



**Regulatory Reset for  
Iligan Light and Power, Inc. (ILPI)**

**April 2009 to March 2013  
(Second Regulatory Period)**

**FINAL DETERMINATION**

**ERC Case No. 2008-027 RC**

**December 15, 2008**

## **Regulatory Reset for Iligan Light and Power, Inc.**

**April 2009 to March 2013**

**(Second Regulatory Period)**

### **FINAL DETERMINATION**

Pursuant to Section 43(f) of Republic Act No 9136, otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA), and Rule 15, Section 5(a) of its Implementing Rules and Regulations (IRR), the Energy Regulatory Commission (ERC) promulgated the *Distribution Wheeling Rates Guidelines* (DWRG) on December 10, 2004. These were subsequently updated and re-issued on July 26, 2006 as the *Rules for Setting Distribution Wheeling Rates (RDWR) for Privately Owned Distribution Utilities entering Performance Based Regulation (Second Entry Point)*.

Under Section 7.1.2 of the DWRG and the subsequent RDWR, the ERC was required to publish a Regulatory Reset Issues Paper to provide its initial views on the issues to be discussed during the pending Regulatory Reset Process, to specify the information required to be delivered by each Regulated Entity for the purposes of the Regulatory Reset Process and the time by which such information should be delivered. The Regulatory Reset Issues Paper was published on January 10, 2007. Following public consultation on the Issues Paper, the ERC's final view on the Regulatory Reset Process was described in the Position Paper on the Regulatory Reset for the October 2008 to September 2012 Regulatory Period for Privately Owned Distribution Utilities subject to Performance Based Regulation, published on March 14, 2007.

Annex B of ERC Resolution No. 12-02, Series of 2004 "Adopting a Methodology for Setting Distribution Wheeling Rates", dated December 10, 2004, defined five (5) entry points into PBR for privately owned Distribution Utilities. This was later amended to four (4) entry points by the ERC under Resolution 24, Series of 2007, dated October 24, 2007.

In accordance with the RDWR and the Position Paper, the three (3) Regulated Entities entering Performance Based Regulation (PBR) at the Second Entry Point, these being Iligan Light and Power, Inc. (ILPI), Mactan Electric Company, Inc. (MECO) and Cotabato Light and Power Company (ILPI), filed various information and data relating to the requirements for the Regulatory Reset Process on May 27, 2007.

Pursuant to Section 7.1.7 of the RDWR, after consideration of the information provided by the Regulated Entities and the reports prepared by its Regulatory Reset Experts, the ERC is required to publish a Final Determination on the price control arrangements that will apply to the Regulated Entities for the Second Regulatory Period. This consultation document was published on September 25, 2008, seeking further submissions from interested parties. The closing date for submissions was on October 24, 2008. A public consultation to discuss the submissions on the Draft Determination was held in Iligan City on November 6, 2008.

Following its consideration of the submissions received, the discussions at the public hearing, and further evidence presented by ILPI, the ERC has prepared its Final Determination of the price control arrangements that will apply to ILPI during the Second Regulatory Period. These arrangements are discussed below.

## TABLE OF CONTENTS

<b>1. INTRODUCTION</b> .....	<b>4</b>
1.1 Legal basis .....	4
1.2 Overview of the Reset Process.....	5
1.3 Purpose of the Final Determination.....	7
1.4 Rate-setting process going forward .....	7
<b>2. FORECASTS OF ECONOMIC PARAMETERS</b> .....	<b>8</b>
2.1 Purpose of the Economic Forecasts .....	8
2.2 Consumer Price Index (Philippines): Utility Applications .....	8
2.3 Consumer Price Index – USA .....	10
2.4 Foreign Exchange Rate – Peso/US\$ .....	12
2.5 ERC Final Decision – Forecast Economic Indices .....	13
<b>3. ENERGY FORECASTS</b> .....	<b>15</b>
3.1 General.....	15
3.2 Energy Consumption Forecast.....	15
3.3 ERC Final Decision on Consumption Forecast .....	18
3.4 Demand Forecasts .....	18
3.5 ERC Final Decision on Maximum Demand Forecasts.....	19
<b>4. CAPITAL EXPENDITURE FORECASTS</b> .....	<b>21</b>
4.1 Approach to capital expenditure forecasts .....	21
4.2 Purpose of the capital expenditure program.....	21
4.3 Capital expenditure program proposed by ILPI .....	22
4.4 Analysis of ILPI’s capital expenditure program – General .....	24
4.5 Analysis of ILPI’s capital expenditure program – Significant projects .....	24
4.6 Analysis of ILPI’s capital expenditure program – residual expenditure .....	25
4.7 Review of ILPI’s submission on the Draft Determination .....	26
4.8 Expenditure program proposed by PB Associates .....	26
4.9 ERC Final Determination on the Capital Expenditure Program .....	27
4.10 Acquired sub-transmission assets .....	29
<b>5. OPERATING AND MAINTENANCE EXPENDITURE FORECASTS</b> .....	<b>31</b>
5.1 Approach to operating & maintenance expenditure forecasts .....	31
5.2 Purpose of the operating and maintenance expenditure program .....	31
5.3 Operating and maintenance expenditure proposed by ILPI.....	32
5.4 Analysis of operating and maintenance expenditure - methodology.....	33
5.5 Analysis of the base operating and maintenance expenditure .....	33

5.6	Analysis of the Opex Line items.....	35
5.7	Analysis of related business expenditure.....	36
5.8	PB Associates' review of ILPI's submission on the Draft Determination.....	36
5.9	Expenditure program proposed by PB Associates.....	37
5.10	ERC Final Determination on the operating and maintenance expenditure.....	38
<b>6.</b>	<b>OTHER TAXES, LEVIES AND DUTIES .....</b>	<b>40</b>
6.1	Approach to other taxes, levies and duties expenditure forecasts.....	40
6.2	Purpose of the taxes, levies and duties expenditure.....	40
6.3	License fees, levies, duties and other taxes expenditure proposed by ILPI.....	41
6.4	Analysis of license fees, levies, duties and other taxes expenditure.....	42
6.5	Final determination on license fees, levies, duties and other taxes.....	42
<b>7.</b>	<b>REGULATORY ASSET BASE.....</b>	<b>44</b>
7.1	Approach to the RAB.....	44
7.2	Opening valuation of the RAB.....	44
7.3	Final Determination on the opening value of the RAB.....	46
7.4	Regulatory depreciation.....	47
7.5	Final Determination - Rolled forward asset base.....	47
7.6	Final Determination on Working capital.....	48
<b>8.</b>	<b>WEIGHTED AVERAGE COST OF CAPITAL .....</b>	<b>50</b>
8.1	Purpose of the regulatory WACC.....	50
8.2	Approach to the WACC.....	50
8.3	WACC Methodology.....	51
8.4	Final Determination – Regulatory WACC.....	52
<b>9.</b>	<b>ANALYSIS OF REVENUE REQUIREMENTS AND PRICE CAPS.....</b>	<b>54</b>
9.1	Approach to calculating the Maximum Average Price (MAP).....	54
9.2	Omission of the Corporate Income Tax Building Block.....	54
9.3	Annual Revenue Requirement – ILPI application.....	54
9.4	Annual Revenue Requirement – ERC analysis.....	55
9.5	Final determination – Allowed revenue requirement.....	57
9.6	Final determination – Smoothed maximum average price.....	57
9.7	Setting the P <sub>0</sub> -factor.....	60
9.8	Side constraints.....	61
9.9	Final Determination on the opening price and smoothing factor.....	61
<b>10.</b>	<b>PERFORMANCE INCENTIVE SCHEME.....</b>	<b>63</b>
10.1	Background to the Performance Incentive Scheme.....	63
10.2	Overview of the Price-linked Incentive Scheme.....	63

10.3	Overview of the Guaranteed Service Level Scheme .....	65
10.4	Information Disclosure Scheme .....	65
10.5	Price-linked Incentive Scheme proposed by ILPI .....	66
10.6	Guaranteed Service Level Scheme proposed by ILPI .....	67
10.7	Excluded events proposed by ILPI .....	68
10.8	ERC Final Decision on the Price-linked Incentive Scheme .....	68
10.9	ERC Final Decision on the GSL Scheme .....	69
10.10	ERC Final Determination on Excluded Events .....	69
<b>APPENDIX A : APPROVED CAPITAL EXPENDITURE PROGRAM .....</b>		<b>71</b>
<b>APPENDIX B : APPROVED OPERATING &amp; MAINTENANCE EXPENDITURE .....</b>		<b>74</b>
<b>APPENDIX C : APPROVED LEVIES, DUTIES AND OTHER TAXES (OTHER THAN CORPORATE INCOME TAX) EXPENDITURE .....</b>		<b>77</b>

## 1. INTRODUCTION

### 1.1 Legal basis

1.1.1 Section 43(f) of Republic Act No 9136, otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA), and Rule 15, Section 5(a) of its Implementing Rules and Regulations (IRR), authorized the ERC to adopt alternative forms of internationally accepted rate-setting methodology. Pursuant to the aforementioned provisions of law, the ERC, after conducting public consultation, adopted on December 10, 2004 the *Distribution Wheeling Rates Guidelines (DWRG)*. These were subsequently updated and after further public consultation re-issued on July 26, 2006 as the *Rules for Setting Distribution Wheeling Rates for Privately Owned Distribution Utilities entering Performance Based Regulation (First Entry Point) (RDWR)*. The RDWR provides for a performance-based regulation (PBR) using a price cap to set the distribution wheeling rates to be charged by Distribution Utilities to its customers.

1.1.2 Annex B of ERC Resolution No. 12-02, Series of 2004 "Adopting a Methodology for Setting Distribution Wheeling Rates", dated December 10, 2004, defined five (5) entry points into PBR. This was subsequently revised to four (4) entry points under ERC Resolution No. 24, Series of 2007, dated October 24, 2007. The ERC is currently publishing its Final Determinations for the Regulated Entities entering PBR at the Second Entry Point. This document relates specifically to the Final Determination for Iligan Light and Power, Inc. (ILPI). Similar documents are being published on the same date to describe the Final Determinations for the other Regulated Entities in the Second Entry Group, these being:

- a) Cotabato Light and Power Company (CLPC); and
- b) Mactan Electric Company, Inc (MECO).

The Final Determination applies to the Second Regulatory Period for this entry group, which commences on April 1, 2009 and ends on March 31, 2013.<sup>1</sup>

1.1.3 Under Section 7.1.2 of the RDWR, the ERC is required to publish a Regulatory Reset Issues Paper to provide its initial views on the issues to be discussed during the pending Regulatory Reset Process, to specify the information required to be delivered by each Regulated Entity for the purposes of the Regulatory Reset Process and the time by which such information should be delivered. The Regulatory Reset Issues Paper (Issues Paper) was published on January 10, 2007. Following public consultation on the Issues Paper, the ERC's final view on the Regulatory Reset Process was described in the Position Paper on the Regulatory Reset for the October 2008 to September 2012 Regulatory Period for Privately Owned Distribution Utilities subject to Performance Based Regulation (Position Paper), published on March 14, 2007.

1.1.4 In the Position Paper, the process to be undertaken and the timetable for the regulatory reset for the Second Regulatory Period were set forth as follows:

- a) October 16, 2007 : Regulated Entities to file rate applications.
- b) November 2007 : ERC to conduct expository and evidentiary hearings on the applications.
- c) April 11, 2008 : ERC to publish its Final Determination on the applications and price settings, for consultation.
- d) May 16, 2008 : Submissions on draft determination close.

<sup>1</sup> Note that there was no First Regulatory Period for this entry group.

- e) May-June 2008 : ERC to conduct public consultation and evidentiary hearings.
- f) August 1, 2008 : ERC to issue the Final Determination on the Regulated Entities' applications and the price settings for the Second Regulatory Period.

1.1.5 In a series of communications between the ERC and the Regulated Entities and following the aforementioned reduction in the number of entry groups into PBR, some changes were agreed to the above timetable, the most notable being:

- a) While the Position Paper and the RDWR called for rate applications prior to the Final Determination, on further consideration this was found to be inappropriate. The actual rate applications can only be made once the ERC has made its final determination on the price caps under PBR. The interim rate applications were therefore amended to take the form of a revenue application, in which the Regulated Entities could apply for approval of their revenue requirements and the performance incentive scheme that would apply during Second Regulatory Period, and on which the final rate-setting for the Second Regulatory Period would be based.
- b) The date for filing this revenue application was moved to May 27, 2008.
- c) The publication of the Final Determinations was set on September 25, 2008.
- d) Closing date for submissions on the Final Determination was changed to October 24, 2008.
- e) Public consultation on the Final Determination will occur from November 4 to 7, 2008.
- f) The Final Determination on the rates for the Second Regulatory Period will be issued on December 12, 2008.<sup>2</sup>

1.1.6 Subsequent to developing the timetable described in paragraph 1.1.5, the ERC has consulted with all interested parties about a number of revisions to the RDWR.<sup>3</sup> Following this consultation, a revised version of the RDWR was issued on December 8, 2008<sup>4</sup>, accompanied by a report on the revisions made<sup>5</sup>. The impact of these rule changes have been taken into account in this Final Determination. As a result, the publication of the Final Determination was delayed until December 15, 2008.

## 1.2 Overview of the Reset Process

1.2.1 The Reset Process for the Second Entry Group's Second Regulatory Period (October 1, 2007 until March 31, 2009) commenced with the ERC's issuance of the Issues Paper on January 10, 2007 and the subsequent publication of the Position Paper on March 14, 2007.

1.2.2 In compliance with the Position Paper, the Regulated Entities filed their applications for approval of the allowed revenue and performance incentive schemes (Revenue

<sup>2</sup> In terms of the Final Determination, the maximum average price-cap for Regulatory Year 2010 will be decided, as well as the efficiency factor (X-factor) that will apply for the whole of the Second Regulatory Period. This price cap still has to be converted into distribution rates, which will involve a further consultation process prior to the final rate structure being accepted by the ERC, for implementation on April 1, 2009.

<sup>3</sup> A consultation document in this regard, titled "Discussion Paper on Modifications to the Rules for Setting Distribution Wheeling Rates (RDWR)" was issued on September 24, 2008.

<sup>4</sup> "Rules for Setting Distribution Wheeling Rates for Privately Owned Distribution Utilities entering Performance Based Regulation (Third Entry Point)", dated December 8, 2008.

<sup>5</sup> "Modification to the Rules for Setting Distribution Wheeling Rates (RDWR)", December 8, 2008.

Applications) for the Second Regulatory Period on May 27, 2008. Following the receipt of these applications, the ERC conducted the following hearing and consultation process:

- a) May 28, 2008 : ERC issued Order
- b) June 14, 2008 : First publication of the applications by the Regulated Entities
- c) June 20, 2008 : Second publication of the applications by the Regulated Entities
- d) June 27, 2008 : ILPI jurisdictional hearing
- e) July 1, 2008 : CLPC jurisdictional hearing
- f) July 7, 2008 : CLPC clarificatory meeting
- g) July 9, 2008 : ILPI clarificatory meeting
- h) July 10, 2008 : ILPI evidentiary hearing
- i) July 14, 2008 : CLPC evidentiary hearing
- j) July 23, 2008 : MECO clarificatory meeting
- k) July 24, 2008 : MECO evidentiary hearing
- l) August 26, 2008 : Follow-up clarificatory meeting with MECO

Provision was also made for hearings during August where parties of record to the Revenue Application cases could file counter-evidence. However, no such evidence was filed and the hearings were therefore not required.

- 1.2.3 During these hearings, the ERC informed all interested parties of the procedures and timelines pertaining to the Regulatory Reset Process. The Regulated Entities had opportunity to present witnesses to support their revenue and performance incentive scheme applications and to answer questions in this regard from parties of record and the ERC.
- 1.2.4 As noted in Paragraph 1.2.2, additional provision was made for clarificatory meetings with each of the Regulated Entities. The purpose of these meetings was to allow the ERC's staff and Regulatory Reset Experts to present detailed questions and discuss details of their applications with technical and administrative staff of the Regulated Entities in a less formal environment (than evidentiary hearings). All parties of record were invited to observe these meetings. All information gathered during and subsequent to these meetings (as a result of requests for additional information made during the meetings) that were considered by the Reset Experts and the ERC in preparing this Final Determination was formally offered as supplementary evidence to the applications.
- 1.2.5 Following the hearings and analysis of the applications and evidence presented by ILPI and after considering the recommendations of the ERC's Regulatory Reset Experts, the ERC has concluded a preliminary position on the price caps and price path that should apply to ILPI for the Second Regulatory Period. This position is described in this Final Determination.
- 1.2.6 Submissions were invited from interested parties to comment on the ILPI Draft Determination, with the closing date for submissions on October 24, 2008. At the closing date, submissions were received only from ILPI. A public consultation was held in Metro Manila on November 6, 2007 at which the parties of record were given opportunity to present and discuss their submissions on the ILPI Draft Determination. Other interested parties were also given opportunities to provide oral inputs at the public consultation.

- 1.2.7 Subsequent to the public consultation, several questions for further clarification were submitted to ILPI on its submission (ERC Order dated November 10, 2008). ILPI responded on November 20, 2008 to these questions.
- 1.2.8 The ERC evaluated all the submissions received that were relevant to the Draft Determination, as well as the additional information provided by ILPI and is now issuing a Final Determination on the price-control arrangements for ILPI for the Second Regulatory Period.

### 1.3 Purpose of the Final Determination

- 1.3.1 The Final Determination embodies the ERC's final position on the price control arrangements that will apply to ILPI for the Second Regulatory Period. It describes the ERC's evaluation of ILPI's revenue and performance incentive scheme application, as well as the evidence presented in support thereof during the clarificatory meetings and evidentiary hearings, the submissions received on the ERC's Draft Determination and subsequent further information provided. It will form the basis on which ILPI will prepare and submit its distribution rate applications for the Second Regulatory Period.

### 1.4 Rate-setting process going forward

- 1.4.1 Each Regulated Entity is required to convert the maximum average price (MAP) set in terms of its Final Determination into a distribution rate structure. This rate structure is to be filed with the ERC by January 23, 2009.
- 1.4.2 The ERC will invite public submissions on these rate filings and will conduct public hearings at which they will be addressed. The closing date for the public submissions will be on February 26, 2009.
- 1.4.3 Public hearings will be held in:
- Lapu Lapu City (MECO) : March 9, 2009
  - Manila<sup>6</sup> (CLPC) : March 10, 2009
  - Iligan City (ILPI) : March 6, 2009
- 1.4.4 At the hearings, further information may be requested by the ERC. After consideration of the rate filings, submissions received and any further information obtained, the ERC will publish the final approved rate structures on March 31, 2009. The Regulated Entities will communicate these structures to their customers for a four-week period prior to April 29, 2009.
- 1.4.5 The new rate structures will be implemented from May 1, 2009. This is one month later than the scheduled start of the Second Regulatory Period (April 1, 2009) and any resulting under- or over-recovery in revenue will be reflected in the correction factor at the next rate application, for implementation in April 2010.

<sup>6</sup> Given the current security situation in Cotabato City, until further notice, all further public consultation associated with this case will be held at the ERC offices in Manila.

## 2. FORECASTS OF ECONOMIC PARAMETERS

### 2.1 Purpose of the Economic Forecasts

- 2.1.1 The economic forecasts are important inputs into the determination of the annual revenue requirement and the resulting maximum average price-caps (MAP) for ILPI's Second Regulatory Period. In particular, this section describes the ERC's view on the expected consumer price index (CPI) in the Philippines and the United States of America over the Second Regulatory Period, as well as the forecast Philippine Peso (PhP) and US dollar (US\$) exchange rates.<sup>7</sup>
- 2.1.2 This chapter discusses the macroeconomic forecasts available for the Philippines from a number of independent sources. The information from these sources is compared with the economic forecasts submitted by ILPI in its Revenue Application in order to assess whether these forecasts are reasonable to apply during the Second Regulatory Period, or whether they need to be adopted.
- 2.1.3 It should be noted that as stated in Section 3.1.4 of the Position Paper, the ERC has decided to adopt a single set of economic forecasts for all the Regulated Entities making up the Second Entry Group. The economic forecasts submitted by the other Regulated Entities in their Revenue Applications are therefore also referred to in this chapter.
- 2.1.4 No further submissions were received on alternative economic parameters to those suggested in the Draft Determination. Since the Regulated Entities were not asked to resubmit economic data and this Final Determination is published well after the Revenue Applications were lodged, the originally submitted economic indices, as well as the references used in the Draft Determination are now somewhat outdated. The ERC has therefore obtained updated economic data which is compared against that originally submitted and discussed in the Draft Determination.

### 2.2 Consumer Price Index (Philippines): Utility Applications

- 2.2.1 The Philippines CPI forecast is important to the regulatory reset as this is a prime driver for most operating and maintenance expenditure increases over the Second Regulatory Period, as well as for a large part of the increases in capital expenditure.
- 2.2.2 These expenditure increases have been included in the Regulated Entities' revenue forecasts (discussed in Sections 4, 5 and 6), which are in turn considered in determining the smoothing factor (X-factor) for each Regulated Entity (see the analysis in Section 8.1). The latter calculations also take the forecast Philippines inflation directly into account. Once the X-factor is determined, the projected Smoothed Maximum Average Price caps (SMAPs) and the opening Maximum Average Price-cap (MAP) for the Second Regulatory Period can be established, based on the opening price and the forecast inflation rate, adapted with the X-factor.
- 2.2.3 During the course of the Second Regulatory Period, the X-factor will be used with the actual CPI outcomes experienced in the Philippines during each year to determine the actual price path (as opposed to the initial projection of the MAP at the reset).

---

<sup>7</sup> The RDWR makes provision for local and international expenditure, using the US\$ as the proxy amount for international expenditure. All expenditure in other denominations therefore has to be converted into US dollar amounts.

- 2.2.4 In its application, ILPI proposed forecasts for the Philippines CPI that correspond to those published by the Economist Intelligence Unit (EIU) in March 2008<sup>8</sup>, converted to regulatory years. Since this data set only provides forecasts until 2012, it was assumed that the 2012 figures will also apply in 2013. This approach was also adopted by the other two (2) Regulated Entities in the Second Entry Group.
- 2.2.5 The forecasts proposed by the three (3) Regulated Entities are presented in Table 2.1 and Figure 2.1 below. This is also compared with the inflation forecasts of the ERC in its final determination on the price-control arrangements for the First Entry Group (August 2007), the figures used in the Draft Determination and updated figures from the EIU. The ERC consulted the National Economic Development Authority (NEDA), but these figures were not available. Since the regulatory years run from April 1 to March 31, the annual CPI figures have been converted to these periods.<sup>9</sup> In addition, all inflation forecasts were converted from a common regulatory year basis.
- 2.2.6 For the Draft Determination, indices published in August 2008 by the EIU were used. These have now been updated with the latest available (October 22, 2008) indices which are also included in the comparison. It will be noted that the latest local inflation forecasts are substantially higher than those published by the EIU in August 2008, or most of the other information sources available at the time of the Revenue Application.<sup>10</sup>
- 2.2.7 The EIU figures used in Table 2.1 are more recent than those obtained from other sources and therefore better takes into account the substantial recent increases experienced in the Philippines CPI.
- 2.2.8 While the CPI forecasts range across a considerable band, reflecting the uncertainty that exists in forecasting such economic indices, this is not considered a material problem in terms of the impact on the price setting. The CPI forecast is taken into account in both sides of the equation for the calculation of the X-factor<sup>11</sup> – indirectly in the case of the annual revenue requirement. The revenue requirement is calculated in nominal terms, and takes into account the same inflation forecast for future expenditure. As long as the economic indicators are consistently applied, the impact of choosing a lower or higher CPI (within the indicated range) on the calculated X-factor is therefore low.

2.2.9 Table 2.1 : Various Philippines CPI Movement Forecasts (Regulatory Years)

	2007	2008	2009	2010	2011	2012	2013
ILPI	3.4%	4.0%	3.9%	3.6%	3.5%	3.4%	3.4%
ILPI	3.4%	4.0%	3.9%	3.6%	3.5%	3.4%	3.4%
MECO	3.4%	4.0%	3.9%	3.6%	3.5%	3.4%	3.4%
EIU (Oct 2008)	3.4%	4.5%	9.0%	6.4%	4.4%	4.2%	4.0%
Draft Det (2 <sup>nd</sup> Entry)	3.4%	4.5%	8.8%	5.6%	3.6%	3.4%	3.4%
First Entry Gr. Final	3.4%	3.2%	3.4%	3.4%	3.5%		

Source : Economist Intelligence Unit (published Oct. 2008, updated figures obtained in Dec, 2008)  
ERC Final Determination for First Group Entrants  
ERC Draft Determination for Second Group Entrants

Note : Data for 2007 regulatory year based on actual indices

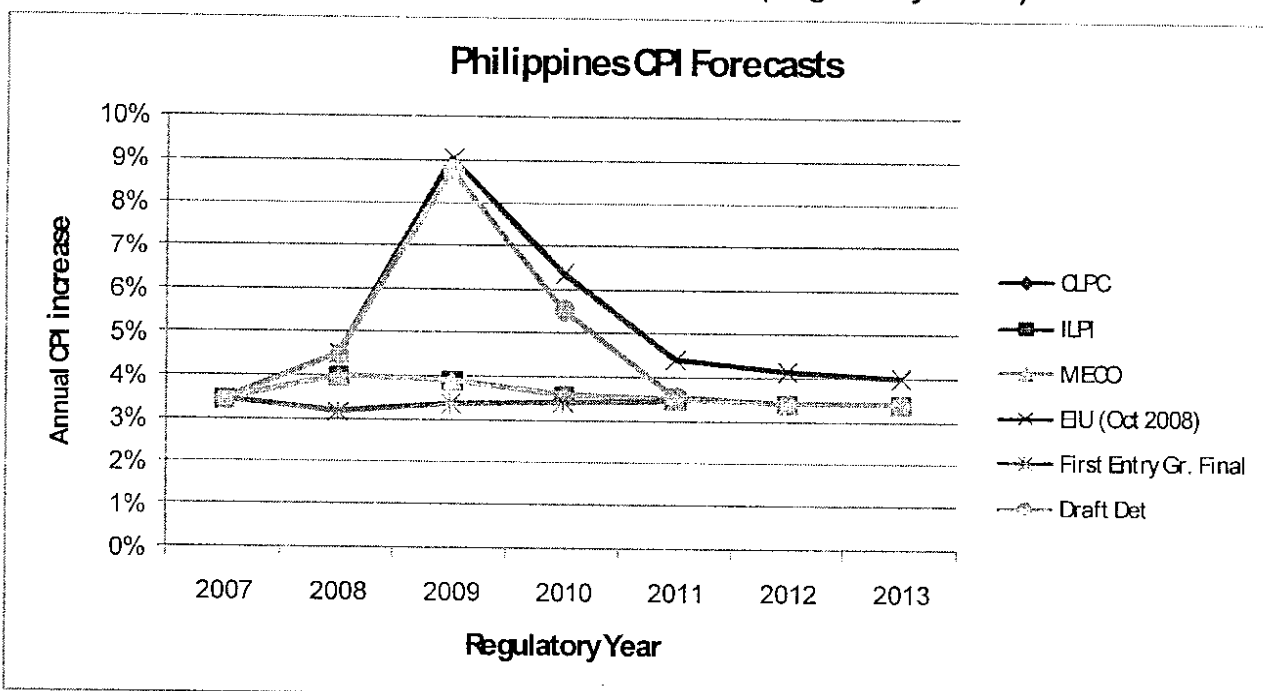
<sup>8</sup> These indices were communicated to ILPI by the ERC as part of pro forma documentation for filing the Revenue Application, but there was no obligation on any Regulated Entity to apply the figures.

<sup>9</sup> This was simply done by calculating a weighted average of the calendar year figures, where the weighting is in accordance to the proportion of the regulatory year that overlaps with the calendar year.

<sup>10</sup> The 2008 figure remained unchanged in the new EIU forecast. This reflects the fact that Regulatory Year figures are reported here, for the period April 2007 to March 2008.

<sup>11</sup> Section 4.15.3 of the RDWR

Figure 2.1 : Comparison of Philippine CPI Forecasts (Regulatory Years)



2.2.10 In addition, the actual annual price caps will be based on the actual CPI for each regulatory year and discrepancies between the forecast and actual figures will therefore not impact on future price settings.

### 2.3 Consumer Price Index – USA

2.3.1 Capital investment in distribution networks generally involves substantial overseas purchases. The RDWR recognizes this and uses the United States dollar as proxy for all foreign purchases.<sup>12</sup> Movements in the US CPI therefore have a significant bearing on the forecast expenditure of Regulated Entities for the Second Regulatory Period.

2.3.2 To recognize the parity relationship between international rates of inflation, interest rates and exchange rates, it is important to adopt a consistent approach (with that used for the local CPI forecast) to selecting the US CPI forecasts. As with the local CPI forecasts, if this consistency is maintained, differences between forecasts for the US CPI, as long as these are within reasonable bounds, should not have a material impact on the calculation of the X-factor.

2.3.3 In addition, the calculation of the weighted index that is used to determine the annual MAP<sup>13</sup> also takes into account movements in the US CPI – if these exceed a certain threshold limit.

2.3.4 In its application, ILPI proposed forecasts for the USA CPI that corresponds to those published by the Economist Intelligence Unit (EIU) in March 2008<sup>14</sup>, converted to regulatory years. Since this data set only provides forecasts until 2012, it was assumed

<sup>12</sup> This does not imply that all foreign purchases will be made in the US, but that foreign purchases should be converted to US dollar terms for the purpose of assessing international CPI and exchange rate movements.

<sup>13</sup> Sections 4.2.1 and 3.3 of the RDWR

<sup>14</sup> Supra note 8

that the 2012 figures will also apply in 2013. This approach was also adopted by the other two Regulated Entities in the Second Entry Group.

2.3.5 The US CPI forecasts proposed by the three Regulated Entities are presented in Table 2.2 and Figure 2.2 below. This is also compared with the inflation forecasts of the ERC in its final determination on the price-control arrangements for the First Entry Group (August 2007), the Draft Determination figures, updated figures from the EIU and figures published by the International Monetary Fund (IMF)<sup>15</sup>. Since the regulatory years run from April 1 to March 31, the annual CPI figures have been converted to these periods.<sup>16</sup> In addition, all inflation forecasts were converted from a common regulatory year basis.

2.3.6 The EIU forecast of the US CPI has decreased somewhat since the publication of the Draft Determination, as indicated in Figure 2.2.

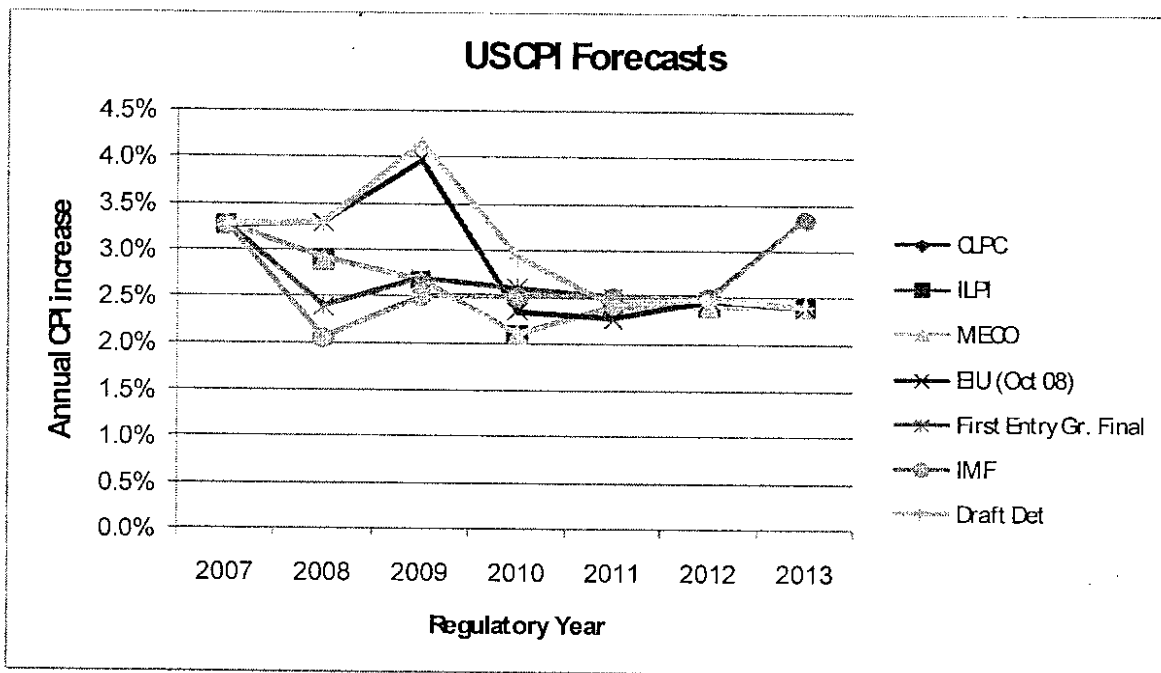
2.3.7 Table 2.2: Various US CPI Movement Forecasts (Regulatory Years)

	2007	2008	2009	2010	2011	2012	2013
ILPI	3.3%	2.9%	2.7%	2.1%	2.4%	2.4%	2.4%
MECO	3.3%	2.9%	2.7%	2.1%	2.4%	2.4%	2.4%
EIU (Oct 08)	3.3%	3.3%	4.0%	2.4%	2.3%	2.5%	2.4%
Draft Det	3.3%	3.3%	4.2%	2.9%	2.4%	2.5%	2.4%
First Entry Gr. Final	3.3%	2.4%	2.7%	2.6%	2.5%		
IMF	3.3%	2.1%	2.5%	2.5%	2.5%	2.5%	3.3%

Source : Economist Intelligence Unit (published Dec. 2008)  
ERC Draft Determination for Second Group Entrants  
ERC Final Determination for First Group Entrants  
International Monetary Fund (up to 2009)

Note : Data for 2008 regulatory year based on actual indices

Figure 2.2 : Comparison of US CPI Forecasts (Regulatory Years)



<sup>15</sup> The IMF projections are only up to 2009, and have been assumed constant thereafter.

<sup>16</sup> This was simply done by calculating a weighted average of the calendar year figures, where the weighting is in accordance to the proportion of the regulatory year that overlaps with the calendar year.

## 2.4 Foreign Exchange Rate – Peso/US\$

- 2.4.1 The last economic index required to be forecasted for the Second Regulatory Period is the rate of exchange of the Philippine Peso against the US dollar. As noted before, the US dollar is used as proxy for foreign expenditure by the Regulated Entities. Since the allowed revenue for each Regulated Entity will be set in Peso, it is necessary to convert foreign expenditure to Peso, and exchange rate movements therefore impact directly on the approved expenditure.
- 2.4.2 As noted above, given the parity relationship between exchange rates, interest rates and inflation rates, it is important to apply a consistent approach to these factors. This will ensure that forecasts that deviate somewhat from actual future rates will not have a material impact on the X-factor.
- 2.4.3 In its application, ILPI used the Peso/US\$ rate published by the Economist Intelligence Unit (EIU) in March 2008<sup>17</sup>, converted to regulatory years. Since this data set only provides forecasts until 2012, it was assumed that the 2012 figures will also apply in 2013. This approach was also adopted by the other two Regulated Entities in the Second Entry Group.
- 2.4.4 The rate of exchange forecasts proposed by the three Regulated Entities are presented in Table 2.3 and Figure 2.3 below. This is also compared with the forecasts of the ERC in its final determination on the price-control arrangements for the First Entry Group, the figures used in the Draft Determination for the Second Entry Group and updated figures from the EIU. Since the regulatory years run from April 01 to March 31, the average annual rate of exchange figures have been converted to these periods, assuming straight-line movements throughout the year. In addition, all exchange rate forecasts were converted to a common regulatory year basis (2007).

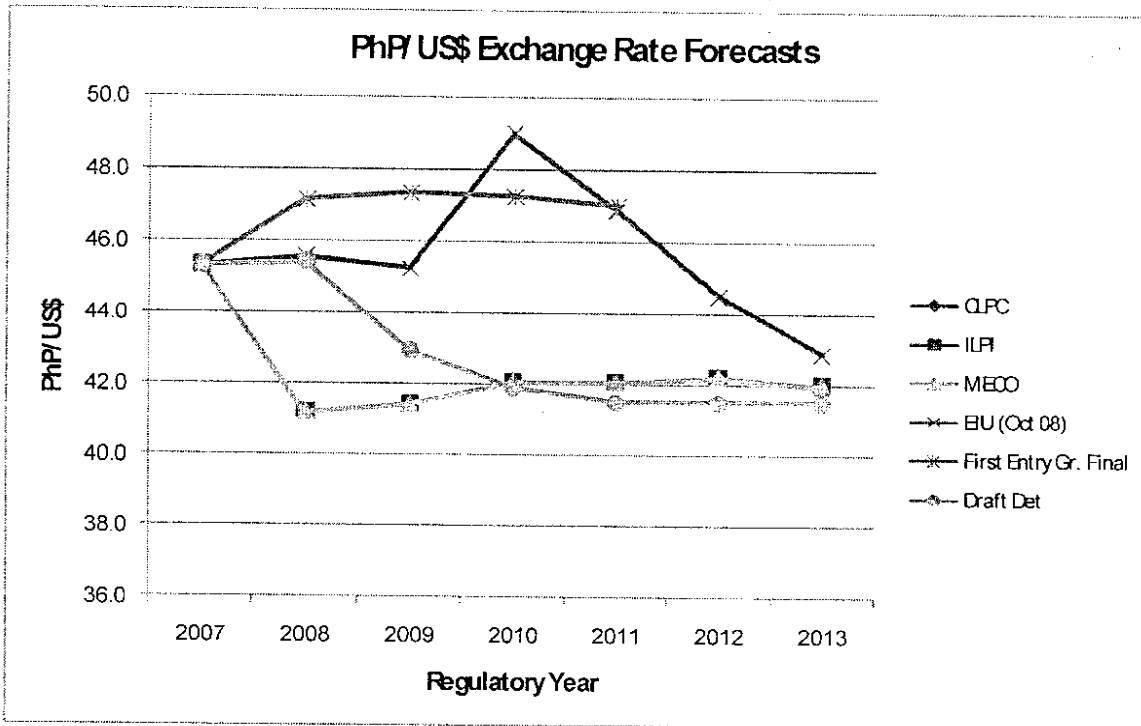
2.4.5 Table 2.3 : Various PhP/US\$ Rate of Exchange Forecasts (Regulatory Years)

	2007	2008	2009	2010	2011	2012	2013
ILPI	45.3	41.2	41.4	42.1	42.1	42.2	42.0
ILPI	45.3	41.2	41.4	42.1	42.1	42.2	42.0
MECO	45.3	41.2	41.4	42.1	42.1	42.2	42.0
EIU (Oct 08)	45.3	45.6	45.3	49.0	46.9	44.5	42.9
Draft Det	45.3	45.4	42.9	41.9	41.5	41.5	41.5
First Entry Gr. Final	45.3	47.2	47.4	47.3	47.0		

Source : ERC Draft Determination for Second Group Entrants  
Economist Intelligence Unit (published Dec. 2008)  
ERC Final Determination for First Group Entrants

<sup>17</sup> Supra note 8

**Figure 2.3 : Comparison of PhP/US\$ Exchange Rate Forecasts (Regulatory Years)**



## 2.5 ERC Final Decision – Forecast Economic Indices

- 2.5.1 As discussed above, it is important to apply a consistent approach to the forecasting of the economic indices. In addition, it is also important that forecasts are obtained from a reliable and independent macro-economic forecasting specialist. The ERC resolved to use the forecasts obtained from the Economist Intelligent Unit (EIU), based on October 22, 2008 values (published in December 2008).
- 2.5.2 The updated EIU figures correlate better with current economic data in the Philippines than those used for the Draft Determination. The ERC, however, notes that economic conditions are somewhat unstable and that the financial indices are still subject to high volatility. The current spot CPI and exchange rate (PhP/US\$) values are somewhat higher than the averages indicated by the EIU, but the medium term projections are considered a reasonable estimate.
- 2.5.3 The ERC also notes that there are correction mechanisms built into the RDWR for material changes between the forecast and actual CPI or exchange rates which will largely offset the impact on consumers or Regulated Entities if the value of these indices should in the future differ materially from the estimated values used in the draft and final determinations.
- 2.5.4 In Table 2.4, the forecasts adopted by the ERC for the Final Determination are indicated.

**Table 2.4 : Economic Indices Forecasts Accepted by the ERC**

	2008	2009	2010	2011	2012	2013
Philippine CPI (% increase per regulatory year)	4.5%	9.0%	6.4%	4.4%	4.2%	4.0%
US CPI (% increase per regulatory year)	3.3%	4.0%	2.4%	2.3%	2.5%	2.4%
PhP/US\$ exchange rate (average for regulatory year)	45.58	45.27	49.00	46.88	44.50	42.88

(Source : EIU, October 2008 – converted to regulatory years)

2.5.5 These figures differ from those used in the ERC's final determinations on the price-control arrangements for the First Entry Group. This is a reflection of the updated forecast economic parameters, not of any change in approach by the ERC.

(This space is left intentionally blank)

### 3. ENERGY FORECASTS

#### 3.1 General

- 3.1.1 Energy consumption and maximum demand forecasts are key parameters for the price determination. Firstly, the forecast energy consumption levels are directly taken into account in calculating the X-factor and the smoothed price path at the start of the regulatory period.
- 3.1.2 In addition, operating and capital expenditure, especially the latter, are heavily influenced by network demand forecasts. Growth in demand therefore represents a primary justification for a Regulated Entity's capital expenditure plans. More indirectly, growth also drives operating and maintenance expenditure - larger networks, or networks utilized closer to maximum capacity to cater for additional demand, generally require more inputs from all levels of the organization, which over time leads to higher staffing requirements and higher expenditure on maintenance consumables.
- 3.1.3 A price-capped form of regulation is applied to the Distribution Wheeling Services. Since prices are pre-determined for the regulatory period, Regulated Entities' actual revenue will vary in proportion to energy sales (after accounting for changes in the CPI), with no opportunity to adjust prices to compensate for the fluctuations. The Regulated Entities will bear a so-called "volume risk". If actual sales are substantially less than forecast, this may mean that they would have to curtail expenditure. On the other hand, if actual consumption levels are higher than forecast, this should allow additional expenditure to cater for the additional demand.<sup>18</sup>
- 3.1.4 It is therefore clearly in the consumers' and the Regulated Entities' best interest to ensure that the energy and demand forecasts are accurate. Under-estimating consumption or demand may lead to reductions in the approved expenditure programs, while over-estimating may give rise to a lower than sustainable price-cap.

#### 3.2 Energy Consumption Forecast

- 3.2.1 The ILPI energy sales forecasts included in the Revenue Application are indicated in Table 3.1 below. A broken down value, including historical figures, is provided in Table 3.2. ILPI's own consumption has been excluded from the figures.

**Table 3.1 : ILPI MWh Energy Sales Figures (Forecast in the Revenue Application)**

	2009	2010	2011	2012	2013
<b>Energy consumption (MWh)</b>	187,901	366,002	371,567	462,120	467,870

- 3.2.2 ILPI bases its consumption forecasts on a polynomial curve fit method, based on long-term trends. The ERC's expenditure review consultant, PB Associates (PBA) reports<sup>19</sup> that the period over which the fit analysis conducted combines periods of very strong growth with slumps – the overall annual growth since 1996 was 4.7%. The growth-forecasts over the Second Regulatory Period is 25.8% per year (compound), but this

<sup>18</sup> This is as opposed to a revenue-capped form of regulation, where prices are allowed to be adjusted (within reasonable limits) to ensure approved revenue levels are maintained. However, should consumption levels rise substantially above that forecast, this may lead to network over-utilization problems, since no additional revenue would become available to cater for additional consumption.

<sup>19</sup> PB Associates report titled "REVIEW OF FORECAST EXPENDITURE: SECOND REGULATORY PERIOD – Iligan Light and Power Incorporated", dated 4 September 2008.

includes the contribution of several bulk consumers that ILPI intends to acquire through the acquisition of TransCo sub-transmission assets.

**Table 3.2 : Broken down ILPI MWh Energy Sales Figures**

Category	Calendar Years					Regulatory Years				
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Residential	66,115	66,099	67,244	69,808	74,101	74,834	77,755	80,633	83,451	86,187
Commercial	60,307	59,711	61,653	64,522	65,290	65,673	67,203	68,738	70,306	71,935
Industrial	6,860	6,392	6,166	6,334	5,704	5,627	5,332	5,091	4,915	4,811
Flat rate	1,151	1,210	1,210	1,210	1,632	1,670	1,818	1,954	2,076	2,181
Bulk	35,349	36,664	36,162	32,643	40,268	40,098	213,894	215,150	301,373	302,755
<b>TOTAL</b>	<b>169,782</b>	<b>170,076</b>	<b>172,435</b>	<b>174,518</b>	<b>186,995</b>	<b>187,901</b>	<b>366,002</b>	<b>371,566</b>	<b>462,121</b>	<b>467,869</b>
Annual Growth		0.2%	1.4%	1.2%	7.1%	0.5%	94.8%	1.5%	24.4%	1.2%

3.2.3 If the impact of the proposed new directly connected customers is removed, the resulting consumption figures are as presented in Table 3.3.

3.2.4 For the Draft Determination, it was assumed that bulk consumer consumption would grow at 2% per year. However, following ILPI' submission on the Draft Determination where the actual consumption growth in this category was demonstrated to be much lower for 2008, and taking into account the economic turmoil around the world, this growth was revised downwards to 1% per year in Table 3.3. Furthermore, in accordance with the revised systems loss cap policy currently being finalized by the ERC, a utility's own electricity consumption will no longer be passed through directly to consumers. It will now become a normal operating expense and, as such, own consumption should be included in the overall consumption figures for a Regulated Entity. This has been added back below. The overall ILPI growth-forecast for the Second Regulatory Period is then reduced to 2.55% per year (compound).

**Table 3.3 : ILPI Consumption Figures without New Bulk Consumers (MWh)**

Category	Calendar Years					Regulatory Years				
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Residential	66,115	66,099	67,244	69,808	74,101	74,834	77,755	80,633	83,451	86,187
Commercial	60,307	59,711	61,653	64,522	65,290	65,673	67,203	68,738	70,306	71,935
Industrial	6,860	6,392	6,166	6,334	5,704	5,627	5,332	5,091	4,915	4,811
Flat rate	1,151	1,210	1,210	1,210	1,632	1,670	1,818	1,954	2,076	2,181
Bulk	35,349	36,664	36,162	32,643	40,268	40,098	40,499	40,904	41,313	41,726
Utility	1,337	1,156	1,175	1,204	1,329	1,336	1,363	1,383	1,401	1,416
<b>TOTAL</b>	<b>171,120</b>	<b>171,232</b>	<b>173,611</b>	<b>175,721</b>	<b>188,325</b>	<b>189,237</b>	<b>193,969</b>	<b>198,704</b>	<b>203,460</b>	<b>208,256</b>
Annual Growth		0.1%	1.4%	1.2%	7.2%	0.5%	2.5%	2.4%	2.4%	2.4%

Source : ILPI application and ERC analysis

3.2.5 The average annual compound growth in consumption between 2004 and 2008 was 2.0%, but this is heavily influenced by the considerable growth figure forecast for 2008 while the forecast compound growth from 2008 to 2013 is 2.6% per year. There is a nine-month overlap between the 2008 calendar year and the 2009 regulatory year and it is therefore not surprising that the 2009 growth forecast is modest. The substantial increase in 2008 is somewhat unusual and appears to arise from an additional bulk supply customer connected to the network.

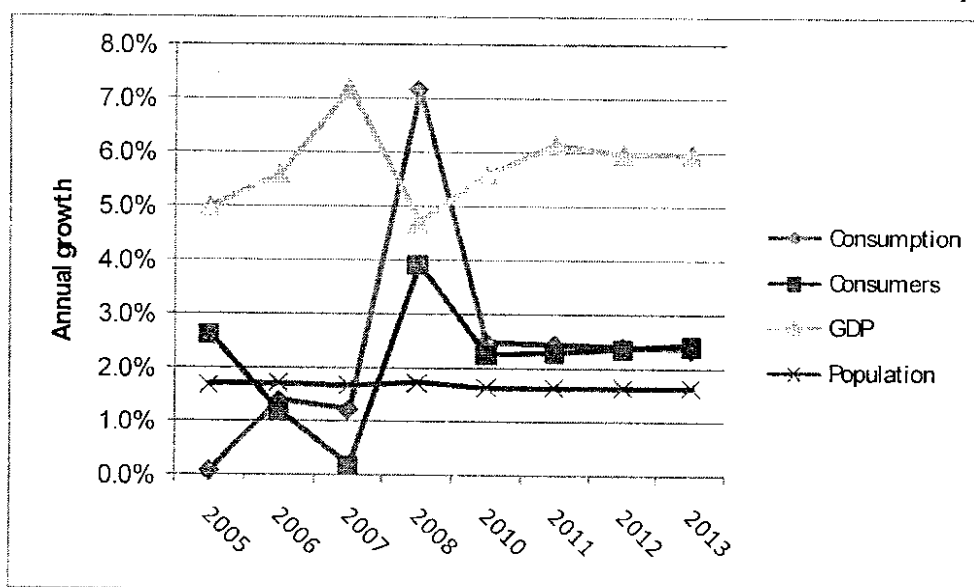
3.2.6 In order to better understand the consumption trends, the ERC also analyzed ILPI's consumer number figures, which is presented in Table 3.4. The overall growth rates indicate a slowdown in 2007, with recovery in 2008. The forecast growth rate is 2.6% per year, but this figure is somewhat suspect given the growth forecast for 2009 which does not seem to reflect the overlap between CY 2008 and RY 2009.

**Table 3.4 : ILPI Consumer Numbers (Forecast and Historical)**

	HISTORICAL FIGURES (CALENDAR YEARS)				Forecast	FORECAST (REGULATORY YEARS)				
	2004	2005	2006	2007		2008	2009	2010	2011	2012
<b>Total</b>	42,648	43,771	44,280	44,357	46,096	47,114	48,171	49,272	50,431	51,653
<b>Residential</b>	34,739	36,423	37,042	37,208	39,512	40,869	42,241	43,620	44,996	46,359
<b>Commercial</b>	7,892	7,331	7,221	7,133	6,565	6,226	5,908	5,630	5,411	5,270
<b>Industrial</b>	11	11	11	11	12	12	12	12	12	12
<b>Flat Rate</b>	4	4	4	4	4	4	4	4	4	4
<b>Bulk</b>	2	2	2	2	3	3	6	6	8	8
<b>Growth</b>		2.6%	1.2%	0.2%	3.9%	2.2%	2.2%	2.3%	2.4%	2.4%

3.2.7 In Figure 3.1 below, the forecast growth in ILPI's energy consumption (excluding the proposed additional directly connected customers) is compared with their estimated consumer numbers, as well as the predicted population growth in the region and the predicted growth in the national gross domestic product. It is recognized that consumption forecasts for a Distribution Utility are not directly comparable with these reference sources as there is no linear relationship between growth in population, maximum electricity demand, gross domestic product and energy consumption, and that comparisons of local figures with regional or national figures give rise to further inaccuracies. However, these factors are all drivers of energy consumption and are therefore useful indicators of the environment ILPI is likely to face over the Second Regulatory Period.<sup>20</sup>

**Figure 3.1 : Comparison of Energy Growth Estimates with Consumption Drivers**



Sources : Population growth for Lanao del Norte – National Statistics Office, January 2007  
GDP growth (Philippines) for 2006 and 2007 – National Statistical Coordination Board (2005 and 2006)  
GDP growth forecasts (Philippines) - EIU (2008)

<sup>20</sup> In the absence of directly applicable local statistical indicators, these are the best indicators available.

### 3.3 ERC Final Decision on Consumption Forecast

3.3.1 The ERC excluded the five (5) proposed TransCo directly connected customers in the consumption forecast of ILPI. This is in accordance with its Final Determination on the acquisition of TransCo sub-transmission assets – see the discussion in Section 4.10. With the removal of these customers, the ERC is generally comfortable with ILPI's energy consumption forecasts, amended to reflect the lower consumption of bulk consumers noted in ILPI's submission on the Draft Determination. For the Final Determination, the ERC will therefore accept ILPI's modified forecast energy sale figures as discussed above. The figures accepted for the Final Determination are indicated in Table 3.4.

**Table 3.4 : ERC Final Determination on Forecast Energy Sales (MWh)**

Category	Regulatory Years				
	2009	2010	2011	2012	2013
Residential	74,834	77,755	80,633	83,451	86,187
Commercial	65,673	67,203	68,738	70,306	71,935
Industrial	5,627	5,332	5,091	4,915	4,811
Flat rate	1,670	1,818	1,954	2,076	2,181
Bulk	40,098	40,499	40,904	41,313	41,726
Utility	1,336	1,363	1,383	1,401	1,416
<b>TOTAL</b>	<b>189,237</b>	<b>193,969</b>	<b>198,704</b>	<b>203,460</b>	<b>208,256</b>
Annual Growth	0.5%	2.5%	2.4%	2.4%	2.4%

### 3.4 Demand Forecasts

3.4.1 The ILPI maximum demand forecasts provided with the Revenue Application are indicated in Table 3.5 below, as well as historical demand figures from 2004. It should be noted that the Total Regulated Distribution System were based on the total reading on each feeders of Pala-O and Kiwalan Substations and not on a per customer class. The demand figure is non-coincident.

**Table 3.5 : ILPI Maximum Electricity Demand (MW) (Forecast and Historical)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Residential					15.2	15.3	15.9	16.5	17.1	17.7
Commercial					13.4	13.5	13.8	14.1	14.4	14.8
Industrial					1.2	1.2	1.1	1.0	1.0	1.0
Flat Rate					0.3	0.3	0.4	0.4	0.4	0.4
Bulk					8.3	8.2	43.9	44.1	61.8	62.1
<b>TOTAL</b>	<b>35.3</b>	<b>33.2</b>	<b>33.7</b>	<b>34.5</b>	<b>38.4</b>	<b>38.5</b>	<b>75.1</b>	<b>76.1</b>	<b>94.7</b>	<b>96.0</b>
<b>Growth</b>		-5.8%	1.3%	2.4%	11.2%	0.5%	94.8%	1.5%	24.4%	1.2%

3.4.2 The figures in Table 3.5 include the additional demand anticipated from the bulk supply consumers that feed directly off the sub-transmission assets that ILPI intends to acquire. In Table 3.6, the impact of these customers was not considered. It is assumed that the growth in demand from the existing bulk consumers will be 1% per year. This figure was revised down following ILPI's submission on the Draft Determination.

3.4.3 The annual compound growth in demand from 2004 to 2008 was 2.1% and the anticipated growth over the regulatory period is 2.6% per year (new bulk consumers excluded). As with consumption, a substantial increase in demand for 2008 was foreseen by ILPI. For the year to date, this demand growth has not yet transpired – this

appears to be mainly as a result of the Gaisano Mall for which the 69kV substation still has to be completed.<sup>21</sup>

**Table 3.6 : ILPI Maximum Demand (MW) (Without New Bulk Consumers)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Residential</b>					15.2	15.3	15.9	16.5	17.1	17.7
<b>Commercial</b>					13.4	13.5	13.8	14.1	14.4	14.8
<b>Industrial</b>					1.2	1.2	1.1	1.0	1.0	1.0
<b>Flat Rate</b>					0.3	0.3	0.4	0.4	0.4	0.4
<b>Bulk</b>					8.3	8.2	8.3	8.4	8.5	8.6
<b>TOTAL</b>	<b>35.3</b>	<b>33.2</b>	<b>33.7</b>	<b>34.5</b>	<b>38.3</b>	<b>38.5</b>	<b>39.5</b>	<b>40.5</b>	<b>41.4</b>	<b>42.4</b>
<b>Growth</b>		-5.8%	1.3%	2.4%	11.2%	0.5%	2.5%	2.4%	2.4%	2.4%

### 3.5 ERC Final Decision on Maximum Demand Forecasts

- 3.5.1 The demand figures are not directly taken into account in the price-control arrangements. However, demand is an important factor in considering especially, capital expenditure on distribution networks, as well as the degree of asset optimization. PB Associates recommended in their Expenditure Review Report<sup>22</sup> that ILPI's demand forecasts should be slightly amended to ensure a better match between the forecast energy and demand growth.
- 3.5.2 In the revised forecast figures given in Table 3.6, the demand and consumption growth are already closely matched. The ERC therefore accepts these revised demand figures as a reasonable basis for the Second Regulatory Period.
- 3.5.3 The ERC's final decision on the forecast maximum demand for ILPI is illustrated in Table 3.7.

**Table 3.7 : ERC Final Determination on Forecast Maximum Demand (kW)**

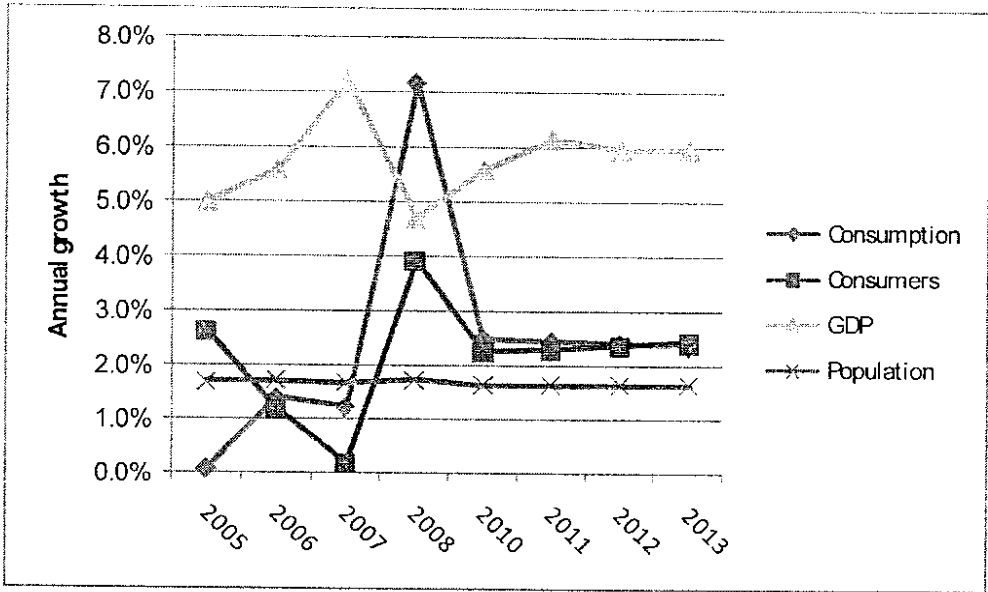
Forecast	Calendar Years		Regulatory Years				
	2007	2008	2009	2010	2011	2012	2013
<b>Maximum demand (MW)</b>	34,491	38,345	38,530	39,495	40,462	41,434	42,414
<b>Growth in demand (%)</b>	2.4%	11.2%	0.5%	2.5%	2.4%	2.4%	2.4%

- 3.5.4 In Figure 3.2, a comparison is provided between the demand growth forecasts adopted by the ERC, and the growth forecast by the DOE for Mindanao and by TransCo for Mindanao North Central. While it is accepted that the TransCo and DOE information is somewhat dated, it is clear that the ILPI forecasts, as adapted by the ERC, is generally more conservative.

<sup>21</sup> It is assumed that this lower demand is due to the delay only, and would still be experienced in the near future.

<sup>22</sup> Supra note 19

Figure 3.2 Comparison of Demand Growth Figures



Sources : TransCo demand forecast for Mindanao North Central - Transmission Development Plan, 2006  
Department of Energy demand forecast for Mindanao - Power Development Plan, 2006-2014

(This space is left intentionally blank)

## 4. CAPITAL EXPENDITURE FORECASTS

### 4.1 Approach to capital expenditure forecasts

- 4.1.1 Section 4.12 of the RDWR specifies the requirements for the capital expenditure forecasts required from Regulated Entities. These forecasts are to be based on the economically efficient capital expenditure requirements to meet the forecast demand over the Second Regulatory Period. The economic efficiency of the forecasts should be assessed in particular against the general principles declared in Section 4.6.1 of the RDWR, and the declaration of policy in Section 2 of the EPIRA.
- 4.1.2 ILPI submitted its proposed capital expenditure program for the Second Regulatory Period as part of its Revenue Application.
- 4.1.3 Also included in the Revenue Application is the proposed capital expenditure for the 2009 Regulatory Year (April 1, 2008 to March 30, 2009). Under the current regulatory arrangements, there is no provision for the ERC to review any capital expenditure subsequent to the start of 2008<sup>23</sup>. Since ILPI will be entering PBR at the start of the Second Regulatory Period three months into the 2009 calendar year, the expenditure over the period January 2008 to March 2009 had to be reviewed as part of the Revenue Application and the ERC has therefore decided to include ILPI's capital expenditure program for the 2009 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.
- 4.1.4 In terms of Section 4.12.4, the ERC must retain a Regulatory Reset Expert (or Experts) to review the capital expenditure program for a Regulated Distribution System, as well as the supporting information. The ERC appointed Parsons Brinckerhoff Associates (PB Associates) for this purpose.
- 4.1.5 The findings and recommendations of PB Associates with regard to the capital expenditure forecasts submitted by ILPI are presented in an accompanying report (the Expenditure Review Report).<sup>24</sup> This was analyzed by the ERC and forms the basis of the capital expenditure program approved by the ERC, as described below. Since the Expenditure Review Report is available for public review, only the main findings are repeated below.
- 4.1.6 PB Associates was also requested to consider the submissions made on the Draft Determination. Based on their further consideration, PB Associates suggests a small number of revisions to their original recommendations, as described in the Expenditure Review Addendum<sup>25</sup>.

### 4.2 Purpose of the capital expenditure program

- 4.2.1 Capital expenditure is critical to the reliable operation of a distribution network and to provide for growing electricity demand. If capital expenditure is at levels lower than that required to maintain acceptable network performance standards or to ensure sufficient capacity for growth, this could compromise the longer term sustainability of an effective

<sup>23</sup> This is because no more rate cases will be filed for the Second Entry Group under the current return-on-rate-base form of regulation.

<sup>24</sup> Supra note 19

<sup>25</sup> PB Associates report to the ERC titled "REVIEW OF FORECAST EXPENDITURE : ILIGAN LIGHT AND POWER, INC.- ADDENDUM", dated December 3, 2008.

distribution service and the ability to provide customers' needs. On the other hand, excessive network investments cause upward price-pressure which is not balanced by commensurate service improvements or value to consumers. It is the goal of the ERC to allow an efficient balance in capital expenditure – to ensure the long-term sustainability of distribution networks while keeping investment levels at the minimum levels required to achieve this goal.

4.2.2 From a regulatory perspective, the approved capital expenditure forecasts are included in the value of the rolled forward regulatory asset base, in nominal terms for every year of the Second Regulatory Period. Return on capital, one of the building blocks for determining the allowed revenue requirement for Regulated Entities, is in turn based on the value of the rolled forward asset base.<sup>26</sup> In addition, depreciation of newly acquired capital assets is also taken into account in the return of capital, or regulatory depreciation, building block. The approved capital expenditure program therefore has a direct influence on the allowed price-cap for distribution services.

### 4.3 Capital expenditure program proposed by ILPI

4.3.1 ILPI's historical capital expenditure and the forecast expenditure as submitted in its Revenue Application are shown in Table 4.1. The expenditure figures are in real values for the year indicated. It should be noted that the figures up to 2008 are for calendar years, while those from 2009 onwards are for regulatory years. There is therefore a 9-month overlap between the 2008 and 2009 figures.

**Table 4.1 - ILPI Application for Capital Expenditure**

	Actual (PhP million, real 2008)				Forecast (PhP million, real 2008)				
	CY2004	CY2005	CY2006	CY2007	RY2009	RY2010	RY2011	RY2012	RY2013
Distribution Plant	36.9	21.7	14.8	21.5	44.0	74.9	47.3	39.8	74.7
Non-network Plant	4.4	4.3	5.8	7.2	27.1	20.9	14.3	17.4	19.2
Connection plant	1.0	0.7	0.4	0.7	2.3	2.4	3.2	2.5	2.6
Retail plant	9.5	8.2	6.5	12.4	6.4	6.6	6.7	7.1	6.6
Materials & supplies	7.0	-6.2	3.2	-1.4	0.0	0.1	0.3	0.3	0.0
Subtransmission	0.0	0.0	0.0	0.0	0.0	38.0	0.0	28.1	9.0
<b>TOTAL</b>	<b>58.8</b>	<b>28.7</b>	<b>30.7</b>	<b>40.4</b>	<b>79.8</b>	<b>142.9</b>	<b>71.8</b>	<b>95.2</b>	<b>112.1</b>

4.3.2 The breakdown in Table 4.1 is based on details that ILPI submitted on September 01, 2008 in compliance with the Commission's directive dated August 11, 2008. However, in this later submission, the expenditure forecast for 2013 was revised upwards. Since there is no justification for this upward revision, the ERC has used the originally submitted 2013 figures.

4.3.3 ILPI also provided a further breakdown of their forecast capital expenditure program into the following categories, as presented in Table 4.2.

- (a) Growth projects are for capital projects required to accommodate increased electricity demand or new connections.
- (b) Renewal projects are those to replace existing assets where it is no longer economically feasible to maintain the assets, or where technological obsolescence forces their replacement.
- (c) Refurbishment projects are to extend asset serviceability to beyond standard lives.
- (d) Non-network capital expenditure relates to expenditure on non-network assets.

<sup>26</sup> Plus an allowance for working capital, as discussed in section 7.6

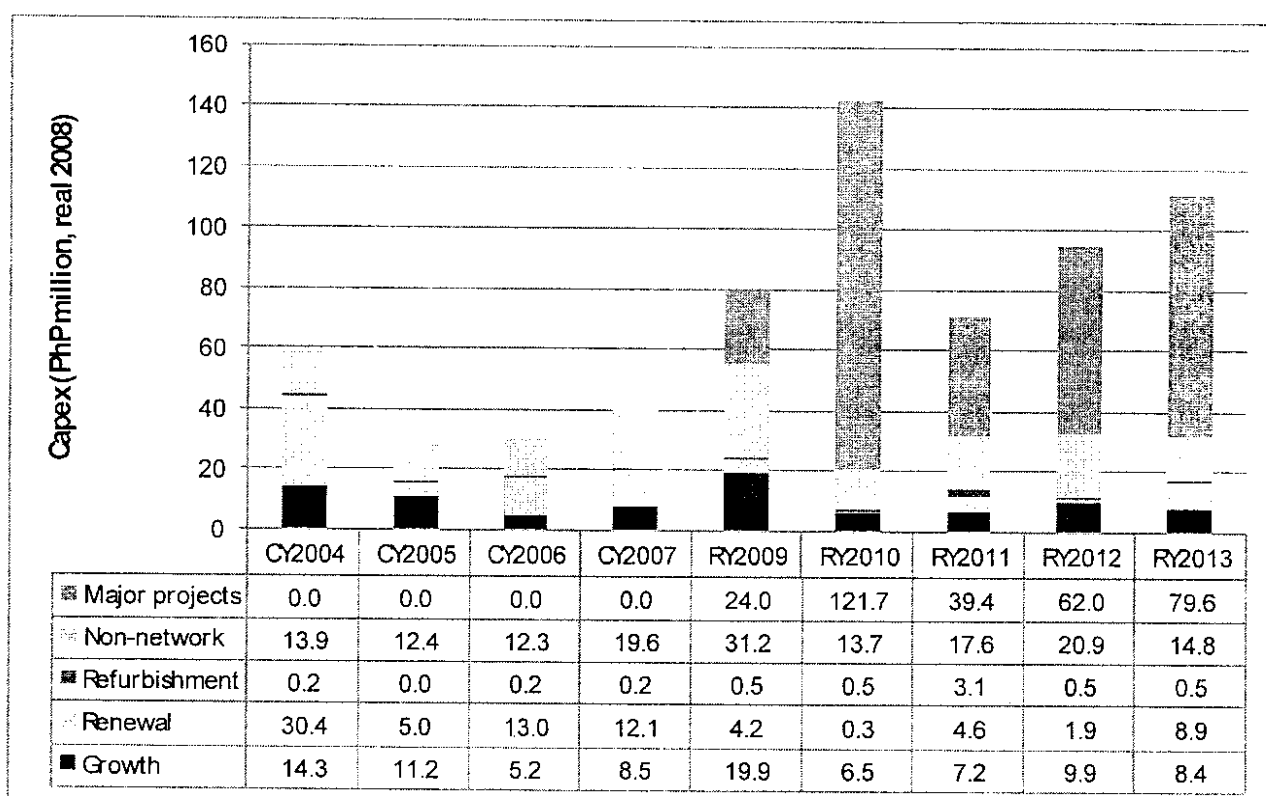
(e) Major projects are those for which expenditure will exceed the lesser of 30% of the total capital expenditure forecast for a Regulatory Year, or PHP50Million.

**Table 4.2 : Breakdown of Forecast Capital Expenditure (Php Million, 2008 real)**

	CY2004	CY2005	CY2006	CY2007	RY2009	RY2010	RY2011	RY2012	RY2013
Growth	14.3	11.2	5.2	8.5	19.9	6.5	7.2	9.9	8.4
Renewal	30.4	5.0	13.0	12.1	4.2	0.3	4.6	1.9	8.9
Refurbishment	0.2	0.0	0.2	0.2	0.5	0.5	3.1	0.5	0.5
Non-network	13.9	12.4	12.3	19.6	31.2	13.7	17.6	20.9	14.8
Major projects	0.0	0.0	0.0	0.0	24.0	121.7	39.4	62.0	79.6
<b>TOTAL</b>	<b>58.8</b>	<b>28.6</b>	<b>30.7</b>	<b>40.4</b>	<b>79.8</b>	<b>142.7</b>	<b>71.9</b>	<b>95.2</b>	<b>112.2</b>

4.3.4 In Figure 4.1, the ILPI capital expenditure information is graphically represented in real 2008 values.

**Figure 4.1 - ILPI Capex – Historical and Forecast**



Note : Given the large overlap in the CY 2008 and RY 2009 values, no 2008 figures are indicated.

4.3.5 Examination of Figure 4.1 indicates that ILPI's forecast total capital expenditure is substantially higher than its adjusted historic expenditure, which is mainly due to the inclusion of major projects in the forecast. There were no major projects included in the broken down historic capital expenditure figures, even though ILPI substantially completed the construction of a 69 kV tie line between the Pala-O and Kiwalan substations over this period.

4.3.6 As a result of large projects not being separately indicated in the historical figures, the forecast residual capital expenditure appears slightly lower than expected when compared with historic figures, except for the notable increase in the RY 2009 forecast.

#### 4.4 Analysis of ILPI's capital expenditure program – General

4.4.1 PB Associates conducted a top-down analysis of ILPI's capital expenditure forecast, including an analysis of the expenditure trends and a review against growth-driven expenditure ratios. This is discussed in the Expenditure Review Report.

4.4.2 The main findings were as follows:

- As noted above, the capital expenditure trends show significant increases planned for the Second Regulatory Period, mainly as a result of the substantial portion of major project included.
- A large proportion of residual capital expenditure appears to have been lumped with the major projects category. PB Associates has not been able to fully resolve the problem with project definitions.

4.4.3 ILPI advised that for their capital expenditure forecasts in the Second Regulatory Period, PB included the cost of labor on projects. Historically, this has not been the case and for trend analysis purposes, adjustments therefore have to be made. (PB Associates made the required adjustments in their Expenditure Review Report.)

#### 4.5 Analysis of ILPI's capital expenditure program – Significant projects

4.5.1 ILPI submitted details of seven (7) significant projects in their Revenue Application. A summary of the projects is as follows:

- (a) Luinab 20/25 MVA Substation;
- (b) Zamora 5 MVA Substation;
- (c) Acquisition of TransCo Subtransmission Assets;
- (d) ILPI 69 kV Tie Lines;
- (e) Kiwalan Switching Station;
- (f) Power Substation Rehabilitation; and
- (g) Rehabilitation of Acquired TransCo Subtransmission Assets.

4.5.2 Each of the major projects was separately reviewed by PB Associates, in order to provide an assessment whether the project is required, efficient and whether the proposed project timing is appropriate. Independent cost estimates were also prepared to verify the reasonableness of the ILPI estimates. Their findings are provided in the Expenditure Review Report, with more details provided on individual projects where discrepancies or unusual factors were found.

4.5.3 PB Associates' recommendations for the Draft Determination with regard to the significant projects can be summarized as follows:

- ILPI is proposing to construct a new 69/13.8 kV substation at Luinab. This is recommended for approval as it will relieve the existing very high utilization of ILPI's power transformers. It is also suggested that the capacity of the power transformer be increased from 20/25 MVA to 20/30 MVA as the increased forced air capacity would be needed in the event of an n-1 contingency arising. A minor adjustment to ILPI's estimated cost was made to provide for this.
- ILPI is proposing to construct a small 5 MVA substation at Zamora using an old semi-retired transformer. This is not recommended for approval, since PB Associates

believes this to be an “opportunistic” proposal that is not consistent with an optimal network development plan. The cost of this development is considered high for the additional transformer capacity provided.

- ILPI has proposed the rehabilitation of its existing two power substations and this is recommended for approval, particularly in respect of the Pala-O substation, which was constructed using second hand equipment and is in poor condition. It is further recommended that an allowance be made in this project for the replacement of the existing Pala-O transformer.
- ILPI proposed the construction of two (2) additional 69 kV tie lines, which it believes will improve the security of supply to customers. Since the existing 69 kV TransCo lines and ILPI's existing 69 kV tie line provide a level of security consistent with the n-1 criteria specified in Table D1 of the RDWR, these projects are not recommended for approval.
- In general PB Associates recommends that none of the sub-transmissions acquisitions and associated projects proposed by ILPI should be approved. The ERC notes that these acquisitions have proved problematic when viewed from a distribution price-setting perspective, not only for the ILPI revenue application. This is further addressed in Section 4.10. Besides the acquisitions themselves, related projects in this category are:
  - Construction of a new 69 kV switching station that would ensure that directly connected customers would be connected to the network through a circuit breaker.
  - Rehabilitation of the sub-transmission assets that ILPI intends to purchase from TransCo.

#### 4.6 Analysis of ILPI's capital expenditure program – residual expenditure

4.6.1 PB Associates reviewed the proposed residual network and general plant expenditure, including the minor projects listed by ILPI. In general, PB Associates agree with ILPI's proposal, but made the following comments:

- The high level of residual capital expenditure in CY 2004 was largely due to renewal expenditure. Expenditure on poles towers and structures, overhead conductors and devices and distribution transformers was between two and four times the level in the following two years. PB Associates assumed that this was due to the completion of a one-off major project, and therefore, in using the historic capital expenditure as a basis for forecasting the appropriate level of underlying residual expenditure, has reduced the real expenditure in CY 2004 to the average level of residual expenditure over the following two (2) years.
- The high level of residual capital expenditure in CY 2007 was due to the high costs of pole renewals and high growth related expenditures on poles and conductors. PB Associates note that the 69 kV tie-line was constructed over this time and note that this expenditure has not been separately reported as a major project. To allow for this, PB Associates has reduced the level of expenditure to the average level of residual capital expenditure over the previous two (2) years for comparative purposes.
- The forecast high level of residual capital expenditure in RY 2009 is mainly due to growth related expenditure on vehicles, IT equipment and miscellaneous equipment. While ILPI has submitted supporting documentation, PB Associates note that it did

not have sufficient information to assess the merit of each of the expenditure items on a case by case basis. Of the PhP6 Million growth related residual capital expenditure on miscellaneous equipment in RY 2009, only PhP0.5 Million is explained. The additional expenditure on vehicles and IT equipment seems reasonable.

- 4.6.2 On this basis, PB Associates recommend that the residual capital expenditure forecast by ILPI for RY 2009 be reduced by the unexplained PhP5.5 Million and that residual capital expenditure in years RY 2010-13 be set at the average adjusted historic residual capital expenditure over RY 2005-06, or PhP34.85 Million per annum. While it could be argued that the approach PB Associates used to determine the recommended residual capital expenditure is not particularly rigorous, given the inconsistencies in the information provided to them PB Associates note that a more in-depth analysis was not possible. PB Associates also note that a significant amount of the residual reliability improvement expenditure for which information was provided is discretionary and that this would provide ILPI with some ability to reallocate expenditure to less discretionary line items, should this prove necessary.

#### **4.7 Review of ILPI's submission on the Draft Determination**

- 4.7.1 From its review of ILPI's submission on the Draft Determination and discussions during the public hearing, PB Associates concluded that the construction of the 69kV interconnection between the Luinab and Overton substations is appropriate. The second tie line is still not considered necessary in the Second Regulatory Period.<sup>27</sup> An additional allowance of PhP 14.86 million in Regulatory Year 2012 is therefore recommended.
- 4.7.2 No further adjustments to their earlier recommendation on capital expenditure was suggested.

#### **4.8 Expenditure program proposed by PB Associates**

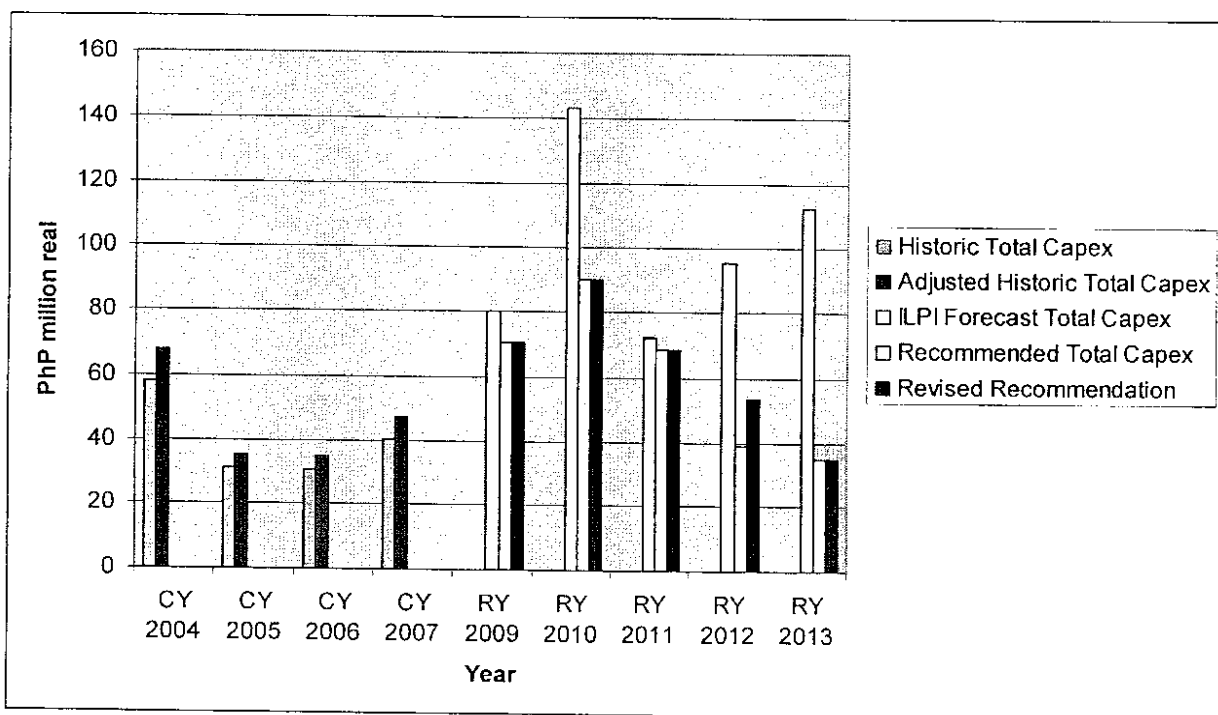
- 4.8.1 Based on their analysis, including that of information obtained after the Draft Determination, PB Associates recommend that ILPI's proposed capital expenditure program for the Second Regulatory Period should be amended as summarized in Table 4.3.
- 4.8.2 The figures indicated by PB Associates for the original application varies slightly from that submitted by ILPI (and used by the ERC). The reason for this variance is not clear. This variance however does not affect PB Associates' recommendations for changes to the proposed expenditure levels.
- 4.8.3 In Figure 4.3, a graphical comparison is provided of the capital expenditure program proposed by ILPI in their Revenue Application, and PB Associates' recommended figures. A substantial reduction in the overall expenditure level submitted by ILPI is proposed – mainly as a result of the omission of the sub-transmission acquisitions and associated projects.

<sup>27</sup> The new evidence on lower demand growth further supports PB Associates' conclusion.

**Table 4.3 : ILPI Forecast Capital Expenditure for the Second Regulatory Period – PB Associates Recommendation (PhP Million, real 2008)**

	RY 2009	RY 2010	RY 2011	RY 2012	RY 2013
<b>Forecast Capex (Revenue Application)</b>	<b>79.86</b>	<b>142.94</b>	<b>72.33</b>	<b>95.57</b>	<b>112.58</b>
Recommended Adjustments					
Luinab Substation Transformer Capacity		0.91			
Deletion of Zamora Substation			(14.44)		
Deletion of TransCo Asset Purchase		(37.96)		(28.13)	(9.04)
Deletion of 69 kV Tie Lines				(14.86)	(15.82)
Deletion of Kiwalan Switching Station					(37.81)
Rehabilitation of Power Substations	(3.94)	(10.05)	33.77	3.94	
Deletion of TransCo Asset Rehabilitations			(5.69)		(7.18)
Residual Capex Adjustment	(5.50)	(5.61)	(17.35)	(17.72)	(7.88)
<b>Recommended Capex (Draft Determination)</b>	<b>70.42</b>	<b>90.23</b>	<b>68.62</b>	<b>38.80</b>	<b>34.85</b>
69 kV tie-line to Overton substation				14.86	
<b>Amended recommendation</b>	<b>70.42</b>	<b>90.23</b>	<b>68.62</b>	<b>53.66</b>	<b>34.85</b>

**Figure 4.3 : Comparison of Capital Expenditure Forecasts**



Source: PB Associates

#### 4.9 ERC Final Determination on the Capital Expenditure Program

4.9.1 The ERC generally accepts the recommendations made by PB Associates based on their review and analysis of ILPI's proposed capital expenditure program for the Second

Regulatory Period and the 2009 regulatory year. The rationale provided for the expenditure allowance is sound, as are the reasons for the suggested reductions from the ILPI proposal. The suggested expenditure program is considered efficient and would provide sustainable investment levels while avoiding unnecessary expenses or undue upward price pressure.

4.9.2 However, on reconsideration of the proposed acquisition of transferred sub-transmission assets from TransCo, the ERC believes that the acquisition of the sub-transmission assets for which an agreement is currently being finalized, should be included in the allowed capital expenditure. This is for:

- Agus 6 – Kiwilan 69 kV line
- Agus 6 – NSC1 69 kV line
- Agus 6 – NSC2 69 kV line
- Agus 6 – Overton 69 kV line
- Kiwilan-Pilmico 69 kV line
- Kiwilan-Mapalad 69 kV line
- Kiwilan – ICC 69 kV line
- Mapalad-Lugait 69 kV line
- Overton – ILPI 13.8kV line

4.9.3 This acquisition is in accordance with the RDWR and Republic Act No. 9136 (EPIRA) which allows for these assets to be acquired by Regulated Entities and the pricing corresponds to the 2006 SKM valuation, which was accepted by the ERC. An amount of PhP 37.96 million is therefore allowed for this acquisition in RY2010, in accordance with ILPI's revenue application.

4.9.4 The treatment of directly connected customers to acquired sub-transmission assets remains problematic. This is discussed further in Section 4.10.

4.9.5 Given the small discrepancy in the PB Associates' figures used to indicate ILPI's initial application (see Paragraph 4.8.2), the ERC's final recommendation differs slightly from that of PB Associates.

4.9.6 The ERC's draft determination on the capital expenditure program for the Second Regulatory Period and the 2009 regulatory year is provided in Table 4.4. A more detailed breakdown is provided in Appendix A.

**Table 4.4 : ERC Final Determination on ILPI's Capital Expenditure Program (PhP thousand)**

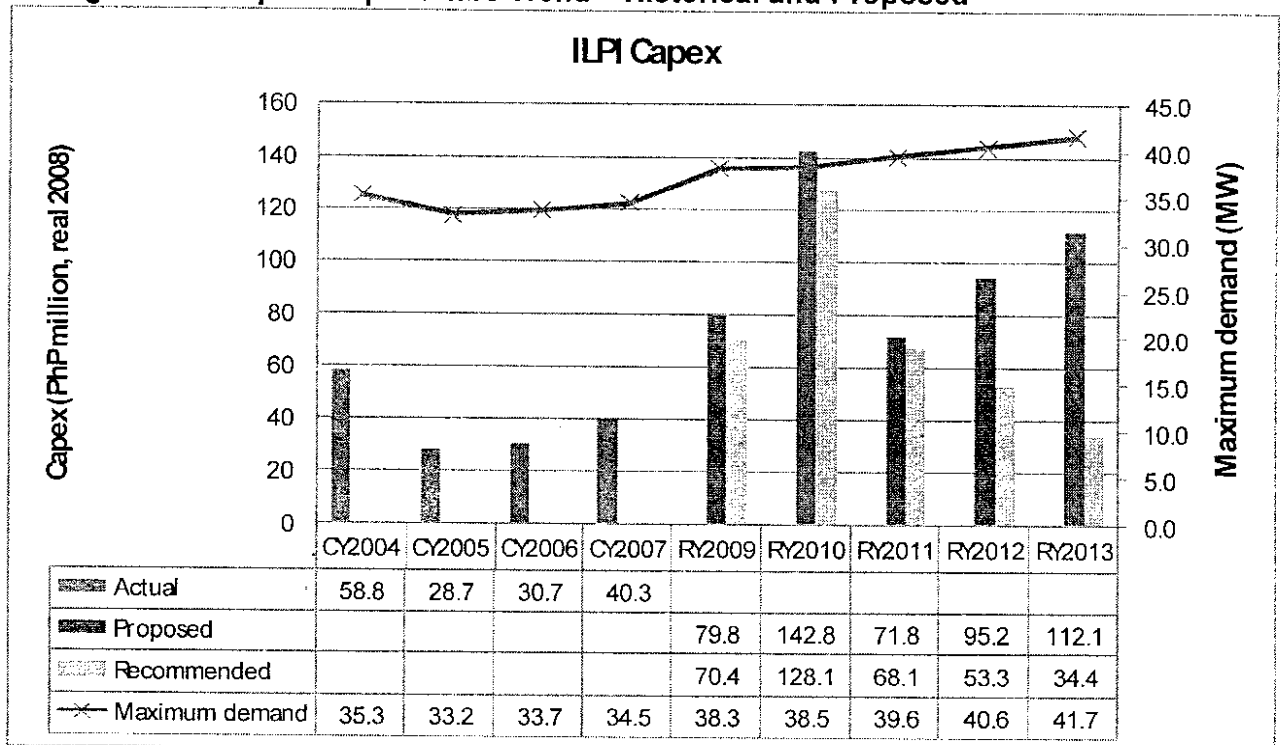
	RY2009	RY2010	RY2011	RY2012	RY2013	TOTAL
Nominal values	73,708	144,436	80,773	65,872	44,269	335,350
Real values (2008)	70,374	128,073	68,131	53,284	34,415	283,903
Nominal values, including CWIP factor	75,319	147,490	83,809	68,012	44,797	344,107

Note: The total is excluding Regulatory Year 2009.

4.9.7 In Figure 4.4, the ERC's allowed capital expenditure is compared with ILPI's Revenue Application. By way of illustrating the need for increased capital expenditure, as a key

driver for expenditure, the historical and forecast maximum demand, as accepted by the ERC<sup>28</sup> is also included.

**Figure 4.4: Capital Expenditure Trend – Historical and Proposed**



Source: PB Associates, ERC analysis

#### 4.10 Acquired sub-transmission assets

4.10.1 In the Draft Determination it was proposed that the acquisition of sub-transmission assets from TransCo, as well as associated projects, should be excluded from the approved capital expenditure for the Second Regulatory Period. This was in spite of the fact that the ERC recognized that acquiring such assets are allowed in terms of Republic Act No. 9136 (EPIRA) and that the RDWR makes provision for their inclusion as part of Regulated Distribution Assets.

4.10.2 Difficulties were perceived with the connection of other distribution utilities to acquire sub-transmission lines and the distortive effect of the consumption of directly connected customer to sub-transmission lines on the overall price-setting process. In some instances, sub-transmission assets may also be acquired that are in excess to the requirements of Regulated Entities – providing security or capacity levels that would have led to assets being optimized out under an ODR asset valuation. Lastly, uncertainty existed about the actual dates at which such assets would be acquired.

4.10.3 However, since it is recognized that transferred sub-transmissions could be legitimately acquired by Regulated Entities and that there is no other recourse or the costs associated with these acquisitions other than the rate-setting under PBR, the ERC will adopt the following approach:

- (a) Sub-transmission assets may be acquired if this is done in accordance with the ERC guidelines for the acquisition of such assets. The cost at which these assets

<sup>28</sup> See discussion in section 3.5

are acquired should correspond with the valuation carried out by SKM of the TransCo assets in 2006.

- (b) Acquisitions will only be approved if there is a reasonable degree of certainty that the transactions will actually occur within the Regulatory Period and that discussions between a Regulated Entity and TransCo in this regard has substantially commenced.
- (c) Consumption of newly acquired directly-connected bulk consumers (connected to sub-transmission assets) should not be included in the distribution consumption figures of a Regulated Entity for the Second Regulatory Period. Instead, separate supply agreements will have to be drawn up with each such customer. Such a customer's supply rates should reflect a reasonable return only on the actual assets used to provide its supply, allocated in proportion to the actual use of these assets by the direct-connect customer (based on coincident maximum demand), depreciation of the assets involved (proportionally allocated) and the operating and maintenance costs incurred by a Regulated Entity in providing the bulk connection.
- (d) Where a bulk consumer is the only customer feeding from a sub-transmission line (or part thereof), this dedicated asset is to be treated as a connection asset. In future, after full implementation of the Distribution System Open Access Rules (DSOAR), these assets will no longer form part of the Regulatory Asset Base.
- (e) Excess assets acquired will be optimized out from the Regulatory Asset Base at the next Regulatory Reset.
- (f) If assets are not acquired at the date provided for in the Final Determination, this may form a cause for a re-opening event as envisaged in Article XII of the RDWR.

## 5. OPERATING AND MAINTENANCE EXPENDITURE FORECASTS

### 5.1 Approach to operating & maintenance expenditure forecasts

- 5.1.1 Section 4.13 of the RDWR specifies the requirements for the operating and maintenance expenditure forecasts required from Regulated Entities. These forecasts are to be justified in terms of why they are necessary and of reasonable magnitude.
- 5.1.2 ILPI submitted its proposed operating and maintenance expenditure for the Second Regulatory Period as part of its Revenue Application.
- 5.1.3 Also included in the Revenue Application is the proposed operating and maintenance expenditure for the 2009 Regulatory Year (April 1, 2008 to March 30, 2009). Under the current regulatory arrangements, there is no provision for the ERC to review any operating and maintenance expenditure subsequent to the start of 2008<sup>29</sup>. Since ILPI will be entering PBR at the start of the Second Regulatory Period three months into the 2009 calendar year, the expenditure over the period January 2008 to March 2009 had to be reviewed as part of the Revenue Application and the ERC has therefore decided to include ILPI's operating and maintenance expenditure program for the 2009 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.
- 5.1.4 In terms of Section 4.13.4, the ERC must retain a Regulatory Reset Expert (or Experts) to review the operating and maintenance expenditure forecasts for a Regulated Distribution System, as well as the supporting information. The ERC appointed Parsons Brinckerhoff Associates (PB Associates) for this purpose.
- 5.1.5 The findings and recommendations of PB Associates with regard to the operating and maintenance expenditure forecasts submitted by ILPI are included in the Expenditure Review Report.<sup>30</sup> This was analyzed by the ERC and forms the basis of the operating and maintenance expenditure forecasts approved by the ERC, as described below. Since the Expenditure Review Report is available for public review, only the main findings are repeated below.
- 5.1.6 PB Associates was also requested to consider the submissions on the Draft Determination. Based on their consideration, a number of revisions to their original recommendations on operating and maintenance expenditure were suggested, as described in the Expenditure Review Addendum.<sup>31</sup> These are also discussed below.

### 5.2 Purpose of the operating and maintenance expenditure program

- 5.2.1 Operating and maintenance expenditure is critical to the sustained reliable and safe operation of a distribution network. If operating and maintenance expenditure is at insufficient levels, it leads to deterioration of operating standards and of the condition of network assets – affecting the reliability of service to consumers. Under-expenditure also affects the ability of distribution utilities to plan in advance to cater for load growth or changing consumer requirements and will, in the long run, also increase the required

<sup>29</sup> This is because no more rate cases will be filed for the Second Entry Group under the current return-on-rate-base form of regulation for periods after this date.

<sup>30</sup> Supra note 24

<sup>31</sup> Supra note 25

capital expenditure on network assets, to replace assets that have not been well maintained.

5.2.2 On the other hand, excessive operating and maintenance expenditure cause upwards price-pressure which is not balanced by commensurate service improvements or value to consumers. It is the goal of the ERC to allow an efficient balance in operating and maintenance expenditure – to ensure that acceptable service standards are maintained, while keeping expenditure at the minimum levels required to achieve this goal.

5.2.3 From a regulatory perspective, the approved operating and maintenance expenditure forecasts is one of the building blocks for determining the allowed revenue requirement for Regulated Entities. The approved operating and maintenance expenditure is therefore directly recovered from customers as part of their distribution wheeling rates.

### 5.3 Operating and maintenance expenditure proposed by ILPI

5.3.1 ILPI's historical operating and maintenance expenditure and the forecast expenditure as submitted in its Revenue Application are shown in Table 5.1. The expenditure figures are in nominal values for the year indicated. It should be noted that the figures up to 2008 are for calendar years, while those from 2009 on are for regulatory years.

**Table 5.1 : ILPI Application for Operating and Maintenance Expenditure**

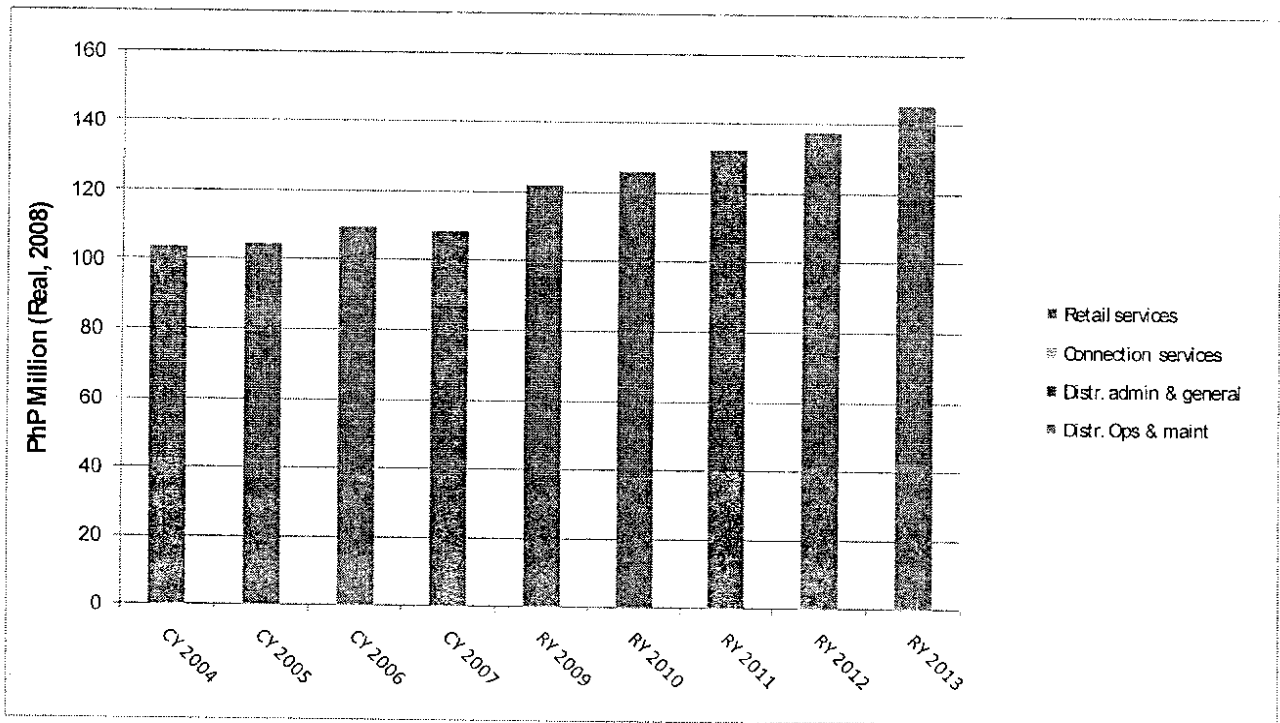
OPEX Category	Actual (nominal in PhP Million)				Forecast (Nominal, in PhP Million)				
	CY 2005	CY 2006	CY 2007	CY 2008	RY 2009	RY 2010	RY 2011	RY 2012	RY 2013
Distribution Opex	27.55	35.31	36.28	35.04	9.15	35.79	39.90	43.38	46.43
Regulated Retail Services	22.90	19.00	21.52	27.48	6.19	27.29	26.24	27.38	29.06
Administrative and General	41.55	47.80	46.21	57.87	15.12	61.38	67.70	74.65	80.78
<b>Total Opex</b>	<b>92.00</b>	<b>102.11</b>	<b>104.01</b>	<b>120.39</b>	<b>30.46</b>	<b>124.46</b>	<b>133.84</b>	<b>145.41</b>	<b>156.27</b>

Note : The full year actual figure for 2008 was not available at the time of the application and may differ slightly from that indicated above.

5.3.2 In Figure 5.1, the ILPI operating & maintenance expenditure information is graphically represented, in real (August 2008) values. Given the 9-month overlap between calendar year 2008 and regulatory year 2009, to avoid distorting the trend, no 2008 figure is presented.

5.3.3 ILPI was forecasting considerable increases in its operating and maintenance expenditure over the Second Regulatory Period, mainly resulting from increased administrative and general expenses.

**Figure 5.1 : ILPI Proposed Operating & Maintenance Expenditure (real)**



#### 5.4 Analysis of operating and maintenance expenditure - methodology

5.4.1 PB Associates' review of ILPI's operating and maintenance expenditure forecasts is discussed in detail in the Expenditure Review Report. They assessed ILPI's proposals for prudence and cost efficiency using the following approach:

- Determine the base year operational expenditure on a cost category basis;
- Confirm that the base year opex is efficient;
- Identify opex cost drivers and the impact of efficiency initiatives;
- Project the base year opex forward for each year of the regulatory period, taking into account projected changes in the cost drivers and the impact of any efficiency initiatives;
- Compare ILPI's base forecasts with the PB Associates model forecasts and test for relative efficiency;
- Assess each component of the additional expenditures individually, compare them to ILPI's forecast expenditures and develop recommended allowances;
- Combine the recommended base opex forecasts and additional expenditure recommendations to obtain the total recommended annual opex forecasts; and
- Confirm the relative efficiency of the resulting recommended total opex forecasts by developing high level indicators.

#### 5.5 Analysis of the base operating and maintenance expenditure

5.5.1 PB Associates reported in the Expenditure Review Report that ILPI did not benchmark well against the first and second entry point utilities in terms of both adjusted opex per kWh and staff numbers (measured in terms of customers per staff member). The summary of the benchmarking results is given in Table 5.2.

**Table 5.2 : Benchmark Data and Normalized Benchmark**

	Second Entry Point (CY 2007)			First Entry Point (RY 2008) <sup>1</sup>		
	ILPI	ILPI	ILPI	CEPALCO	DECORP	MERALCO
<b>Data</b>						
Energy Sales (GWh)	117.5	175.7 <sup>2</sup>	238.2	686.3	219.4	26,242.5
Customers	27,966	44,357	58,551	109,672	83,224	4,416,999
ORC (PhP million)	682.06	791.71	918.50	2,966.51	1,347.78	155,257.93
Total Opex (PhP million)	71.91	108.67	57.95			
Adjustment (PhP million)	(2.90)	(6.74)	(5.76)			
Adjusted Opex (PhP million)	69.01	101.93	52.19	217.19	107.08	11,496.72
Total Staff	48	161	69			
Admin Staff	21	71	32			
<b>Normalized Benchmarks</b>						
Adjusted Opex / kWh	0.59	0.58	0.22	0.32	0.49	0.44
Adjusted Opex / ORC	0.10	0.13	0.06	0.07	0.08	0.07
Customers per employee	583	276	849			747
Customers per administration employee	1,332	625	1,830			

Note 1: The second regulatory period for the first entry point Regulated Entities is from 1 July 2007-30 June 2008.

Note 2: Includes customers connected at 69 kV

Source : PB Associates

5.5.2 The 2007 operating and maintenance expenditure levels were assessed by PB Associates to be efficient and suitable to use as base year in assessing the future operating and maintenance expenditure.

The key drivers affecting ILPI's proposed operating and maintenance expenditure are:

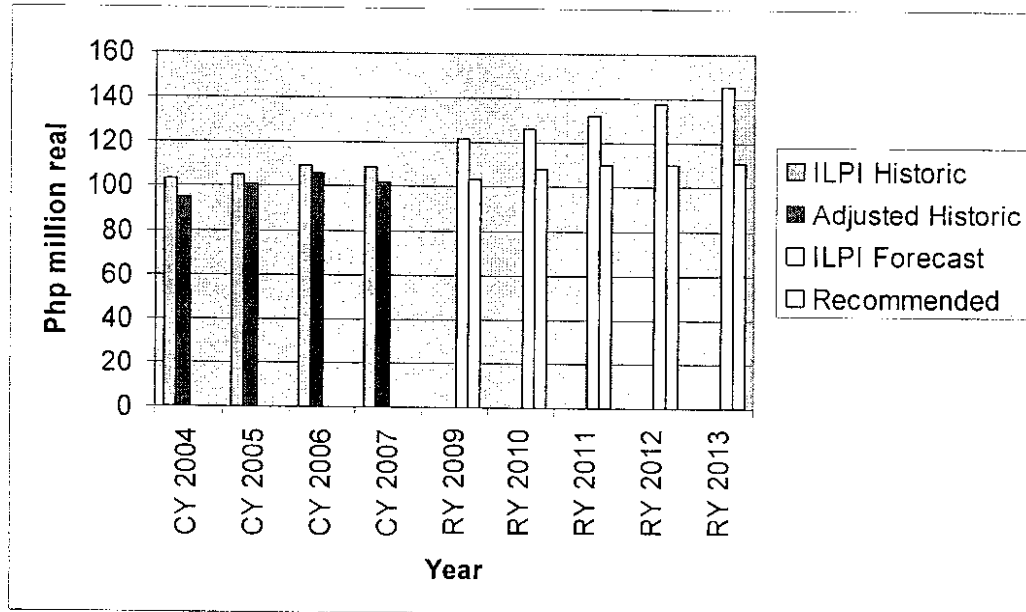
- size of the asset base;
- number of customer connections;
- employee numbers and labor costs; and
- material prices.<sup>32</sup>

5.5.3 PB Associates assessed each of these key drivers and found it necessary to make adjustments in each of the main expenditure categories, especially with regard to consumer accounts and administration & general expenditure. This is mainly to reflect better economies of scale that are possible with increased customer numbers and efficiency gains possible through improved data management processes. PB Associates assumed that material costs will remain constant in real terms but that labor costs will go down at 1% per year in real terms.

5.5.4 A graphical comparison of ILPI's forecasts and PB Associates forecast operating expenditure (for the Draft Determination) is shown in Figure 5.2. In comparing the forecast OPEX with historic trends it should be remembered that the adjusted historic OPEX is the more valid comparison because it does not include any capital related expenditure.

<sup>32</sup> This impacts on the cost of consumables used for maintenance works

**Figure 5.2 : Comparison between ILPI and PB Recommended OPEX Forecast (PhP Million, real 2008)**



Source : PB Associates

5.5.5 ILPI's operating expenditure model shows the regulated retail services expenditures is increasing by 6.4% over the second regulatory period and the administrative and general expenditures is increasing by 19.6% over the same period. However, the PB Associates' model indicates a lower percentage increase of 6% for regulated retail services and - 1.8% for administrative and general expenditure. ILPI forecasted its distribution and connection services expenditure to increase by 13% over the regulatory period whereas PBA's modeling indicates a lower percentage increase of 1.1% over the same period.

## 5.6 Analysis of the Opex Line items

5.6.1 PB Associates' Opex model is based on the assumption of business as usual in forecasting future opex and any changes in future expenditure patterns need to be modeled independently. Hence, ILPI was requested to provide information with regard to any known changes in future expenditure patterns or any one off expenditures included in the base year costs which did not represent business as usual expenditures.

5.6.2 PB Associates recommends that the historic and future expenditure for distribution system operations related information technology fluctuates with the purchase of software packages. More specifically, expenditure for this line item in the RY 2007 base year seems to be high due to the acquisition of a SynerGEE Reliability and Protection module, as noted in submissions made by ILPI after the clarificatory meeting. For this reason, we used the average expenditure over CY 2004-07, as the base year expenditure. The magnitude of this downward adjustment is PhP0.17 Million.

5.6.3 The miscellaneous expenditure line item in to the distribution system operations category is higher in the base year than any historic (CY 2004-07) or forecasted (RY 2009-13) year. For this reason we used the average expenditure over CY 2004-07, as the base year expenditure. The magnitude of this downward adjustment to the base year is PhP0.58 Million.

5.6.4 In ILPI's additional information submission, details were provided that identified the acquisition of Windows Server Operating System and an SQL Server License, at a

significant cost of PhP0.55 Million, as a one-off cost found only in the base year of the information technology line item in the administrative and general expenditures category. For this reason we used the average expenditure over CY 2004-07, as the base year expenditure. The magnitude of this downward adjustment to the base year is PhP0.45 Million.

5.6.5 The impact of the aforementioned adjustments on the base year opex is shown in Table 5.3.

**Table 5.3: 2007 Opex Adjustments (PhP million, real 2008)**

	CY 2007
Adjusted RY 2007 opex (Table 3.3)	101.93
Adjustments	
Distribution System Operations - Information Technology	(0.17)
Distribution System Operations – Miscellaneous Expenditure	(0.58)
Administrative and General – Information Technology	(0.45)
<b>Revised RY 2007 base opex</b>	<b>100.73</b>

5.6.6 The 2007 base year opex, incorporating the recommended adjustments, used for modelling future expenditures are as shown in Table 5.4:

**Table 5.4: Base 2007 Opex (PhP million, real 2008)**

Operational Expenditure Category	CY 2007
Operation	17.44
Maintenance	14.83
Administration and General	47.84
Regulated Retail Services	20.62
<b>Total Operational &amp; Maintenance Expenditure</b>	<b>100.73</b>

Source: PB Associates based on ILPI data, also includes adjustments for the exclusion of capex installation related costs

## 5.7 Analysis of related business expenditure

5.7.1 ILPI reported no income from or costs associated with activities that it undertakes that involve the Regulated Distribution System and for which it receives external revenue. During the clarificatory meetings, it however, advised that it does engage in such activities, but could not provide broken down data on the income or expenses associated with this. PB Associates recommend that a provision should be made for costs incurred to provide these services, noting that 50% of the profit from such services can be retained by the Regulated Entities.

## 5.8 PB Associates' review of ILPI's submission on the Draft Determination

5.8.1 From their review of ILPI's submission on the Draft Determination and additional information submitted, PBA concluded that a number of small adjustments of the recommended operating and maintenance forecasts are warranted. These are indicated in Table 5.5 below.<sup>33</sup>

<sup>33</sup> Since these items are discussed in some detail in the Expenditure Review Addendum, no further discussion is provided here.

## 5.9 Expenditure program proposed by PB Associates

- 5.9.1 The operating and maintenance expenditure forecasts for the Second Regulatory Period recommended by PB Associates, taking into account their recommended reductions and subsequent additions following the ILPI submission on the Draft Determination, is presented in Table 5.5.
- 5.9.2 Included in Table 5.5 are PB Associates' recommended changes to the 2009 Regulatory Year expenditure.

**Table 5.5 : Comparison of ILPI and PB Associates Forecast Base Operational Expenditure (PhP million, real 2008)**

	RY 2009	RY 2010	RY 2011	RY 2012	RY 2013
<b>Distribution System Operations</b>					
Revenue Application Forecast	19.10	20.23	20.17	20.89	21.74
Model	18.18	19.45	20.17	20.15	20.26
DSOAR Adjustment		-0.19	-0.40	-0.60	-0.81
<b>Recommended Opex</b>	<b>18.18</b>	<b>19.26</b>	<b>19.77</b>	<b>19.55</b>	<b>19.45</b>
<b>Distribution System Maintenance</b>					
Revenue Application Forecast	15.99	17.50	19.44	20.11	20.90
Model	15.46	16.56	17.18	17.19	17.30
DSOAR Adjustment		-0.17	-0.34	-0.52	-0.69
<b>Recommended Opex</b>	<b>15.46</b>	<b>16.39</b>	<b>16.84</b>	<b>16.67</b>	<b>16.61</b>
<b>Regulated Retail Services</b>					
Revenue Application Forecast	26.76	24.81	25.01	25.67	26.40
<b>Recommended Opex</b>	<b>21.90</b>	<b>23.72</b>	<b>24.05</b>	<b>24.59</b>	<b>25.15</b>
<b>Administrative &amp; General Expenditure</b>					
Revenue Application Forecast	60.18	64.02	68.18	71.34	76.55
<b>Recommended Opex</b>	<b>47.96</b>	<b>50.11</b>	<b>49.80</b>	<b>49.48</b>	<b>49.20</b>
<b>Totals</b>					
Revenue Application Forecast	122.04	126.56	132.81	138.01	145.58
<b>Recommended Opex (Draft Determination)</b>	<b>103.51</b>	<b>109.48</b>	<b>110.45</b>	<b>110.29</b>	<b>110.41</b>
<b>Recommended Adjustment</b>	<b>-18.53</b>	<b>-17.08</b>	<b>-22.36</b>	<b>-27.72</b>	<b>-35.17</b>
Percentage Adjustment	-15.2%	-13.5%	-16.8%	-20.1%	-24.2%
<b>Recommended additions – Expenditure Review Addendum</b>					
<i>Distribution Operations – Miscellaneous – measuring water and electricity consumption</i>	0.61	0.64	0.66	0.65	0.65
<i>Adjustment to line item Distribution Operations – Miscellaneous (CBA)</i>	0.34	0.34	0.35	0.35	0.35
<i>Adjustment to line item Distribution Maintenance – Miscellaneous (CBA)</i>	0.25	0.26	0.26	0.26	0.26
<i>Adjustment to line item Distribution Administration and General - Miscellaneous (CBA)</i>	0.86	0.88	0.90	0.89	0.89
<i>Adjustment to line item Regulated Retail Services – Miscellaneous (CBA)</i>	0.37	0.38	0.39	0.39	0.39
<i>Adjustment to line item Distribution Operations – Miscellaneous (call</i>	0.07				

accounting software)					
Adjustment to line item <i>Distribution Administration and General – Regulatory Liaison and Compliance</i>	0.23	0.23	0.23	0.23	0.23
Adjustment to line item <i>Distribution Administration and General – Outside Services Employed (PBR legal services)</i>	1.05	0.33	0.33	0.33	1.05
Adjustment to line item <i>Distribution Administration and General – Outside Services Employed (security at substation)</i>	0.63	0.63	0.63	0.63	0.63
Adjustment to line item <i>Distribution Administration and General – Regulatory Liaison and Compliance (ERC permit fees)</i>	0.53	0.68	0.52	0.40	0.26
<b>Total Recommended Adjustments</b>	<b>4.94</b>	<b>4.37</b>	<b>4.27</b>	<b>4.13</b>	<b>4.71</b>
<b>Revised Recommendation (Final Determination)</b>	<b>108.45</b>	<b>113.85</b>	<b>114.72</b>	<b>114.42</b>	<b>115.12</b>

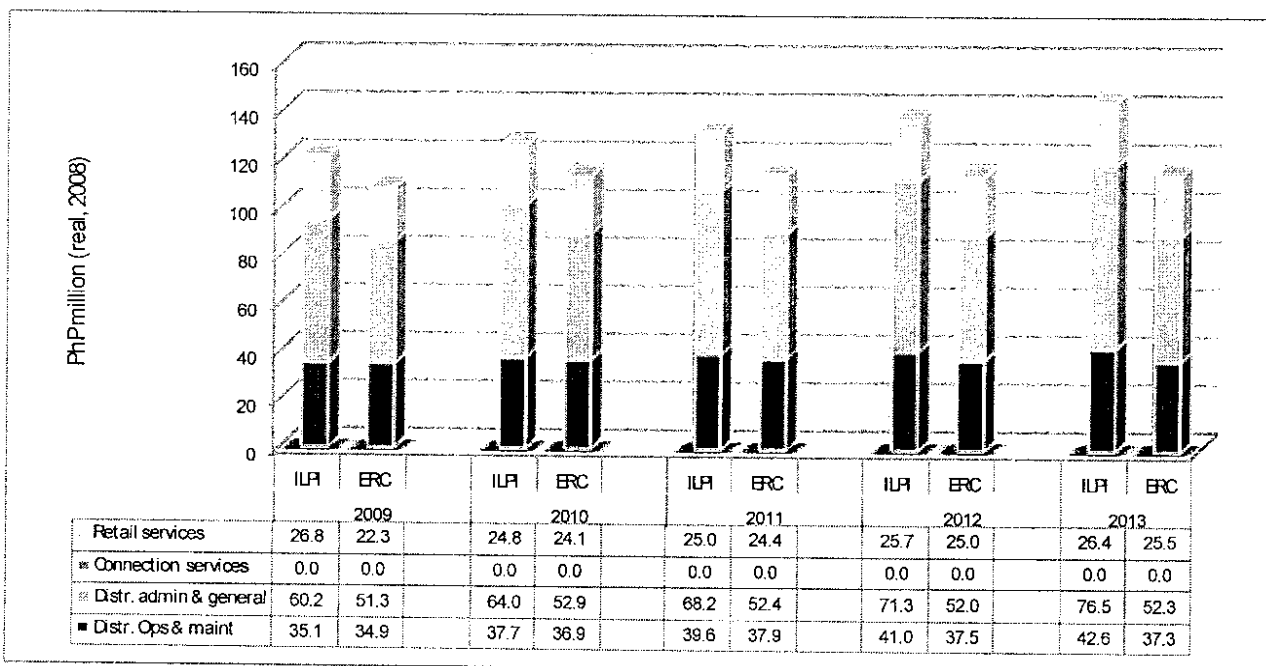
Source: PB Associates

### 5.10 ERC Final Determination on the operating and maintenance expenditure

5.10.1 The ERC accepts the analysis performed by PB Associates on the ILPI forecast operating and maintenance expenditure. The justification for the decreases proposed in ILPI's application value is considered sound and reasonable. The ERC also notes with some concern the results from the benchmarking review and accepts that the PB Associates recommendations will go some way to improving ILPI's relative performance.

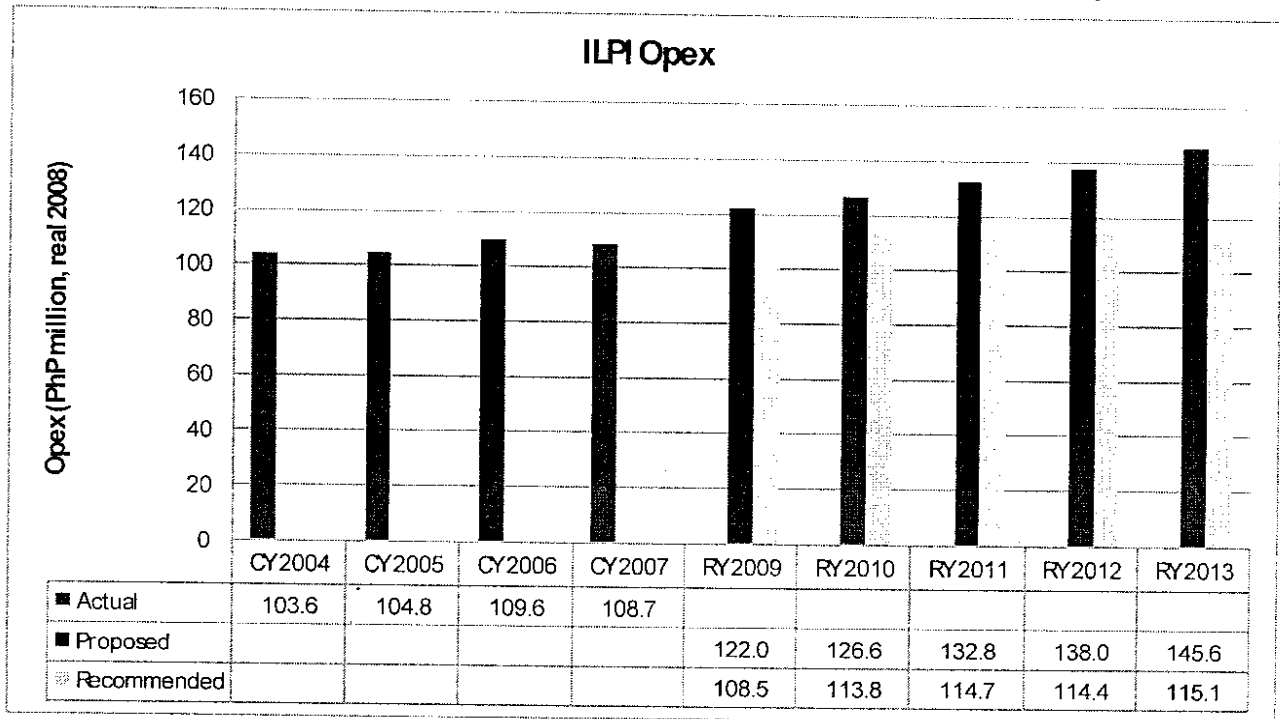
5.10.2 In Figure 5.3, a comparison is provided of ILPI's application for operating and maintenance expenditure during the Second Regulatory Period and the 2007 regulatory year and that accepted by the ERC for the Final Determination. A further comparison is provided in Figure 5.4, where the historical expenditure levels are also indicated.

**Figure 5.3 : Comparison of Operating and Maintenance Expenditure Forecasts**



Source : ILPI application, PB Associates and ERC analysis

Figure 5.4 : Historical and Forecast Trends – Operating and Maintenance Expenditure



5.10.3 The ERC's final determination for the allowed operating and maintenance expenditure forecasts for the Second Regulatory Period and for the 2009 regulatory year is indicated in Table 5.6. A more detailed breakdown of the approved operating and maintenance expenditure is provided in Appendix B. In addition, the operating and maintenance expenses is inclusive of the utility expense (water and electricity) estimated to be incurred in the course of providing Regulated Distribution Services, Distribution Connection Services and Regulated Retail Services of ILPI.

Table 5.6 : Final Determination on Operating and Maintenance Expenditure

PhP (Thousand)	2009	2010	2011	2012	2013	TOTAL
Nominal values	113,608	128,392	136,034	141,454	148,083	553,962
Real values (2008)	108,469	113,846	114,742	114,422	115,122	458,132

Note: The total is excluding Regulatory Year 2009

(This space is left intentionally blank)

## 6. OTHER TAXES, LEVIES AND DUTIES

### 6.1 Approach to other taxes, levies and duties expenditure forecasts

- 6.1.1 Section 4.13.2 of the RDWR specifies the requirements for the forecasts required from Regulated Entities with respect to taxes, levies and duties (other than corporate income tax). ILPI submitted its estimates for the taxes, levies and duties (other than corporate income tax) expenditure for the Second Regulatory Period as part of its Revenue Application.
- 6.1.2 Also included in the Revenue Application is the proposed expenditure on taxes, levies and duties (other than corporate income tax) for the 2009 Regulatory Year (April 1, 2008 to March 30, 2009). Under the current regulatory arrangements, there is no provision for the ERC to review any expenditure subsequent to the start of 2008<sup>34</sup>. Since ILPI will be entering PBR at the start of the Second Regulatory Period three months into the 2009 calendar year, the expenditure over the period January 2008 to March 2009 had to be reviewed as part of the Revenue Application and the ERC has therefore decided to include ILPI's expenditure program for the 2009 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.
- 6.1.3 In terms of Section 4.13.4 of the RDWR, the ERC must retain a Regulatory Reset Expert (or Experts) to review the operating and maintenance expenditure forecasts for a Regulated Distribution System, as well as the supporting information. The ERC included in this the review of the forecast expenditure on taxes, levies and duties (other than corporate income tax) carried out by PB Associates.
- 6.1.4 The findings and recommendations of PB Associates with regard to the forecast expenditure on taxes, levies and duties (other than corporate income tax) as submitted by ILPI are included in the Expenditure Review Report.<sup>35</sup> This was analyzed by the ERC and forms the basis of the taxes, levies and duties (other than corporate income tax) expenditure forecasts approved by the ERC, as described below. Since the Expenditure Review Report is available for public review, only the main findings are repeated below.
- 6.1.5 PBA was also requested to consider the submissions on the Draft Determination. Based on their consideration, they do not recommend any change to the recommendations made for the Draft Determination.

### 6.2 Purpose of the taxes, levies and duties expenditure

- 6.2.1 As part of its normal operations, a distribution utility has certain obligations to pay various license fees, levies, duties and other taxes (excluding corporate income tax) to various authorities and/or industry bodies. Failure to incur these expenses would lead to severe penalties and possible suspension of operations.
- 6.2.2 Expenditure on taxes, levies and duties (other than corporate income tax) constitutes one of the building blocks on which the calculation of the annual revenue requirement for Regulated Entities is based and therefore has a direct impact on the price cap determined under PBR. The approved license fees, levies, duties and other taxes

<sup>34</sup> This is because no more rate cases will be filed for the Second Entry Group under the current return-on-rate-base form of regulation.

<sup>35</sup> Supra note 24