


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

IN THE MATTER OF THE PETITION
FOR REVIEW/EVALUATION AND
APPROVAL OF THE CAPITAL
PROJECTS FOR YEAR 2008, WITH
PRAYER FOR THE ISSUANCE OF
PROVISIONAL AUTHORITY

ERC CASE NO. 2008-079 MC

ZAMBOANGA CITY ELECTRIC
COOPERATIVE, INC. (ZAMCELCO),
Applicant.

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DOCKETED
Date: APR 15 2009
By: 

DECISION

Before this Commission for resolution is the petition filed on August 5, 2008 by the Zamboanga City Electric Cooperative, Inc. (ZAMCELCO) for review/evaluation and approval of its capital projects for year 2008, with prayer for the issuance of provisional authority.

Having found said petition sufficient in form and in substance with the required fees having been paid, an Order and a Notice of Public Hearing, both dated August 11, 2008, were issued setting the case for initial hearing on September 16, 2008.

In the same Order, ZAMCELCO was directed to cause the publication of the Notice of Public Hearing, at its own expense, once (1x) in a newspaper of general circulation in the Philippines, at least ten (10) days before the scheduled initial hearing.



The Office of the Solicitor General (OSG), the Commission on Audit (COA) and the Committees on Energy of both Houses of Congress were furnished with copies of the Order and the Notice of Public Hearing and were requested to have their respective duly authorized representatives present at the initial hearing.

Likewise, the Office of the Mayor of the City of Zamboanga was furnished with copies of the Order and the Notice of Public Hearing for the appropriate posting thereof on its bulletin board.

On September 16, 2008, ZAMCELCO filed its "Pre-trial Brief" and "Compliance".

On October 15 to 17, 2008, the Commission conducted an ocular inspection on ZAMCELCO's assets subject of the instant petition.

During the September 16, 2008 initial hearing of this case, ZAMCELCO and Mr. Efren Wee, representative of Industrial Group of Zamboanga, Incorporated (IGZI) and Philippine International Development, Inc. (PHIDCO), appeared.

In the said hearing, ZAMCELCO adduced proofs of its compliance with the Commission's posting and publication of notice requirements which were duly marked as Exhibits "A" to "D", inclusive. Thereafter, it conducted an expository presentation of its petition. At the conclusion of the said expository presentation, the Commission directed Mr. Wee and all other interested parties to file their respective petitions for intervention or opposition on or before September 19,

2008. ZAMCELCO was, likewise, directed to submit various documents at the next scheduled hearing.

On various dates, IGZI, PHIDCO and the Employers' Confederation of the Philippines, Zambasulta Chapter (ECPZC), filed their respective "Manifestations" stating their intentions to participate in the instant petition. Relative thereto, on October 2, 2008, the Commission issued an Order directing them to submit their respective preliminary position papers/comments, within thirty (30) days from receipt of their copies of the petition.

At the continuation of the hearing on November 7, 2008, IGZI and ECPZC submitted jointly their "Preliminary Manifestation/Position Paper". Subsequently, ZAMCELCO presented the following witnesses: 1) Mr. Samuel S. Julio, its Ayala Area Manager and Head of Engineering Area 4; 2) Mr. Reinfredo Sevilla, its Head of Engineering Area 2; 3) Ms. Rosario T. David, its Finance Manager; and 4) Mr. Reinario R. Ramos, its General Manager, who all testified in support of the petition. Thereafter, IGZI and ECPZC cross-examined all the witnesses while the Commission propounded clarificatory questions. ZAMCELCO was then directed to submit various documents.

On November 28, 2008 and January 5, 2009, ZAMCELCO filed its "Formal Offer of Evidence" and "Compliance", respectively, which are hereby admitted for being relevant and material to the final resolution of the case.

On January 27, 2009, the Commission issued an Order directing IGZI, PHIDCO and ECPZC to submit their respective final position papers. In compliance therewith, they sent a letter dated February 24, 2009 informing the

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Commission that they would no longer submit their final position papers in the interest of time.

DISCUSSION

ZAMCELCO sought the Commission's approval of the following projects:

1. Construction of a Single Phase Line Extension

a. Project Description:

- Construction of a Single Phase Line Extension at Sitio Calibatu, Barangay Lamisahan, Zamboanga City

b. Rationale of the Project:

- To provide power for the ten (10) sitios located within the area of Western Mindanao Power Center (WMPC)

c. Project Cost: **PhP2,091,181.17**

2. Rehabilitation/Upgrading of Line

a. Project Description:

- Rehabilitation/Upgrading of Line at Canela Road to convert the existing primary line from two (2) phase primary line circuit to three (3) phase primary line circuit as well as replacement of assorted primary line conductor into one (1) specific conductor size

b. Rationale of the Project

- To reduce system loss, load balancing and system reliability

c. Project Cost: **PhP1,649,048.43**

3. Replacement of Overloaded Distribution Transformer

a. Project Description:

- Replacement of the overloaded distribution transformers in four (4) feeders under the Engineering Area 2

b. Rationale of the Project

- To reduce system loss, address load growth and system reliability

c. Project Cost: **PhP4,090,473.10**

4. Replacement of Rotten Poles

a. Project Description:

- Replacement of rotten poles with thirty-five (35) feet steel poles within the coverage area of Engineering Area 2

b. Rationale of the Project

- To avoid damages which may arise from the collapsed or broken post
- To minimize and/or avoid power interruption and recover revenue loss

c. Project Cost: **PhP2,649,952.73**

5. Re-routing of Backbone Three (3) Phase Primary Line

a. Project Description:

- Re-routing of three (3) phase primary line at Sta. Catalina Feeder along Don Toribio Street up to Talon-Talon Loop to reduce the length of primary line from 2,694.29 meters to 2,003.96 meters. The project will use #4/0 ACSR bare conductor at 13.2 kV and neutral line of # 1/0 ACSR bare conductor

b. Rationale of the Project

- To provide an efficient and reliable service of electricity, voltage improvement and system loss reduction

c. Project Cost: **PhP2,310,541.31**

6. Procurement of Kilowatthour (kWh) Meters

a. Project Description:

- The project includes replacement of kWh meters under the Meter on Pole Project (MOP). This covers the facilities from the customer service pole and/or service entrance to the coop electric post/pole with proper grounding and sealing. The

meters' specifications are socket type electronic kWhr meters,
1Φ CL 100, 2w, 240 volts, 60Hz, 15A

b. Rationale of the Project

- To prevent pilferage of electricity

c. Project Cost: **PhP32,985,000.00**

7. Procurement of Potential Transformers and Current Transformers

a. Project Description:

- Installation of instrument transformers (current transformers [CTs] and potential transformers [PTs]) for the primary metering of its industrial and large commercial customers who are currently metered at the secondary of sole-serve distribution transformers resulting to unaccounted energy loss due to *core loss* and *copper loss*

b. Rationale of the Project

- To convert all secondary metering outfits to primary metering to capture energy loss particularly on sole users of distribution transformer with installed capacity of 225 KVA and above and to reduce system loss

c. Project Cost: **PhP6,224,195.71**

8. Procurement of Distribution Transformers, Pole Type Conventional

a. Project Description:

- Procurement of twenty-five (25) units of 50 KVA, 25 units of 75 KVA and two (2) units of 100 KVA

b. Rationale of the Project

- To address load growth within the franchise area and relieve overloaded transformers

c. Project Cost: **PhP10,560,000.00**

9. Procurement of Distribution Poles

a. Project Description:

- Procurement of two hundred (200) pieces of thirty-five (35) footer steel poles and 200 pieces of 35 footer concrete poles

b. Rationale of the Project

- To replace existing dilapidated/rotten electric poles that pose danger to lives and property

c. Project Cost: **PhP5,087,208.00**

10. Emergency Rewinding of Busted Power Transformer

a. Project Description:

- Repair (*rewinding*) of the 5 MVA power transformer with Serial # - 840006, New Korea brand at Sangali Substation. Primary input voltage is 69 kV connected in DELTA, secondary output voltage of 13200 volts/7620 volt WYE grounded, ONAN, 60 HZ, with no load tap changer (NLTC)

b. Rationale of the Project

- To provide an efficient and reliable service of electricity, voltage improvement and system loss reduction

c. Project Cost: **PhP1,700,000.00**

11. Procurement of Handheld Computers for Meter Reading

a. Project Description:

- Acquisition of PSION Handheld Computer 2MB RAM Serial Bottom Type with Extech Thermal Printer 3000T THS Series with complete accessories, cables, battery, adaptor, etc.

b. Rationale of the Project

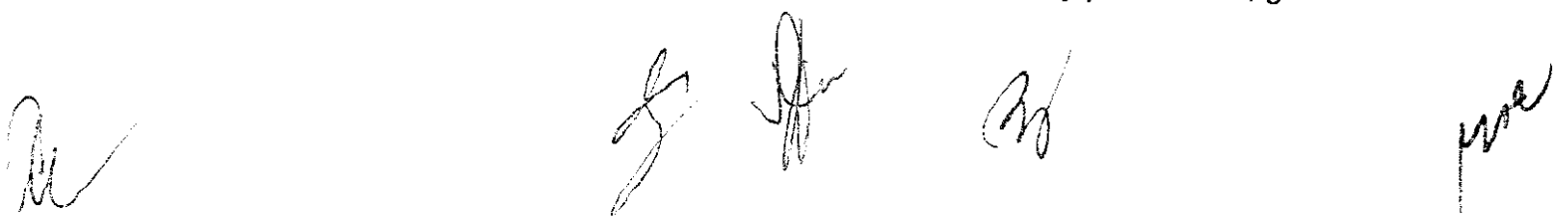
- To provide efficient service

c. Project Cost: **PhP3,956,000.00**

12. Installation of Integrated Accounting System and Wireless Communication

a. Project Description:

- Installation of a more advanced, powerful, flexible, simplified windows-based programming language. The system includes the following modules: Membership Management and Information System, Meter Reading, Billing and Collection (MRBC), Accounting System, Inventory Management, Payroll, Human Resource Information System (HRIS) and System Manager which will provide the necessary procedures, general



settings, password management and database utilities needed to run other modules of the system

b. Rationale of the Project

- To provide accurate financial reporting, improve collection efficiency and reduce manpower, thereby, reducing cost
- To eliminate the need to install, maintain, and sometimes re-pull or relocate costly network cabling, or utilize expensive leased line services

c. Project Cost: **PhP5,497,500.00**

13. Procurement of Vacuum Circuit Breaker

a. Project Description:

- Installation of efficient protective devices for the 13.2 kV loadside of the 20MVA power transformer at Putik substation. The complete specification of the two (2) sets vacuum circuit breaker (VCB) are 15.5 kV, 1200 A, 25 kV with control power. It also includes 2 sets of SIPROTEC SJ531 micro-processor relay that are needed to replace the existing ones which have already shown signs of inefficiency in protecting the low voltage side of the 20MVA Hyosung Brand power transformer

b. Rationale of the Project

- To provide system reliability

c. Project Cost: **PhP2,525,000.00**

14. Procurement of PWS2.3 Plus MTE Testing Equipment

a. Project Description:

- Acquisition of a polyphase meter testing equipment equipped with a Calsoft software which is capable of measuring the active, reactive and apparent power for single phase, three phase and 3 or 4 wire circuits

b. Rationale of the Project

- To eliminate downtime while verifying the actual potential and current ratio of instrument transformers currently installed in the field

c. Project Cost: **PhP2,500,000.00**

15. Procurement of Maintenance/Utility Trucks

a. Project Description:

- Acquisition of three (3) maintenance utility trucks to meet the mobility requirement of the cooperative

b. Rationale of the Project

- To be used in the delivery of materials in the rehabilitation and extension of lines

c. Project Cost:

PhP2,160,100.00

16. Procurement of Service Vehicles

a. Project Description:

- Acquisition of three (3) units military type jeep and three (3) units service vehicles all equipped with 4x4 wheel drive function

b. Rationale of the Project

- The three (3) units military type owner jeep are necessary for operation and maintenance purposes and the three (3) service vehicles will be utilized to ferry ZAMCELCO personnel to the remote barangays within the franchise area

c. Project Cost:

PhP1,985,600.00

17. Construction of Multi-Purpose Building

a. Project Description:

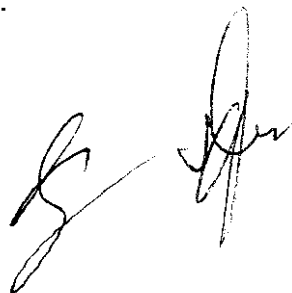
- Construction of a multi-purpose building inside the compound of ZAMCELCO in Barangay Putik, Zamboanga City

b. Rationale of the Project

- To cater to ZAMCELCO's activities such as its: 1) annual membership assembly; 2) weekly gatherings; and 3) physical fitness programs of employees and other activities that require a bigger covered place. This will also provide venue for activities of its member-consumers such as sports, districts meetings and even for the general public for a minimal fee as added revenue for the cooperative in the recovery of investment

c. Project Cost:

PhP15,721,693.20



PROJECT	AMOUNT (in PhP)
Construction of a Single Phase Line Extension	2,091,181.17
Rehabilitation/Upgrading of Line	1,649,048.43
Replacement of Overloaded Distribution Transformer	4,090,473.10
Replacement of Rotten Poles	2,649,952.73
Re-routing of Backbone Three (3) Phase Primary Line	2,310,541.31
Procurement of Kilowatthour (kWh) Meters	32,985,000.00
Procurement of Potential Transformers and Current Transformers	6,224,195.71
Procurement of Distribution Transformers, Pole Type Conventional	10,560,000.00
Procurement of Distribution Poles	5,087,208.00
Emergency Rewinding of Busted Power Transformer	1,700,000.00
Procurement of Handheld Computers for Meter Reading	3,956,000.00
Installation of Integrated Accounting System and Wireless Communication	5,497,500.00
Procurement of Vacuum Circuit Breaker	2,525,000.00
Procurement of PWS2.3 Plus MTE Testing Equipment	2,500,000.00
Procurement of Maintenance/Utility Trucks	2,160,100.00
Procurement of Service Vehicles	1,985,600.00
Construction of Multi-Purpose Building	15,721,693.20
TOTAL PROJECT COST	103,693,493.65

TECHNICAL ANALYSIS

1. Replacement of Overloaded Distribution Transformers

Shown below is the load forecast of the San Jose Gusu Substation for each of the following feeders as provided using the Cubic Trending Method:

	San Jose Feeder (kwh)	Calarian Feeder (kwh)	Guardia Nacional Feeder (kwh)	Baliwasan Feeder (kwh)
2007	2,596,554.5	2,255,679.5	922,202.0	366,196.7
2008	2,626,906.8	2,423,183.6	969,103.7	373,085.4
2009	2,698,806.2	2,657,894.3	1,039,132.1	389,403.6
2010	2,831,433.5	2,973,937.5	1,138,003.9	419,504.6
2011	3,043,969.4	3,385,438.6	1,271,435.8	467,741.5
2012	3,355,594.7	3,906,523.2	1,445,144.9	538,467.6

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On the other hand, shown below is the technical analysis for the replacement of overloaded distribution transformers at a condition of 80% allowable maximum loading:

SAN JOSE GUSU SUBSTATION	Annual KWHR Loss (Existing)	Annual KWHR Loss (New)	KWHR Savings	Annual Savings @PhP4.40/kwhr.
San Jose Feeder	40,241.50	34,733.70	5,507.80	24,234.32
Calarian Feeder	28,773.00	26,056.55	2,716.45	11,952.38
Guardia Nacional Feeder	14,355.00	10,656.23	3,698.77	16,274.59
Baliwasan Feeder	5,031.00	4,585.16	445.84	1961.70
TOTAL	88,400.50	76,031.64	12,368.86	54,419.20

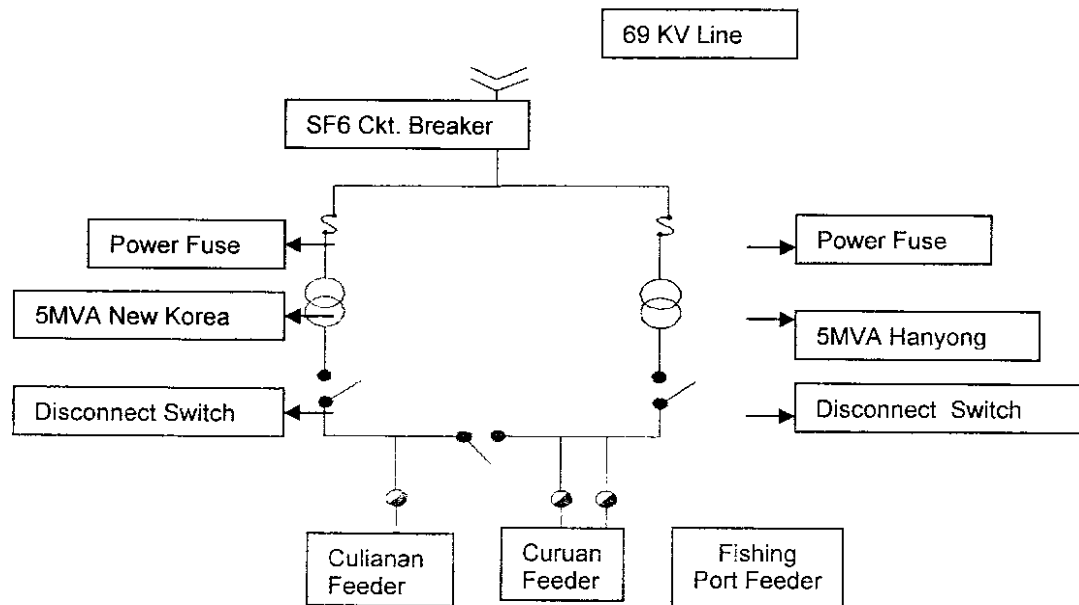
With the existing set-up, the annual energy loss is 88,400.50 kWh as compared to the replaced overloaded distribution transformers with an annual energy loss of 76,031.64 kWh or a difference of 12,368.86 kWh. If such difference is converted at a rate of PhP4.40 per kWh, the annual savings will amount to PhP54,419.20. This will give ZAMCELCO a benefit to cost ratio of 1.93 with an internal rate of return of 18% and a payback period of 5.41 years.

2. Rewinding of the 5 MVA Power Transformer at Sangali Substation

Last March 2008, ZAMCELCO conducted different tests on the unit. The insulation test failed indicating a 350 mega-ohms insulation resistance which was below the required value of 1000 mega-ohms. The table below shows the annual average historical data involving the loading condition of the 5MVA New Korea brand power transformer:

New Korea Brand	Energy (Ave. KWHR)	Demand Ave. KW	Loading In Percent
2003	1,411,388	3,555	73 %
2004	1,456,056	3,704	76 %
2005	1,427,681	3,505	72 %
2006	1,394,043	3,462	71 %
2007	1,395,708	3,415	70 %

Further, the transformer secondary winding was found to contain a burnt secondary winding, which makes it unserviceable. With the repair of said unit, installed capacity will be reverted to 10 MVA as illustrated below:



3. Re-routing of Backbone Three (3) Phase Primary Line at Sta. Catalina Feeder

The proposed re-routing of three (3) phase primary line at Sta. Catalina feeder along Don Toribio St. up to Talon-Talon Loop will reduce the length of primary line from 2,694.29 meters to 2,003.96 meters, shortening the distance by 690.33 meters. Said re-routing will result to improved primary voltage and reduced system loss.

Based on the simulation conducted by ZAMCELCO on January 2008, the existing technical loss of the feeder was 948.21 kW per month as compared to the proposed re-routing of about 518.23 kW per month. Technical loss was from 19.25% to 12.22% or a reduction of 7.03% equivalent to 429.98 kW per month

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reduction. This will give ZAMCELCO 10,319.56 kWh monthly savings. When multiplied at a rate of PhP4.40/kWh, monthly savings will be PhP4,406.07 or an annual recovered energy savings of PhP544,872.80. Return on Investment will be 23.58% and the payback period will be 4.24 years.

COST ANALYSIS

ZAMCELCO manifested that the funding for all the projects was sourced from its Reinvestment, General Funds and the Department of Energy (DOE). The Phase 1 construction of the Multi-Purpose Building was funded thru the Countrywide Development Fund (CDF) of APEC Partylist amounting to **One Million Five Hundred Thousand Pesos (PhP1,500,000.00)** under Special Allotment Release Order (SARO) No. ROIX-2004-02 dated March 2, 2004.

A perusal of the evidence presented herein showed that the completion of the aforesaid projects redounded to the benefit of ZAMCELCO's consumers in terms of continuous, reliable and efficient power supply as mandated by Republic Act No. 9136, or the *Electric Power Industry Reform Act of 2001* (Section 2. Declaration of Policy – (b) “to ensure the quality, reliability, security and affordability of the supply of electric power”).

WHEREFORE, the foregoing premises considered, the petition for review/evaluation and approval of capital projects for year 2008, with prayer for the issuance of provisional authority, filed by Zamboanga City Electric Cooperative, Inc. (ZAMCELCO) is hereby **APPROVED**.

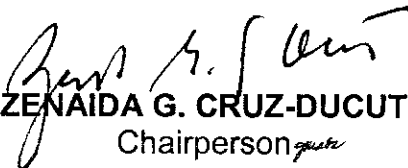
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Relative thereto, ZAMCELCO is hereby directed to pay a permit fee in the amount of **Seven Hundred Seventy-Seven Thousand Seven Hundred One Pesos and Twenty Centavos (PhP777,701.20)**, within fifteen (15) days from receipt hereof, computed as follows:

$$\frac{\text{PhP}103,693,493.65}{\text{PhP}100.00} \times \text{PhP}0.75 = \text{PhP}777,701.20$$

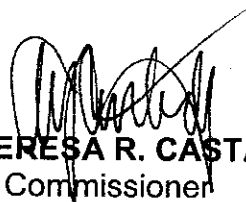
SO ORDERED.

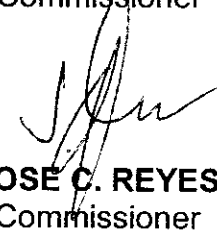
Pasig City, March 16, 2009.


ZENAIDA G. CRUZ-DUCUT
Chairperson


RAUF A. TAN
Commissioner


ALEJANDRO Z. BARIN
Commissioner


MARIA TERESA R. CASTAÑEDA
Commissioner


JOSE C. REYES
Commissioner

Copy Furnished:

1. **Atty. Antonio Guiroy Angeles**
In-House Counsel for Applicant
Zamboanga City Electric Cooperative, Inc. (ZAMCELCO)
MCLL Highway, Putik, Zamboanga City
2. **Zamboanga City Electric Cooperative, Inc. (ZAMCELCO)**
MCLL Highway, Putik, Zamboanga City
3. **Office of the Solicitor General**
134 Amorsolo Street, Legaspi Village
Makati City, Metro Manila
4. **Commission on Audit**
Commonwealth Avenue
Quezon City, Metro Manila
5. **Senate Committee on Energy**
GSIS Bldg., Roxas Blvd., Pasay City
Metro Manila
6. **House Committee on Energy**
Batasan Hills, Quezon City, Metro Manila
7. **The City Mayor**
Zamboanga City
8. **Engr. Efren Wee**
Philippine International Development, Inc. (PHIDCO)
Baliwasan Seaside,
Zamboanga City
9. **Mr. Roberto Valerio**
Industrial Group of Zamboanga, Incorporated (IGZI)
Road 305, 3/F, BG Investment & Development Corporation Building
Nuñez St., Zamboanga City
10. **Mr. Carl Andrew Rubio**
Employers' Confederation of the Philippines, Zambasulta Chapter
(ECOP-ZAMBASULTA)
c/o Lantaka Hotel By the Sea
Valderroza Street, Zamboanga City 7000