAGPALE-ASIRIT**, and **GERONIMO D. STA. ANA**, Energy Regulatory Commission, this 25th day of January 2017 in Pasig City.


ATTY. NATHAN J. MARASIGAN
Chief of Staff
Office of the Chairman and CEO


LS: JHH/LSP/AVP