

(excluding corporate income tax) expenditure is therefore directly recovered from customers as part of their distribution tariffs.

### 6.3 License fees, levies, duties and other taxes expenditure proposed by ILPI

6.3.1 ILPI's historical expenditure on license fees, levies, duties and other taxes (excluding corporate income tax) and the forecast expenditure as submitted in its Revenue Application are shown in Table 6.1.

**Table 6.1: ILPI Application for License Fees, Levies, Duties and Other Taxes Expenditure (Figures in the original Revenue Application)**

Regulatory Year	2009	2010	2011	2012	2013
<b>Taxes</b>					
Business Operation Permits		10,299	10,737	11,109	11,485
Corporate Community Tax		11,767	12,268	12,691	13,122
Real property Tax	1,123,324	735,795	767,066	793,529	820,509
Other		443,933	462,800	478,766	495,044
<b>SUBTOTAL</b>	<b>1,123,324</b>	<b>1,201,794</b>	<b>1,252,871</b>	<b>1,296,095</b>	<b>1,340,160</b>
<b>Levies</b>					
Regulatory Reset Expert Fees		1,646,560	630,939	208,427	
<b>Duties</b>					
<b>Total</b>	<b>1,123,324</b>	<b>2,848,354</b>	<b>1,883,810</b>	<b>1,504,522</b>	<b>1,340,160</b>

6.3.2 The ILPI application, in real figures, is indicated in Table 6.2, together with historical expenditure on license fees, levies, duties and other taxes.

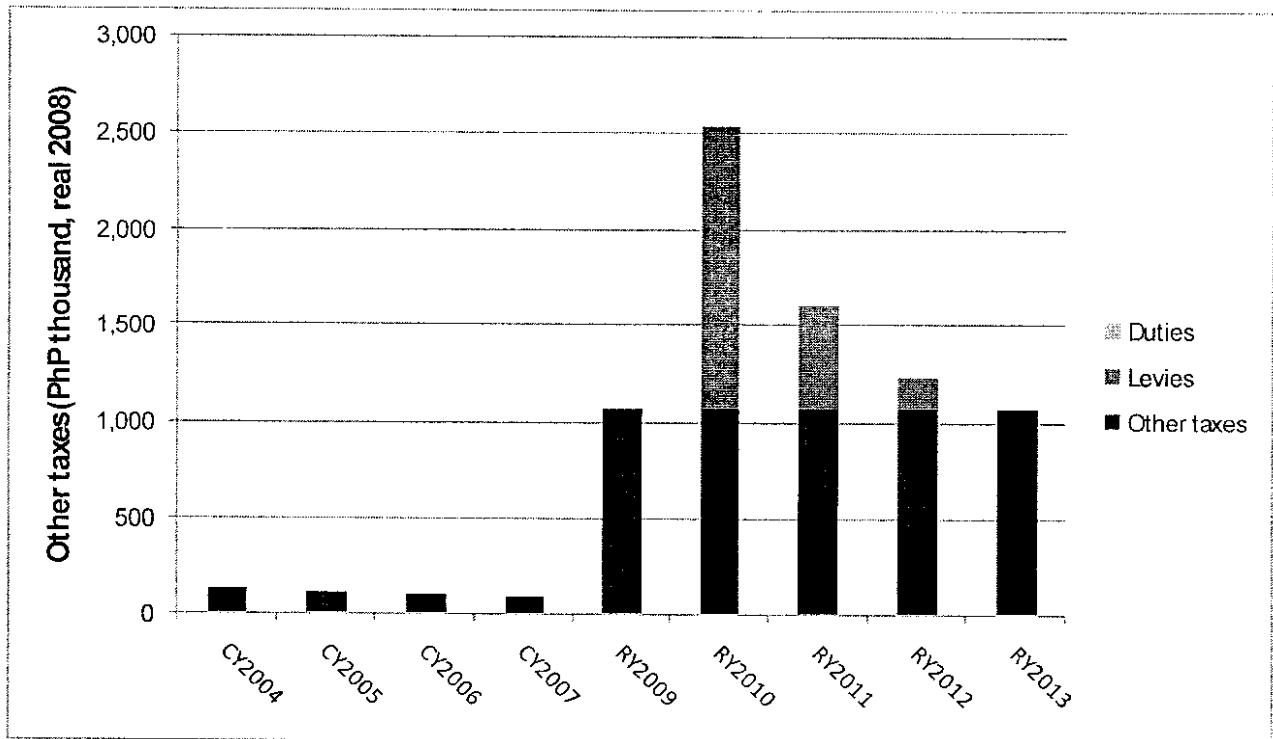
**Table 6.2: ILPI Application for License Fees, Levies, Duties and Other Taxes Expenditure (Figures revised by using the ERC financial indices forecasts)**

Category	Actual expenditure (PhP thousand)				Forecast expenditure (PhP thousand)				
	CY2004	CY2005	CY2006	CY2007	RY2009	RY2010	RY2011	RY2012	RY2013
Other Taxes	133	116	103	97	1,073	1,072	1,072	1,072	1,072
Levies	0	0	0	0	0	1,469	540	172	0
Duties	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>133</b>	<b>116</b>	<b>103</b>	<b>97</b>	<b>1,073</b>	<b>2,542</b>	<b>1,612</b>	<b>1,245</b>	<b>1,072</b>

Note: Given the 9-month overlap between the 2008 calendar year and the 2009 regulatory year, to avoid distorting the trend, no 2008 figure was included in the table.

6.3.3 In Figure 6.1, the ILPI forecast expenditure on license fees, levies, duties and other taxes is graphically represented, in real (August 2008) values. From Figure 6.1, ILPI is clearly anticipating very substantial increases in license fees, levies, duties and other taxes expenses during the Second Regulatory Period. The high increase in Taxes for 2010 is attributable to the forecast payment of the regulatory reset expert fees, as provided in the RDWR.

**Figure 6.1 : ILPI proposed Expenditure on License Fees, Levies, Duties and Other Taxes**



#### 6.4 Analysis of license fees, levies, duties and other taxes expenditure

6.4.1 PB Associates' review of ILPI's forecasts for license fees, levies, duties and other taxes during the Second Regulatory Period is discussed in detail in the Expenditure Review Report. They suggest the following reduction to ILPI's application:

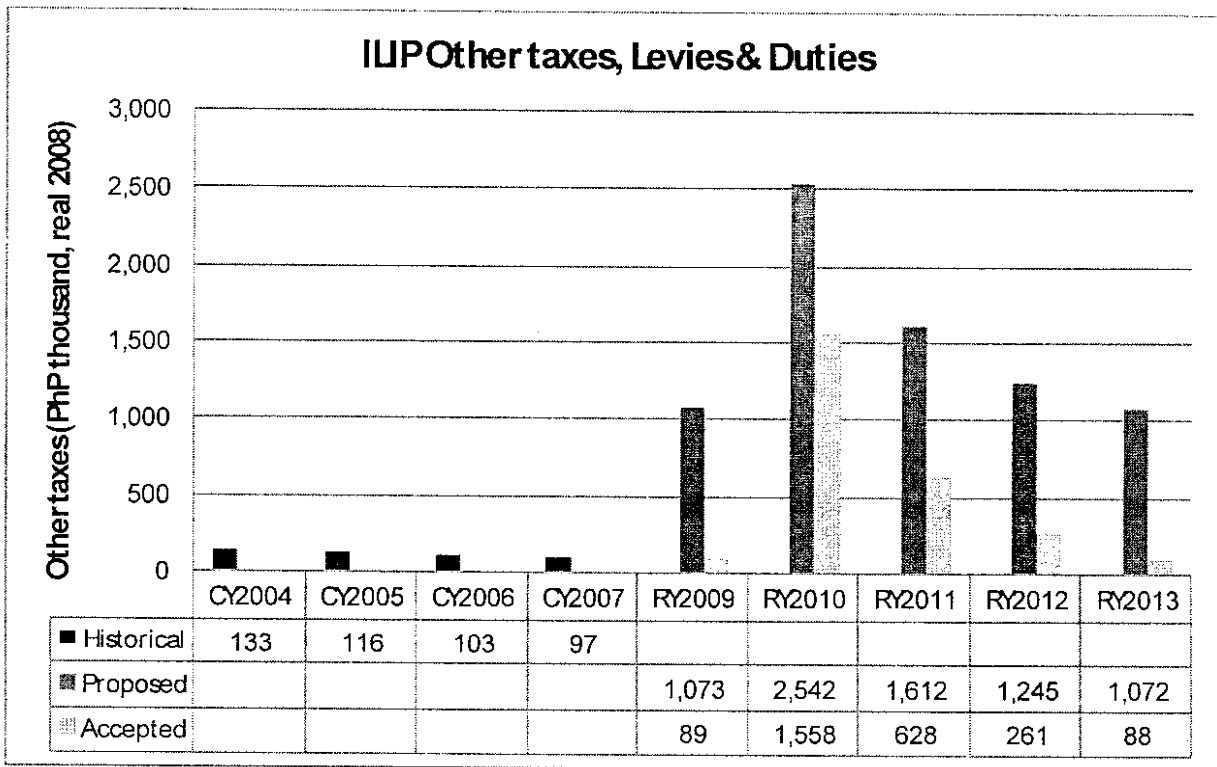
- The component of provision of real property taxes on the machineries as well as the proposed Luinab building should be excluded from the annual revenue requirement because insufficient information has been provided to satisfy us of ILPI's liability for these payments. Only taxes for which ILPI's liability has been legally established and confirmed at the time of this expenditure review should be included in the revenue requirement. Taxes for which ILPI's liability has not been confirmed or is in dispute before the courts should not be included. In the event that ILPI's liability for these taxes is legally confirmed or that ILPI becomes liable for new taxes that are not included in the annual revenue requirement, Article XI of the RDWR allows for unexpected tax liabilities imposed during the Second Regulatory Period by means of a "Tax Event Pass Through".

#### 6.5 Final determination on license fees, levies, duties and other taxes

6.5.1 The ERC accepts PB Associates' recommendations with regard to ILPI's forecasts for license fees, levies, duties and other taxes.

6.5.2 In Figure 6.2, the historical and forecast trend is illustrated, based on the ERC's allowance for license fees, levies, duties and other taxes expenditure during 2007 and the Second Regulatory Period.

Figure 6.2 : Comparison of License Fees, Levies, Duties and Other Taxes trends



6.5.3 In Table 6.3, the ERC's Final Determination for the forecast license fees, levies, duties and other taxes (other than corporate income tax) for the Second Regulatory Period and the 2007 Regulatory Year is presented. A more detailed breakdown of the allowed expenditure is provided in Appendix C.

**Table 6.3 : Final Determination on License Fees, Levies, Duties and Other Taxes Expenditure**

PhP	RY2009	RY2010	RY2011	RY2012	RY2013	TOTAL
Nominal values	93,217	1,756,573	744,992	322,416	113,652	<b>2,937,633</b>
Real values (2006)	89,000	1,557,572	628,388	260,803	88,355	<b>2,535,118</b>

Note: The total is excluding Regulatory Year 2009

## 7. REGULATORY ASSET BASE

### 7.1 Approach to the RAB

- 7.1.1 The regulatory asset base (RAB) represents the assets used by a Regulated Entity to provide Regulated Distribution Services and covers the Regulated Distribution System assets as well as the Non-system Assets.
- 7.1.2 While it is the intent to separate Distribution Connection Assets from the RAB in the future once Distribution Connection Services are applied in a competitive environment, these assets are presently still included in the RAB.
- 7.1.3 Under PBR, Regulated Entities are entitled to earn a return on the value of their rolled-forward RAB, as part of the annual allowed revenue requirement. The value of the RAB therefore has a direct bearing on the price consumers pay for electricity distribution.

### 7.2 Opening valuation of the RAB

- 7.2.1 Section 4.8 of the RDWR describes the approach to the opening valuation of the RAB. An optimized depreciated replacement cost (ODRC) valuation methodology is adopted. This method is used to ensure that only those assets that are required to provide efficient distribution services and allows efficient planning and investment in distribution assets are included in the RAB. Assets not meeting these criteria are optimized out.<sup>36</sup>
- 7.2.2 The ERC opted to appoint a regulatory reset expert to assist it to establish the initial revaluation of the Regulated Entities' RAB, rather than to require them to conduct their own valuation and present this to the ERC. This was in accordance with Clause 4.8.2(b) of the RDWR.
- 7.2.3 PB Associates and Asian Appraisal Company (hereafter jointly referred to as PB Associates) were appointed as the regulatory reset experts to conduct the initial revaluation for ILPI. The results of their valuation are described in the Initial Revaluation Report<sup>37</sup> and were accepted by the ERC. These reports were also presented to ILPI, who likewise indicated their acceptance of PB Associates' recommended valuation of the RAB at the Initial Re-valuation Date. Since the Initial Revaluation Report has been separately published and is publicly available, only the key points from this report, as it pertains to the Final Determination, will be repeated here.
- 7.2.4 The value of the RAB at the Initial Re-valuation Date (December 31, 2007) is presented in Table 7.1. No asset optimization was required for ILPI.
- 7.2.5 As part of the asset valuation project, PB Associates investigated the appropriate standard asset lives for distribution assets and prepared a report to the ERC in this regard<sup>38</sup>, which was adopted after a consultation process. These asset lives were used as basis for the depreciation of the assets in the RAB, using a straight-line depreciation method.

<sup>36</sup> The optimization approach is described in Clause 4.8.6 and Appendix D of the RDWR

<sup>37</sup> PB Associates and Asian Appraisal report titled "Asset valuation for Privately Owned Distribution Utilities subject to Performance Based Regulation : Iligan Light and Power Inc, Valuation Date: 31 December, 2007", dated April 2008

<sup>38</sup> PB Associates report titled "Standard Asset Lives for Philippines Distribution Utilities", dated August 2006

**Table 7.1 : Value of the ILPI RAB at December 31, 2007 (Initial Revaluation Date)**

Asset Category	Replacement Cost (PhP)	Optimized Replacement Cost (PhP)	Optimized Depreciated Replacement Cost (PhP)
Distribution assets	491,608,211	491,608,211	312,145,648
Non-system assets	158,665,689	158,665,689	104,418,337
Connection assets	36,713,116	36,713,116	22,242,903
Retail services assets	104,718,200	104,718,200	56,841,591
<b>TOTAL</b>	<b>791,705,216</b>	<b>791,705,216</b>	<b>495,648,479</b>

Source : PB Associates and Asian Appraisal

7.2.6 The calculation of the opening value of the RAB for the Second Regulatory Period (March 30, 2009) is derived as follows:

$$\begin{aligned}
 \text{Opening value of the RAB} &= \text{Value of the RAB at the Initial Revaluation Date} \\
 &\quad \text{minus} \\
 &\quad \text{Depreciation of the initial RAB to March 30 2009} \\
 &\quad \text{plus} \\
 &\quad \text{Inflation of the initial value to a March 2009 basis} \\
 &\quad \text{plus} \\
 &\quad \text{Approved capex for the 2009 regulatory year (RY)} \\
 &\quad \text{minus} \\
 &\quad \text{Depreciation of assets acquired during 2009 (RY)} \\
 &\quad \text{minus} \\
 &\quad \text{Disposal of assets during 2009 (RY)} \\
 &\quad \text{plus} \\
 &\quad \text{CWIP allowance}
 \end{aligned}$$

7.2.7 The depreciation of the initial asset base as well as the assets acquired during 2009 is discussed in Section 7.4. The approved capital expenditure program for 2009 is discussed in Section 4.9. Disposal of assets is as reported by ILPI in the Revenue Application.

7.2.8 The construction work in progress factor (CWIP factor) is described in Section 4.8.9 of the RDWR. This is to compensate Regulated Entities for the investment cost of capital tied up during construction of major projects. During the reset period for the First Entry Group, the ERC conducted a study on the appropriate CWIP factor for typical distribution projects, based on information provided by Regulated Entities and consulted with the Regulated Entities on this. Based on this study, a preliminary CWIP factor was determined by the ERC and was communicated to the First Entry Regulated Entities prior to the filing of their Revenue Applications.<sup>39</sup> This was further updated for the Final Determination for the First Entry Group and the Regulated Entities in the Second Entry Group were advised to use the same CWIP figures for their Revenue Applications.

<sup>39</sup> The findings are described in the ERC report titled "Performance Based Regulation of Privately Owned Electricity Distribution Utilities (First Entry Point) : Preliminary Calculation of the Construction Work in Progress Factor that will apply during the Second Regulatory Period", dated August 23, 2006

Updated information had subsequently been received from the Second Entry Group, and was analyzed. Overall, the project construction periods did not vary significantly from that submitted by the First Entry Group. The ERC has therefore decided to adopt the same CWIP factor used for the Final Determination for the First Entry Group, adapted for the WACC used for this Final Determination. This is indicated in Table 7.2. The CWIP factor only applies to Regulated Distribution Assets and Distribution Connection Assets, and to Non-network structures and improvements.

**Table 7.2 : CWIP Factors Adopted for the Final Determination**

Project category	CWIP factor
Substations	4.6%
All other capital projects	3.3%

Source: ERC analysis

7.2.9 Inflation of the initial asset value (Dec. 31, 2007) to the opening value (April 1, 2009) is done using the Philippines inflation rate forecast for the 2008 and 2009 regulatory year adopted by the ERC.

### 7.3 Final Determination on the opening value of the RAB

7.3.1 The ERC's Final Determination of the ILPI RAB opening value is indicated in Table 7.3.

**Table 7.3 : Opening Value of the ILPI RAB at March 31, 2009 (PhP Million)**

Asset Category	Initial value	Deprec. original base 2009 RY	Inflation of asset base to Mar 09	Approved Jan 08 to Mar 09 capex	Deprec. of additions	Disposals	CWIP	Opening RAB for 2nd Regulatory Period
<b>Distribution Assets</b>								
Land and structures	14.4	0.0	1.6	0.5	0.0	0.0	0.0	16.5
Substation Equipment	46.8	3.0	4.9	13.6	0.2	0.0	2.9	65.0
Distribution Lines – network	181.3	6.1	19.5	22.5	0.4	0.0	7.2	223.9
Underground distribution network	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Line Transformers – Distribution	61.5	3.5	6.5	7.0	0.1	0.0	2.4	73.6
Other	8.2	0.4	0.9	-0.6	0.0	0.0	0.2	8.2
<b>Non-network assets</b>								0.0
Land and structures	58.6	0.6	6.5	4.4	0.0	0.0	0.5	69.3
Furniture, transportation, tools	19.1	2.5	1.9	13.5	0.7	0.0		31.3
Materials, supplies and spares	23.9	0.0	2.7	0.0	0.0	0.0		26.6
Other	2.8	1.0	0.2	6.0	0.6	0.0		7.4
<b>Connection assets</b>								0.0
Overhead connections	22.2	1.3	2.3	3.1	0.1	0.0	0.9	27.2
Underground connections	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-network assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0		0.0
<b>Retail service assets</b>								0.0
Metering	56.8	4.1	5.9	8.3	0.2	0.0	1.9	68.7
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Transferred subtrans. Assets</b>								0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0		0.0
<b>TOTAL</b>	<b>495.6</b>	<b>22.6</b>	<b>52.7</b>	<b>78.5</b>	<b>2.3</b>	<b>0.0</b>	<b>16.0</b>	<b>618.0</b>

Source : ILPI application, PBA Valuation, ERC analysis

## 7.4 Regulatory depreciation

- 7.4.1 The ERC reviewed ILPI's calculations of regulatory depreciation (Schedules A6, E1 and E2 of the Revenue Application) and made some adjustments to consider standard asset lives.
- 7.4.2 For the calculation of the historical cost depreciation of the original assets base at the Initial Re-valuation Date, ILPI's submitted figures were accepted. The purpose of including the historic cost depreciation is to align the depreciation amount used in calculating the corporate income tax building block with the actual depreciation figure used in ILPI's financial statements. It is therefore important to maintain this consistency.
- 7.4.3 The historical cost depreciation of assets acquired during the 2009 regulatory year and the Second Regulatory Period, is assumed to be identical to the regulatory depreciation. This requires ILPI to modify the standard lives used in its financial statements for new assets (acquired after December 2007) to ensure consistency with the regulatory asset lives. Failing this, a divergence between the historical cost depreciation used to calculate the corporate income building block and ILPI's asset depreciation used to determine its actual corporate income tax payments is likely to occur.
- 7.4.4 In Table 7.4, a summary is provided of the regulatory depreciation (ODRC basis) of the ILPI asset base, as calculated by the ERC. The historical cost depreciation is presented in Table 7.5. In terms of the RDWR (Clause 4.10), disposals are included in the depreciation amounts. The forecasts provided by ILPI in their Revenue Application are included below. No income from disposals was forecasted.

**Table 7.4 : Summary of ODRC Depreciation of the ILPI RAB (calculated by the ERC) (PhP Millions)**

ODRC depreciation	2009	2010	2011	2012	2013
Depreciation of the opening asset base	18.1	20.7	20.7	20.0	19.9
Depreciation of assets acquired Jan 08–Mar 09	2.2	4.5	4.5	4.5	4.5
Depreciation of assets acquired during the 2nd regulatory period	0.0	3.3	6.5	9.9	12.3
<b>Subtotal</b>	<b>20.4</b>	<b>28.5</b>	<b>31.7</b>	<b>34.3</b>	<b>36.7</b>
plus Disposals	0.0	0.0	0.0	0.0	0.0
minus Income from disposals	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>20.4</b>	<b>28.5</b>	<b>31.7</b>	<b>34.3</b>	<b>36.7</b>

Source : ERC analysis

**Table 7.5 : Summary of Historical Cost Depreciation of the ILPI RAB (calculated by the ERC) (PhP Millions)**

Historical cost depreciation	2007	2008	2009	2010	2011
Depreciation of the opening asset base	15.9	15.3	14.8	14.3	13.9
Depreciation of assets acquired Jan 08–Mar 09	2.2	4.5	4.5	4.5	4.5
Depreciation of assets acquired during the 2nd regulatory period	0.0	3.3	6.5	9.9	12.3
<b>TOTAL</b>	<b>18.2</b>	<b>23.0</b>	<b>25.8</b>	<b>28.6</b>	<b>30.7</b>

## 7.5 Final Determination - Rolled forward asset base

- 7.5.1 The ERC's Final Determination on the value of the rolled-forward asset base for the Second Regulatory Period, as determined through the ERC modeling, is presented in Table 7.6.

**Table 7.6: Value of the Rolled Forward Regulatory Asset Base (PhP Thousand)**

	2009	2010	2011	2012	2013
Opening Value of RAB		617,991	737,328	790,157	824,280
Depreciation on RAB		28,462	31,686	34,329	36,670
Capital Expenditure		147,490	83,809	68,012	44,797
Change in assets used over regulatory lives		309	707	439	480
Closing Value of RAB	617,991	737,328	790,157	824,280	832,886
<b>Average RAB for the Year</b>	<b>617,991</b>	<b>677,659</b>	<b>763,743</b>	<b>807,219</b>	<b>828,583</b>

Source : ERC analysis and financial model

## 7.6 Final Determination on Working capital

- 7.6.1 The RDWR allows Regulated Entities to recover a return on the working capital tied up in the operation of their Regulated Distribution Systems. The ERC conducted a lead/lag study to ascertain the allowance that should be made for such working capital and determined that this is relatively minor.
- 7.6.2 During consultation by the ERC prior to the filing of the Revenue Applications on the appropriate working capital allowance, the Regulated Entities indicated that they have a greater concern about the significant amounts of working capital tied up in their energy purchases, for which they have no recourse to recover. The ERC pointed out that energy purchases is not a Regulated Distribution Service and as such should not be included in the maximum average price-cap for such services. Likewise, working capital on energy purchases should not be recovered in the allowed annual revenue requirement. However, since the ERC recognizes that the current unbundled rate structure does not allow for the recovery of working capital on energy purchases and for the Second Regulatory Period, has therefore approved to include an allowance for capital tied up in energy purchases as part of the working capital for Regulated Distribution Services.
- 7.6.3 In the Final Determination for the First Entry Group, the ERC indicated that given the contractual settlement periods for consumers to pay their electricity bills (which averages around 10 days), and the period that Regulated Entities have to settle their payments for energy and transmission charges (30-35 days on average), there should not be any working capital tied up in energy or transmission service procurement. If customer payment was therefore collected as per the contracted period, there would be a negative net working capital requirement even if customer invoicing is distributed throughout the month.
- 7.6.4 The ERC therefore concluded that it is not appropriate to allow any working capital for energy purchases. It accepts that the Regulated Entities do have a longer debtor settlement period than that contracted and that they therefore would have working capital tied up in energy purchases. However, the ERC believes that late payments should be made subject to penalties to recover this lost working capital, rather than recover this from the distribution (or energy) rates, which would penalize those customers who are paying their accounts within the prescribed time.
- 7.6.5 Further lead/lag information was provided by the Second Entry Group Regulated Entities. Based on an analysis of this information, it appeared that the average lag time until payment of electricity accounts is 40 days – well in excess of the standard payment terms, which varied between 10 and 20 days. For the First Entry Group, the ERC assumed an efficient payment period of 15 days. On considering this additional information, it appears that this period may be too low and it has now been set at 25

days. Since the ERC wishes to ensure that a strong incentive remains on Regulated Entities to pursue electricity account payments, this period is still substantially less than the actual average payment period experienced by the Regulated Entities. As a result, the working capital factor is increased to 4.9% of the operating and maintenance expenditure allowed (from the 3% allowed for the First Entry Group).

## 8. WEIGHTED AVERAGE COST OF CAPITAL

### 8.1 Purpose of the regulatory WACC

8.1.1 The Regulatory Weighted Average Cost of Capital (WACC) is the rate at which the return on capital (the RAB and working capital) is calculated for inclusion in the allowed revenue requirement. In addition, it is also used in the calculation of the CWIP factor (see Paragraph 7.2.8). It is therefore one of the key parameters to be determined for the Second Regulatory Period.

### 8.2 Approach to the WACC

- 8.2.1 During the regulatory reset period for the First Entry Group, the ERC prepared a report<sup>40</sup> (the WACC Report) and conducted public consultation on the manner in which the Regulatory WACC for the Second Regulatory Period should be determined. After the consultation, the recommended methodology described in the WACC Report was accepted.
- 8.2.2 The preliminary WACC figures used in the WACC report was updated by the ERC for the Final Determination of the First Entry Group, based on the economic indices and other parameters at the time of the decision. This resulted in a “vanilla” WACC figure of 12.80%.
- 8.2.3 The ERC has decided to use the same approach in determining the WACC that it had applied for the Final Determination of the First Entry Group. However, some modifications had to be made to reduce the impact of volatility in some of the base parameters used, to avoid undue volatility in the WACC itself.<sup>41</sup> A full description of the ERC’s determination of the WACC is to be published in an accompanying updated WACC report which will be made available on the ERC website for scrutiny and comment.
- 8.2.4 This volatility is particularly problematic with respect to the local CPI. Given the historically very low trading volumes in long-term bonds in the Philippines, using the yields on these bonds as an indication of the appropriate risk-free rate in setting the WACC is not considered appropriate. The ERC has therefore to date determined the risk-free rate based on the US bond rates, adapted for the inflation differential between the USA and the Philippines. However, since the date of the Final Determination for the First Entry Group (August 2007), the Philippines has experienced major variability in the local consumer price index. The ERC has therefore decided to adopt the 12-month average CPI figures in determining the inflation differential, rather than the spot-rates applied for previous decisions.
- 8.2.5 In addition, the ERC has decided to use the Philippines average country risk premium of the last two years rather than the longer term average applied in the past.

<sup>40</sup> ERC report titled “PRELIMINARY CALCULATION OF THE REGULATORY WEIGHTED AVERAGE COST OF CAPITAL THAT WOULD APPLY DURING THE SECOND REGULATORY PERIOD” dated May 30, 2006.

<sup>41</sup> Since the WACC is intended to be a stable indication of the reasonable rate of return, investors should obtain their investments on distribution assets, thus, a high degree of volatility in this parameter is not acceptable. Furthermore, such excess volatility would give rise to discrepancies between the price settings for various entry groups into PBR and may lead to several re-opening events during the regulatory periods – which is not only very resource-intensive to undertake, but would also lead to instability in the price forecasts and increased regulatory uncertainty for Regulated Entities and investors.

8.2.6 Following industry consultation, a number of changes were made to the RDWR on December 8, 2008.<sup>42</sup> Some of these changes affect the manner in which the regulatory WACC for Regulated Entities is to be determined. In particular, the changes reflect the higher risks faced by investors in Philippines electricity distribution infrastructure compared with investors in developed overseas markets:

- Due to the developing nature of the local economy and the utility infrastructure business, the systemic risk faced by investors in Philippines utilities are higher than that faced by investors in comparable utilities in developed countries. It is therefore not appropriate to directly compare the observed asset beta of international utilities with the local environment, and these observed values will therefore be adapted (increased) by a factor of a quarter (25%).
- The point value at which the WACC will be set from the range of likely values determined by the ERC<sup>43</sup>, will now be at the 75<sup>th</sup> percentile of the range, as opposed to the 50<sup>th</sup> percentile (mean) used in the past. This is to reflect the developing nature of PBR in the Philippines and the regular challenges and delays associated with the process, which add considerably to the regulatory risk faced by Regulated Entities.

8.2.7 Since the calculation of the WACC is described in some detail in the updated WACC report, only the main discussion points are replicated below.

### 8.3 WACC Methodology

8.3.1 The WACC formula adopted by the ERC, as described in Section 4.11 of the RDWR, is for the so-called “Vanilla WACC” :

$$\text{WACC} = [r_e \times E / V] + [r_d \times D / V]$$

Where:

$r_e$  = the cost of equity;

with  $r_e = r_f + \beta_e \times \text{MRP}$

where  $r_f$  = the risk-free rate;

$\beta_e$  = the equity Beta; and

MRP = market risk premium, set at 6% for the Second Regulatory Period

$r_d$  = the cost of debt;

with  $r_d = r_f + \text{DM}$

where  $r_f$  = the risk-free rate; and

DM = the debt margin in the Philippines

E = the amount of equity funding assumed for regulatory purposes in the capital structure of the Regulated Entity, being 55% of V for the Second Regulatory Period;

D = the amount of debt funding assumed for regulatory purposes in the capital structure of the Regulated Entity, being 45% of V for the Second Regulatory Period; and

<sup>42</sup> Supra note 5

<sup>43</sup> A range of values is determined to reflect the uncertainty in the value of many of the parameters used to determine the WACC.

$$V = E + D.$$

- 8.3.2 The calculation of the WACC is straightforward, but considerable uncertainty surrounds the determination of the underlying parameters. Setting these parameters, which are subject to various manners of interpretation, is often contentious. While the approach to the WACC adopted by the ERC has been largely unchallenged for the regulatory reset for the distribution utilities, it was thoroughly tested and challenged during the regulatory reset for TransCo before being finalized. The adopted methodology is therefore considered sound and robust.
- 8.3.3 The risk-free rate was estimated using two approaches – a direct measure using the yields on long dated Philippines Treasury bonds (in Peso); and an indirect measure using yields on long dated USA Treasury bonds (US\$), adjusted for the inflation differential between the Philippines and the USA, and the Philippines country risk. Since the indirect method appears more robust given the very low trading volumes in long dated Philippine bonds, the ERC used this and determined a value of between 9.56% and 10.59% for the risk-free rate.
- 8.3.4 In the absence of sufficient local evidence on the appropriate equity Beta ( $\beta_e$ ) for electricity distribution businesses, this figure is derived from international observations<sup>44</sup>. Since these observations generally reflect the financing structure of the observed companies, it is necessary to de-lever the observed  $\beta_e$  figures and re-lever these using the gearing ratio adopted by the ERC (60:40 debt equity ratio). The ERC sourced data from Bloomberg on various overseas electricity companies, resulting in a  $\beta_e$  estimate of 1.35 (after allowing for the factor noted in paragraph 8.2.6). This was compared against research data published by Prof. Anwath Damodaran of the Stern University<sup>45</sup> which resulted in an un-adapted value (1.25). Finally, international regulatory decisions of recent years were considered, resulting in an indicative (un-adapted)  $\beta_e$  range of 0.65 to 1.00. Based on these figures the ERC's final value for the  $\beta_e$  is between 1.35 and 1..
- 8.3.5 Based on its investigation of the debt margin, the ERC concluded that a figure of 2.5% is appropriate. This is somewhat higher than its similar decision for TransCo (2.3%), but reflects the smaller size and somewhat higher risk proposition of distribution companies.
- 8.3.6 Taking into account the values above, the calculation of the indicative range for the regulatory WACC for the first entry group of Philippines electricity distribution utilities for the Second Regulatory Period is indicated in Table 8.1.
- 8.3.7 The ERC notes that this calculated range is substantially higher than that indicated in its WACC calculation for the First Entry Group – this is a reflection of the impact of the changes in the economic situation in the Philippines over the last 12 months, and the recent changes made to the RDWR to provide a fair return on investment.

#### 8.4 Final Determination – Regulatory WACC

- 8.4.1 The ERC's Final Determination on the Regulatory WACC that will apply for the Second Regulatory Period is to accept a figure at the 75<sup>th</sup> percentile of the indicated WACC range as calculated in Table 8.1. This is a "vanilla" WACC and is set at 16.27% (p.a.).

<sup>44</sup> It is noted that Meralco is the only electricity distribution company traded on the Philippine stock exchange. However, given its energy trading and supply activities, it has the characteristics of a vertically integrated company rather than a stand-alone distribution business. Its risk profile is therefore not considered an appropriate benchmark for setting the  $\beta_e$  for local electricity distribution companies.

<sup>45</sup> <http://pages.stern.nyu.edu/~adamodar/>

**Table 8.1 : Calculation of the Regulatory WACC – First Entry Group**

		<i>Regulatory WACC Estimate by ERC</i>			
		<i>Low</i>	<i>Mid</i>	<i>High</i>	
<b>Parameters</b>					
Gearing (Debt) ratio	$D/(D+E)$	40%	40%	40%	
Equity ratio	$E/(D+E)$	60%	60%	60%	
Debt to Equity	$D/E$	0.67	0.67	0.67	
Asset beta (degeared empirical beta)	$\beta_a$	0.807	0.812	0.817	
Risk free rate (nominal - US\$ 10 Year Bond Yields in USA)		3.89%	3.89%	3.89%	
Country Risk Margin (excluding FX Risk)	CRP	1.61%	1.86%	2.11%	
Risk free rate used in WACC	$R_f$	9.56%	10.08%	10.59%	
Debt Margin	DM	2.25%	2.50%	2.75%	
<b>Cost of debt (pre-tax nominal peso terms)</b>	$K_d$	11.81%	12.58%	13.34%	
Market Risk Premium (Developed Country)	$R_m - R_f$	6.00%	6.00%	6.00%	
Corporate tax rate	$t_c$	30.8%	30.8%	30.8%	
Inflation rate (Philippines)	$i$	7.88%	8.38%	8.88%	
Inflation Rate (USA)		3.95%	4.45%	4.95%	
<b>Calculated Equity (Regeared) Betas</b>		<b>Formula</b>	<b>Low</b>	<b>Mid</b>	<b>High</b>
Equity Beta (1) Simple No Tax Adjustment		1	1.35	1.35	1.36
Equity Beta (2) Simple Tax Adjustment		2	1.18	1.19	1.19
<b>Other Parameters</b>					
Equity beta (geared beta)	$\beta_e$		1.35	1.35	1.36
<b>Cost of Equity (post-tax nominal)</b>	$K_e$		17.63%	18.20%	18.76%
<b>WACC Matrix - Commercial Practice</b>					
Post-tax nominal			13.85%	14.40%	14.95%
Post-tax real			5.53%	5.55%	5.57%
Pre-tax nominal			20.02%	20.82%	21.62%
Pre-tax real			11.25%	11.48%	11.70%
<b>Vanilla WACC (nominal)</b>			<b>15.30%</b>	<b>15.95%</b>	<b>16.59%</b>
<b>WACC set at 75th percentile of suggested range</b>			<b>16.27%</b>		

## 9. ANALYSIS OF REVENUE REQUIREMENTS AND PRICE CAPS

### 9.1 Approach to calculating the Maximum Average Price (MAP)

- 9.1.1 The ERC has adopted the approach outlined in Article IV of the RDWR for the calculation of the Smoothed Maximum Average Price (SMAP) for ILPI. The steps in this calculation are as follows.
- a. Decision on the energy forecasts and the allowed capital, operating & maintenance and levies, duties and other taxes expenditure for the Second Regulatory Period (see Sections 3, 4, 5 and 6);
  - b. Identification of the rolled-forward asset base (see Section 7.5);
  - c. Calculating the annual allowed revenue requirement, using the building blocks; and
  - d. Setting of the  $P_0$ -factor and calculation of the X-factor as per Section 4.15.
- 9.1.2 A regulatory financial model has been developed for the ERC and Regulated Entities to assist with the analysis and calculation of the X-factor and the SMAP. This model relies on forecast expenditure data, economic indices and consumption figures, as well as the opening value of the RAB.
- 9.1.3 The results presented below have been calculated by applying this regulatory financial model. The previous version of the model was also applied by ILPI for its Revenue Application. Following the recent changes to the RDWR<sup>46</sup>, the model was adapted to reflect these changes.

### 9.2 Omission of the Corporate Income Tax Building Block

- 9.2.1 During the recent consultation on the changes to the RDWR<sup>47</sup>, a request was received from all Regulated Entities operating under PBR, or yet to enter PBR, that the Corporate Income Tax Building Block should be omitted from the allowed revenue requirement calculation for utilities for the Second Regulatory Period. The ERC has considered this request and while it believes that including corporate income tax as a recoverable expense is based on sound economic principles, has decided to accede to this request.
- 9.2.2 During the Second Regulatory Period there will therefore not be any recovery of corporate income tax by any Regulated Entity. This situation will again be reviewed at the Third Regulatory Period.

### 9.3 Annual Revenue Requirement – ILPI application

- 9.3.1 The annual revenue requirement proposed by ILPI in their Revenue Application is indicated in Table 9.1. This was based on the following key assumptions:
- a) The capital expenditure proposed in ILPI's Revenue Application.
  - b) The operating and maintenance expenditure proposed in ILPI's Revenue Application.
  - c) The levies, duties and other taxes proposed in ILPI's Revenue Application.
  - d) The energy consumption forecasts included in ILPI's Revenue Application.

<sup>46</sup> Supra note 5

<sup>47</sup> Ibid

- e) The financial indices proposed in ILPI's Revenue Application.
- f) ILPI's calculation of the value of the opening RAB.
- g) The depreciation calculations proposed in ILPI's Revenue Application.
- h) A Regulatory WACC of 12.8%.
- i) A zero working-capital allowance.
- j) An assumed corporate tax rate of 30%, for the whole Second Regulatory Period.

**Table 9.1 : ILPI Application - Allowed Revenue Requirement (PhP Million, nominal)**

Building block	2010	2011	2012	2013
Return on capital	81.3	92.0	99.6	110.2
Opex	133.8	145.4	156.3	170.4
Regulatory depreciation	31.2	33.5	35.8	39.6
Corporate income tax	0.0	18.9	20.8	33.7
Other taxes	2.7	1.8	1.4	1.3
<b>TOTAL</b>	<b>249.0</b>	<b>291.6</b>	<b>313.9</b>	<b>355.2</b>

Source : ILPI Revenue Application

#### 9.4 Annual Revenue Requirement – ERC analysis

9.4.1 The ERC modeled the annual revenue requirement for ILPI based on its energy forecasts described in Section 3.3, expenditure allowances discussed in Sections 4.9, 5.9 and 6.5, the opening value of the RAB discussed in Section 7.3.1 and the rolled-forward value of the RAB discussed in Section 7.5.

9.4.2 The calculation of the return on capital building block is indicated in Table 9.2.

**Table 9.2 : Calculation of the Return on Capital (PhP Thousand, nominal)**

	2010	2011	2012	2013
Average RAB for the Year (see Table 7.6)	677,659	763,743	807,219	828,583
Opex approved (see Table 5.6)	128,392	136,034	141,454	148,083
Working capital allowed	6,291	6,666	6,931	7,256
Subtotal - capital invested	683,951	770,408	814,150	835,839
<b>RETURN ON CAPITAL</b>	<b>111,279</b>	<b>125,345</b>	<b>132,462</b>	<b>135,991</b>
Regulatory WACC (see Section 8)	16.27%			
Working capital factor (see Section 7.6)	4.9%			

Source: ERC Analysis

9.4.3 Based on its modeling, the ERC's determination of ILPI's annual revenue requirement for the Second Regulatory Period is indicated in Table 9.3. This is also graphically represented in Figure 9.1.

**Table 9.3 : ERC Calculation – ILPI Revenue Requirement (PhP Million, nominal)**

Building block	2010	2011	2012	2013
Return on capital (see Table 9.2)	111.3	125.3	132.5	136.0
Opex (see Table 5.5)	128.4	136.0	141.5	148.1
Regulatory depreciation (see Table 7.3)	28.5	31.7	34.3	36.7
Corporate income tax (calculated by model)	0.0	0.0	0.0	0.0
Other taxes (see Table 6.3)	1.8	0.7	0.3	0.1
<b>TOTAL</b>	<b>269.9</b>	<b>293.8</b>	<b>308.6</b>	<b>320.9</b>

Note: These figures do not include the required GSL provision

9.4.4 In Figure 9.2, the ERC's approved annual revenue requirement is compared with that of ILPI and the forecast energy consumption on the ILPI network, on a normalized basis (using the 2008 values as basis and working with the real values for expenditure).

From this it is clear that the ILPI application for its revenue requirement over the Second Regulatory Period is reasonably well aligned with the anticipated energy consumption growth, but that it also provides for catching up on some of the deficiencies from past under-expenditure. This is also the situation anticipated with the ERC's allowed revenue requirement for ILPI.

Figure 9.1 : Allowed Revenue Requirement – ILPI Application vs. ERC Determination

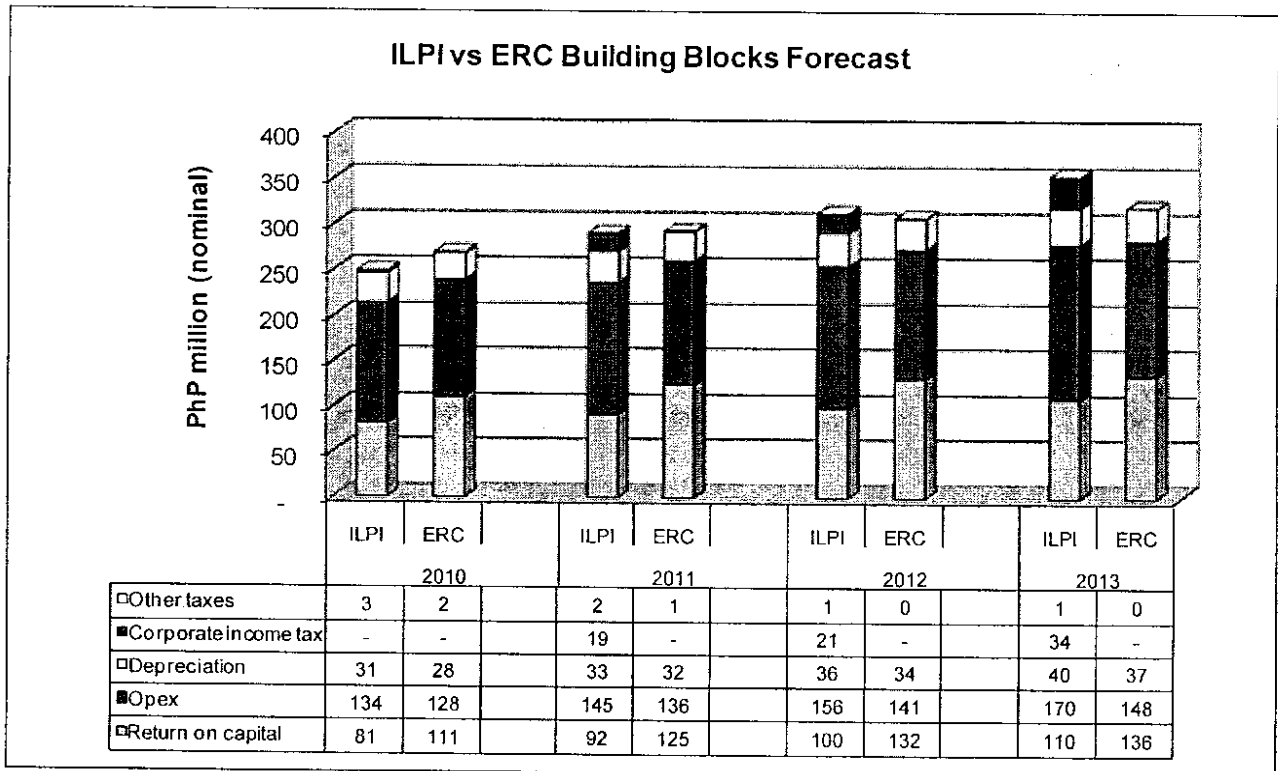
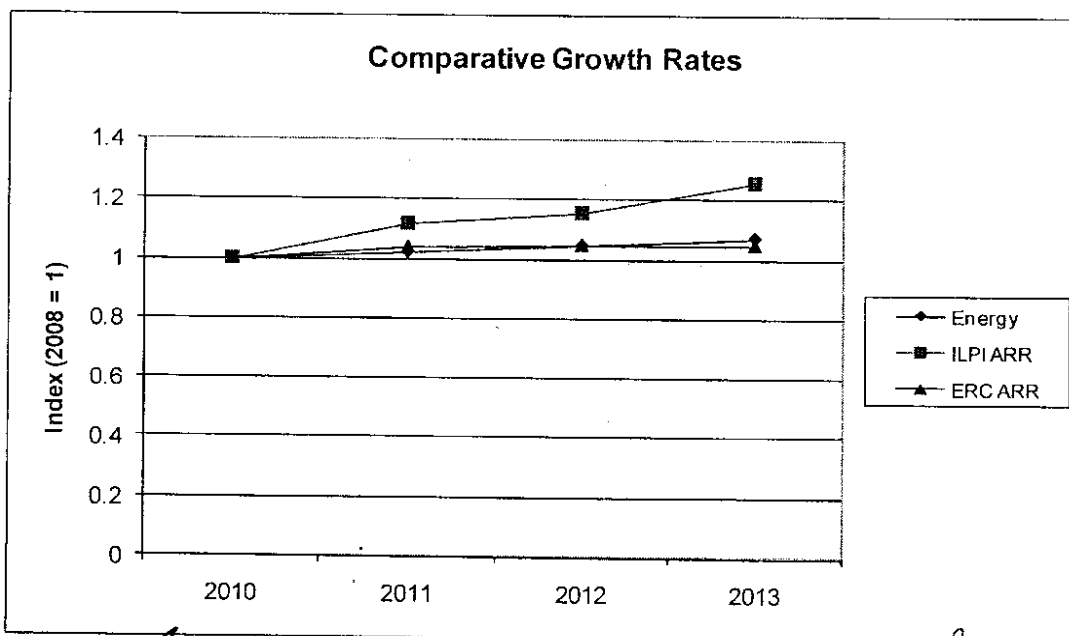


Figure 9.2: Comparison of Growth Rates – Revenue Requirements (real) and Energy Consumption



Source: ERC analysis

## 9.5 Final determination – Allowed revenue requirement

9.5.1 For the Guaranteed Service Level (GSL) component of the performance incentive scheme approved for the Second Regulatory Period, an additional allowance of 0.5% of the annual revenue requirement should be made (see discussion in Section 10.3). This is to ensure the revenue-neutrality of the Regulated Entities in applying this scheme.

9.5.2 After allowing for this addition, the ERC's Final Determination with regard to ILPI's allowed annual revenue requirement for the Second Regulatory Period is indicated in Table 9.4.

**Table 9.4 : Final Determination - ILPI Annual Revenue Requirement (PhP, nominal)**

	2010	2011	2012	2013
ARR without GSL allowance	269,885,496	293,806,399	308,563,288	320,853,754
GSL allowance	1,349,427	1,469,032	1,542,816	1,604,269
<b>TOTAL ARR</b>	<b>271,234,924</b>	<b>295,275,431</b>	<b>310,106,104</b>	<b>322,458,023</b>

## 9.6 Final determination – Smoothed maximum average price

9.6.1 The MAP for Regulated Distribution Services in 2009, as indicated by ILPI in their revenue application, based on their October 2007 to September 2008 energy consumption, is calculated in Table 9.5. In terms of the RDWR (Clause 4.5), this value is used as the basis from which the X-factor is determined.

**Table 9.5 : Average Price during 2009**

ILPI revenue from Regulated Distribution Services from April 2009 to Mar 2010 <sup>48</sup> (PhP)	<b>140,976,905</b>
Energy sales for Oct 2007 to Sept 2008 (kWh)	177,637,103
Average price (PhP/kWh)	0.794

9.6.2 Based on this 2009 average price and the allowed annual revenue requirement described above, the ERC calculates the X-factor and the opening MAP for ILPI for the Second Regulatory Period as follows (with a  $P_0$ -factor of zero) :

X-factor : -23.3%  
MAP<sub>2010</sub> : PhP1.030 (PhP/kWh)

Based on these values, the anticipated average annual price increases during the Second Regulatory Period will be at the rate of inflation plus 23.3%. Taking the ERC forecasts for the Philippine inflation rate into account, it results in the anticipated smoothed price path indicated in Figure 9.3.

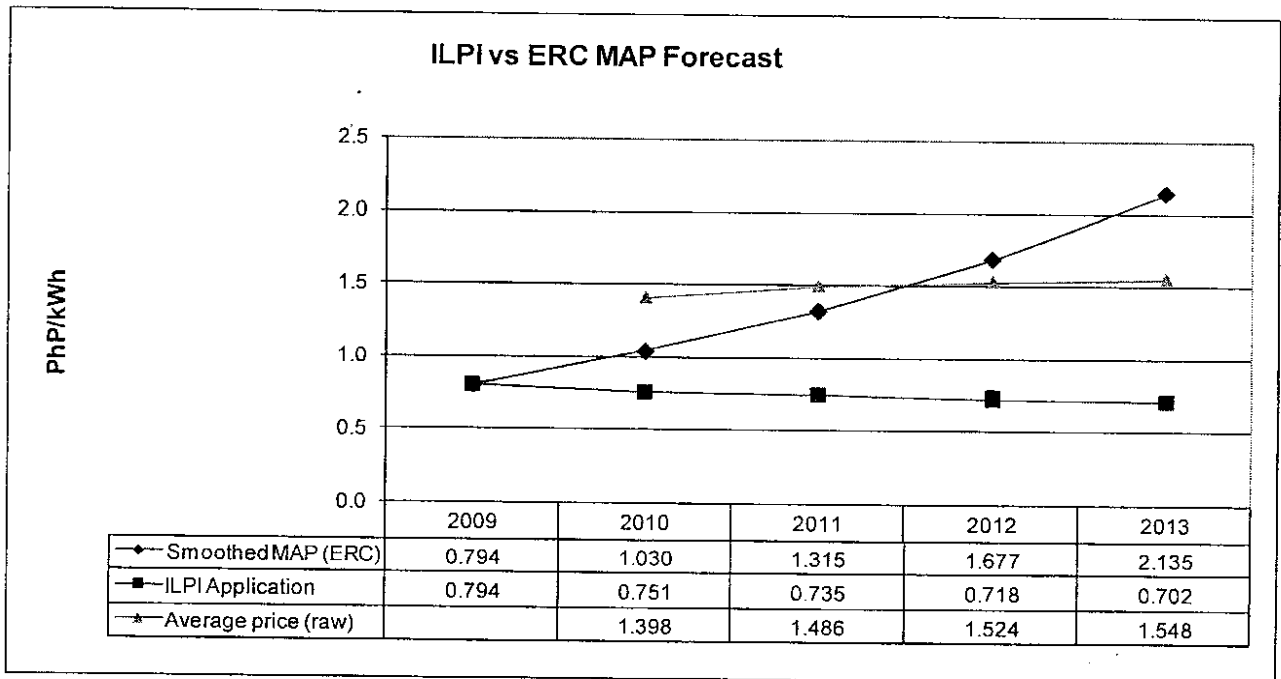
In Figure 9.3, the ILPI proposed price path is also indicated. In addition, the raw (non-smoothed) price based on the ERC's calculated annual revenue requirement is shown.

9.6.3 In Figure 9.3, it will be noted that the ILPI modeled price path trends down. This is illustrative of the problem discussed in Section 4.10.1 with the proposed acquisition of a number of large direct-connect sub-transmission customers and including their consumption in the overall distribution figures. For the ERC modeling, these consumers were not included and a substantial increase in the smoothed price path resulted. This is a fairer reflection of the actual prices that the bulk of consumers, especially residential

<sup>48</sup> This revenue is calculated after deducting 50% of related business revenue (RBR) earned from the distribution network.

and commercial is likely to experience, even if the new direct connect consumption was to be included in the rate base.

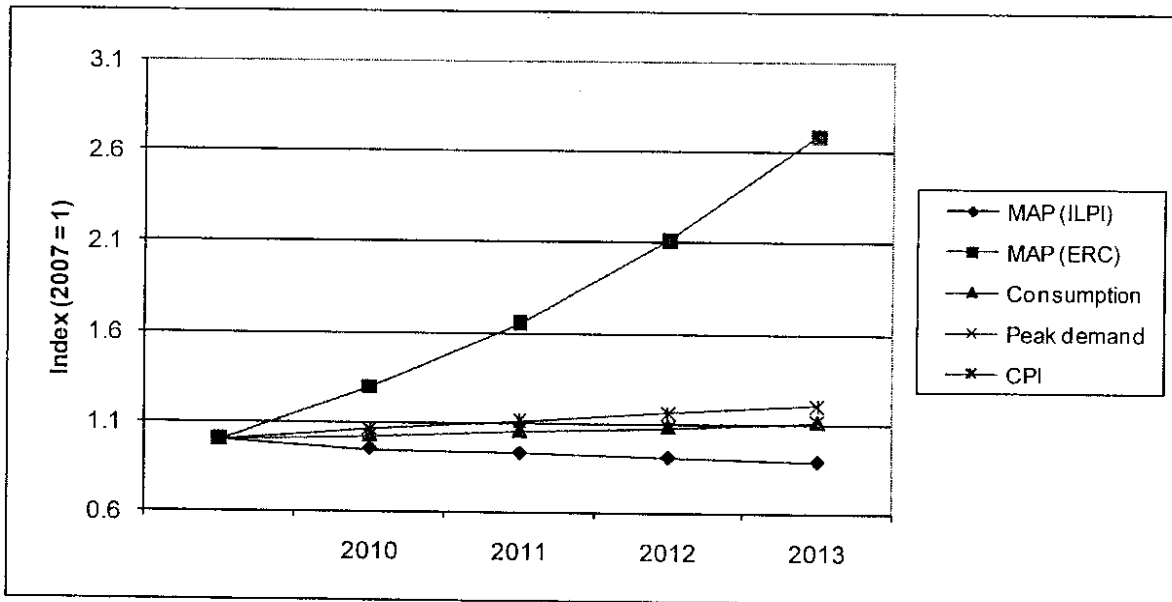
**Figure 9.3 : Comparison of Anticipated Price Paths**



Source: ERC analysis

9.6.4 In Figure 9.4, a further analysis of the smoothed price path is presented. By normalizing values to a common 2007 basis, it is possible to compare the relative movement of the smoothed MAP with the movements in the CPI, energy consumption and the system peak demand.

**Figure 9.4 : Comparison of the Smoothed MAP to Other Indices**

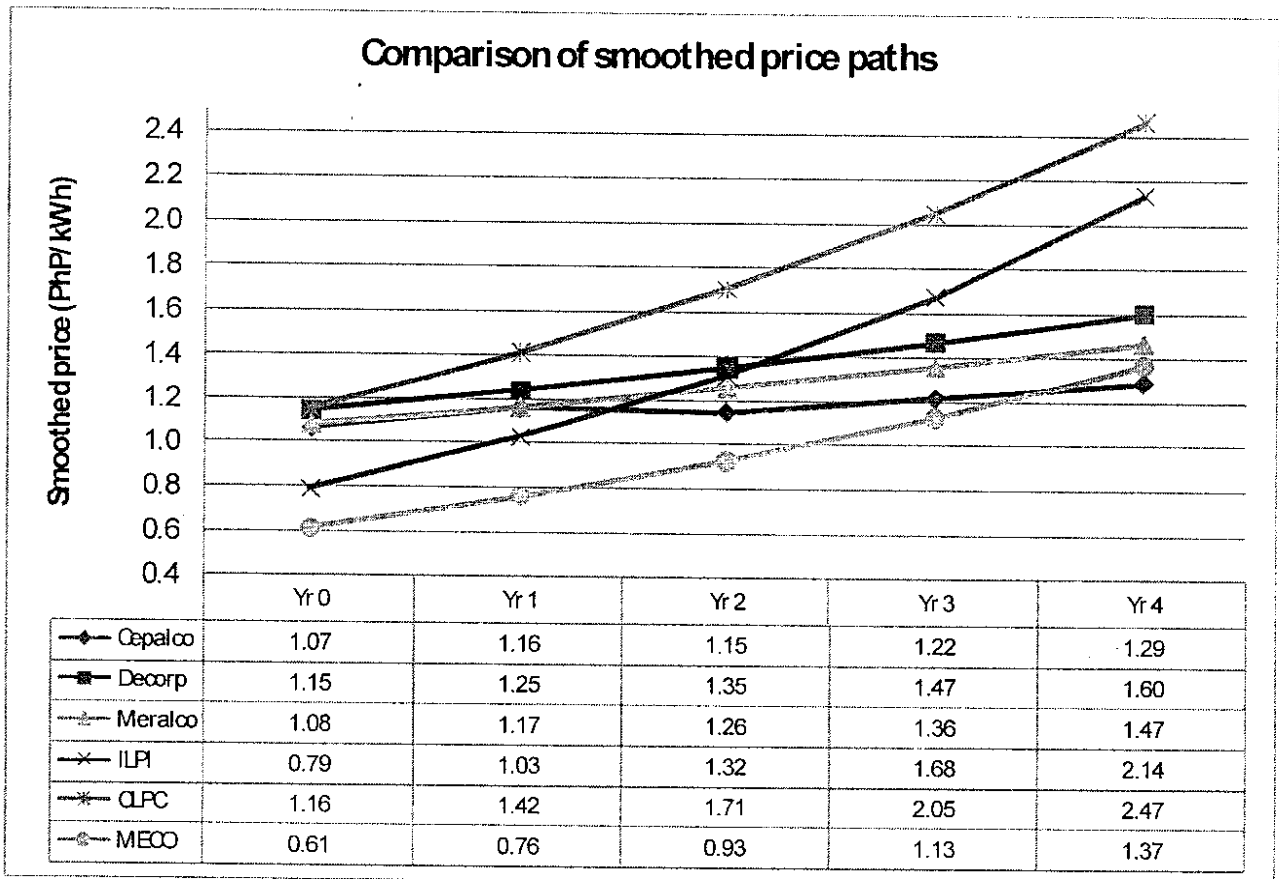


Source: ERC analysis

9.6.5 It will be noted that the ILPI price path growth is substantially higher than the other indicated indices. This is of some concern to the ERC, since the price increases for

distribution services would therefore clearly outstrip the factors that would normally be considered to underlie it. Furthermore, a comparison of the indicated ILPI price path for the Second Regulatory Period, when compared against that of the first entry group utilities and the others in the second entry group, indicates that the ILPI distribution rates would increase at the highest rate and at the end of the Second Regulatory Period would be second to only that of ILPI. This is indicated in Figure 9.5.

**Figure 9.5 : Comparison of the Smoothed Price Paths of Distribution Utilities**



Source: ERC analysis

9.6.6 The ERC is concerned about the substantial rises in the cost of electricity distribution as indicated in the above figures, if ILPI is allowed the revenue requirement as calculated in Section 9.4. It accepts that in terms of the RDWR, this outcome is reasonable and would provide ILPI with a reasonable return on their efficient expenditure. The ERC also accepts that the indicated increases are at partly due to previous under-expenditure – as indicated by the low starting base for the ILPI distribution price (see Figure 9.5) and the resulting catching up with deferred past expenditure. However, it does not believe that the indicated price increase for the 2008 regulatory year, as well as the indicated increases for the rest of the 2<sup>nd</sup> regulatory period, are reasonable or realistically sustainable by the majority of ILPI’s customers.

9.6.7 In the best interest of the ILPI consumers and to avoid a huge price-shock, the ERC has therefore decided to intervene in the rate-setting process. It proposes to introduce a reduction on the revenue allowance for ILPI during the Second Regulatory Period. This reduction will be lifted during the Third Regulatory Period, at which time ILPI will be allowed to earn the full annual revenue requirement as calculated in terms of the RDWR methodology at that time.

- 9.6.8 The proposed reduction will reduce the effective return on the RAB that ILPI can earn during the Second Regulatory Period. The recommended expenditure levels however do not need to be reduced. The intervention will therefore not inhibit ILPI's ability to invest in or to effectively maintain and operate its electricity distribution network.
- 9.6.9 The reduction made during the Second Regulatory Period will be recoverable in the Third Regulatory Period. The current reduction will be added to the allowed revenue requirement for the Third Regulatory Period, corrected for the time-value of money.
- 9.6.10 The ERC will not prescribe in which of the building blocks the proposed reduction would have to be achieved and will leave the value of these building blocks as indicated in Table 9.3 unchanged. This implies that ILPI will be entitled to reduce any (or all) of these as it best fits with its operations.
- 9.6.11 In addition, any efficiency adjustments<sup>49</sup> achieved by ILPI to be carried over to the Third Regulatory Period, will be measured against the building block values as calculated without the regulatory intervention.
- 9.6.12 The annual revenue requirement approved by the ERC for the final determination is presented in Table 9.6. The extent of the ERC's intervention to reduce the amount indicated through the calculations above is also demonstrated in this table.
- 9.6.13 The reduction in the allowed annual revenue and the resulting lower Smoothed Maximum Annual Price (SMAP) caps will result in lower corporate taxes payable on units sold. The corporate income tax building block therefore also has to be adjusted, as indicated in Table 9.6. This implies that the actual reduction in the ARR is expected to be somewhat larger than the regulatory intervention on its own. However, the net impact of the reduction in the corporate tax building block will be largely neutral to ILPI.<sup>50</sup>
- 9.6.14 For the Guaranteed Service Level (GSL) component of the Performance Incentive Scheme (PIS) approved for the Second Regulatory Period, an additional allowance of 0.5% of the annual revenue requirement should be made (see discussion in Section 10.3). This is to ensure the revenue-neutrality of the Regulated Entities in applying this scheme. The impact of this addition is also indicated in Table 9.6. This calculation is based on the ARR without the regulatory intervention.

**Table 9.6 : Final Determination - ILPI Annual Revenue Requirement (PhP, nominal)**

	2010	2011	2012	2013
ARR as calculated	269,885,496	293,806,399	308,563,288	320,853,754
Reduction imposed by ERC	-42,000,000	-42,000,000	-42,000,000	-42,000,000
Resulting ARR	227,885,496	251,806,399	266,563,288	278,853,754
GSL allowance	1,349,427	1,469,032	1,542,816	1,604,269
<b>TOTAL ARR</b>	<b>229,234,924</b>	<b>253,275,431</b>	<b>268,106,104</b>	<b>280,458,023</b>

## 9.7 Setting the P<sub>0</sub>-factor

- 9.7.1 In terms of Clause 4.15.3 of the RDWR, the ERC can set the P<sub>0</sub>-factor to reduce price shocks during the transition to the Second Regulatory Period. The impact of the P<sub>0</sub>-factor is to shift the opening MAP during the Second Regulatory Period up or down, depending on its setting, and to create an opposite movement in the annual price

<sup>49</sup> As described in Article IX of the RDWR.

<sup>50</sup> The reduced ARR is offset against lower corporate taxes. There may be a minor difference arising due to timing differences as to when the tax is actually paid and when it is recovered from consumers.

increments during the Second Regulatory Period. Overall, the impact of the  $P_0$ -factor is revenue neutral to the Regulated Entities.

- 9.7.2 The ERC is reluctant to further increase the initial incremental price rise indicated by the current revenue allowance, even if subsequent increases will be reduced. It has therefore decided to set the  $P_0$ -factor at zero.

## 9.8 Side constraints

- 9.8.1 In terms of Clause 6.4 of the RDWR, side constraints can be set by the ERC, having regards to the plight of end-consumers. In the Position Paper (Clause 10.3), the ERC indicated that these constraints will not be set at less than 2%. The side constraints inhibit the maximum average price rise for a particular customer segment (or segments).
- 9.8.2 Following the publication of this Final Determination, ILPI will be applying for a formal distribution rate structure that will convert the MAP into tariffs for various customer categories. To avoid normal annual shifts in the revenue collected per customer group from breaching the side constraint<sup>51</sup> and also to allow some movement in the manner in which costs are allocated to customer groups, to reduce existing cross-subsidies and to implement a tariff structure that provides a fairer reflection of the cost to provide distribution services, it will be necessary to allow a side-constraint that is higher than the X-factor determined for the Second Regulatory Period.
- 9.8.3 In light of the ERC's decision on the X-factor that would apply to ILPI's price setting for the Second Regulatory Period, the side constraint for the Second Regulatory Period will be set at 18.5 % over the CPI. This allows for a 3.5% additional relative movement in the tariff per customer category over the expected mean.
- 9.8.4 In terms of the recent changes to the RDWR<sup>52</sup>, the ERC is entitled to relax the side constraint during a distribution rate setting. This is to avoid a situation where earlier under-recovery and subsequent correction cannot be adequately implemented, due to the side constraint.

## 9.9 Final Determination on the opening price and smoothing factor

- 9.9.1 The ERC's Final Determination on the opening MAP and the smoothing factor (X-factor) that will apply to ILPI at the start of the Second Regulatory Period, is as follows:

X-factor	:	-16.02%
MAP <sub>2010</sub>	:	PhP 0.972 (PhP/kWh)

- 9.9.2 The impact of the regulatory intervention on the smoothed price path is indicated in Figure 9.6.
- 9.9.3 In Figure 9.7, the impact of the regulatory intervention on the comparative price paths of the other utilities that have entered PBR to date, is indicated.<sup>53</sup> It will be noted that even after this intervention, while the resulting ILPI distribution price is closer to the average (compared with Figure 9.5), it will still be the second highest of this group. While it is

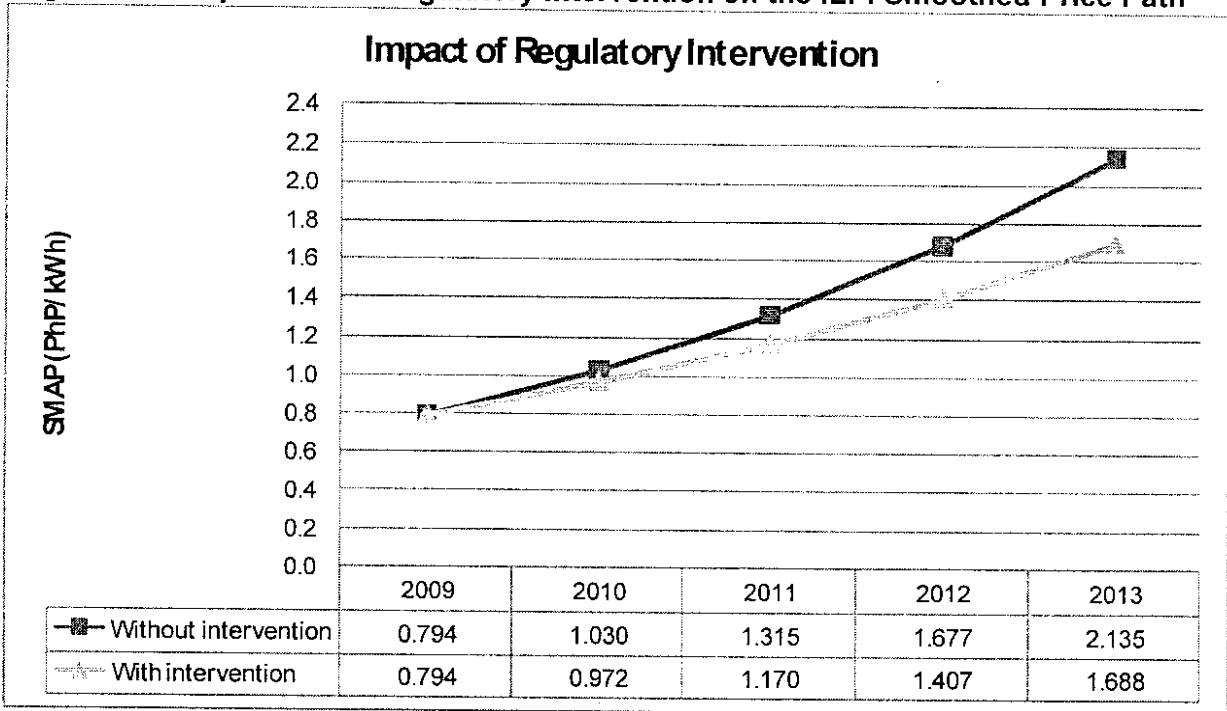
<sup>51</sup> Changes in annual consumption of various customer groupings demonstrate some degree of randomness and will under normal circumstances be expected to exceed the forecast for at least 50% of the time (or fall below the forecast for at least 50% of the time). A side constraint that does not provide for some uncertainty around the anticipated consumption and associated revenue levels, will therefore be breached for an estimated 50% of the time.

<sup>52</sup> Supra note 5

<sup>53</sup> In this figure the price path for ILPI also takes into account a proposed regulatory intervention.

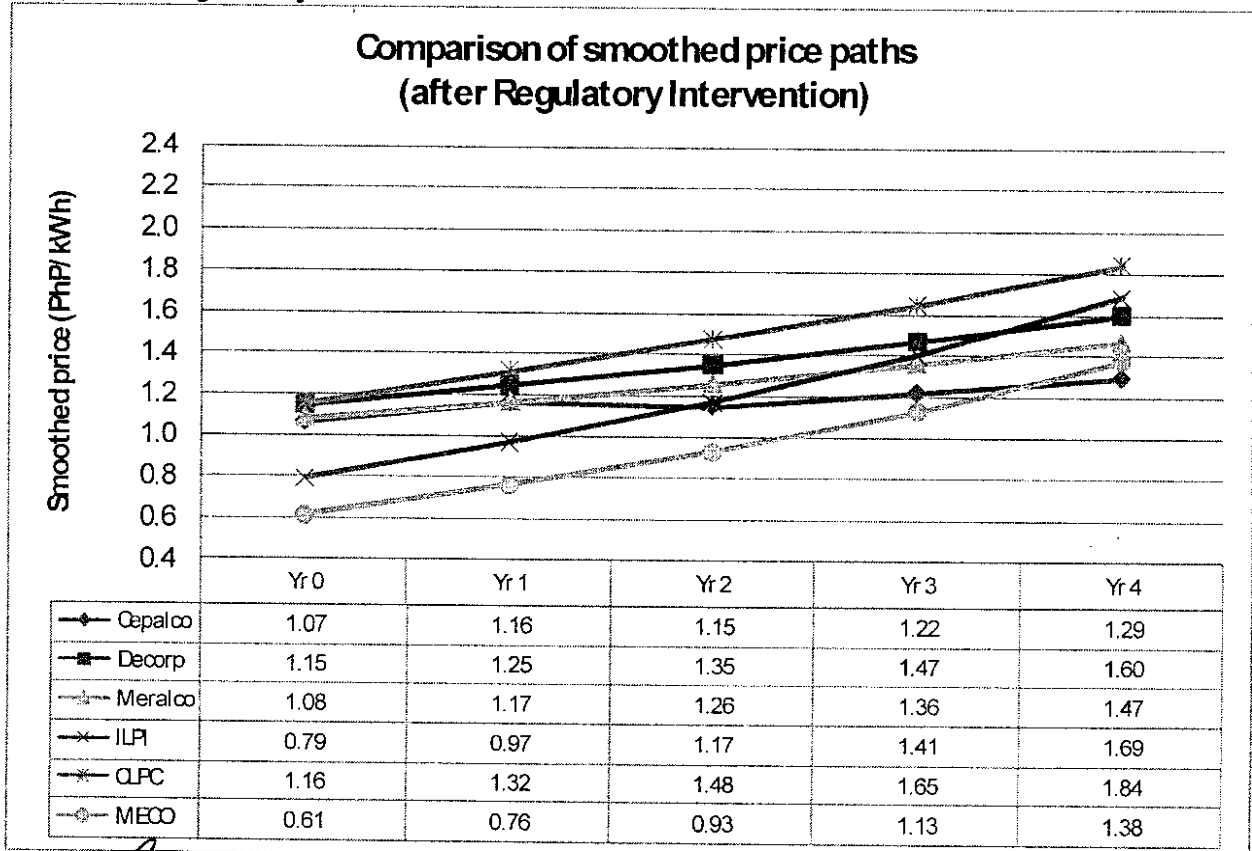
recognized that due to the lack of economies of scale smaller utilities often lie at the higher end of the price spectrum, this outcome remains of some concern to the ERC.

**Figure 9.6 : Impact of the Regulatory Intervention on the ILPI Smoothed Price Path**



Source : ERC analysis

**Figure 9.7 : Comparison of the Smoothed Price Paths of Distribution Utilities, after the proposed Regulatory Intervention**



## 10. PERFORMANCE INCENTIVE SCHEME

### 10.1 Background to the Performance Incentive Scheme

10.1.1 The Performance Incentive Scheme (PIS) is one of the key features of Performance Based Regulation. The service delivery performance of the Regulated Entities will be monitored and, depending on performance against pre-set benchmarks, the Regulated Entity will be rewarded or penalized. The penalty or reward is capped at a maximum of 3% of the annual revenue requirement for each Regulated Entity.

10.1.2 As part of the preparation of the Issues Paper, the ERC developed a PIS to meet the requirements of the RDWR (Clause 8.2). The PIS consists of three parts:

- a) Price-linked Incentive scheme;
- b) Guaranteed Service Level scheme; and
- c) Information disclosure.

10.1.3 However, during consultation on the Issues Paper, it became apparent to the ERC that the Regulated Entities did not have a sufficiently developed measurement capacity or historical data records to fully implement the PIS as envisaged by the ERC. For the Second Regulatory Period, each Regulated Entity was therefore given the opportunity to design a PIS based on its own ability and available performance records. This PIS was submitted for the ERC's consideration as part of the Revenue Application.<sup>54</sup>

10.1.4 The ERC published a framework for the PIS that would apply from the Third Regulatory Period onwards to guide the Regulated Entities in the preparation of their PIS for the Second Regulatory Period.<sup>55</sup> In this framework, the performance indices that will apply from the Third Regulatory Period are described. In addition, the mechanisms for calculating the performance incentives or penalties are discussed, as well as events of which the impact can be excluded from the yearly performance statistics.

10.1.5 The ERC's Final Determination on the PIS that will apply to ILPI during the Second Regulatory Period is discussed below.

### 10.2 Overview of the Price-linked Incentive Scheme

10.2.1 The price-linked component of the PIS allows for the introduction of a performance incentive factor, or S-factor, in the annual calculation of the price-caps, as follows (Clause 4.2.1 of the RDWR):

$$MAP_t = [MAP_{t-1} \times \{1 + CWI_t - X\}] + S_t - K_t + ITA_t$$

The S-factor can be zero, positive or negative, depending on whether actual performance against the (weighted) majority of the performance indices measured has exceeded the predetermined performance targets, or has fallen below these.

10.2.2 The maximum value of the price-linked incentive is capped at 2.5% of the annual revenue requirement (ARR) for each Regulated Entity.

<sup>54</sup> It is the intent that Regulated Entities will develop their performance measurement capacity and build up performance statistics during the Second Regulatory Period, so that the full version of the ERC's intended PIS can be implemented from the Third Regulatory Period onwards.

<sup>55</sup> ERC report, titled "Framework for the Performance Incentive Scheme to apply from the Third Regulatory Period", dated March 2006.

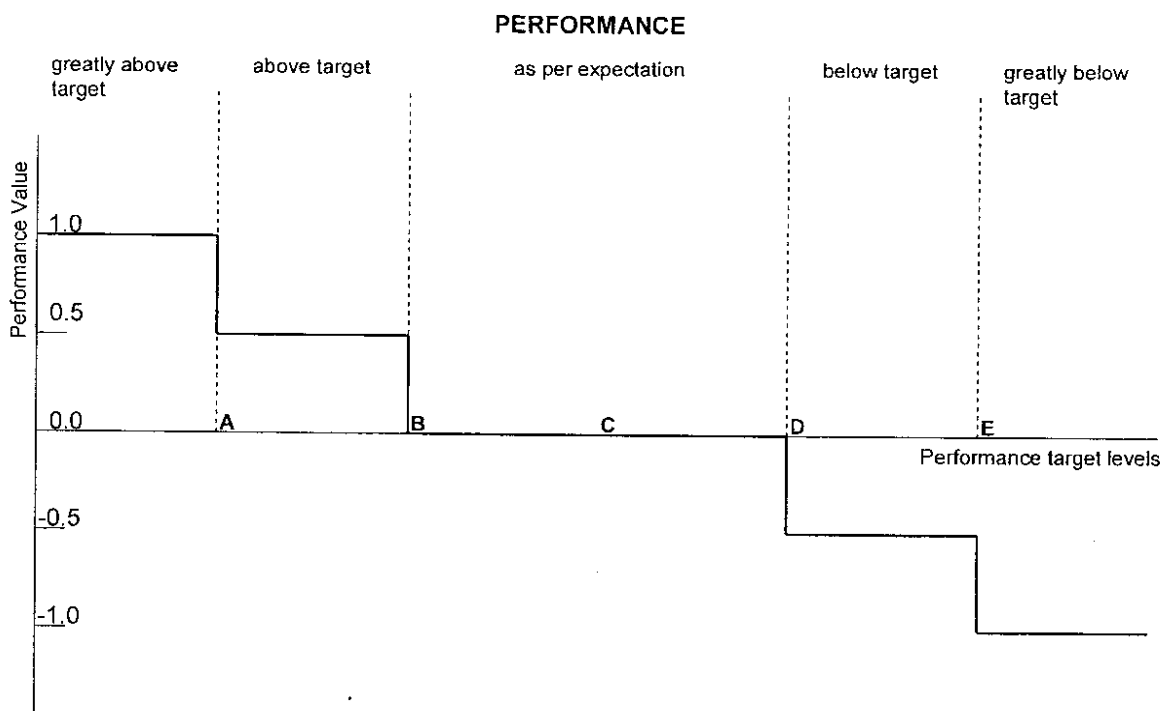
10.2.3 Performance will be assessed against a number of targets and, depending on the actual result, each index will be awarded a performance value, as described in Table 10.1 and illustrated in Figure 10.1 below.

**Table 10.1 : Determining Performance Values**

Description	Performance level	Performance value
Target greatly exceeded	≤ A	1.0
Target exceeded	≤ B, but > A	0.5
Performance as per expectation	> B but < D	0
Target not achieved	≥ D but < E	-0.5
Performance greatly below target	≥ E	-1.0

Note : Symbols A to E refer to figure 9.1 below

**Figure 10.1 : Depiction of the Price-Linked Incentive Scheme**



10.2.4 The target levels for each performance index (depicted as A to E in Figure 10.1) vary for each index and are determined by each Regulated Entity for their particular PIS. These targets are based on historical performance for each index, with point C typically representing the average performance over recent years<sup>56</sup>. This implies that for the Second Regulatory Period, the Regulated Entities have an incentive to maintain service levels at, or improve from current performance levels. The ERC may in future regulatory periods introduce targets that require performance at higher than current levels to, over time, encourage higher service delivery standards to consumers. For the Second Regulatory Period, it was however decided that since a) regulatory performance management is new to the Regulated Entities; b) there are recognized imperfections in the existing performance management and measurement capability of Regulated Entities; and c) that there is as yet insufficient historical performance data to allow

<sup>56</sup> The actual details are as per the design of the PIS by each Regulated Entity.

accurate targets to be set, it would be unreasonable to introduce such stretch targets at present.

10.2.5 The S-factor is the sum of the weighted performance values for each of the indices included in the price-linked incentive scheme, where the actual indices and the weightings allocated are as per the design of each Regulated Entity's PIS and the final value is converted to a value per kWh.

$$S = \frac{\sum(\text{Performance value per index}) \times (\text{Weighting per index})}{\text{Total energy distributed}} \times 0.025(\text{ARR})$$

10.2.6 The S-factor for each regulatory year will be calculated during the annual rate reset before the start of the regulatory year. It is based on the service performance during the previous calendar year and the forecast energy that will be distributed through the Regulated Distribution System for the regulatory year. No S-factor will apply during the first regulatory year of the Second Regulatory Period.

### 10.3 Overview of the Guaranteed Service Level Scheme

10.3.1 In terms of the Guaranteed Service Levels (GSL) scheme, Regulated Entities will compensate a consumer directly if certain service delivery performance standards are not met. The measures for which such compensation will become payable and the thresholds to be breached before it is paid, are based on the design of the PIS for each Regulated Entity.

10.3.2 There will be an allocation of 0.5% of the annual revenue requirement to the GSL scheme. To ensure revenue-neutrality to Regulated Entities, this amount will be added to the allowed annual revenue from the start of the Second Regulatory Period. Regulated Entities have the option of using this additional allocation to pay out penalty amounts, or to effect network and service improvements to avoid penalty pay-outs.

10.3.3 In terms of the RDWR (Clause 8.2.3), the total value of the PIS cannot exceed 3% of the annual revenue requirement. Since 2.5% is allocated to the price-linked incentive scheme, this implies that the maximum penalties a Regulated Entity would face under the GSL scheme is 1% of its annual revenue requirement, this being the sum of the 0.5% residual balance for the total PIS and the 0.5% additional allowance described above. The ERC recognizes that setting this cap could lead to potential problems, as it will only be apparent at the end of each regulatory year exactly how much has been paid out in terms of the GSL scheme, which could therefore theoretically exceed the cap.<sup>57</sup> However, it is the ERC's view that if the situation arises where total pay-outs under the GSL scheme reaches this 1% level, it would be indicative of very serious performance issues<sup>58</sup>, which would by itself warrant further investigation and possible intervention by the ERC.

### 10.4 Information Disclosure Scheme

10.4.1 The third component of the PIS is the measurement and disclosure of further performance data. Regulated Entities will be required to measure the performance of each Regulated Distribution System, or to develop their capability during the Second Regulatory Period to measure performance against the following indices:

<sup>57</sup> To ensure that the scheme is equitable to all customers, Regulated Entities will not be allowed to discontinue payments to affected customers if the cap is reached.

<sup>58</sup> Or a very poorly designed GSL scheme.

Network performance indices:

- a) Momentary Average Interruption Frequency Index (MAIFI);
- b) Frequency of tripping events per 100 circuit-km;

Service performance indices:

- c) Average time to respond to queries and complaints;
- d) Average time to reconnect a service after payment of all dues.

The information has to be collected and supplied to the ERC on a monthly basis (as soon as the measurement capability has been established).

10.4.2 The ERC will publish the information disclosure data for all Regulated Entities on an annual basis.

10.4.3 Since the format of the information disclosure scheme has been set by the ERC, the Regulated Entities were not required to address this in their Revenue Applications.

### 10.5 Price-linked Incentive Scheme proposed by ILPI

10.5.1 ILPI's proposed price-linked performance scheme for the Second Regulatory Period largely conforms to the PIS framework designed by the ERC for the Third Regulatory Period, with the exception of call center performance, which is not included.<sup>59</sup> The method by which the S-factor will be calculated and the actual performance factors determined are as per the ERC framework, as well as the definition of the indices.

10.5.2 In Table 10.2 below, the price-linked performance scheme proposed by ILPI as part of its Revenue Application is indicated. This identifies the performance indices proposed, the weighting to be allocated to each index and the proposed performance target levels.

**Table 10.2 : Price-linked Incentive Scheme Submitted by ILPI**

Performance Index	Units	Weight	Reward		Average	Penalty	
			Level A	Level B	Level C	Level D	Level E
System average interruption frequency index (SAIFI)	No	0.2	5.66	11.94	18.23	24.51	30.80
Customer average interruption duration index (CAIDI)	Min	0.2	101.50	155.10	208.70	262.30	315.91
Planned system average interruption duration index (planned SAIDI)	Min	0.15	433.97	1,200.61	1,967.26	2,733.91	3,500.56
Probability of voltage levels falling within prescribed limits	%	0.1		1.83%	14.68%	27.53%	40.38%
System losses	%	0.05	10.60%	10.73%	10.86%		
Average time to process application for Regulated Distribution Services	Days	0.15	1.64	3.32	5.00	6.68	8.36
Average time to connect premises to the Regulated Distribution System	Days	0.15	1.68	3.59	5.50	7.41	9.32

10.5.3 It is the ERC's understanding that ILPI's capability to measure power outages and hence calculate the SAIFI, CAIDI and SAIDI indices is limited to outages on the major medium voltage feeders (one or more phases) and distribution transformers. This capability will be further developed during the Second Regulatory Period, to allow the impact of outages to be measured more accurately, a more localized basis.

<sup>59</sup> ILPI does not at this stage operate a call center.

10.5.4 Based on ILPI's calculations, the average historical system performance against the proposed network performance indices is presented in Table 10.3.

**Table 10.3 : Historical Network Performance**

Performance Indices	Unit	2003	2004	2005	2006	2007	Average	Standard Deviation
SAIFI	no.	25.60	22.27	9.99	19.32	13.96	<b>18.23</b>	6.28
CAIDI	min.	153.42	190.04	185.10	219.74	294.85	<b>208.70</b>	53.60
Planned SAIDI	min.	2,033.22	2,794.06	808.22	2,477.38	1,723.43	<b>1,967.26</b>	766.65
Voltage Reg.	%	-	-	-	23.77	5.59	<b>14.68</b>	12.85
System Losses	%	4.92	6.91	10.72	10.98	10.88	<b>10.86</b>	0.13

10.5.5 With regard to the probability of voltage levels violating the limits prescribed in the Philippines Distribution Code, ILPI indicated that it only has limited readings available and that these were all taken on the low-voltage side of the network.

10.5.6 The targets for the average time to process applications for regulatory services, or to connect premises, are based on historical average times recorded by ILPI to perform these services. The proposed performance threshold bands were based on the same calculation method described in Paragraph 10.5.7.

## 10.6 Guaranteed Service Level Scheme proposed by ILPI

10.6.1 ILPI's proposed GSL scheme for the Second Regulatory Period largely conforms with the PIS framework designed by the ERC for the Third Regulatory Period. This includes the method used to determine the applicable penalty levels, as well as the approach to events which should be excluded when determining the service performance. In Table 10.4 below, the proposed GSL scheme is summarized.

**Table 10.4 : GSL Scheme Proposed by ILPI in the Revenue Application**

Performance Measure	Unit	Threshold	Penalty level (PhP)
GSL1 Duration of Sustained Interruptions	Hours	67	41.01
GSL2 No. of Sustained Interruptions	Numbers	18	41.01
GSL3a Restoration Time	Hours	4	41.01
GSL4 Time to Connect	Days	5.5	41.01

10.6.2 ILPI noted that the proposed threshold values for the GSL1 and GSL2 components are based on historical observations of feeder outages.

10.6.3 The threshold values for the GSL3 components are based on the 2006 and 2007 observed values.

10.6.4 ILPI interprets the GSL4 component as the length of time that a customer has to wait for a connection to be made after the service contract has been signed and the service fees paid. No supporting evidence was provided on how the threshold was determined.

10.6.5 The calculation of the penalty levels are based on the estimated value of the scheme<sup>60</sup>, the number of customers likely to be affected if the proposed threshold values are adopted and a weighting allocated by ILPI to ensure consistent penalty amounts.

## 10.7 Excluded events proposed by ILPI

10.7.1 ILPI proposes that the following events should be treated as excluded in as far as they may impact on annual performance statistics:

- a. Security concern that may arise in some areas that may hinder ILPI personnel to perform its functions in relation to the indices or performance measures.
- b. Faults due to fire incidents not caused by ILPI facilities.
- c. Failure of an applicant to appear on the pre-agreed schedule, in relation to service performance measures.
- d. Preference of an applicant for a particular date for service beyond the target accomplishment period as indicated in this scheme.

## 10.8 ERC Final Decision on the Price-linked Incentive Scheme

10.8.1 The ERC accepts the performance indices proposed by ILPI for the price-linked incentive scheme, the proposed weightings for each index and the manner in which performance against these indices are converted to the S-factor.

10.8.2 The ERC accepts ILPI's application. ILPI's proposal for the calculation of the performance bands by adopting multiples of the standard deviation of each index, is also accepted. The ERC is concerned that the available sample size of annual performance figures is too small for accurate statistical manipulation, but recognizes that using any other method to set the bands would be arbitrary and not provide any additional accuracy. It is also satisfied that if these bands had been applied to the historical performance figures, it would have provided acceptable outcomes.<sup>61</sup>

10.8.3 The ERC notes that ILPI's proposed targets for the system losses index is based on the actual historic average figures. This was the original intention for this index in the incentive scheme. However, following recent focus on system losses and to avoid possible wrong perceptions, the ERC believes that it would be more appropriate to set the minimum value over which performance bonuses will be paid at the system loss cap. This would provide a further incentive for Regulated Entities to reduce losses to this value. For Regulated Entities with historical losses below the system loss cap, the target (average) value for losses will still be based at the historical level. In accordance with the ERC policy set out in the Position Paper, index should not have a penalty component.

10.8.4 The ERC's Final Determination on the price-linked incentive scheme is presented in Table 10.6.

<sup>60</sup> 0.5% of the annual revenue requirement for each year, as discussed in Paragraph 10.3.2.

<sup>61</sup> Based on its calculation, the great majority of the historical performance values from 2000 to 2007 for the proposed indices involved would have resulted in neutral outcomes, i.e. no penalty or bonus. In no instance would performance have been assessed to greatly exceed expectations.

**Table 10.6 : ERC Final Determination on the Price-Linked Incentive Scheme for ILPI**

Performance Index	Units	Weight	Reward		Average	Penalty	
			Level A	Level B	Level C	Level D	Level E
System average interruption frequency index (SAIFI)	No	0.2	5.66	11.94	18.23	24.51	30.80
Customer average interruption duration index (CAIDI)	Min	0.2	101.50	155.10	208.70	262.30	315.91
Planned system average interruption duration index (planned SAIDI)	Min	0.15	433.97	1,200.61	1,967.26	2,733.91	3,500.56
Probability of voltage levels falling within prescribed limits	%	0.1		1.83%	14.68%	27.53%	40.38%
System losses	%	0.05	8.5%	9.0%	9.5%		
Average time to process application for Regulated Distribution Services	Days	0.15	1.64	3.32	5.00	6.68	8.36
Average time to connect premises to the Regulated Distribution System	Days	0.15	1.68	3.59	5.50	7.41	9.32

## 10.9 ERC Final Decision on the GSL Scheme

10.9.1 The ERC accepts the broad GSL categories proposed by ILPI. The penalty levels are however considered low. ILPI was requested in the Draft Determination to review these levels. No further submission was received and the ERC will therefore use the same penalty levels as that in the Draft Determination.

10.9.2 The final penalty levels for the GSL scheme has been adjusted in accordance with the allowance made by the ERC (as per Table 9.6). The average GSL allowance over the regulatory period was used as basis. In Table 10.7 the ERC's Final Determination on the GSL scheme for ILPI is described.

**Table 10.7 : ERC Final Determination on the GSL Scheme for ILPI**

Performance Measure	Unit	Threshold	Penalty level (PhP)
GSL1 Duration of Sustained Interruptions	Hours	67	37.2
GSL2 No. of Sustained Interruptions	Numbers	18	37.2
GSL3 Restoration Time	Hours	4	37.2
GSL4 Time to Connect	Days	5.5	37.2

## 10.10 ERC Final Determination on Excluded Events

10.10.1 The ERC will adopt the approach described in its PIS framework<sup>62</sup> to exclude the impact of certain events on ILPI's annual reliability statistics. This approach allows for any type of external event to be excluded, if such an event is rare and the impact of such an event is so severe that it overwhelms the capacity of Regulated Entities to respond effectively.

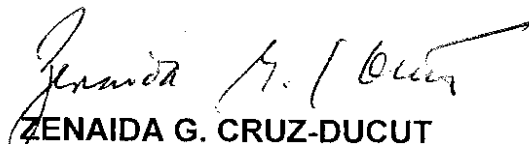
10.10.2 However, the ERC does not accept that specific causes for supply interruptions should be separately identified for exclusion. It, for example, does not distinguish

<sup>62</sup> Supra note 55

between outages caused by fires and vehicle accidents – both of which are outside the control of a utility, but which would be relatively common occurrences and should be manageable by an effective business.

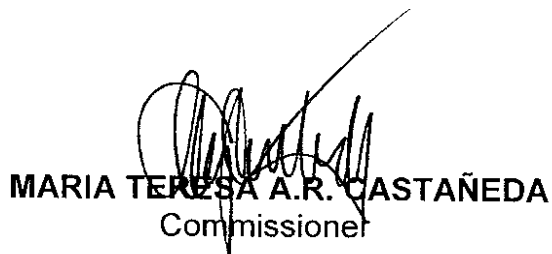
10.10.3 ILPI's proposed exclusions for the service provision measures are acceptable.

Pasig City, December 15, 2008.

  
**ZENAIDA G. CRUZ-DUCUT**  
Chairperson

  
**ALEJANDRO Z. BARIN**  
Commissioner

  
**RAUF A. TAN**  
Commissioner

  
**MARIA TERESA A.R. CASTAÑEDA**  
Commissioner

  
**JOSE C. REYES**  
Commissioner

## APPENDIX A : APPROVED CAPITAL EXPENDITURE PROGRAM

Category		Forecast, nominal (regulatory year)	Forecast (peso, nominal) (Regulatory Year)			
		2009	2010	2011	2012	2013
<b>Regulated Distribution Services Assets</b>						
<b>Network</b>	Land and Land Rights (Distribution Purposes)	0	-	-	-	1,540,872
	Structures and Improvements	549,085	4,220,511	6,125,359	-	4,838,580
	Station Equipment	- 4,316,495	11,855,387	41,878,060	5,094,856	-
	Power transformers	-	24,557,058	16,046,849	-	-
	Switchgear	-	4,082,949	371,092	-	48,141,556
	Protective equipment	5,667,146	15,952,965	7,286,303	2,105,521	19,238,210
	Metering & control equipment	6,161,344	4,228,303	4,727,243	-	9,932,818
	Communications equipment	-	-	-	-	-
	Other station equipment	1,882,342	2,988,300	2,005,246	4,945,009	4,004,946
	Poles, Towers and Fixtures	14,473,340	10,454,271	18,908,366	21,838,329	28,024,727
	Overhead Conductors and Devices	7,596,872	8,972,881	7,027,718	8,475,684	9,898,132
	Underground Cables & Devices	262,684	2,403,941	162,271	-	1,690,660
	Underground Conduits	-	-	-	-	-
	Line (distribution) Transformers	7,014,617	7,263,205	7,895,542	8,377,334	8,821,118
	Power Conditioning Equipment	501,766	-	910,301	563,851	293,344
	Meters, Instruments & Metering Transformers	3,693,009	3,868,940	6,141,081	4,579,353	7,539,449
	Information Systems Equipment	-	-	-	-	-
Regulated Entity Property on Consumer's Premises	-	-	-	-	-	
Street Lights and Signal Systems	-	-	-	-	-	
Submarine Cables	-	-	-	-	-	
<b>Non-network</b>	Land and Land Rights (non-network)	2,513,706	1,939,753	1,600,507	618,122	128,631
	Structures and Improvements (non-network)	876,372	652,389	1,739,052	3,192,599	1,993,139
	Office Furniture and Equipment	1,088,954	240,777	194,313	151,440	197,577
	Transportation Equipment	6,728,792	845,823	3,642,043	9,329,929	693,859
	Stores Equipment	272,318	166,345	118,556	30,906	128,631

	Tools, Shop and Garage Equipment	387,236	1,206,588	1,029,606	1,031,587	1,758,835
	Laboratory Equipment	1,577,402	-	-	-	-
	Information Systems Equipment	5,309,943	1,779,611	1,261,437	1,124,982	1,521,706
	Power-operated Equipment	-	-	-	-	-
	Communication Plant and Equipment	672,312	5,639	-	-	-
	Miscellaneous Equipment	3,204,247	10,418,098	13,133,135	- 15,783,609	8,220,421
<b>Materials</b>	Materials and supplies, including spares	-	112,776	355,668	370,873	-
<b>Subtrans</b>	Transferred subtransmission assets	-	42,814,326	-	3,416	3,025
	<b>Sub-total Regulated Distribution Services</b>	<b>66,116,995</b>	<b>137,320,064</b>	<b>71,949,061</b>	<b>56,050,182</b>	<b>32,847,651</b>
<b>Distribution Connection Services Assets</b>						
<b>Network</b>	Poles, Towers and Fixtures	0	0	0	0	0
	Overhead Conductors and Devices	2,541,888	2,768,976	2,992,812	3,233,888	3,506,035
	Underground Circuits	0	0	0	0	0
	Underground Cables & Devices	0	0	0	0	0
	Line (distribution)	0	0	0	0	0
	Transformers	0	0	0	0	0
	Information Systems Equipment	0	0	0	0	0
<b>Non-network</b>	Land and Land Rights (non-network)	0	0	0	0	0
	Structures and Improvements (non-network)	0	0	0	0	0
	Office Furniture and Equipment	0	0	0	0	0
	Transportation Equipment	0	0	0	0	0
	Stores Equipment	0	0	0	0	0
	Tools, Shop and Garage Equipment	0	0	0	0	0
	Laboratory Equipment	0	0	0	0	0
	Information Systems Equipment	0	0	0	0	0
	Power-operated Equipment	0	0	0	0	0
	Communication Plant and Equipment	0	0	0	0	0
	Miscellaneous Equipment	0	0	951,755	0	0
<b>Materials</b>	Materials and supplies, including spares	0	0	0	0	0
	<b>Sub-total Distribution Connection Assets</b>	<b>2,541,888</b>	<b>2,768,976</b>	<b>3,944,567</b>	<b>3,233,888</b>	<b>3,506,035</b>
<b>Regulated Retail Services Assets</b>						
	Meters, Instruments & Metering Transformers	6,660,491	7,400,823	7,915,208	8,727,607	8,443,150
	Land and land rights	0	0	0	0	0
	Structures & improvements	0	0	0	0	0
	Office Furniture and Equipment	0	0	0	0	0
	Transportation Equipment	0	0	0	0	0
	Stores Equipment	0	0	0	0	0

Tools, Shop and Garage Equipment	0	0	0	0	0
Laboratory Equipment	0	0	0	0	0
Information Systems Equipment	0	0	0	0	0
Communication Plant and Equipment	0	0	0	0	0
Miscellaneous Equipment	0	0	0	0	0
<b>Sub-total Regulated Retail Services Assets</b>	<b>6,660,491</b>	<b>7,400,823</b>	<b>7,915,208</b>	<b>8,727,607</b>	<b>8,443,150</b>
<b>TOTAL CAPEX (CWIP included)</b>	<b>75,319,374</b>	<b>147,489,862</b>	<b>83,808,837</b>	<b>68,011,676</b>	<b>44,796,837</b>

Note that in some cases negative amounts are indicated. This is as a result of allocation of proposed reductions, where it was not clear to exactly which line items these should have been made. The allocation per line is indicative only and Regulated Entities are not required to adhere strictly to these. Control and verification will occur based on total expenditure.

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## APPENDIX B : APPROVED OPERATING & MAINTENANCE EXPENDITURE

Opex Category and Sub-category		Forecast, nominal (regulatory year)	Forecast (peso, nominal) (Regulatory Year)			
		2009	2010	2011	2012	2013
<b>Distribution</b>						
Operation	Operation supervision & engineering	1,462,443	1,728,541	1,978,525	2,297,573	2,680,846
	Load dispatching	-	-	-	-	-
	Structures	-	-	-	-	-
	Substations	-	-	-	-	-
	Overhead conductors & devices	16,286,484	18,140,574	19,470,205	20,907,744	22,454,111
	Underground cables & devices	-	-	-	-	-
	Streetlighting	-	-	-	-	-
	Metering	-	-	-	-	-
	Line (distribution) transformers	-	-	-	-	-
	Rents	82,743	97,552	103,737	111,880	117,697
	Information technology	394,416	976,884	437,669	492,981	611,777
	Miscellaneous	1,332,777	1,041,494	445,175	1,272,966	3,141,084
Maintenance	Maintenance supervision & engineering	792,154	994,858	1,184,804	1,375,859	1,605,375
	Structures	-	-	-	-	-
	Substations	1,552,554	2,115,531	3,013,048	3,174,880	3,682,521
	Overhead conductors & devices	14,190,719	16,373,552	18,567,733	19,981,490	21,209,676
	Underground cables & devices	-	-	-	-	-
	Streetlighting	-	-	-	-	-
	Line (distribution) transformers	-	-	-	-	-
	Information technology	209,219	247,943	287,455	331,280	381,354
	Metering	-	-	-	-	-
	Miscellaneous	261,844	112,776	569,069	1,063,169	1,595,026
Admin & Gen	Admin & general salaries	15,331,787	19,003,926	21,927,852	25,177,321	29,212,949
	Office supplies & expenses	10,013,386	11,888,178	13,080,553	13,786,153	14,825,251

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	Information technology	1,077,380	1,248,253	1,410,511	1,586,444	1,785,103
	Outside services employed	3,513,952	4,469,326	4,898,737	5,108,158	6,326,079
	Property insurance	1,393,235	1,642,032	1,721,738	1,824,325	1,898,211
	Injuries & damages	114,968	123,791	130,136	135,699	141,195
	Employee pension & benefits	16,485,867	18,393,362	20,525,960	22,171,311	23,874,812
	Regulatory liaison & compliance	4,127,108	3,234,936	3,382,111	3,393,182	4,953,267
	Rents	666,996	1,299,522	1,526,172	1,591,416	1,655,869
	Maintenance of office & general plant	594,452	820,561	996,642	1,102,853	1,232,158
	Officers allowance & benefits	7,317,493	8,264,340	9,228,096	10,021,851	10,925,618
	Travel	1,249,679	1,361,210	1,528,899	1,609,095	1,693,558
	Training	3,704,701	2,554,480	2,506,015	2,655,130	2,732,511
	Miscellaneous	-	-	-	-	-
WESM	Registration fees	11,877,263	14,694,757	20,723,602	25,924,026	34,035,798
		-	-	-	-	-
	Metering fees	-	-	-	-	-
	Billing & settlement fees	-	-	-	-	-
	Administration fees	-	-	-	-	-
	Costs for the PEM Board, committees & working groups	-	-	-	-	-
	Market management software & upgrades	-	-	-	-	-
	<b>Sub-total Regulated Distribution Services</b>	<b>90,279,094</b>	<b>101,213,312</b>	<b>107,059,100</b>	<b>110,576,462</b>	<b>115,228,029</b>
	<b>Distribution Connection Services</b>					
Operation	Operation supervision & engineering	0	0	0	0	0
	Load dispatching	0	0	0	0	0
	Structures	0	0	0	0	0
	Overhead and underground connections	0	0	0	0	0
	Underground cables & devices	0	0	0	0	0
	Consumer installations	0	0	0	0	0
	Line (distribution) transformers	0	0	0	0	0
	Information technology	0	0	0	0	0
Maintenance	Maintenance supervision & engineering	0	0	0	0	0
	Structures	0	0	0	0	0
	Overhead and underground connections	0	0	0	0	0
	Underground cables & devices	0	0	0	0	0
	Consumer installations	0	0	0	0	0

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	Line (distribution) transformers	0	0	0	0	0
	Information technology	0	0	0	0	0
	Miscellaneous	0	0	0	0	0
Admin & Gen	Admin & general salaries	0	0	0	0	0
	Office supplies & expenses	0	0	0	0	0
	Information technology	0	0	0	0	0
	Outside services employed	0	0	0	0	0
	Property insurance	0	0	0	0	0
	Injuries & damages	0	0	0	0	0
	Employee pension & benefits	0	0	0	0	0
	Regulatory liaison & compliance	0	0	0	0	0
	Rents	0	0	0	0	0
	Maintenance of office & general plant	0	0	0	0	0
	Officers allowance & benefits	0	0	0	0	0
	Travel	0	0	0	0	0
	Training	0	0	0	0	0
	Miscellaneous	0	0	0	0	0
	<b>Sub-total Distribution Connection Services</b>	0	0	0	0	0
<b>Regulated Retail Services</b>						
	Administration & management	1,549,590	1,585,202	1,854,856	2,152,109	2,494,520
	Plan, install & maintain consumer meter installations	12,009,960	12,872,503	13,108,641	13,872,008	14,686,421
	Consumer meter reading expenses	3,545,794	3,604,041	3,876,254	4,136,829	4,408,147
	Information technology	488,177	578,533	670,728	772,986	889,825
	Consumer records, billing & collection	8,317,251	7,054,935	7,738,977	8,292,933	8,877,434
	Bad debts	2,094,755	2,255,527	2,371,122	2,472,487	2,572,623
	Informational & instructional advertising	26,184	28,194	29,639	30,906	32,158
	Energy trading expenses (excluding energy purchases)	-	-	-	-	-
	Consumer prompt payment discounts	-	-	-	-	-
	Miscellaneous	4,702,726	800,712	675,770	853,008	1,106,228
	<b>Sub-total Regulated Retail Services</b>	23,328,986	27,178,223	28,974,448	30,877,250	32,854,899
	<b>Total Operating &amp; Maintenance Expenditure</b>	<b>113,608,080</b>	<b>128,391,535</b>	<b>136,033,548</b>	<b>141,453,712</b>	<b>148,082,929</b>

Note that in some cases negative amounts are indicated. This is as a result of allocation of proposed reductions, where it was not clear to exactly which line items these should have been made. The allocation per line is indicative only and Regulated Entities are not required to adhere strictly to these. Control and verification will occur based on total expenditure.

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**APPENDIX C : APPROVED LEVIES, DUTIES AND OTHER TAXES  
(OTHER THAN CORPORATE INCOME TAX) EXPENDITURE**

<b>ILPI</b>					
CY 2007-2011 Operating and Maintenance Expenditure Forecast (Total : PhP Nominal)					
Taxes, duties and levies (other than corporate income tax) - ERC allowed amount					
Category and Sub-category	Regulatory year	Forecast (peso, nominal in peso of regulatory year)			
	2009	2010	2011	2012	2013
<b>Levies</b>					
Regulatory Reset Expert Fees		1,656,929	640,242	213,186	0
<b>Sub-total Levies</b>		1,656,929	640,242	213,186	0
<b>Duties</b>					
<b>Sub-total Duties</b>					
<b>Other taxes</b>					
Business operation permits	0	10,364	10,895	11,362	11,821
Community tax	0	11,842	12,448	12,981	13,506
Other	93,217	77,438	81,407	84,887	88,325
<b>Subtotal</b>	93,217	99,644	104,750	109,230	113,652
<b>Total Levies, Duties &amp; other Taxes Expenditure</b>	<b>93,217</b>	<b>1,756,573</b>	<b>744,992</b>	<b>322,416</b>	<b>113,652</b>

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