

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



IN THE MATTER OF THE
APPLICATION FOR THE APPROVAL
OF THE CAPITAL PROJECTS OF
MISAMIS ORIENTAL I RURAL
ELECTRIC SERVICE COOPERATIVE,
INC. (MORESCO I) FOR THE YEAR
2009, WITH PRAYER FOR
PROVISIONAL AUTHORITY

ERC CASE NO. 2008-114 MC

MISAMIS ORIENTAL I RURAL
ELECTRIC SERVICE COOPERATIVE,
INC. (MORESCO I),

Applicant.

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DOCKETED
Date: MAY 19 2009
By: [Signature]

DECISION

Before this Commission for resolution is the application filed on December 16, 2008 by Misamis Oriental I Rural Electric Service Cooperative, Inc. (MORESCO I) for the approval of its capital projects for the year 2009, with prayer for provisional authority.

Having found said application sufficient in form and in substance with the required fees having been paid, an Order and a Notice of Public Hearing, both dated January 12, 2009, were issued setting the case for initial hearing on February 10, 2009.

In the same Order, MORESCO I was directed to cause the publication of the Notice of Public Hearing, at its own expense, once (1x) in a newspaper of

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general circulation in the Philippines, not later than ten (10) days before the scheduled date of initial hearing. It was also directed to inform the consumers, within its franchise area, by any other means available and appropriate, of the filing of the instant application, its reasons therefor, and of the scheduled hearing thereon.

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 Offices of the Mayors of the Cities and Municipalities within MORESCO I's franchise area were furnished copies of the Order and Notice of Public Hearing for the appropriate posting thereof on their respective bulletin boards.

On February 4 to 6, 2009, the Commission conducted an ocular inspection on MORESCO I's assets subject of the instant application.

On February 9, 2009, MORESCO I filed its "*Manifestation of Compliance of Jurisdictional Requirements*" and "*Pre-trial Brief*".


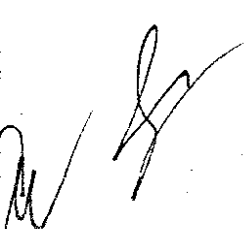
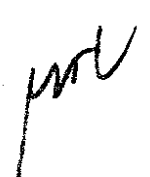

During the February 10, 2009 initial hearing of this case, only MORESCO I appeared. No intervenor/oppositor appeared nor was there any intervention/opposition registered.

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At the said hearing, MORESCO I presented its proofs of compliance with the Commission's posting and publication of notice requirements which were duly marked as Exhibits "A" to "J", inclusive. Thereafter, it conducted an expository presentation of its application.

At the termination of the expository presentation, MORESCO I presented the following witnesses: 1) Engr. Julie B. Real, its General Manager, who testified, among others, on the inadequacy of MORESCO I's existing capital assets in view of the expected increase in load requirements within the coming five (5) years and on the technical and financial viability of the projects; 2) Engr. Juvel Ubay-Ubay, its Engineering Manager, who testified, among others, on the technical study, analysis and evaluation of the capital projects, the justifications of the capital projects sought to be approved, the alternative to the capital projects he proposed to be considered, the consistency of the projects to the cooperative's Long Term Development Plan and on his attestation that the equipment and material specifications of the projects comply with the quality standards set by the National Electrification Administration (NEA) Guidelines; and 3) Mr. Eugene Velasco, its Finance Manager, who testified, among others, on the financial aspects of the project, the projects' impact on its rates and that the projects will be financed through loans from the National Electrification Administration (NEA).

In the course of their direct examinations, various documents were presented and duly marked as exhibits. The direct examinations having been terminated, the Commission propounded clarificatory questions on the said witnesses and directed MORESCO I to submit various documents.

On February 25, 2009, MORESCO I filed its "*Formal Offer of Evidence*" which is hereby admitted for being relevant and material to the final resolution of the case.

On March 10, 2009, MORESCO I filed its "*Manifestation*".

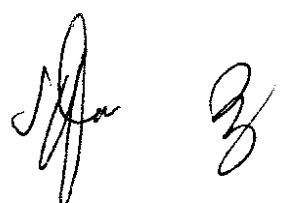
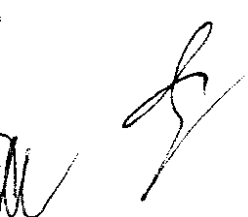
DISCUSSION

MORESCO I sought the Commission's approval of the following projects:

System Development Projects

1. **Construction of a 10 MVA Substation and Sub-transmission and Primary Distribution Lines**
 - a. Project Description:
 - Construction of a new 10 MVA substation at Canituan, Cagayan de Oro City including a 2.66 kilometer (km.) 69 kV and 13.2 kV double circuit line to Canituan and another 3.73 km. single circuit three phase line to Barra, Opol
 - b. Rationale of the Project:
 - To address load growth in the Municipality of Opol and its barangays
 - c. Project Cost: PhP50,002,165.39

2. **Construction of a 10 MVA Substation and Sub-transmission and Primary Distribution Lines**



a. Project Description:

- Construction of a new 10 MVA substation at Quibonbon, City of El Salvador including a 0.2 km. 69 kV line and another 1.8 km. 13.2 kV single circuit line and 0.8 km. of 13.2 kV double circuit line to Lumbo

b. Rationale of the Project:

- To address load growth in the City of El Salvador

c. Project Cost: **PhP35,661,759.81**

3. Construction of a 10 MVA Substation and Sub-transmission and Primary Distribution Lines

a. Project Description:

- Construction of a new 10 MVA substation at Moog, Laguindingan including a 6.8 kilometer 69 kV and 13.2 kV double circuit line to the International Airport

b. Rationale of the Project:

- To address the power requirements of the new International Airport at Laguindingan

c. Project Cost: **PhP53,134,916.71**

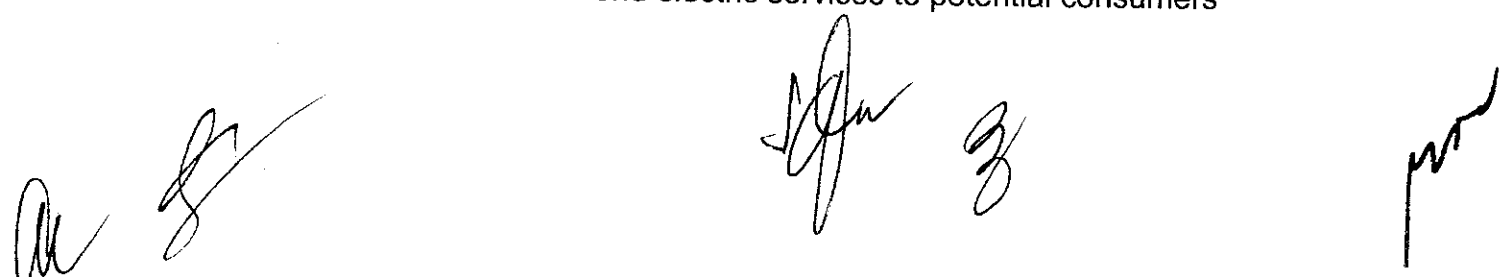
4. Acquisition of Electronic Kilowatt-hour (kWhr) Meters for Use in the Years 2009, 2010 and 2011

a. Project Description:

- Acquisition of 21,654 units (Socket Type [9,337 units], Bottom Type [12,317 units]) of electronic kilowatt-hour meters

b. Rationale of the Project:

- To extend electric services to potential consumers



c. Project Cost: **PhP58,924,320.27**

Capital Projects in Compliance with the Philippine Grid Code (PGC)

5. Acquisition of Microprocessor Relay

a. Project Description:

- Acquisition of six (6) units of microprocessor relay

b. Rationale of the Project:

- To locate power fault and monitor power quality

c. Project Cost: **PhP950,000**

6. Acquisition of Power Monitoring Instruments (Potential Transformers)

a. Project Description:

- Acquisition of nine (9) units of 72.5 kV Potential Transformers and nine (9) units of 15 kV Potential Transformers

b. Rationale of the Project:

- To maximize the capability of relay in monitoring the power quality and energy consumption

c. Project Cost: **PhP3,005,000**

7. Acquisition of Switch Capacitors

a. Project Description:

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- Acquisition of seven (7) units of kilovoltampere reactive (kVAR) switch capacitors

b. Rationale of the Project:

- To limit excessive voltage during light load

c. Project Cost: **PhP2,798,952.00**

8. Acquisition of Voltage Regulator

a. Project Description:

- Acquisition of nine (9) units of three (3) phase 250 kilovolt ampere (kVA) Voltage Regulator

b. Rationale of the Project:

- To maintain the required standard voltage level set by the Philippine Distribution Code (PDC)

c. Project Cost: **PhP6,300,000**

Capital Projects in Compliance with the PDC

9. Acquisition of Circuit Recloser

a. Project Description:

- Acquisition of three (3) phase 15 kilovolt (kV) 600 ampere circuit recloser

b. Rationale of the Project:

- To minimize the area coverage interruptions and improve reliability

c. Project Cost: **PhP9,980,000**

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10. Acquisition of Power Quality Monitoring Instruments

a. Project Description:

- Acquisition of three (3) phase electronic current and voltage source including one (1) unit of meter and meter instrument test system

b. Rationale of the Project:

- To monitor power quality at any node of the system

c. Project Cost:

PhP4,589,579

11. Installation of Equipment Identification

a. Project Description:

- Installation of equipment identification for poles, switches, transformers, breakers and reclosers

b. Rationale of the Project:

- To easily identify system equipment

c. Project Cost:

PhP1,637,720

12. Acquisition of Engineering Software

a. Project Description:

- Acquisition of Automated Mapping/Facilities Management Gas Insulated Switchyard (AM/FM GIS) software

b. Rationale of the Project:

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- To generate automatic mapping of system coverage and assess asset inventory and exportation of map data to load flow analysis software

c. Project Cost: **PhP1,535,000**

13. Acquisition of 20 MVA Power Transformer

a. Project Description:

- Acquisition of 20 MVA power transformer

b. Rationale of the Project:

- To replace the defective 10 MVA power transformer of TRANSCO inside Carmen Substation

c. Project Cost: **PhP30,000,000**

Thus, the total project cost is as follows:

DESCRIPTION	COST(PhP)
Construction of a 10 MVA Substation, and Sub-transmission and Primary Distribution Lines	50,002,165.39
Construction of a 10 MVA Substation, and Sub-transmission and Primary Distribution Lines	35,661,759.81
Construction of a 10 MVA Substation, and Sub-transmission and Primary Distribution Lines	53,134,916.71
Acquisition of Electronic Kilowatt-hour (kWhr) Meters For Use in the Years 2009, 2010, and 2011	58,924,320.27
Acquisition of Microprocessor Relay	950,000.00
Acquisition of Power Monitoring Instruments (Potential Transformers)	3,005,000.00
Acquisition of Switch Capacitors	2,798,952.00
Acquisition of Voltage Regulator	6,300,000.00
Acquisition of Circuit Recloser	9,980,000.00
Acquisition of Power Quality Monitoring Instruments	4,589,579.00
Installation of Equipment Identification	1,637,720.00
Acquisition of Engineering Software	1,535,000.00
Acquisition of 20 MVA Power Transformer	30,000,000.00
TOTAL	PhP258,519,413.19

COST ANALYSIS

MORESCO I filed its 2009 capital expenditure (CAPEX) project application with a required total capital investment of PhP258,519,413.19. However, during the ocular inspection, it was found that the acquisition of 20 MVA power transformer worth PhP30 Million is not necessary because the National Transmission Corporation (TRANSCO) had already installed a new 10 MVA power transformer in lieu of the old and dilapidated transformer. Hence, the said amount will be deducted from the total project cost which will result to an adjusted total project cost of PhP228,519,413.19.

The capital investment for the projects will be funded through loans from NEA. MORESCO I proposed a financing loan term with NEA for a ten (10) year period with a 9% interest rate. The application for authority to secure the loan is not yet filed with the Commission. Below is the breakdown of the adjusted total project cost:

Capital Project	Amount (in PhP)
System Capital Projects	
1. Construction of 10 MVA Canituan Substation	50,002,165.39
2. Construction of 10 MVA Quibonbon Substation	35,661,759.81
3. Construction of 10 MVA Moog Substation	53,134,916.71
4. Acquisition of Electronic kWh Meters	58,924,320.27
For 2009 (PhP19,618,605.41)	
For 2010 (PhP19,644,299.35)	
For 2011 (PhP19,661,415.53)	
Capital Projects for PGC Compliance	
5. Acquisition of Microprocessor Relay	950,000.00
6. Acquisition of Power Monitoring Instruments Potential Transformer	3,005,000.00
7. Acquisition of Switch Capacitor	2,798,952.00

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8. Acquisition of Voltage Regulator	6,300,000.00
Capital Projects for PDC Compliance	
9. Acquisition of Circuit Recloser	9,980,000.00
10. Acquisition of Power Quality Monitoring Instruments	4,589,579.00
11. Installation of Equipment Identification	1,637,720.00
12. Acquisition of AM/FM GIS software	1,535,000.00
Subtransmission Capital Project	
13. Acquisition of 20 MVA Power Transformer	30,000,000.00
TOTAL PROJECT COST	258,519,413.19
TOTAL (ADJUSTED)	PhP 228,519,413.19

NOTE: The total adjusted project cost = Total Project Cost – PhP30,000,000.00.

Based on the Commission's *Decision* in ERC Case No. 2008-024 RC, MORESCO I was granted an annual Reinvestment Fund of PhP27,157,562.00. Said fund is not enough to finance the annual amortization of the projects because the simulated proposed annual amortization is computed to be at PhP34,897,088.13 based on a ten (10) year term of payment with a nine percent (9%) interest rate. However, the insufficient fund could be addressed by an increase in revenue because of the load growth demand upon the commissioning of its substation projects and reduction of interruptions with the acquisition of circuit recloser.

TECHNICAL ANALYSIS

Construction of 10 MVA Canituan Substation

The forecasted demand (shown in Table No. 1) of the existing 10 MVA Opol Substation serving the Municipalities of Opol, Misamis Oriental and Talakag, Bukidnon, including a portion of Cagayan de Oro City, was simulated to reach 76% loading at the end of its 10th year planning horizon in 2018. As provided in the new CAPEX Guidelines, substation power transformer should be loaded at least around 70% at the end of its 10th year planning horizon. The

existing constraint of Opol Substation to supply power in the adjacent feeder "D" during maintenance and emergency situations can now be addressed by the new Canituan Substation. Below is Opol Substation's Demand Forecast:

Table No. 1 – Opol Substation Demand Forecast

Year	Demand	Loading
2009	6,271	63%
2010	6,423	64%
2011	6,574	66%
2012	6,725	67%
2013	6,877	69%
2014	7,028	70%
2015	7,180	72%
2016	7,331	73%
2017	7,482	75%
2018	7,634	76%

Construction of 10 MVA El Salvador City Substation

The forecasted demand (shown in Table No. 2) of the existing 10 MVA Lumbo substation serving Lumbo and adjacent areas, including the newly created City of El Salvador, was simulated to reach 99% loading on its 6th year planning horizon in 2014. As provided in the new CAPEX Guidelines, substation power transformer should be loaded at least around 70% at the end of its 10th year planning horizon. The 99% loading in 2014 will require the construction of a new substation. To cater to the load growth within its franchise area, including the City of El Salvador, MORESCO I has considered various options to construct a new substation. The new substation will unload the Lumbo Substation and provide ideal substation loading for the next 10-year planning horizon. Below is Lumbo Substation's Demand Forecast:



Table No. 2 – Lumbo Substation Demand Forecast

Year	Demand	Loading
2009	5,046	50%
2010	5,741	57%
2011	6,579	66%
2012	7,558	76%
2013	8,679	87%
2014	9,943	99%
2015	11,348	-
2016	12,895	-
2017	14,585	-
2018	16,416	-

Construction of 10 MVA Moog Substation

The forecasted demand (shown in Table No. 3) of the existing 10 MVA Lumbo Substation serving Lumbo and Laguindingan areas was simulated to reach 99% loading on its 6th year planning horizon in 2014. As provided in the new CAPEX Guidelines, substation power transformer should be loaded at least around 70% at the end of its 10th year planning horizon. The 99% loading in 2014 will require the construction of a new substation. To cater to the load growth within its franchise area, including the new Laguindingan International Airport set to be operational in March 2010, MORESCO I has considered various options to construct a new substation in Moog, Laguindingan. The new substation will unload the Lumbo Substation and provide ideal substation loading for the next 10-year planning horizon. Below is Moog Substation's Demand Forecast:

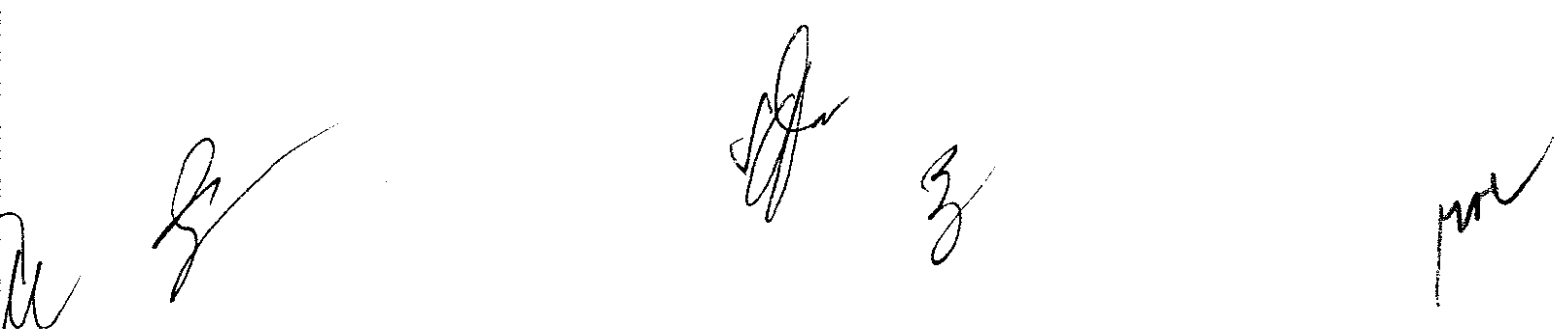


Table No. 3 – Moog Substation Demand Forecast

Year	Demand	Loading
2009	5,046	50%
2010	5,741	57%
2011	6,579	66%
2012	7,558	76%
2013	8,679	87%
2014	9,943	99%
2015	11,348	-
2016	12,895	-
2017	14,585	-
2018	16,416	-

Acquisition of kilowatt-hour (kWhr) Meters

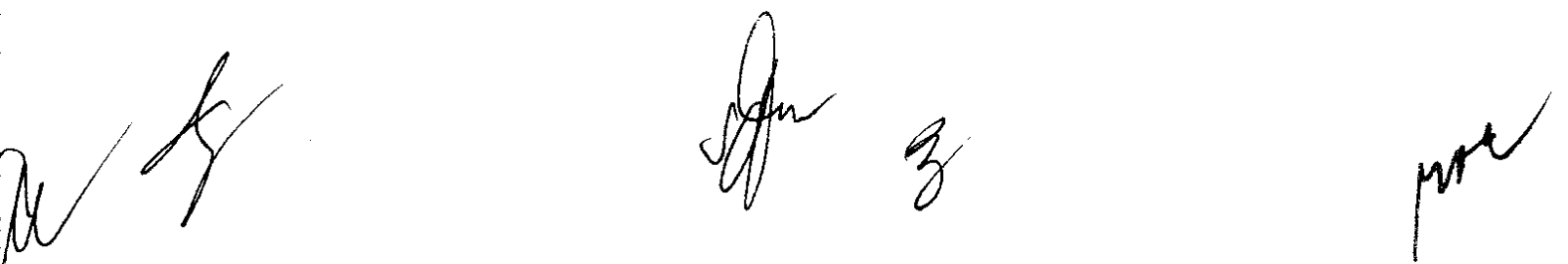
New service connections and replacement of defective meters will require the acquisition of new kWhr meters (electronic socket and bottom type) and service drops and accessories. Moreover, the increasing number of member consumers needs to be addressed.

PGC and PDC Compliance Projects

These projects are in compliance with the PGC and PDC to promote safe, reliable and efficient distribution system.

Acquisition of 20 MVA Power Transformer

The acquisition of the new 20 MVA power transformer will address frequent power interruptions and outages in Cagayan de Oro City and in the Talakag areas. The area is presently being served by TRANSCO's 40 year old

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10 MVA power transformer which, in 2008, has showed signs of defectiveness and has malfunctioned several times resulting to unreliable service. Consequently, MORESCO I's large customers have opted to temporarily source their power from Cagayan Electric Light and Power Company (CEPALCO).

The Commission, together with MORESCO I's representative, conducted an ocular inspection of TRANSCO's Carmen Substation and found that it was recently replaced by a new 10 MVA off-load power transformer. The installation of the new transformer was made a week before the February 4, 2009 ocular inspection. During the hearing of the case, MORESCO I withdrew its intention to acquire a new 20 MVA power transformer and manifested to modify its PGC compliance project, particularly, the installation of three (3) units out of the nine (9) units of automatic voltage regulator (15 kV, 250 kVA) acquired and uprated to 34.5 kV and 300 kVA per phase.

A perusal of the evidence presented herein showed that the completion and acquisition of the aforesaid projects will redound to the benefit of MORESCO I'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 application for approval of the capital projects of Misamis Oriental I Rural Electric Service Cooperative, Inc. (MORESCO I) for the year 2009, with prayer for provisional authority, filed by Misamis Oriental I Rural Electric Service Cooperative, Inc. (MORESCO I) is hereby **APPROVED**.



Relative thereto, MORESCO I is hereby directed to pay a permit fee in the amount of **One Million Seven Hundred Thirteen Thousand Eight Hundred Ninety-Six Pesos (PhP1,713,896.00)**, computed as follows:

$$\begin{array}{r} \text{PhP228,519,413.19} \\ \hline \text{PhP100.00} \end{array} \times \text{PhP0.75} = \text{PhP1,713,896.00}$$

Further, MORESCO I is hereby directed to conduct a competitive bidding in the procurement and implementation of its capital projects for 2009 and to file a separate application for authority to secure a loan from the NEA.

SO ORDERED.

Pasig City, May 4, 2009.


ZENAIDA G. CRUZ-DUCUT
Chairperson


RAUF A. TAN
Commissioner


ALEJANDRO Z. BARIN
Commissioner


MARIA TERESA A. R. CASTAÑEDA
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9017 El Salvador, Misamis Oriental
9. **Office of the Municipal Mayor**
9020 Gitagum, Misamis Oriental
10. **Office of the Municipal Mayor**
9022 Initao, Misamis Oriental
11. **Office of the Municipal Mayor**
9019 Laguindingan, Misamis Oriental
12. **Office of the Municipal Mayor**
9021 Libertad, Misamis Oriental
13. **Office of the Municipal Mayor**
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16. **Municipal Mayor**
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