GEOFF BROWN & ASSOCIATES LTD

REVIEW OF FORECAST CAPITAL EXPENDITURE: SECOND REGULATORY PERIOD

Cabanatuan Electric Corporation (CELCOR)

ADDENDUM

Prepared

for

ENERGY REGULATORY COMMISSION

February 4, 2010

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EXECUTIVE SUMMARY

We recommend the following adjustments to the forecast capital expenditure (CAPEX) allowed in the Draft Determination.

Recommended CAPEX Adjustments (PhP million, real 2009)

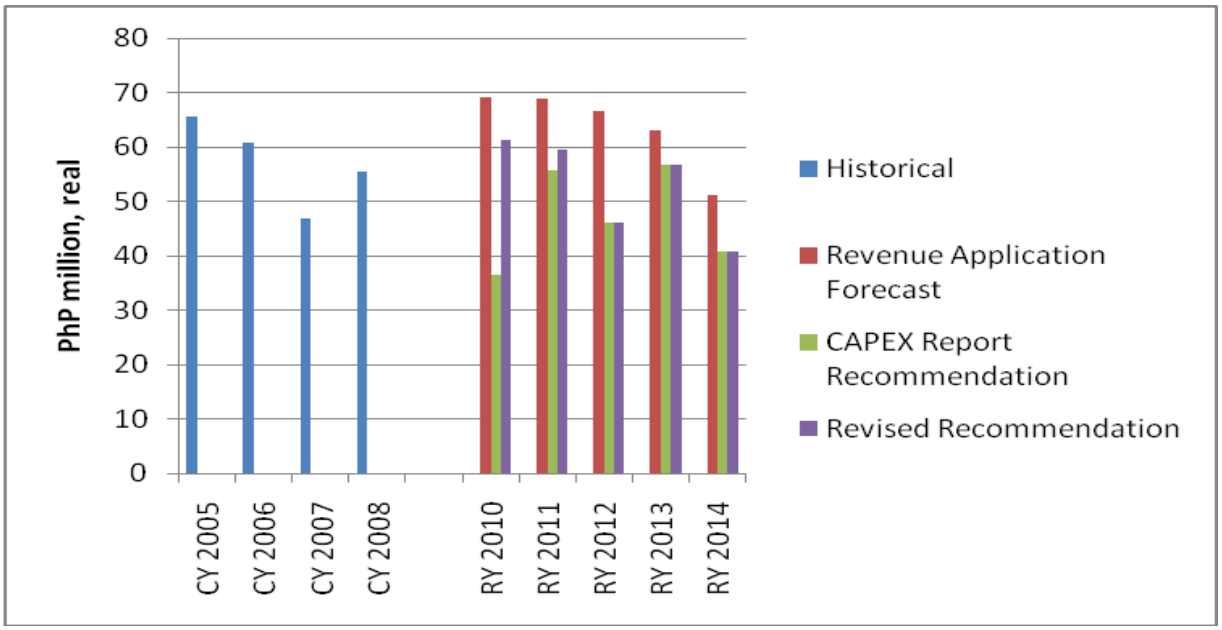
	RY 2010	RY 2011	RY 2012	RY 2013	RY 2014	Total (RY 2011-14)
Revenue application	69.25	68.88	66.53	63.11	51.11	249.63
Recommended forecast[1]	36.52	55.73	46.04	56.79	40.71	199.27
Recommended adjustments						
Major projects						
Partial reinstatement of major project expenditure	9.96					
Residual growth						
Adjustments to line item *meters, instruments and metering transformers*	3.72	3.72				
Adjustment to line item *materials and supplies (including spares)*	9.58					
Residual renewal						
Adjustment to line item *meters, instruments and metering transformers*	1.50					
Revised recommendation	**61.28**	**59.45**	**46.04**	**56.79**	**40.71**	**202.99**

Note 1: CAPEX Report, Table 6.1; Draft Determination Table 4.2.

The recommended adjustments allow for a partial reinstatement of major project CAPEX for RY 2010, the purchase of electronic meters for the metering of large commercial customers and also the purchase of substation spares.

The impact of this adjustment on the allowed capex is shown in the figure below.

Impact of Recommended CAPEX Adjustments (PhP million, real 2009)



1. INTRODUCTION

The Energy Regulatory Commission (ERC) has promulgated a performance-based form of regulation (PBR) for regulated investor owned electricity distribution utilities in the Philippines. Under the PBR framework, a regulated entity will be subject to a price cap for the delivery of distribution wheeling services. The reset process for the setting of the price cap for the six (6) regulated entities entering PBR at the third entry point is currently underway. This process will result in the setting of a maximum price path that will determine the maximum average price a regulated entity can charge for each year of the Second Regulatory Period (which commences on 1 July 2010 and ends on 30 June 2014).

The mechanism for the calculation of the price cap and the procedure and timelines for the introduction of this cap, are described in the Rules for Setting the Distribution Wheeling Rate (RDWR), which was released by the ERC on December 8 2008[1]. The ERC has also formulated its position on the reset process – as set out in a Position Paper, also dated December 8 2008[2].

An important requirement of the reset process going forward is the review of the CAPEX forecasts submitted by the regulated entities as part of the rate-setting process under PBR. The required CAPEX is critical to the determination of the revenue to which regulated entities are entitled and on which the price caps will be based.

The RDWR require that the CAPEX forecast provided by a regulated entity be reviewed by a Regulatory Reset Expert as part of the PBR regulatory reset process. Geoff Brown & Associates Ltd (GBA) has been engaged by the ERC to review the capital expenditure (CAPEX) forecasts of the six (6) regulated entities (including CELCOR) that will be entering PBR at the third entry point.

CELCOR submitted a PBR revenue application to ERC on June 19 2009[3] (Revenue Application). GBA submitted its final report on its review of the CAPEX forecast included in CELCOR's Revenue Application on November 26 2009[4] (CAPEX Report). ERC publicly released its Draft Determination on the Revenue Application on November 25 2009[5] (Draft Determination). Following the release of the Draft Determination, ERC held a Public Consultation in San Juan, La Union on January 27 2010. At the public consultation CELCOR raised a number of issues in respect of the Draft Determination and was required by the ERC to subsequently provide additional information to support its position. GBA was present at the public consultation and has now reviewed the additional information supplied by CELCOR insofar as this information relates to the CAPEX forecast. In this Addendum to the CAPEX Report we document our review of the issues raised and, where appropriate, modify the recommendations in the CAPEX Report on CELCOR's reasonable CAPEX requirements for the second regulatory period.

In undertaking this review we have relied on the accuracy of the information provided to the ERC by CELCOR. We cannot be held responsible for any conclusions based on misleading or inaccurate information provided to us.

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1 *Rules for Setting Distribution Wheeling Rates (RDWR) for Privately Owned Distribution Utilities Entering Performance Based Regulation (Third Entry Point)*, Energy Regulatory Commission, December 8 2008.

2 *Regulatory Reset for the July 2010 to June 2014 Regulatory Period Privately Owned Distribution Utilities subject to Performance Based Regulation, Position Paper*, Energy Regulatory Commission, December 8 2008.

3 ERC Case No 2009-044RC

4 *Review of Forecast Capital Expenditure for the Second Regulatory Period, Cabanatuan Electric Corporation (CELCOR),* Geoff Brown & Associates Ltd, November 26 2009.

5 *Regulatory Reset for Cabanatuan Electric Corporation. (CELCOR) July 2010 to June 2014 (Second Regulatory Period) Draft Determination,* Energy Regulatory Commission, November 9 2009.

The issues that were discussed at the public consultation are summarized in Appendix A. Only those issues that could have a material impact on the forecast CAPEX approved in the Draft Determination are discussed in detail in the body of this Addendum.

All expenditures in this Addendum are expressed as PhP million, real 2009.

2. ANALYSIS

2.1 MAJOR PROJECT CAPEX FOR RY 2010

2.1.1 Background

In our CAPEX report we recommended that the forecast major project CAPEX of PhP 17.58 million for RY 2010 not be allowed because CELCOR provided no information to support this expenditure. Following release of the Draft Determination CELCOR advised that, as it would be entering PBR, it understood that major projects for RY 2010 would automatically be included in the regulatory asset base (RAB) and hence no supporting documentation was needed in the revenue application. It also submitted comprehensive additional information to support this expenditure.

2.1.2 Analysis

In analyzing the additional information submitted we have considered only the forecast peak demand on each feeder in 2014, since augmentation of distribution lines not required to meet demand up to 2014 can be deferred to the third regulatory period. Based on the forecasts provided by CELCOR[6], we have assumed the maximum feeder demands for 2014, shown in Table 1.

Table 1: Assumed 2014 Feeder Demands

Bitas Substation			Barrera Substation		
Feeder	Demand (MW)	Demand (MVA)	Feeder	Demand (MW)	Demand (MVA)
22BJ	6.14	6.46	22BR	4.24	4.46
23BJ	4.78	5.03	23BR	4.53	4.77
24BJ	4.69	4.94	24BR	3.62	3.81
			25BR	5.51	5.80

2.1.2.1 Additional Feeder to Bantug Norte

This project would provide a new feeder, 25BJ, to supply the load in the Bantug Norte area, at a forecast cost of PhP 3.61 million. The forecast project cost includes a new recloser at the Bitas substation to supply the feeder. The project would offload feeder 23BJ. An alternative supply to the load affected is currently available from a normally open interconnection to feeder 24BJ.

All primary backbone lines on feeders supplied from the Bitas substation use 336.4 MCM ACSR conductor, which has a rating of 12.3 MVA when energized at 13.8 KV. Table 1 indicates that any Bitas feeder can therefore carry the load of any other feeder without exceeding the rating of the primary backbone lines. In the worst case scenario, the combined peak loads of feeders 22BJ and 23BJ is only 11.5 MVA, 6.5% below the rating of the backbone feeder conductor.

In this case there is already an alternative supply to the load affected by this project (though feeder 24BJ) and we conclude that the additional feeder is not required before the end of the second regulatory period if its purpose is only to secure the Bantung Norte load against the loss of one of the existing Bitas feeders.

[6] In Section 2.2 of our CAPEX report, we concluded that CELCOR's forecast demand in 2014 was reasonable and an acceptable basis for the review.

However, another situation that could result in high feeder loadings is the loss of the Barreras transformer. In this event the Bitas transformer would be fully loaded but, as its capacity is only 25 MVA and the combined capacity of the three existing feeders should be adequate.

A fourth feeder from Bitas would be necessary if CELCOR was to install a 13.8 kV interconnector between the Bitas substation and the FCVC generating plant. This would allow the FCVC plant to supply power directly at 13.8 kV in the event of a loss of one of the two power transformers. While this has not been included in the CAPEX forecast we think CELCOR could usefully consider this.

CELCOR has provided photographs of some of the existing lines that will be rehabilitated under this project and it is clear that some serious maintenance is required. We also accept that some of the spur and secondary lines in the area affected may be overloaded and need conductor upgrades.

2.1.2.2 Kapt. Pepe (Gen, Tinio, Melencio Primary Line Extensions)

This project involves the rehabilitation and upgrading of 1.95 km of primary line on feeder 23BR. While the exact scope of work and the benefits of the project are not fully clear to us, the project appears to involve the upgrading of existing low capacity spur lines to the capacity of full feeder backbone lines. CELCOR has provided photographic evidence that the lines affected are in poor repair and in need of maintenance. It would seem that the Melencio extension will provide an interconnection between feeders 23BR and 24BR but it is not clear to us that this interconnection is really necessary, given that an interconnection between these two feeders already exists. As the Gen. Tinio extension component of the project does not appear to form part of a feeder backbone or support an interconnection between two feeders it is not clear that heavy duty 336.4 MCM conductor is required to support forecast loads in the medium term.

2.1.2.3 Calanbangbangan - Cinco-Cinco Primary and Secondary Line Upgrades

Celcor describes the project as involving the reconductoring of primary and secondary lines as well as the conversion of primary line from 1 wire to 2-3 wires. The total length of line involved is 5.93 km and the estimated project cost is PhP 10.64 million, which makes it a large project in the context of CELCOR's distribution network development plan. The planned conductor size is 336.4 MCM for primary lines and 1/0 for secondary lines. Correction of load unbalance is one of the main factors driving this project. CELCOR has also provided photographs indicating that some serious maintenance is required.

The need for maintenance is very clear and we also understand the need to balance the load by upgrading single wire lines to three wire. While the upgrading of single wire lines to three wire lines using heavy conductor will increase line capacity by a factor of ten or more, the upgraded lines would form part of a third heavy interconnection between the Barreras and Bitas substations. This would increase the ability of the network to retain supply in the event of a failure of the Barreras transformer.

2.1.2.4 Magasaysay to Bantang Norte Primary Line Upgrading / Rehabilitation

CELCOR has provided very little information on this project, which has an estimated cost of PhP 0.9 million, except to say that it involves a total length of 0.7 km and the conductor size will be 336.4 MCM. CELCOR also provided a map which suggested that the lines involved are used to provide local distribution and did not form part of a feeder backbone. If this is the case we consider the use of heavy 336.4 MCM conductor to be excessive.

2.1.3 Conclusions and Recommendation

We have reviewed the existing single line diagram of CELCOR's 13.8 kV network and note that there is already a relatively high level of interconnection between the different

feeders. In particular the 13.8 kV feeders supplied from the two substations are interconnected. This interconnection is important because, in the event of a loss of one of the two substation transformer, load will be transferred to the other substation through the 13.8 kV system.

There are essentially three 13.8 kV interconnections between the Bitas and Barrera substations. Two of these, 22BR-22BJ and 24BR-23BJ are strong, in that the backbones of the interconnected feeders already use heavy duty 336.4 MCM conductor throughout their whole length. The third interconnection 23BR-24BJ is weaker in that much of the 23BR feeder backbone uses smaller 2/0 conductor. We support this upgrade.

We do sense however that CELCOR may be planning to install heavy duty 336.4 MCM conductor in situations where it is not really required to cater for N-1 contingency situations. We think that CELCOR should not use 336.4 MCM conductor as a matter of course but should only use it where it is needed to deal with identified contingency operating conditions. Where smaller conductor is adequate it should be used – savings in losses from the use of heavy duty conductor will not be material in those parts of the network where loadings are not high.

In the CAPEX report we noted that ongoing development of the 13.8 kV network was discretionary[7] and that most utilities find that they are unable to do all the augmentation and maintenance they would like. While our review of CELCOR's proposed projects for RY 2010 has not produced a conclusive outcome, it has indicated to us that some of the work could be deferred without potentially severe adverse consequences to the operation and reliability of the network. The recommended expenditure in the CAPEX report provided a level expenditure on the augmentation and development of the 13.8 kV network that we considered reasonable and sustainable, given the need to manage in impact of additional capital expenditure on consumers. CELCOR has accepted this.

The proposed level of major project CAPEX for RY 2010 is substantially higher than the major project CAPEX allowed for 13.8 kV network development over the second regulatory period. We therefore recommend that it be reduced to the average level of major project expenditure allowed for the years RY 2011-14. It will be up to CELCOR to prioritize this work and decide what components should be deferred or where savings can be made.

We recommend that expenditure of PhP 9.96 million be allowed for major project expenditure in RY 2010. This is based on the average annual recommended CAPEX for the period RY 2011-14, derived as shown in Table 2 below.

Table 2: Derivation of Recommended Major Project CAPEX for RY 2010 (PhP million, real)

Recommended major project CAPEX for RY 2011	7.41
Recommended major project CAPEX for RY 2012	9.47
Recommended major project CAPEX for RY 2013	10.45
Recommended major project CAPEX for RY 2014	12.49
Average recommended major project CAPEX RY 2011-14	**9.96**

Source: CAPEX Report Table 4.9.

[7] Sections 4.3 and 4.4

2.2 PROJECT BB02

2.2.1 Background

In the CAPEX report we recommended that expenditure for the implementation of project BB002 not be allowed. We stated:

> *Sub-project BB002 is a normally open interconnection between main feeders 25BR4 and 22BR4. Our view is that for an 'n-1' condition there will be sufficient interconnection capacity after the above conductor upgrades are completed and an additional interconnection, as shown in the CELCOR's single line diagram, is not required. Hence we consider that this sub-project BB002 can be deferred until after the second regulatory period.*

In response CELCOR stated:

> *BB002 is a normally open interconnection between main feeders 25BR4 and 22BR4, this will serve as interconnection between the two feeders as in the case for a N-1 function. A number of interconnection is reflected in the CELCOR's single line diagram, but notice that that there are no interconnections between the two feeders. Feeder 25BR4 consists of a number of large commercial customers. Under contingency situation, the additional connection between feeders 25BR4 and 22BR4 is not feasible. (see attached single line diagram and technical support file).*
>
> *Therefore, we recommend that this distribution feeder backbone project be part of allowed capital expenditure for second regulatory period.*

In support of this position CELCOR provided additional load flow information to support its position.

2.2.2 Analysis

In reviewing a regulated distribution utility's CAPEX requirements for the purposes of PBR, we are constrained by the requirements of Table 5.1 of the Position Paper, which sets the degree of network security that should be provided in planning and designing the network. We interpret this to mean that network augmentation cannot be justified if there is sufficient capacity in the existing network to allow supply to be restored to customers following a worst case single event contingency.

In analyzing the need for project BB002 we considered the existing network as presented in CELCOR's single line diagram. We assumed the forecast feeder demands shown in Table 1, since augmentation to meet loads that are expected to occur after the end of the second regulatory period can be deferred. The two worst case contingencies we considered were the loss of feeders 22BR and 25BR. Our analysis indicates that:

- In the event of the loss of feeder 22BR, the load could be supplied from feeder 23BR by closing the normally open interconnector 22BR-23BR. Based on the forecast loads in Table 1, the maximum load would be 9.23 MVA, which is less than the 12.3 MVA conductor rating. We note that interconnections are also available with feeders 24BR, 22BJ and 23BJ, which could share some of the load.

- In the event of the loss of feeder 25BR, the load could be supplied from feeder 24BR by closing the normally open interconnector 24BR-25BR. Based on the forecast loads in Table 1, the maximum load would be 9.61 MVA, which is less than the 12.3 MVA conductor rating. Alternatively an interconnection is available with feeder 23BR, and if this was used the maximum load would be 10.57 MVA, which is still comfortably below the conductor rating.

We have also reviewed the load flow information provided by CELCOR and note that the loads under contingency conditions are relatively low. We found nothing to invalidate the above analysis.

2.2.3 Conclusion and Recommendation

We conclude that an additional heavy duty line to interconnect feeders 22BR and 25BR and sufficient interconnections to other feeders already exist to cater for N-1 contingency situations. This does not preclude expenditure to reinforce supply to local loads but, if required, this would need to be funded from the allocated budget.

We recommend no change to the recommendation in the CAPEX report in respect of the funding of this project.

2.3 RESIDUAL GROWTH METERING

2.3.1 Background

In the CAPEX report we recommended a reduction of PhP 3.72 million in both RY 2010 and RY 2011 in the forecast residual growth CAPEX for the line item *meters, instruments and metering transformers*. The recommendation was made on the basis that the forecast was abnormally high in these two years compared to the other years of the forecast period and no reason had been provided to justify the additional expenditure.

CELCOR submitted that the expenditure was for electronic meters to replace existing mechanical meters current used for the billing of large commercial customers. It would also enable a higher level of compliance with Chapters 3 and 8 of the Philippines Distribution Code. The electronic meters would also be used to ensure the accuracy of its SynerGEE power system analysis software.

2.3.2 Recommendation

We have reviewed the additional information provided by CELCOR and consider it reasonable. We therefore recommend the CAPEX be reinstated.

2.4 SPARES

2.4.1 Background

In the CAPEX report we recommended that the one-off expenditure of PhP 11.08 million in RY 2010 for the line item *materials and supplies including spares* not be allowed as there was no CAPEX on this line item in any other year of the forecast period and no justification for the expenditure was provided in the revenue application.

CELCOR submitted that the purpose of the expenditure was to purchase spares for its substation equipment and provided a breakdown of the forecast expenditure.

2.4.2 Recommendation

We have reviewed the additional information submitted by CELCOR and consider it reasonable. We note in particular that the reliability of the electricity supply provided by CELCOR is very dependent on the reliable operation of both its existing substations. We therefore recommend the CAPEX be reinstated.

3. SUMMARY OF RECOMMENDED ADJUSTEMENTS

A summary of the recommended adjustments to the CAPEX forecast approved in the Draft Determination is presented in Table 3.

Table 3: Recommended Adjustments to the CAPEX Forecast (PhP million, real)

	RY 2010	RY 2011	RY 2012	RY 2013	RY 2014
Major projects					
Partial reinstatement of major project expenditure	9.96				
Residual growth					
Adjustments to line item *meters, instruments and metering transformers*	3.72	3.72			
Adjustment to line item *materials and supplies (including spares)*	9.58				
Residual renewal					
Adjustment to line item *meters, instruments and metering transformers*	1.50				
Total recommended adjustments	**24.76**	**3.72**			

APPENDIX A
SUMMARY OF COMMENTS

<table>
<tr><th>Page/ Section Number</th><th>Discussion of Comment/s and/or Questions for Clarification</th><th>Suggestions / Proposed Change(s) to the Draft Determination</th><th>GBA Comment</th></tr>
<tr><td>DD:4.1.3
Page 19
(Draft Determination of CELCOR)</td><td>Also included in the Revenue Application is the proposed capital expenditure for the 2010 Regulatory Year (July 1, 2009 to June 30, 2010). Under the current regulatory arrangements, there is no provision for the ERC to review any capital expenditure subsequent to the start of 200915. Since CELCOR will be entering PBR at the start of the Second Regulatory Period six months into the 2010 calendar year, the expenditure over the period January 2009 to June 2010 had to be reviewed as part of the Revenue Application and the ERC has therefore decided to include CELCOR's capital expenditure program for the 2010 regulatory year as part of its review of the expenditure program for the Second Regulatory Period. The Regulated Entities were therefore required to submit details of this program as part of their Revenue Applications.</td><td rowspan="3">CELCOR thought that since the company will be entering PBR, when it files the application for 2009-2010 major projects along with the submission of project descriptions and details, the proposed project will be automatically included in our Regulatory Asset Base.
Please see attached supporting justifications and technical support file for these July 2009 to June 2010 Major Projects:
<table><tr><th>PROJECT TITLE</th><th>PROJECT LOCATION</th><th>PROJECT COST</th></tr><tr><td>Upgrading/Rehabilitation of Primary Line, Secondary Line and Additional Recloser for Bitas Feeder</td><td>Mampulog Bitas to Bantug Norte</td><td>3,615,250.48</td></tr><tr><td>Extension/Upgrading of Primary Line</td><td>Kapt. Pepe-Gen. Tinio-Melencio</td><td>2,414,326.25</td></tr><tr><td>Upgrading of Primary and Secondary Line</td><td>Caalibangbangan to Cinco-Cinco</td><td>10,648,297.38</td></tr><tr><td>Upgrading/Rehabilitation of Primary Lines</td><td>Magsaysay to Bantug Norte</td><td>898,462.95</td></tr><tr><td colspan="2">Total</td><td>17,576,337.06</td></tr></table>These projects form part of the distribution feeder backbone that CELCOR wanted to upgrade and rehabilitate. Projects for Regulatory Year 2011 to Regulatory Year 2014 are continuation of their implementation. Removal of these projects will deter the intention to increase the capability of CELCOR not just to carry future loads but also to transfer loads from other feeders.
If the application for July 2009 to June 2010 CAPEX Major projects was approved by ERC, it is hereby requested that the PhP17.58 million worth of Capital Projects be included in the computation of Revenue Requirement.</td><td rowspan="3">We have reviewed the additional information provided by CELCOR and recommend an increase of PhP 9.96 million to the RY 2010 expenditure recommended in the CAPEX report.</td></tr>
<tr><td>DD:4.4.2
Page 21</td><td>GB Associates indicated in their report that due to the fact that CELCOR did not provide adequate supporting information for the proposed major capital expenditure for the year 2010, the proposed value will be removed from the recommended expenditure to the amount of PhP17.58 million.</td></tr>
<tr><td>CER:4.1
Page 14
(Capital Expenditures Review)</td><td>CELCOR did not provide any justification for its major project CAPEX in RY 2010 and therefore we had no option but to remove this expenditure from our recommended CAPEX.</td></tr>
</table>

Page/ Section Number	*Discussion of Comment/s and/or Questions for Clarification*	*Suggestions / Proposed Change(s) to the Draft Determination*	*GBA Comment*
DD:4.5.3 Page 22	**GB Associates' recommendations with regard to the significant projects can be summarized as follows:** CELCOR proposed to upgrade its distribution feeder backbone which includes the replacement of old wooden pole structures and upgrading of conductors on 13.8 kV feeder backbones at a total cost of PhP 31.33 million. The project has six subprojects which will be commissioned progressively over the period RY 2011 to RY 2014. As per the information in CELCOR's revenue application, the feeder backbone sections to be upgraded use smaller, lower capacity conductor and therefore limit CELCOR's ability to transfer loads from other feeders or substations during faults or maintenance. GB Associates recommends that CELCOR should proceed with all of the above sub-projects, except for sub-project BB002 (Sanciangco Extension to Jollibee Circumferential) which is normally an open interconnection between main feeders 25BR4 and 22BR4.	BB002 is a normally open interconnection between main feeders 25BR4 and 22BR4, this will serve as interconnection between the two feeders as in the case for a N-1 function. A number of interconnection is reflected in the CELCOR's single line diagram, but notice that that there are no interconnections between the two feeders. Feeder 25BR4 consists of a number of large commercial customers. Under contingency situation, the additional connection between feeders 25BR4 and 22BR4 is not feasible. (see attached single line diagram and technical support file.) Therefore, we recommend that this distribution feeder backbone project be part of allowed capital expenditure for second regulatory period.	We have reviewed the additional information provided by CELCOR and recommend no adjustment to the expenditure recommended in the CAPEX report.
CER:4.2 Page 15	We consider that CELCOR should proceed with all of the above sub-projects, except for BB002. Sub-project BB002 is a normally open interconnection between main feeders 25BR4 and 22BR4. Our view is that for an 'n-1' condition there will be sufficient interconnection capacity after the above conductor upgrades are completed and an additional interconnection, as shown in the CELCOR's single line diagram, is not required. Hence we consider that this sub-project BB002 can be deferred until after the second regulatory period.		

<table>
<tr><th>Page/ Section Number</th><th>Discussion of Comment/s and/or Questions for Clarification</th><th>Suggestions / Proposed Change(s) to the Draft Determination</th><th>GBA Comment</th></tr>
<tr>
<td>DD:4.5.3
Page 22</td>
<td>CELCOR is proposing the replacement of old wooden pole structures, reducing sags, line extensions, conversion from
1 phase to 3-phase and upgrading of conductors on 13.8 kV lateral lines. The total cost for this project is PhP 22.39 million which is broken up into 19 sub-projects. The commissioning of these sub-projects is spread over the period RY 2011-14. CELCOR's single line diagrams indicate that the line sections, identified to be upgraded, are used to distribute electricity from primary feeders. The view of GB Associates is that CELCOR should be allowed to upgrade its main lateral lines primarily due to the fact that it will help reduce its technical losses. The technical losses in CELCOR's distribution network in CY 2008 were 10.96%, which appears to be high compared to the loss cap allowed by the ERC. GB Associates however recommends the exclusion of a few sub-projects, based on the fact that they are either used as normally open points or that the forecast load on these feeders are projected to be very low. The remaining 16 proposed line upgrades are each relatively small and to some extent discretionary. That is, it will be possible for CELCOR to slow down the rate at which it implements this program without having an immediate and material impact on either its quality of supply to customers or its total network losses. GB associates indicated their awareness of the possible impact of discretionary capital expenditure on the price paid by customers and they therefore recommended that the remaining capital expenditure in this program be reduced by 25%.</td>
<td>CELCOR is willing to reduce the remaining capital in this program with the understanding that the reduction to the remaining 16 projects is discretionary. CELCOR proposes to select which among the 16 remaining projects is equivalent to 25% and also the less critical. CELCOR believes that it is better to defer some projects equivalent to 25% rather than reducing the annual cost or on staggered basis.
<table>
<tr><th colspan="3">PRIORITIZED PRIMARY LATERAL LINE PROJECTS</th></tr>
<tr><th>PROJECT CODE</th><th>REGULATORY YEAR</th><th>PROJECT COST</th></tr>
<tr><td>LL-002</td><td>2011</td><td>817,036.21</td></tr>
<tr><td>LL-003</td><td>2011</td><td>235,177.21</td></tr>
<tr><td>LL-004</td><td>2011</td><td>163,982.86</td></tr>
<tr><td>LL-005</td><td>2011</td><td>194,690.90</td></tr>
<tr><td>LL-006</td><td>2011</td><td>381,026.63</td></tr>
<tr><td>LL-007</td><td>2011</td><td>219,378.20</td></tr>
<tr><td>LL-008</td><td>2012</td><td>1,615,215.99</td></tr>
<tr><td>LL-010</td><td>2012</td><td>1,288,475.63</td></tr>
<tr><td>LL-011</td><td>2013</td><td>1,090,145.65</td></tr>
<tr><td>LL-012</td><td>2013</td><td>1,458,238.20</td></tr>
<tr><td>LL-014</td><td>2013</td><td>1,565,428.48</td></tr>
<tr><td>LL-016</td><td>2013</td><td>562,102.70</td></tr>
<tr><td>LL-019</td><td>2014</td><td>1,133,493.48</td></tr>
<tr><td colspan="2">Total</td><td>10,724,392.14</td></tr>
</table>
</td>
<td>CELCOR's position is consistent with the recommendation in our CAPEX report. CELCOR is in a much better position than us to prioritize the individual sub-projects and determine which should be deferred.</td>
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<table>
<tr><th>Page/ Section Number</th><th>Discussion of Comment/s and/or Questions for Clarification</th><th>Suggestions / Proposed Change(s) to the Draft Determination</th><th>GBA Comment</th></tr>
<tr><td>CER:4.3
Page 17</td><td>The remaining 16 proposed line upgrades are each relatively small and to some extent discretionary. That is, it will be possible for CELCOR to slow down the rate at which it implements this program without having an immediate and material impact on either its quality of supply to customers or its total network losses. Since there is a need for the ERC to be cognizant of the impact of discretionary CAPEX on the price paid by customers, we recommend that the remaining CAPEX in this program be reduced by 25%. We envisage that, in response to this reduction, CELCOR will slow down the rate at which it implements this program but not stop it completely. In recommending this reduction, we have deliberately not specified those sub-projects that should be deferred. It will be up to CELCOR to prioritize the different sub-projects and defer those that it considers less critical.</td><td>
<table>
<tr><td>LL-014</td><td>2013</td><td>1,565,428.48</td></tr>
<tr><td>LL-017</td><td>2013</td><td>737,576.44</td></tr>
<tr><td>LL-018</td><td>2014</td><td>1,628,696.08</td></tr>
<tr><td colspan="2">Discretionary Adjustments</td><td>3,931,701.00</td></tr>
</table>
See Technical Support files.</td><td></td></tr>
<tr><td>DD:4.5.3
Page 22</td><td>CELCOR proposes to rehabilitate low voltage secondary lines of its distribution network due to customer growth and the replacement of damaged structures. CELCOR has estimated a total project cost of PhP 29.53 million in the revenue application for this project which includes 14 sub-projects. The sub-projects will be commissioned over the period RY 2011-14. GB Associates is of the view that CELCOR should proceed with this rehabilitation work except for sub-projects identified as SL001(San Josef Norte to Sumacab Sur), SL003 (Ibabao Bana to Polilo), SL005 (Accfa Imelda and MS Gracia), SL010 (Lagare) and SL014 (Valle Cruz).</td><td>Similar to above, CELCOR is willing to reduce the remaining capital in this program with the understanding that the reduction to the remaining 9 projects is discretionary. CELCOR proposes to select which among the 14 remaining projects is equivalent to 25% and also the less critical. CELCOR believes that it is better to defer some projects equivalent to 25% rather than reducing the annual cost or on staggered basis.</td><td>CELCOR's position is consistent with the recommendation in our CAPEX report. CELCOR is in a much better position than us to prioritize the individual sub-projects and determine which should be deferred.</td></tr>
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<tr><th>Page/ Section Number</th><th>Discussion of Comment/s and/or Questions for Clarification</th><th>Suggestions / Proposed Change(s) to the Draft Determination</th><th>GBA Comment</th></tr>
<tr><td>CER:4.4
Page 19</td><td>The remaining nine (9) proposed line upgrades are each relatively small and to some extent discretionary. That is, it will be possible for CELCOR to slow down the rate at which it implements the program without having an immediate and material impact on either its quality of supply to customers or its total network losses. Since there is a need for the ERC to be cognizant of the impact of discretionary CAPEX on the price paid by customers, we recommend that the remaining CAPEX in this program be reduced by 25%. We envisage that, in response to this reduction, CELCOR will slow down the rate at which it implements this program but not stop it completely. In recommending this reduction, we have deliberately not specified those sub-projects that should be deferred. It will be up to CELCOR to prioritize the different sub-projects and defer those that it considers less critical.</td><td>
<table>
<tr><th colspan="3">PRIORITIZED SECONDARY LINE PROJECTS</th></tr>
<tr><th>PROJECT CODE</th><th>REGULATORY YEAR</th><th>PROJECT COST</th></tr>
<tr><td>SL-004</td><td>2012</td><td>1,867,289.20</td></tr>
<tr><td>SL-006</td><td>2012</td><td>707,911.42</td></tr>
<tr><td>SL-007</td><td>2012</td><td>678,960.50</td></tr>
<tr><td>SL-008</td><td>2013</td><td>796,521.71</td></tr>
<tr><td>SL-009</td><td>2013</td><td>1,983,739.50</td></tr>
<tr><td>SL-012</td><td>2013</td><td>1,296,546.86</td></tr>
<tr><td>SL-013</td><td>2013</td><td>1,728,482.98</td></tr>
<tr><td colspan="2">Total</td><td>9,059,452.17</td></tr>
</table>
<table>
<tr><td>SL-002</td><td>2012</td><td>1,491,014.65</td></tr>
<tr><td>SL-011</td><td>2013</td><td>1,540,827.65</td></tr>
<tr><td colspan="2">Discretionary Adjustments</td><td>3,031,842.30</td></tr>
</table>
See Technical Support files.
</td><td></td></tr>
<tr><td>DD:4.6.1
Page 23</td><td>CELCOR has forecasted PhP 58.52 million for expenditure on meters, instruments and metering transformers over the forecast period RY 2010-14. This represents an average annual spend of PhP 11.70 million compared to the average annual historic CAPEX of PhP 12.37 million over the historic period CY 2005-08.
CELCOR has provided no explanation as to why the forecast average annual refurbishment CAPEX should be higher than over the historic period and therefore, it is recommended that this expenditure be adjusted to maintain the refurbishment</td><td>The P3.72 Million reduction per year for RY2010 and RY2011 from CELCOR forecast growth-related Metering Capital Expenditures represents forecast purchase and installation of electronic meters.
CELCOR shall be using these electronic meters in order for it to comply the following provisions of the Philippine Distribution Code Guidelines under:
Chapter 8: Distribution Revenue Metering Requirements
Section 8.1 – Purpose and Scope
Section 8.2 – Unbundled Service Provision
Section 8.3 – Metering Requirements
Section 8.4 – Metering Equipment Standards</td><td>We have reviewed the additional information provided by CELCOR and recommend an increase in the allowed forecast CAPEX of PhP 3.72 million in RY 2010 and also in RY 2011.</td></tr>
</table>

Page/ Section Number	Discussion of Comment/s and/or Questions for Clarification	Suggestions / Proposed Change(s) to the Draft Determination	GBA Comment
	related forecast expenditure at the same level as the historic average expenditure.	Chapter 3: Performance Standard for Distribution and Supply Section 3.1 – Purpose and Scope Section 3.2 – Power Quality Standards for Distributors These provisions require the use of Electronic Meters for our large customers where the existing meters are that of old mechanical type. Our existing inventories of meters for large commercial customers consist of G.E.-VM-63A AND G.E.-VM-62S-3~~O~~-Class mechanical types. These types of meters are not suited for the demands of the said PDC guidelines. Aside from these, CELCOR is currently developing our SynerGee Software for Engineering Analysis. We need these electronic meters for the accurate load graphs for our 10 types of customer classes. Our proposal is to consider the P7.44 million costs of electronic meters for the RY2010 to RY2011 Capital Expenditures.	
CER:5.5 Page 24	CELCOR has forecast PhP58.52 Million for expenditure on meters, instruments and metering transformers over the forecast period RY 2010-14. This represents an average annual spend of PhP11.70 Million compared to the average annual historical CAPEX of PhP12.37 Million over the historical period CY2005-CY2008. This expenditure is towards meters, instruments and instrument transformers required to serve new and existing customers. The average annual refurbishment and growth related expenditure was higher over the forecast years than the equivalent average annual growth CAPEX over the historical period. However the forecast average annual renewal expenditure was lower than in the historical years. The forecast growth related expenditure for RY 2010 and RY 2011 is PhP9.47 Million, which is almost twice as high as the average annual forecast CAPEX of PhP5.75 Million over the remaining three years of the forecast period. We see no reason why forecast growth related metering CAPEX should vary significantly from year to year. We therefore recommend that the forecast CAPEX for this line item be reduced by PhP3.72 Million for the years RY 2010 and RY2011 to reduce this expenditure to the average level forecast for the following three years.		
DD:4.6.1 Page 23	CELCOR's residual CAPEX forecast includes one-off CAPEX of PhP 11.08 million in RY 2010 for residual expenditure	The purpose of this CAPEX is to provide provision for spares of station equipment whose failure may affect the operation of our substations and cause widespread interruption. The one-off	We have reviewed the additional information provided by CELCOR and recommend that the disallowed

Page/ Section Number	Discussion of Comment/s and/or Questions for Clarification	Suggestions / Proposed Change(s) to the Draft Determination	GBA Comment
	on renewal and growth related materials and supplies including spares. There is no other CAPEX in this line item either for the historic period or for the remainder of the forecast period. No explanation for this one-off expenditure has been provided in the revenue application. It is considered that this expenditure to be sufficiently material to have been justified in the revenue application. Since no such justification has been provided the GB Associates recommend that this expenditure not be allowed.	expenditure was intended to build up our stock, which is at near zero level, to provide us sufficient replacement parts so we can continue to serve our customers and meet our commitment in reliability and continuity of service. It is inconceivable for our operations to continue without provisions for spares considering the systems configuration that we have and our functional limitation in the N-1 category. Another factor that is working against us is the wear and tear on the equipment and devices which have been in service since the maiden operation of the station in 1996. The electrical and mechanical stresses imposed on the equipment will eventually manifest in their performance and with ordering and delivery time for station equipments in weeks and even months, the result may be an unavoidable shutdown.	expenditure be reinstated.
CER:5.8 Page 26	CELCOR's residual CAPEX forecast includes one-off CAPEX of PhP11.08 Million in RY 2010 for residual expenditure on renewal and growth related materials and supplies including spares. There is no other CAPEX in this line item either for the historical period or for the remainder of the forecast period. No explanation for this one-off expenditure has been provided in the revenue application. We consider this expenditure to be sufficiently material to have been justified in the revenue application. Since no such justification has been provided we recommend that the expenditure not be allowed. (Spares of 69 KV poles and spares for Substation Equipments)	This CAPEX has no historical equivalent in magnitude and scale as we have not implemented any major or even minor upgrading in our equipments, instruments and devices. Prior to our entry into PBR our substations were provided with limited spares and in some instances only, when necessary condition and this is due to the budget constraints that we have experienced on previous years. CELCOR proposes to include spares for substation equipment amounting to PhP9.58 million, so that it will be able to conduct replacement of equipment and to restore power as soon as possible in the event of failure because our concern is the reliability performance of our stations and distribution systems. See breakdown of the proposed spare equipment.	
CER:5.9 Page 26	There was no reported growth related historical expenditure for this line item (overhead conductor and devices-service drops) over CY 2005-08 but CELCOR appears to have inadvertently shown this expenditure in its renewal template.	Yes, our forecasts for service drops are for growth but we inadvertently placed on residual renewal template only its historical expenditures.	Noted.