

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

IN THE MATTER OF THE
APPLICATION FOR APPROVAL
OF CAPITAL EXPENDITURE
PROGRAM FOR THE YEAR 2010 to
2014 WITH PRAYER FOR
PROVISIONAL AUTHORITY

ERC CASE NO. 2010-133RC

QUEZON I ELECTRIC COOPERATIVE,
INC., (QUEZELCO I)

Applicant.

X ----- X

APPLICATION

Applicant, **QUEZON I ELECTRIC COOPERATIVE, INC., (QUEZELCO I** for brevity), through the undersigned counsel, and to this Honorable Commission, respectfully states that:

1. Applicant is an electric cooperative duly organized and existing under and by virtue of Presidential Decree No. 29 (PD 269) and other laws of the Republic of the Philippines, with principal office at Brgy. Poctol, Pitogo, Quezon, represented herein by its Officer-In-Charge, Hermes Z. Avillo, CPA, as per Board Resolution hereto attached as **Annex "A"**;

2. Herein applicant is the exclusive franchise holder issued by the National Electrification Commission (hereafter NEA), to operate electric light and power services in the Province of Quezon, namely: Agdangan, Alabat, Atimonan, Buenavista, Calauag, Catanauan, Gen. Luna, Guinayangan, Gumaca, Lopez, Macalelon, Mulanay, Padre

Burgos, Perez, Pitogo, Plaridel, Quezon, San Andres, San Francisco, San Narciso, Tagkawayan, Unisan and in the Province of Camarines Sur: Del Gallego ;

3. QUEZELCO I's proposed capital expenditure projects for 2010 to 2014, are summarized and enumerated below;

Summary of Proposed CAPEX Projects NETWORK PROJECTS			
DESCRIPTION		Commissioning Year	Total Costs
1	Sub-Trans Asset Acquisition	2010	157,971,384.23
2	New Connections (Meters)	2010	5,159,387.04
3	New Connections (Service Drop)	2010	2,672,419.59
4	Secondary Lines Expansion	2010	4,560,741.57
5	Distribution Transformer Expansion Requirement	2010	10,676,500.00
6	Conversion of 4651 meters main trunk from single-phase to three-phase and reconductoring of 8561 meters three-phase main trunk from #2/0 AWG - #336.4 MCM.	2011	13,556,246.11
7	Reconductoring of 40,724 meters main trunk from #2/0 - #4/0 AWG.	2011	35,403,477.00
8	Installation of 3-MVA Substation at Brgy. Lakdayan, San Narciso Quezon and transformer load management	2011	83,683,692.52
9	Installation of 3-MVA Substation at San Francisco Quezon and Conversion from single-phase to three-phase to 5.695 kms. and installation of 3-100 kVA AVR at p00459.	2011	143,281,564.07
10	New Connections (Meters)	2011	5,156,232.64
11	New Connections (Service Drop)	2011	2,670,915.62
12	Secondary Lines Expansion	2011	3,562,349.75
13	Distribution Transformer Expansion Requirement	2011	9,753,350.00
14	Installation of 13 units of 3-phase reclosers for feeder protection	2011	26,898,056.64
15	Construction of 100 kms. length 69 kV subtransmission lines	2011	75,116,475.00
16	Transfer part of the load of feeder 3 from Gumaca 10-MVA substation to the new Bacungan 5-MVA substation	2011	540,000.12
17	Transfer part of the load of feeder 9 from Pitogo 5-MVA substation to the new Catanauan 5-MVA substation	2011	540,000.12
18	Transfer all the load of feeder 13 from Mulanay Substation to the new Catanauan 5-MVA Substation	2011	540,000.12

19	Phase balancing and reconductoring of 46,568 meters main trunk from #2/0 - #4/0 AWG.	2012	40,483,968.10
20	New Connections (Meters)	2012	5,153,515.16
21	New Connections (Service Drop)	2012	2,669,619.97
22	Secondary Lines Expansion	2012	3,544,073.35
23	Distribution Transformer Expansion Requirement	2012	10,391,650.00
24	Construction of 100 kms. length 69 kV subtransmission lines	2012	75,116,475.00
25	Installation of 18 units of 3-phase reclosers for line protection	2012	37,243,463.04
26	Phase Balancing and Reconductoring of 38,281 meters main trunk from #2/0 AWG - #336.4 MCM	2013	37,331,001.02
27	Phase Balancing and Reconductoring of 40,680 meters main trunk from #2/0 - #336.4 MCM	2013	83,517,761.58
28	New Connections (Meters)	2013	5,151,149.92
29	New Connections (Service Drop)	2013	2,668,492.26
30	Secondary Lines Expansion	2013	3,528,241.25
31	Distribution Transformer Expansion Requirement	2013	11,242,600.00
32	Construction of 100 kms. length 69 kV subtransmission lines	2013	75,116,475.00
33	Installation of 13 units of feeder metering	2013	8,722,814.62
34	Installation of 6 units of 69 kV SF6 Circuit Breakers for substation protection	2013	27,060,480.00
35	Construction of 100 kms. length 69 kV subtransmission lines	2014	75,116,475.00
36	New Connections (Meters)	2014	5,149,072.77
37	New Connections (Service Drop)	2014	2,667,501.91
38	Secondary Lines Expansion	2014	3,572,710.76
39	Distribution Transformer Expansion Requirement	2014	11,932,150.00
40	Installation of 6 units switchgear for secondary protection	2014	18,144,000.00
41	2 units of 69 kV Air Break Switch	2014	9,020,160.00
42	2 Units of 13.2 Air Break Switch	2014	453,600.00
TOTAL NETWORK PROJECTS			1,136,740,242.88

4. Table 1 shows that at present, QUEZELCO I has six (6) substations, all located in the Province of Quezon;

Table 1 QUEZELCO I Substations and Feeders				
Substation	Capacity (MVA)	No. Of Feeders	No. Of Customers Served	Location
Atimonan	5	1	8,867	Brgy. Caridad, Atimonan
Gumaca	10	3	24,211	Brgy. Progreso, Gumaca
Hondagua	5	2	14,937	Brgy. Hondagua, Lopez
Tagkawayan	5	2	14,886	Brgy. Sta. Cecilia, Tagkawayan
Pitogo	5	2	18,864	Brgy. Poctol, Pitogo
Mulanay	5	3	24,183	Brgy. Sta. Rosa, Mulanay

5. **Figure 1** below shows that QUEZELCO I's energy sales and purchases have an increasing trend until 2004 and from 2005 until 2009 the data become erratic due to typhoons that hit the coverage area of the cooperative.

Figure 1. ANNUAL ENERGY SALES AND PURCHASE 2002-2009

YEAR	MWh Purchased	MWh Sold
2002	97,805	85,015
2003	109,648	93,338
2004	114,716	97,970
2005	113,047	87,870
2006	101,462	82,423
2007	106,900	85,918
2008	111,848	90,170
2009	118,798	97,757

6. **Table 2** shows the total length of overhead distribution line per type of configuration for the entire distribution system while the summary of annual system performance is presented in **Table 3**;

Table 2 OVERHEAD DISTRIBUTION LINE	
Configuration	Length (Kms)
69KV	N/A
Double Circuit 3Φ	5.365
Three Phase (3-Ph)	485.684
Vee Phase (V-Ph)	88.708
Single Phase (1-Ph)	1,435.573
Under Built Secondary (UB)	999.053
Open Secondary (OS)	834.643

Table 3. ANNUAL SYSTEM PERFORMANCE								
	2002	2003	2004	2005	2006	2007	2008	2009
System Loss (kWh)	11,937,580	15,631,051	16,416,088	18,499,679	18,722,098	20,692,170	21,409,143	20,790,097
System Loss (%)	12.13	14.23	14.18	16.35	15.49	19.31	19.13	17.52
Peak Load (MW)	24.86	25.21	27.40	25.16	23.84	24.13	23.86	25.62
Load Factor (%)	52.40	52.47	53.92	55.17	48.75	56.02	54.69	58.97
Power Factor (%)	95.69	93.59	93.23	94.50	96.44	97.47	97.49	96.48

7. Table 3 shows that QUEZELCO I's system power factor is steadily in the range of 96.47% to 97.49% in the last four (4 years) and the load factor improves from 52.40% in year 2002 to 58.97% in 2009;

QUEZELCO I's CAPITAL EXPENDITURE PLAN:

8. QUEZELCO I's Capital Expenditures (CAPEX) Plan for the period 2010-2014 is consists of two (2) volumes, as follows:

Volume I Financial Analysis Summary

Annex "A" Unbundled Power Rate (February 2010 Billing)

Annex “B”	Summary of Capital Projects (2009 Prices) 2010 – 2014
Annex “C”	Summary of Capital Projects (At Future Prices) 2010 – 2014
Annex “D”	CAPEX Projects List
Annex “E”	Summary of Amortization for Term Debts Outstanding as of 2009
Annex “F”	Projected Revenue from Members' Contribution for CAPEX 2010 – 2014
Annex “G”	Project list at future cost with recommended financier 2010 – 2014
Annex “H”	QUEZELCO-I 15 Year Financing Requirements
Annex “I”	Matrix of Conditions to Guide Decisions in Identifying a Lending Institution to Finance Capital Expenditure
Annex “J”	NEA Loan Amortization Schedule – 2010 borrowings
Annex “K”	NEA Loan Amortization Schedule – 2011 borrowings
Annex “L”	NEA Loan Amortization Schedule – 2012 borrowings
Annex “M”	NEA Loan Amortization Schedule – 2013 borrowings
Annex “N”	NEA Loan Amortization Schedule – 2014 borrowings
Annex “O”	TRANSCO schedule of lease payments
Annex “P”	UCPB Amortization – 2010 borrowing
Annex “Q”	UCPB Amortization – 2011 borrowing
Annex “R”	UCPB Amortization – 2012 borrowing
Annex “S”	UCPB Amortization – 2013 borrowing
Annex “T”	UCPB Amortization – 2014 borrowing
Annex “U”	DBP Amortization – 2010 borrowing
Annex “V”	Summary of Principal and Interest Amortization
Annex “W”	Roster of Projects and Annual Amortization 2010 – 2014
Annex “X”	Annual ERC CAPEX Approval Fees
Annex “Y”	Summary of Capital Projects for Rate Impact Computation for the Years 2010 - 2014
Annex “Z”	CAPEX Plan Cost Cash Flow per kWhr Rate

Annex "AA"	5 Year Cash Flow (Without Additional Requirement)
Annex "AB"	5 Year Cash Flow (With Additional Requirement)
Annex "AC"	Cumulative CAPEX Plan Cost Cash Flow at Nth Year
Annex "AD"	CAPEX Plan Cost Rate Impact Analysis
Annex "AE"	Projects Identified for Bank Financing – Susceptible to Cost Sensitivity
Annex "AF"	UCPB Amortization – 2010 borrowing (Sensitivity)
Annex "AG"	Summary of Principal and Interest Amortization – Sensitivity
Annex "AH"	Roster of Projects and Annual Amortization - With Sensitivity 2010 - 2014
Annex "AI"	Roster of Projects and Annual Amortization - With Sensitivity
Annex "AJ"	Post Sensitivity Cumulative CAPEX plan cost cash flow at nth year
Volume II	Distribution Development Plan
Annex "A"	Load flow summary
Annex "B"	Short-circuit Assessment Summary
Annex "C"	Reliability Assessment Summary
Annex "D"	Segregated Distribution Technical Loss
Annex "E"	Energy, Demand, Sales and Customer forecast
Annex "F"	Acquisition of NGCP sub-transmission assets
Annex "G"	Installation of Lopez 5-MVA substation
Annex "H"	Installation of Catanauan 5-MVA substation
Annex "I"	Installation of San Narciso 3-MVA substation
Annex "J"	Installation of San Francisco 3-MVA substation

9. The Justifications for the Proposed Capital Projects and the Summary of Capital Expenditures are shown in ERC-specified templates which are attached likewise attached herein respectively;

TECHNICAL ANALYSIS OF THE EXISTING DISTRIBUTION SYSTEM:

10. QUEZELCO I's technical performance in terms of capacity, power quality, efficiency, reliability and safety was evaluated. Scientific forecasting of loads, customers and demand was conducted and different forecasting models were developed. The forecasting models were tested for validity and those that did not pass were rejected;

11. A newly developed software, *PowerSolv Distribution System Application System Software Package (DSAS)* was utilized for the determination of optimum expansion patterns and alternatives;

12. **Capacity.** The substation projected loads were evaluated applying the 20-year (2010-2030) forecast demand for every substation and was compared to each rated capacity. The findings and analysis are discussed in detailed in Section 4 of the Distribution Development Plan of QUEZELCO I (Volume 2);

A. Low voltage, voltage unbalance or both. The load flow summary for the base year of all the 14 feeders is shown in **Table 4** below.

13. **Power Quality.** The distribution system is served by fourteen (14) feeders and Five (5) of which have power quality problems either from:

A. **Efficiency.** System loss segregation revealed that technical loss at 7.020% is the major component of system losses in 2009 as against non-technical loss at 5.620%, while actual administrative loss was only at 0.560%. QUEZELCO I's 2009 segregated system loss is given in **Table 5** below;

Table 4						
Power Quality Summary						
Voltage Profile 2009						
Feeder	Minimum Voltage/Hour (p.u)			Maximum % Unbalance/Hour		
	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C
Atimonan Feeder 1	0.950292	0.986763	0.951501	1.153807	0.7155	0.621037
Gumaca Feeder 1	0.978443	0.992108	0.98854	0.864731	0.706389	0.325937
Gumaca Feeder 2	0.863026	0.899247	0.925831	4.467948	2.870101	3.422286
Gumaca Feeder 3	0.999052	0.999702	0.999451	0.037341	0.032558	0.006113
Hondagua Feeder 1	0.943106	0.885535	0.95061	1.228009	4.474682	3.246673
Hondagua Feeder 2	Philippine Flour Mills (PFM)					
Tagkawayan Feeder 1	0.974972	0.942476	0.995438	1.61546	3.215535	1.600076
Tagkawayan Feeder 2	0.923166	0.896236	0.884974	1.626583	1.324659	1.151826
Pitogo Feeder 1	0.924637	0.906045	0.957959	1.273574	2.544805	3.128176
Pitogo Feeder 2	0.877828	0.918186	0.928985	2.933895	1.995474	1.997932
Mulanay Feeder 1	0.903787	0.942023	0.982854	4.009452	1.27568	3.747687
Mulanay Feeder 2	0.859392	0.876332	0.943851	5.306214	1.337537	4.893196
Mulanay Feeder 3	0.990221	0.900076	0.994882	4.259488	6.512643	5.367316

Table 5		
2009 Segregated System Loss Summary		
Particular	Energy (kWh)	% Loss
Primary Line Loss	196,631.43	0.947%
Primary Service Drop Loss	0.72	0.000%
Distribution Transformer Load Loss	38,257.40	0.184%
Distribution Transformer No-Load Loss	130,173.22	0.627%
Secondary Line Loss	89,410.50	0.430%
Secondary Service Drop Loss	7,129.08	0.034%
Other Losses (VR, Shunt Capacitor, etc)	128.34	0.001%
Power Transformer Load Loss	37,405.2	0.180%
Power Transformer No-Load Loss	534,360	2.573%
Metering Loss	473,900.78	2.282%
EC kWh Sales	97,757,024.00	
EC kWh Purchased	118,797,633.00	
Total System Loss	20,771,180	17.5
Total Technical Loss	5,540,768.11	4.67%
Administrative Loss	538,858	0.45%
Total Non-Technical Loss	14,691,553.89	12.38%

B. The Table 6, 2009 Segregated Technical Loss per Substation as showed below would reveal that substations with highest technical loss are those with feeders that are already over extended beyond their economic load reach and so power quality problems are present on these feeders. Correcting these power quality problems will usually also lead to the significant reduction of technical loss;

Table 6			
2009 Segregated Technical Loss per Substation			
Particular	Total Technical Loss per Substation (kWh)		
	Atimonan Substation	Gumaca Substation	Hondagua Substation
Primary Line Loss	10,216.03	49,515.73	24,871.97
Primary Service Drop Loss	0.18	0.53	-
Distribution Transformer Load Loss	5,173.02	9,139.20	5,094.08
Distribution Transformer No-Load Loss	14,300.42	27,344.23	16,591.94
Secondary Line Loss	8,129.30	23,858.60	11,556.53
Secondary Service Drop Loss	965.72	3,134.30	721.65
Other Losses (VR, Shunt Capacitor, etc)	22.32	39.06	33.48
Power Transformer Load Loss	2,517.618	10,757.634	2,517.618
Power Transformer No-Load Loss	10,8000	19,200	10,8000
Total Technical Loss			

Table 6			
2009 Segregated Technical Loss per Substation			
Particular	Total Technical Loss per Substation (kWh)		
	Tagkawayan	Pitogo Substation	Mulanay Substation
Primary Line Loss	31,090.7	37,589.73	43,347.28
Primary Service Drop Loss	0	-	-
Distribution Transformer Load Loss	5,399.412	5,411.20	8,040.49
Distribution Transformer No-Load Loss	23,359.37	24,548.28	24,028.97
Secondary Line Loss	13,679.8	11,999.27	20,187.01
Secondary Service Drop Loss	629.918	673.95	1,003.54
Other Losses (VR, Shunt Capacitor, etc)	22.32	-	11.16
Power Transformer Load Loss	2,517.618	2,517.618	2,517.618
Power Transformer No-Load Loss	10,8000	10,8000	10,8000
Total Technical Loss			

- A. **Reliability.** Distribution reliability models were developed for the base year. Based on the historical fault and interruption data, the estimated failure rate and average restoration time were determined. The calculated SAIFI, SAIDI and unserved energy using the number of customer and average demand for each load point are summarized in **Table 7;**

Table 7			
Summary of Interruption Indices			
Feeder Name	SAIFI	MAIFI	SAIDI
Feeder 1	10.34	1.97	10.97
Feeder 2	9.52	3.75	7.73
Feeder 3	56.07	4.05	202.35
Feeder 4	7.24	2.27	5.47
Feeder 5	68.66	24.22	225.08
Feeder 7	18.83	1.07	34.59
Feeder 8	66.57	28.08	418.07
Feeder 9	36.71	3.55	120.54
Feeder 10	42.27	273.13	136.71
Feeder 11	14.1	0.42	83.46
Feeder 12	22.55	1.28	286.23
Feeder 13	3.15	0.05	6.87

- B. **Safety.** The safety of the distribution system was evaluated in order to assess the equipment installed in the present distribution system against the short circuit current. Shown below in Table 8 are the detailed Summary Safety Assessment:

Feeder Name	13.2 kV Secondary Protection (AIC)	Fuse Cutout (AIC)	Maximun Fault @ Z_f = 0 Ω Amp	Margin of Safety 13.2 kV Secondary Protection	Margin of Safety Fuse Cutout	Remarks
Feeder 1	16000	10,000	3313	382.95%	201.84%	Adequate
Feeder 2	16000	10,000	2840	463.38%	252.11%	Adequate
Feeder 3	16000	10,000	2840	463.38%	252.11%	Adequate
Feeder 4	16000	10,000	2840	463.38%	252.11%	Adequate
Feeder 5	16000	10,000	3124	412.16%	220.10%	Adequate
Feeder 7	16000	10,000	2733	485.44%	265.90%	Adequate
Feeder 8	16000	10,000	2733	485.44%	265.90%	Adequate
Feeder 9	16000	10,000	3124	412.16%	220.10%	Adequate
Feeder 10	16000	10,000	3124	412.16%	220.10%	Adequate
Feeder 11	16000	10,000	3527	353.64%	183.53%	Adequate
Feeder 12	16000	10,000	3527	353.64%	183.53%	Adequate
Feeder 13	16000	10,000	3527	353.64%	183.53%	Adequate

NON-NETWORK ASSETS PROJECTS:

14. Included in the Application are non-network projects all of which are essential and vital for the operation of the distribution utility and the improvement of its efficiency to provide better serve all its members -consumers, which includes among others full computerization and automation of accounting, engineering, ISD, warehouse and branch offices, ICT infrastructure development and acquisition of meter reading/billing devices;

15. **Table 9** summarizes the non-network projects of QUEZELCO I:

Table 9			
Proposed CAPEX Projects NON-NETWORK PROJECTS			
Project Description		Implementing Year/s	Total Costs
1	Lot and Building for Sub-offices	2010	2,490,000.00
2	Vehicles	2010	4,250,000.00
3	Read & Bill System	2010	20,000,000.00
4	Accounting Software	2010	2,000,000.00
5	Geographical Information System (GIS)	2010	3,000,000.00
6	Communication Equipments	2011	1,000,000.00
7	New Headquarters of Quezelco I in Gumaca	2011	10,000,000.00
8	Lot and Building for Sub-offices	2011	2,490,000.00
9	Vehicles	2011	4,250,000.00
10	Testing Equipment	2011	5,000,000.00
11	Generator Set	2011	500,000.00
12	Lot and Building for Sub-offices	2012	2,490,000.00
13	Vehicles	2012	4,250,000.00
14	Database Management Facilities & IT Enhancement	2012	2,000,000.00
15	SCADA Facilities	2012	40,000,000.00
16	Lot and Building for Sub-offices	2013	2,490,000.00
17	Vehicles	2013	4,250,000.00
18	Lot and Building for Sub-offices	2014	2,490,000.00
19	Vehicles	2014	4,250,000.00
TOTAL NON-NETWORK PROJECTS (PhP)			117,200,000.00
GRAND TOTAL CAPEX PROJECTS (PhP)			1,253,940,242.88

FINANCIAL AND ECONOMIC EVALUATION:

16. **Financing Plan.** QUEZELCO I's capital projects will be financed through the Members Capital Contribution (MCC) Rate approved by ERC under RSEC-WR which envisioned to fund the amortization or debt servicing of indebtedness associated with the expansion, rehabilitation or upgrading of the existing electric power system of the Applicant and other funds acquired through loans from identified lending institution with the least percentage of interest. **Table 10** below summarizes the CAPEX plan financiers to be pursued and the corresponding costs to be financed (with moderate CAPEX project cost inflation factor of 3%);

Table 10. SUMMARY OF IDENTIFIED FINANCIERS AND CORRESPONDING DESIRED BORROWING

FINANCIER	PROJECT COST TO FINANCE ON Nth YEAR					
	TOTAL	2010	2011	2012	2013	2014
National Electrification Administration	871,079,192	8,403,411	380,258,629	134,663,456	229,529,552	96,658,010
TRANSCO	107,971,384	107,971,384				
Bank Financing	256,098,681	70,600,000	39,145,148	84,406,018	30,456,809	31,490,706
Coop-Direct Capex Rate Financing	119,290,525	27,449,909	28,765,323	24,983,196	33,860,372	25,797,862
TOTAL COST TO FINANCE	1,354,439,783	214,424,704	448,169,099	244,052,669	293,846,732	153,946,578

17. **Cash Flow.** The Cash Flow is basically the ultimate basis of determining whether QUEZELCO I is able to viably pursue and implement the 5 year CAPEX Plan without necessarily effecting a significant increase in electricity rates. **Table 11** below presents the CAPEX plan cash flow cost;

Table 11. SUMMARY OF ANNUAL CASH FLOW COST OF CAPEX PLAN

Financing Amortization	2010	2011	2012	2013	2014	TOTAL
National Electrification Administration	689,768	4,685,586	28,445,115	52,413,881	81,543,359	167,777,709
TRANSCO	-	12,077,219	12,077,219	12,077,219	12,077,219	48,308,877
Bank Financing	2,044,810	51,550,546	58,650,326	64,593,666	67,453,057	244,292,404
Coop-Direct Capex Rate Financing	27,449,909	28,765,323	24,983,196	33,860,372	25,797,862	140,856,660
Annual Cost of Amortizations	30,184,486	97,078,674	124,155,856	162,945,138	186,871,496	601,235,650
Add: Capex Approval Cost	411,068	3,179,568	1,675,071	1,958,093	995,968	8,219,766
Total Capex Plan Cost to Consumers	30,595,554	100,258,242	125,830,927	164,903,231	187,867,464	609,455,416

18. Further, the whole capital expenditure structure of QUEZELCO I will also have to consider previous indebtedness incurred in financing past capital projects outstanding as of 2009, such that including the amortization of the said indebtedness will have the cash flow as shown in **Table 12** below;

Table 12. SUMMARY OF CASH FLOW COST OF CAPEX PLAN INCLUDING AMORTIZATION OF PAST INDEBTEDNESS.

	2010	2011	2012	2013	2014	TOTAL
Capex Annual CF Revenue:						
Annual Revenue Cash Flow from MCC Rate	29,127,230	30,001,555	30,905,340	31,839,913	32,806,545	154,680,583
Total Cost of Amortization (New Capex Projects)	30,184,486	97,078,674	124,155,856	162,945,138	186,871,496	601,235,650
ERC Capex Approval Fees	411,068	3,179,568	1,675,071	1,958,093	995,968	8,219,766
Total Cost of Amortization (existing)	13,533,506	14,405,477	13,598,856	12,901,356	8,450,628	62,889,823
Annual Capex Plan CF (Revenue Requirement)	44,129,060	114,663,718	139,429,783	177,804,586	196,318,092	672,345,240
Net Cash Flow (Add'l Revenue Requirement)	15,001,830	84,662,163	108,524,443	145,964,674	163,511,547	517,664,657

19. **Rate Impact.** The CAPEX Plan is envisioned to have the least rate impact focusing on a capital expenditure plan that will bring the most value to consumers at the most reasonable and justifiable electricity rate or at the least cost of service. **Table 13** below presents the annual rate impact from MCC of the CAPEX Plan:

Table 13. EXCERPTS FROM CASH FLOW ANALYSIS SHOWING RATE IMPACT IN TERMS OF PERCENTAGE RATE PER KWH

	2010	2011	2012	2013	2014	TOTAL
kWh Sales Forecast	100,300,381	103,311,140	106,423,348	109,641,572	112,970,195	532,646,636
Annual Revenue Cash Flow from MCC Rate	29,127,231	30,001,555	30,905,340	31,839,913	32,806,545	154,680,583
Current MCC Rate per kWh	0.2904	0.2904	0.2904	0.2904	0.2904	0.2904
Capex Plan Cost Cash Flow	44,129,060	114,663,718	139,429,783	177,804,586	196,318,092	672,345,240
Indicative Additional Revenue Requirement	15,001,830	84,662,163	108,524,443	145,964,674	163,511,547	517,664,657
Current MCC Rate per kWh	0.2904	0.2904	0.2904	0.2904	0.2904	0.2904
Capex Plan Cost Cash Flow Indicative Rate per kWh	0.4400	1.1099	1.3101	1.6217	1.7378	1.2623
Indicative Additional Revenue Requirement per kWh	0.1496	0.8195	1.0197	1.3313	1.4474	0.9719

20. **Conclusion of the Financial Evaluation.** The following are conclusions derived from the financial analysis:

- All capex projects will have to be financed by Coop-Direct MCC Capex Rate as well as Direct Fund term loans to spread and minimize cost impact on cost to electricity end-users.
- QUEZELCO I can viably pursue and implement the 5 year capex plan if and only when the corresponding rate per kWh is at least equivalent to the total revenue requirement of the capex plan and debt service amortization of outstanding term debts.
- The approval and realization of the 5-year capex plan in compliance with the Energy Regulatory Commission (ERC). The 5-year capex plan

therefore is anchored on a foremost consideration that the Cooperative is accordingly and timely afforded by ERC of a corresponding rate adjustment as what the Honorable Commission may deem applicable under the circumstances.

- There is no price shock. The average indicative cost of projects, considering the amortization of 2009 debts, based on its annual cash flow cost effects to an average additional revenue requirement per kWh of P0.9719 or 11.12% over the aggregate rate of ₱ 8.7370/kWh. Projects which will have no financial backing from lending institutions (or financing takers) shall have to be postponed or suspended, as maybe applicable, and altogether re-evaluated, if necessary to be implemented or realized.

21. **Sensitivity**. In consideration of any eventuality that could occur in the normal course of business towards revenue and cost, the following scenarios were simulated:

- Revenue is 110% and 90% of projections;
- Selected capital projects identified for bank financing may be obtained with a longer term of repayment up to 15 years; and
- All capital projects identified for bank financing may be obtained at 12% instead of 10%.

22. Sensitivity considerations on the said capital projects, as well as with the revenue projections, do not change significantly the indicative rates and rate impact to that of the base assumptions. The following **Tables 14** show the result of the sensitivity analysis (CAPEX plan excluding amortization of past debts):

Table 14. INDICATIVE COST PER KWH (SENSITIVITY)

	2010	2011	2012	2013	2014	Total
kWh Sales Forecast						
100%	100,300,381	103,311,140	106,423,348	109,641,572	112,970,195	532,646,636
110%	110,330,419	113,642,254	117,065,683	120,605,730	124,267,215	585,911,300
90%	90,270,343	92,980,026	95,781,013	98,677,415	101,673,176	479,381,972
Annual Revenue Cash Flow from MCC Rate						
100%	29,127,231	30,001,555	30,905,340	31,839,913	32,806,545	154,680,583
110%	32,039,954	33,001,711	33,995,874	35,023,904	36,087,199	170,148,641
90%	26,214,507	27,001,400	27,814,806	28,655,921	29,525,890	139,212,525
Current MCC Rate per kWh	0.2904	0.2904	0.2904	0.2904	0.2904	0.2904
Capex Plan Cost Cash Flow Indicative Rate per kWh						
100%						1.2789
110%						1.1693
90%						1.4218
Indicative Additional RevReq per kWh						
100%						0.9885
110%						-0.1096
90%						0.1429

23. Applicant further moves for the issuance of a provisional authority to implement the projects while the instant application is pending, to enable it to deliver a more reliable and efficient electric service to its member-consumers.

24. In compliances with the ERC Rules of Practice and Procedure, Applicant QUEZELCO I is submitting the following documents:

Annexes “B” to “B-2” Affidavits of Undertaking / Sworn Statements that an application for approval from the concerned agencies shall be filed, if necessary.

<i>Annex “C and Series”</i>	Affidavit of Posting/ Proof of Public Information Dissemination
<i>Annex “D to D-1”</i>	Certifications of the Sangguniang Bayan of Pitogo and Sangguniang Panlalawigan of Quezon
<i>Annex “E to E-1”</i>	Publication of the Application in a newspaper of general circulation within QUEZELCO I franchise area or where it principally operates

PRAYER

WHEREFORE, premises considered, QUEZELCO I respectfully prays for the following::

1. Approval of its application for approval of capital expenditure (including non-network assets) program for the period 2010-2014;
2. Grant of a provisional authority to implement said projects.

QUEZELCO I prays for other relief which are just, legal and equitable under the premises.

Pasig City, October 1, 2010.

LERIOS-AMBOY & UYBARRETA LAW OFFICES

Counsel for QUEZELCO I

Units 1609-1610, Tycoon Centre Condominium
Pearl Drive, Ortigas Center, Pasig City 1605

By:



CARLOS ROMAN L. UYBARRETA
PTR No. 5152986/Jan. 6, 2010/Pasig City
IBP Lifetime No. 01482/Rizal Chapter
MCLE Compliance No. II-0007174
Roll No. 39013



DITAS A. LERIOS-AMBOY
PTR No. 5914248/Jan. 6, 2010/Pasig City
IBP No. 807570/Jan. 6, 2010/Rizal Chapter
MCLE Compliance No. II-0006100
Roll No. 40628