

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.**

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**D O C K E T E D**  
Date: **FEB 06 2017**  
By: **W**

**ORDER**

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 (2<sup>nd</sup> RP) from October 1, 2011 to September 30, 2015. Thereafter, AEC was supposed to enter into its 3<sup>rd</sup> 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 3<sup>rd</sup> RP.
3. Ordinarily, AEC's Capital Expenditure (CAPEX) Program is incorporated as part of its Regulatory Reset Application. Considering that the Commission suspended the implementation of the RDWR pending its revisions, AEC was prevented from filing its Regulatory Reset Application, including its CAPEX Program, for the 3<sup>rd</sup> 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
	<b>Sub-Total</b>	<b>192,469,926.05</b>

**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 Reduce Distribution Transformer (DT) Technical Losses	39,196,564.19

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
	<b>Sub-Total</b>	<b>112,018,339.62</b>

**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

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
<b>Sub-Total</b>		<b>42,999,704.79</b>
<b>Grand Total</b>		<b>347,487,970.47</b>

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

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

Requirement				
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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	
<b>A.1</b>	
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
<b>A.2</b>	
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
<b>A.3</b>	
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
<b>A.4</b>	
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)

	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)
<b>A.5</b>		
	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>B.1</b>		
	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>B.2</b>		
	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>B.3</b>		
	B.3.1	Detailed Worksheet, Wire/Conductor Requirements for RY 2017
<b>B.4</b>		
	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 Kilowatthour Meters and Instrument Transformers for RY 2017
<b>B.5</b>		
	B.5.1	Single-phase Customers located at Northville and

		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>B.6</b>		
	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>B.7</b>		
	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
<b>C.1</b>		
	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.)
<b>C.2</b>		
	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
<b>C.3</b>		

	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
<b>C.4</b>		
	C.4.1	(Bennettel - Wireless Engineering - Data Infrastructure) Project Proposal (Proposed)
<b>C.5</b>		
	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
<b>C.6</b>		
	C.6.1	Proposal
<b>C.7</b>		
	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.

On 07 December 2016, the Commission issued an Order and a corresponding Notice of Public Hearing setting the instant *Application* for initial hearing on 11 January 2017.

On 06 January 2017, AEC filed a Motion to Reset Hearing (*Motion*) with the following prayer:

PREMISES CONSIDERED, applicant AEC respectfully moves that the hearing of the above-captioned case be reset to a later date, **preferably on March 9, 2017 (Thursday) at 10 a.m., at the AEC Main Office in Angeles City.**



AEC filed the *Motion* for lack of material time to comply with the publication requirements of the Commission as stated in the *Order* dated 07 December 2016.

Finding the said *Motion* to be meritorious, the same is hereby GRANTED. The hearing scheduled on 11 January 2017 is cancelled.

NOW, THEREFORE, the instant *Application* is hereby set anew 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.**

Accordingly, AEC is hereby directed to:

- 1) Cause the publication of the attached Notice of Public Hearing in two (2) newspapers of nationwide circulation in the Philippines at its own expense, twice (2x) within two (2) successive weeks, the dates of publication not being less than seven (7) days apart and the date of the last publication to be made not later than ten (10) days before the date of the scheduled initial hearing;
- 2) Furnish with copies of this Order and the attached Notice of Public Hearing the Offices of the Provincial Governor, the City Mayor, and the Local Government Unit (LGU) legislative bodies within the affected franchise area for the appropriate posting thereof on their respective bulletin boards;
- 3) Inform of the filing of the *Application*, its reasons therefor, and of the scheduled hearing thereon, the consumers within the affected franchise area, by any other means available and appropriate;
- 4) Furnish with copies of this Order and the attached Notice of Public Hearing, the Office of the Solicitor General (OSG), the Commission on Audit (COA), and the Committees on Energy of both Houses of Congress. They are hereby requested, if they so desire to send their duly authorized representatives at the scheduled hearing; and

- 5) Furnish with copies of the *Application* and its attachments all those making requests therefor, subject to reimbursement of reasonable photocopying costs.

On the date of the initial hearing, Applicant must submit to the Commission its written compliance with the aforementioned jurisdictional requirements attaching therewith, methodically arranged and duly marked the following:

- 1) The evidence of publication of the attached Notice of Public Hearing consisting of affidavits of the Editors or Business Managers of the newspapers where the said Notice of Public Hearing was published, and the complete issues of the said newspapers;
- 2) The evidence of actual posting of this Order and the attached Notice of Public Hearing consisting of certifications issued to that effect, signed by the aforementioned Governor, Mayor, and LGU legislative bodies or their duly authorized representatives, bearing the seals of their offices;
- 3) The evidence of the means employed by Applicant to inform of the filing of the *Application*, its reasons therefor, and of the scheduled hearing thereon, the consumers within the affected franchise area;
- 4) The evidence of receipt of copies of this Order and the attached Notice of Public Hearing by the Office of the Solicitor General (OSG), the Commission on Audit (COA), and the Committees on Energy of both Houses of Congress;
- 5) The evidence of receipt of copies of the *Application* and its attachments by all those making requests therefor, if any; and
- 6) Such other proofs of compliance with the requirements of the Commission.

Applicant and all interested parties are also required to submit, at least five (5) days before the date of initial hearing and Pre-Trial Conference, their respective Pre-Trial Briefs containing, among others:

- 1) A summary of admitted facts and proposed stipulation of facts;
- 2) The issues to be tried or resolved;
- 3) The documents or exhibits to be presented, stating the purposes and proposed markings therefor; and
- 4) The number and names of the witnesses, with their written testimonies in a Judicial Affidavit form attached to the Pre-trial Brief.

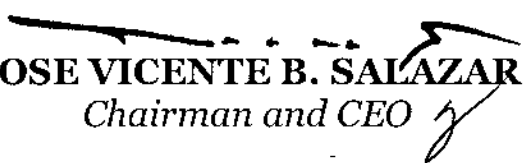
Failure of Applicant to comply with the above requirements within the prescribed period shall be a ground for cancellation of the scheduled hearing, and the resetting of which shall be six (6) months from the said date of cancellation.

AEC must also be prepared to make an expository presentation of the instant *Application*, aided by whatever communication medium that it may deem appropriate for the purpose, in order to put in plain words and explain, for the benefit of the consumers and other concerned parties, what the *Application* is all about and the reasons and justifications being cited in support thereof.

SO ORDERED.

Pasig City, 25 January 2017.

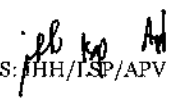
FOR AND BY AUTHORITY  
OF THE COMMISSION:

  
**JOSE VICENTE B. SALAZAR**  
Chairman and CEO

**ERC**  
Office of the Chairman



B-2017-001-OC-08315

  
LS: JHH/LSP/APV

**COPY FURNISHED:**

1. **Atty. Ranulfo M. Ocampo**  
*Counsel for Applicant AEC*  
7/F Strata 100 Bldg., F. Ortigas Jr. Road  
Ortigas Center, Pasig City
2. **Angeles Electric Corp. (AEC)**  
*Applicant*  
Don Juan Nepomuceno corner Doña Teresa Street, Nepo Mart Complex, Angeles City
3. **Office of the Mayor**  
City of Angeles, Pampanga
4. **Local Government Unit (LGU) legislative body**  
City of Angeles, Pampanga
5. **Office of the Governor**  
Pampanga
6. **Office of the LGU legislative body**  
Pampanga
7. **Office of the Solicitor General**  
134 Amorsolo Street, Legaspi Village, Makati City
8. **Commission on Audit**  
Commonwealth Avenue, Quezon City
9. **Senate Committee on Energy**  
GSIS Bldg. Roxas Blvd., Pasay City
10. **House Committee on Energy**  
Batasan Hills, Quezon City
11. **Philippine Chamber of Commerce and Industry (PCCI)**  
3<sup>rd</sup> Floor, Chamber and Industry Plaza (CIP), 1030 Campus Avenue corner Park Avenue,  
McKinley Town Center, Fort Bonifacio, Taguig City
12. **Regulatory Operations Service – Standards, Compliance and Monitoring Division**  
17<sup>th</sup> Floor, Pacific Center, San Miguel Avenue, Pasig City