

Regulatory Reset of the Regulated Transmission Services for 2016 to 2020

Issues Paper

Pursuant to Section 43(f) of Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001, and Rule 15, Section 5(a) of the Implementing Rules and Regulations issued pursuant to that Act, the Energy Regulatory Commission(ERC) promulgated the Guidelines on the Methodology for Setting Transmission Wheeling Rates for 2003 to Around 2027 (ERC Case No. 2003-34, dated May 29, 2003, hereafter the 'TWRG'). Under Section 7.1.2 of the TWRG, the ERC must publish a Regulatory Reset Issues Paper to provide the ERC's initial views on the issues to be discussed during the pending Regulatory Reset Process, and to specify the information required to be delivered by the Regulated Transmission Entity for the purposes of the Regulatory Reset Process and the time by which such information should be delivered. This Issues Paper fulfills these requirements.



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CHAPTER 1 INTRODUCTION

1.1 Legal Basis for Adoption of PBR

Section 43 (f) Republic Act No. 9136 (Electric Power Industry Reform Act - EPIRA) authorizes the Energy Regulatory Commission (ERC) to establish and enforce a methodology for setting transmission wheeling rates, taking into account all considerations, including the efficiency or inefficiency of the regulated entities. It further prescribed that the rates must be such as to allow the recovery of just and reasonable costs and a reasonable return on rate base to enable the entity to operate viably. Finally, it provides that the ERC may adopt alternative forms of internationally accepted rate setting methodology as it may deem appropriate.

The Rules for Setting Transmission Wheeling Rates (RTWR) were promulgated by the ERC in September 2009 pursuant to EPIRA and provide regulatory methodologies and reset processes that follow the model of performance based regulation (PBR). The current set of Rules amended and replaced the Guidelines on the Methodology for Setting Transmission Wheeling Rates for 2003 to around 2027 (May 2003).

1.2 Purpose of RTWR regulatory Reset Issues Paper

The third five-year regulatory period under the RTWR will conclude on 31 December 2015. Article VII of the RTWR sets out the regulatory reset process timelines.

Under Section 7.1.2:

The ERC must publish a Regulatory Reset Issues Paper not less than 21 months prior to the end of each Regulatory Period. The Regulatory Reset Issues Paper must:

(a) provide the ERC's initial views on the issues raised by the pending Regulatory Reset Process; and

(b) specify the information to be provided by the Regulated Entity for the purposes of the Regulatory Reset Process and the time by which that information must be provided.

At its own initiative, NGCP submits this document setting out the issues, along with the corresponding proposed position, that may arise over the course of the Fourth Regulatory Reset (4th Reset) process.

1.3 Structure of this document

The structure of this document is as follows:

- Chapter 2 addresses the 4th Reset process, duration and scope.
- Chapter 3 sets out issues arising from the main rate control decisions the ERC is required to make under the RTWR. This is structured to follow Article 5 of the RTWR.
- Chapter 4 discusses other matters on which the ERC will make decisions under other Articles of the RTWR

For each topic or issue identified, a common structure is applied consisting of the following.

- Context – a brief summary of the nature of the issue and the relevant sections of the RTWR
- Issue – a brief summary of the decision that is required to be made and relevant considerations
- Proposed position – this sets out NGCP's position on the issue in question.

CHAPTER 2 4th Reset Process and Scope

2.1 Timelines

2.1.1 Context

The RTWR sets out the process the ERC will follow in determining the Regulated Entity's Annual Revenue Requirement (ARR) for the 5-year period. More specifically, Article VII of the RTWR specifies this timetable in terms of the tasks the ERC, and NGCP, must complete within a specified number of months prior to the start of the next regulatory period.

Regulatory Task	RTWR Requirement Prior to the Start of the RP
Start of the Regulatory Period	-
Final Determination	3 months
Public Hearings	5 to 7 months
Submission on Draft Determination	7 months
Draft Determination	9 months
Asset Revaluation Completed	10 months
Initial Asset Revaluation Report	11 months
Asset Valuation to Commence	17 months
Response to Issues Paper	19 months
Publish RTWR Regulatory Issues Paper	21 months

2.1.2 Issue

In the 3rd Regulatory Period (3rd RP), both the Regulated Entity and the ERC did not achieve the timelines set in the RTWR.

Regulatory Task	Date Realized
Start of the Regulatory Period	-
Final Determination	22 November 2010
Public Hearings	
Submission on Draft Determination	
Draft Determination	15 July 2010
Asset Revaluation Completed	
Initial Asset Revaluation Report	
Asset Valuation to Commence	
Response to Issues Paper	
Publish RTWR Regulatory Issues Paper	16 February 2009

2.1.3 NGCP view

The RTWR specifies the *maximum* time period for completing various regulatory tasks leading to the Final Determination. The ERC may determine a timeline that would result in these tasks being completed at an earlier date, and hence minimize delays in informing end use customers of any tariff changes. NGCP suggest the ERC may wish to work to the milestones in the table below to ensure the Final Determination available prior to the end of the 3rd Regulatory Period.

Regulatory Task	Indicative 4 th resetTimeline
Start of the Regulatory Period	01 Jan 2016
Final Determination	Jul 31, 2015
Public Hearings	May 12 - 12 June 2015
Submission on Draft Determination	May 1, 2015
Draft Determination	Mar 9, 2015
NGCP revenue application filing	Jan 8, 2015
Asset Revaluation Completed	Dec 1, 2014
Initial Asset Revaluation Report	Nov 3, 2014
Asset Valuation to Commence	Aug 1, 2014
Release of Position Paper	Jul, 31, 2014
Submissions on Issues Paper	Jun 30, 2014
Publish RTWR Regulatory Issues Paper	June 2, 2014

2.2 Amendment to Rules

2.2.1 Context

Section 1.9 of the RTWR states:

These Rules may only be amended by the ERC for the purposes of giving effect to a decision made by it in accordance with these Rules or with the agreement of the Regulated Entity or as ordered by a court with appropriate jurisdiction.

2.2.2 Issue

In the context of public consultation on the “*Issues Paper on the Implementation of PBR for privately owned electricity distribution utilities under the RDWR,*” NGCP is aware of suggestions for far reaching change to the Performance Based Regulation of distribution entities. These suggestions include alternative building blocks and a sinking fund concept. It is possible that similar suggestions may be raised in submissions with regard to the ERC Issues Paper for the RTWR.

2.2.3 NGCP view

NGCP comments further below on the attributes of the alternative building blocks and the sinking fund concepts. Regardless of the merits or otherwise of those proposals, there is not sufficient time available to properly consider fundamental changes prior to the commencement of the 4th Regulatory Period (4th RP).

Changing the rate setting methodology would require careful analysis and development of new rules to ensure the legitimate interests of consumers and the regulated entity were protected during the transition. The timeline shown above for determining the 4th reset shows that insufficient time remains to consider fundamental change prior to the scheduled start of the 4th RP.

The RTWR do not appear to provide the opportunity to extend the 3rdRP to allow time for the design and implementation of far reaching change to the existing regulatory methodology, such as the introduction of the sinking fund concept or the alternative building blocks. The RTWR specifies that the duration of the 3rd RP should not exceed five years.

Any extension of the 3rdRP would also raise questions as to the basis on which rates would be set for an interim period between conclusion of the 3rdRP and the beginning of a new regulatory period under a new rate setting methodology.

Hence, if there is merit in considering far reaching change to the present rate setting methodology provided for in the RTWR, this work would need to be undertaken during the 4thRP. This would enable changes to the rate setting methodology to be applied during the 5th Reset. Again, only if there is merit in considering the far reaching changes being proposed.

2.3 Duration of the regulatory period

2.3.1 Context

The ERC may, during a regulatory reset process for the 4th and subsequent Regulatory Periods, under Article VII, determine that the duration of that subsequent regulatory period is greater than five calendar years but not more than 10 calendar years.¹ Any decision to extend the duration of the 4thRP is subject to whether:

- a duration longer than 5 years has been requested by the regulated entity;
- the regulated entity has provided the ERC with forecasts of capital and operating expenditure for the entirety of the proposed regulatory period; and

¹See section 2.5.2 of the RTWR.

- the ERC has available inflation forecasts for each year of the proposed period, made by a reputable and appropriately qualified entity such as the National Economic Development Authority of the Philippines.

2.3.2 *Issue*

Superficially, there may appear to be some advantages in extending the duration of the 4th RP beyond five years and up to ten years. These apparent advantages include reducing the burden of the regulatory reset process itself. If the regulatory period doubles, then the reset cost associated with any given year is halved. A longer duration might also be perceived as creating greater certainty for both consumers and the regulated entity over the course of future tariff levels.

However, there are significant disadvantages with a longer regulatory period. While the costs of the reset process are significant in absolute terms, they are small relative to the efficient costs of providing regulated transmission services; a small under or over estimate of efficient costs would easily exceed the reset cost. The longer the duration of the regulatory period the greater the risk that the maximum allowed revenue would diverge from the efficient costs of providing the regulated service. It is difficult, for example, to accurately predict capital expenditure or demand 5 years in advance; it would be very difficult to set with confidence expenditure requirements looking out 10 years, especially given the current high economic growth rates.

The risks that would result from this uncertainty may explain why no jurisdiction with a regulatory regime similar to that applying in the Philippines resets revenue on the basis of 10 years; the most common reset period internally is 5 years.

2.3.3 *NGCP view*

NGCP is of view that there would not be a net benefit from extending the duration of the 4th RP.

2.4 **Classification of Services**

2.4.1 *Context*

The classification of regulated transmission services is defined in the RTWR. The RTWR provide for three service classifications:

- Regulated transmission services;
- Excluded services; and

- Contestable services (“unregulated”).

The scope of regulated transmission is shared transmission services provided to direct consumers and distributors. The defined scope of regulated services also includes:

- Ancillary Services that are provided using assets which form part of the Grid;
- Services provided by the System Operator under the Grid Code, the Distribution Code, or the WESM Rules;
- Metering services; and
- Sub-transmission services (where sub-transmission assets remain in the regulated asset base).

The provision of connection services is classified as “Excluded” Services under Article I of the RTWR. It is neither a regulated transmission service nor a service that is contestable. Connection services include dedicated connections between the shared transmission system, on one hand, and generators and individual loads, on the other.

The RTWR require charges for excluded services to be ‘fair and reasonable’.² In the event of a dispute, the ERC may determine charges. In doing so, it is required to take into account several matters, including the charges that would be negotiated if the service were provided on a competitive basis, and whether the assets are dedicated or shared between several parties. The ERC is also obliged to take into account cost building blocks for the service: operations, depreciation, return on capital and tax.

Franchise Tax on Excluded Services

Republic Act (R.A) No. 9557 has had a significant impact on the Regulated Entity’s tax liability. Section 9 of R.A. No. 9511 provides that NGCP shall be liable to pay franchise tax equivalent to three percent (3%) of all its gross receipts derived from its operations.

In the Final Determination for the Third Regulatory Period, the MAR does not include the 3% national franchise tax that NGCP must pay, however, ERC has decided that this should be recovered through surcharge on its customer invoices (*Section 5.20.1*).

²RTWR Article 1.6.1

2.4.2 Issue

The 13 October 2010 Supplementary Report 2 of Sinclair Knight Merz, in relation to its engagement with the ERC for the valuation of NGCP's assets for the 3rd RP, provides a broader range of sub-categories for the sub-transmission assets. These are as follows:

Table 4. SKM subcategory of NGCP assets

Subcategory	SKM Code	Comment
Generation related assets.	GR	NGCP has identified a small number of subtransmission assets that are related to generation. These assets will be reclassified as transmission assets on January 1, 2011 in accordance with Article 3, Section 2 (a) of the ERC's Subtransmission Asset Guidelines ³ .
RAB assets.	RAB	These are assets that are shared by two or more DUs and that are <i>not</i> pending sale. These assets will also be reclassified as RAB assets on January 1, 2011 in accordance with Clause 2 of Resolution 18, Series of 2009 ⁴ .
"Rabbable" Assets pending sale	PS	These are assets that are shared by two or more DUs, but which are pending sale to qualified consortium. These assets will not revert to the RAB and will be categorized as RST assets in the Final Determination.
Direct connected customer assets.	DCC	These assets include <i>all</i> subtransmission assets (irrespective of whether or not sale contracts are pending) that are shared by a single DU and a direct connected customer. These assets will remain as RST assets.
Assets for Reclassification	RCT	The ERC has issued decisions on the following cases that a small number of CA assets will be reclassified as transmission on January 1, 2011. ERC Case No 2007-520MC (Decision February 9, 2009) ERC Case No 2008-088MC (Decision October 12, 2009) ERC Case No 2007-007RC (Decision September 6 2010).
Transferred Assets	TA	Assets transferred from NPC to NGCP in 2009 and 2010
Connection Assets	C	This sub-category captures the remaining Connection Assets that were not re-classified in this exercise
Residual	N	RST Assets – the remaining sub-transmission assets that

³Guidelines to the Sale and Transfer of the Transco's Subtransmission Assets and the Franchising of Qualified Consortiums ERC, October 17, 2003.

⁴ A Resolution Clarifying Resolution No. 1, Series of 2009, entitled, "A Resolution Adopting the Amendments to the Guidelines to the Sale and Transfer of TransCo's Sub-transmission Assets and the Franchising of Qualified Consortiums"

Subcategory	SKM Code	Comment
Subtransmission Assets		were not re-classified in this exercise

Based on the report, the sub-categories GR, RAB, RCT, and TA shall be reverted to RAB while the sub-categories PS, DCC, C, and N shall remain sub-transmission assets which can still be divested to qualified distribution utilities.

Transmission Connection Assets (TC and TCN)

Table 5.4 of the 3rdRP Final Determination provides the classification of the existing assets in PhPMn, Real December 2008, where the Transmission (RAB) assets account for PhP143,852,166,713. This amount does not include the Transmission Connection Assets amounting to PhP2,232,937,974.48 as the assets were categorically included as part of the Connection Assets. The regional values of these assets are shown in Table 5 below:

Table 5. Transmission connection assets

	RC, Dec 2008, PhP	ODRC, Dec 2008, PhP
North Luzon	2,126,813,760.00	975,180,508.95
South Luzon	1,631,428,640.00	769,338,320.38
Visayas	674,163,360.00	297,202,018.29
Mindanao	521,984,320.00	191,217,126.86
Total	4,954,390,080.00	2,232,937,974.48

With the non-inclusion of Transmission Connection Assets in the Transmission (RAB) Assets, and with the ERC's Decision on ERC Case Nos. 2008-066RC⁵ and 2009-153RC⁶ dated 6 July 2011, freezing the imposition of current Connection and Residual Sub-Transmission Charges (CC/RSTC) at CY 2009 level, the corresponding 'return on' and the 'return of' for the amount of PhP2,232,937,974.48 as well as to the costs of improvement to these Transmission Connection Assets, if any, have not yet been recovered in the 3rdRP. It is worthy to note that these Transmission Connection Assets were neither considered in the design of 2009 CC/RSTC nor in the previously implemented 2007 CC/RSTC.

⁵ *In the Matter of the Application for Approval of Connection Charges and Residual Sub-Transmission Charges for Calendar Year 2008 on the Excluded Services Covering the Existing Sub-transmission Assets of the National Transmission Corporation (TransCo) and any Future Concessionaire Thereof, with prayer for Provisional Authority*

⁶ *In the Matter of the Application for Approval of Connection Charges and Residual Sub-Transmission Charges for Calendar Year 2009 on the Excluded Services Covering the Existing Sub-transmission Assets of the National Grid Corporation of the Philippines (NGCP), with prayer for Provisional Authority*

Sub-transmission Assets Reverted to RAB

Section 4, Rule 6 of the Implementing Rules and Regulations (IRR) of the EPIRA provides the technical and functional criteria to be considered in distinguishing transmission assets from sub-transmission assets. These are as follows:

- Sub-transmission Assets are normally in close proximity to retail customers;
- Sub-transmission Assets are primarily radial in character;
- Power flows into Sub-transmission Assets; it rarely, if ever, flows out;
- When power enters Sub-transmission Assets, it is not reconsigned or transported on to some other market;
- Power entering Sub-transmission Assets is consumed in a comparatively restricted geographic area;
- Meters are based at the interface of transmission and Sub-transmission Assets to measure into the Sub-transmission Assets; and
- Sub-transmission Assets will be of reduced voltage.

Notwithstanding these technical and functional criteria, the following were reverted to RAB as transmission assets.

Subcategory	SKM Code	Comment
Generation related assets.	GR	NGCP has identified a small number of sub-transmission assets that are related to generation. These assets will be reclassified as transmission assets on January 1, 2011 in accordance with Article 3, Section 2 (a) of the ERC's Sub-transmission Asset Guidelines ⁷ .
RAB assets.	RAB	These are assets that are shared by two or more DUs and that are <i>not</i> pending sale. These assets will also be reclassified as RAB assets on January 1, 2011 in accordance with Clause 2 of Resolution 18, Series of 2009.
Assets for Reclassification	RCT	The ERC has issued decisions on the following cases that a small number of CA assets will be reclassified as

⁷ *Guidelines to the Sale and Transfer of the Transco's Subtransmission Assets and the Franchising of Qualified Consortiums ERC, October 17, 2003.*

Subcategory	SKM Code	Comment
		transmission on January 1, 2011. ERC Case No 2007-520MC (Decision February 9, 2009) ERC Case No 2008-088MC (Decision October 12, 2009) ERC Case No 2007-007RC (Decision September 6 2010).

Unrecovered Franchise Tax on Excluded Services

Franchise tax is based on gross receipts derived from NGCP's operations. NGCP's operations cover both regulated services and excluded services. While ERC allows NGCP to recover the 3% franchise tax on its regulated services as ruled in the Final Determination, it is silent on the recovery of franchise tax on excluded services by NGCP on its customers.

It is NGCP's position that Transmission Connection Assets should be included as part of the Transmission (RAB) Assets. Further, the under recovery for these assets, including the costs of improvements, be recognized as a windfall loss and be recovered in the 4th RP.

Sub-transmission Assets Reverted to RAB

On the sub-transmission assets reverted to RAB, NGCP views that, in general, all unsold assets be part of the RAB. Nonetheless, the ERC should be able to provide guidelines on this taking into consideration the Section 4, Rule 6 of the IRR – EPIRA.

Unrecovered Franchise Tax on Excluded Services

The 3% franchise tax on Excluded Services is the same tax nature of the 3% franchise tax billed to customers on NGCP's regulated services. The unrecovered Franchise Tax should be included and be recovered by NGCP.

Further, NGCP proposes for the ERC and the Regulated Entity to develop an agreed methodology for the prudence review of unrecovered Franchise Tax.

CHAPTER 3 Price Control

This chapter sets out the issues and proposals in relation to Article V of the Rules which specify the form of revenue cap that is to apply to NGCP. In this chapter, NGCP submits on:

1. Parts of Article V where the ERC has discretion to vary from the approach stipulated in the corresponding component of Article IV.
2. Aspects of Article V where consideration should be given to technical changes to improve the performance of the RTWR against the objectives set out in section 43 of the EPIRA.

3.1 Price Control Formula (5.1, 5.2)

3.1.1 Context

The form of control provided for under the RTWR is a cap on maximum allowable revenue (MAR).⁸ Revenue is controlled over multiple years known as a regulatory (control) period.

The MAR for a given year within a regulatory control period is calculated with reference to the MAR for the preceding year adjusted for:

- Change in a weighted index of prices (CWI);
- An efficiency factor (X), which among other things “smooth’s” allowed revenues over the course of a regulatory period to avoid variable year on year tariff levels due to changes in the “raw” MAR for each year;
- A correction (K) factor to adjust for any over or under recovery of revenue in the preceding regulatory year; and

The MAR for each year is translated into per unit wheeling rates based on forecast monthly usage of available transmission system capacity. Rates are expressed in Php/kW - month.⁹

3.1.2 Issue

The RTWR provides for the ERC to review the form of price control that is to apply for the third and subsequent regulatory periods and apply a revenue cap, a price cap,

⁸See for example clause 4.2.1 of the RTWR

⁹See Article VI of the RTWR and the OATS Rules.

or a hybrid cap as the form of price control. The RTWR also provides for the ERC to amend the price control formula by adding any of the following:¹⁰

- an automatic correction to MAR to account for differences between forecast and actual system coincident maximum demand;
- an automatic correction to MAR to account for differences between forecast and actual levels of operating performance;
- a change to better compensate the regulated entity in the event of hyper-inflation; and
- any other component that is consistent with internationally accepted rate setting methodologies.

The ERC is also required to reset the weighted index of prices; the W1 and W2 factors.

3.1.3 NGCP view

The RTWR currently applies a form of hybrid revenue and price cap to the regulated entity. The Final Determination sets the revenue cap, or maximum allowed revenue for each year of the regulatory period which is built up from the expected efficient costs of providing the regulated services in that year. This revenue cap is the primary form of control. The revenue cap form of regulation differs from price caps applied in the RDWR.¹¹ This revenue cap is supplemented by the side constraints and other provisions as necessary to limit the extent of price changes. NGCP is not aware of any issue that would warrant the ERC to alter the form of price control that is applied to regulated transmission services.

NGCP is not aware of any mechanism that would satisfactorily allow for an automatic correction to MAR to account for differences in demand or operating performance. The linkages between, and timing of, changes in demand and capital and operating expenditure are complex and properly addressed by the ERC in setting the ARR for each year rather than by an automatic formula.

Hyper-inflation has not emerged as an issue.

Hence, NGCP does not propose any change to the price control formula set out in Rule 5.2.

¹⁰See clause 5.2.1 of the RTWR

¹¹See clause 4.2.1 of the RDWR

3.2 Values of W1 and W2 in the CWI Computation

3.2.1 Context

The price control formula in Rule 5.2.3 sets MAR for each Regulatory Year by rolling forward the previous year's revenue, making an adjustment for inflation and exchange rate movements (the CWI_{it} factor), and deducting the X factor. The intent of these adjustments is that the regulated entity is compensated for actual changes in prices and exchange rates, rather than the forecasts assumed in determining the ARRs.

The CWI_{it} combines two adjustments: an adjustment for exchange rate changes and an adjustment for CPI (domestic price changes). The proportion of the adjustment driven by the CPI is set by the W1 factor. The proportion of the adjustment driven by exchange rates is set by the W2.

3.2.2 Issue

The RTWR provides that during the Regulatory Reset Process the ERC is to review the values of W1 and W2 to:

...determine whether those values appropriately reflect the proportions of the capital expenditure forecasts, and the operating and maintenance expenditure forecasts, for that Regulatory Period which are approved by the ERC and which are to be undertaken in or are otherwise referable to a foreign currency."

W1 and W2 are to be set by the ERC after it has approved the capital, operating, and maintenance expenditure forecasts. These forecasts are approved by the ERC in its Final Determination and hence will not be known to NGCP in advance of the release of the Final Determination.

3.2.3 NGCP view

NGCP proposes to review the setting of the weighted index of prices as it prepares its regulatory filings for the 4th Reset. NGCP will propose values for W1 and W2 consistent with its forecast of capital expenditure and operating and maintenance expenditure which would be incurred in a foreign currency.

3.3 PHP/\$US exchange rate Adjustments (12.9.1)

3.3.1 Context

The revenue that a Regulated Entity can actually earn is determined by the price control formula that defines the MAR and that takes the form CWI-X. Corollary, the allowed revenues will go up or down in accordance with changes in the CWI.

In the determination of MAR, the CWI impact significantly on NGCP's recovery of revenue designed in the Final Determination due to certain factors involving the seemingly unfit application of W1 and W2, such as, the basis for the assignment of values for W1 and W2 under Rules 3.3.1 and 12.9.1 of the RTWR considers values which are not deemed relevant in the annual rate verification application.

Rule 12.9.1 of the RTWR states for a trigger condition of:

"The Php/\$US exchange rate for a Quarter within the Second Regulatory Period is less than 90%, or more than 110%, of the Php/\$US exchange rate for the Quarter which is approved by the ERC for the purpose of the capital expenditure program that is approved by the ERC under Section 4.10.5 (see also Section 12.5.3), then this Section 12.9.1 applies in respect of the Regulatory Year that immediately follows the Regulatory Year in which that quarter occurs (Section 3.3.1 specifies the consequences of Section 12.9.1).

3.3.2 Issue

NGCP would like to point out that the ERC_USER for year's t_3 , t_4 , and t_5 of the previous regulatory period are exchange rates that have been determined almost six (6) years ago in reference to the first regulatory year of a regulatory period¹². Emphasis is also placed that these exchange rates are no longer valid and applicable in the determination of the revenues of NGCP for any regulatory period. NGCP believes that there is no windfall gain or loss that will be carried forward in the 4th RP on the capital expenditures in the 3rd RP on account of the ERC_USER. It can be said that all gains or losses due to exchange rates were evaluated and considered in the expenditure efficiency adjustment.

3.3.3 NGCP View

The changes can make a significant difference to the revenue that the Regulated Entity can earn (Final Determination, Section 3.11.4). Consistent with this statement of the Commission which clearly recognizes the critical impact that CWI has on the forecast revenues, NGCP proposes to adjust the ERC US\$ Exchange Rate¹³ (ERC_USER) in the calculation of the MAR. Further, NGCP proposes to use the more correct, relevant and realistic actual US\$ exchange rates (Actual ERC_USER).

¹² example is ERC_USER for 2013, 2014, 2015 determined in 2010 will impact in the computation of the MAR for 2016 and 2017

¹³ Refers to Php/US\$ exchange rates approved by ERC during a Regulatory Period Reset Process

3.4 Over/Under Recovery Formula (5.3)

3.4.1 Context

The over/under recovery formula is set out in Section 5.3 of the RTWR. The formula enables correction (via a K factor in the price control formula) in the event that actual revenues fall short of or exceed the relevant revenue cap.

The correction factor allows for the impact of interest by using an interest factor (180 day weighted average Manila Reference Rate of the Bangko Sentral ng Pilipinas). It also allows for a penalty factor of an additional 4% to this interest factor if over recovery exceeds 7% of the maximum average price-cap.

The under-over recovery formula also applies to the transition between Regulatory Periods. At present, based on Section 5.14.2 of the RTWR, the transition correction is limited to five (5) per cent of the MAR for the first year of the subsequent regulatory period.

3.4.2 Issue

The ERC needs to determine the interest rate adjustment in Article IV and whether the factor of 0.05 in section 4.3.2 should be retained or altered in developing the starting MAR for the first year of the 4th RP.

The ERC also needs to determine whether there should be any change to the existing cap of 5 per cent with regard to the carryover of under and over from the 3rd RP to the 4th RP.

3.4.3 NGCP view

As required by the RTWR, the inputs for the interest rate adjustment and the use of a factor will be reviewed in the course of the 4th regulatory reset. Nonetheless, NGCP considers that the:

- existing correction formula for under or over recoveries should be retained;
- use of Manila Reference Rate (MRR) should be retained; and
- 5% limit on carrying over the under and over recoveries should be removed for the reason that such under/over recoveries are outside of the control of the Regulated Entity.

3.5 Primary Building Blocks (5.5)

3.5.1 Context

Section 5.5 permits the ERC to consider adopting a Building Block analysis, modified from that set out in 4.5.1 of the RTWR, for the 3rd and subsequent regulatory periods. This is subject to section 5.6 (RAB), section 5.9(WACC) and section 5.12 (tax) as discussed below.

At present the Rules define the cost building blocks as follows:

- Operating and maintenance expenditure (OPEX);
- Taxes other than corporate income tax;
- Regulatory depreciation;
- Return “on” capital; and
- Corporate income tax.

3.5.2 Issue

Risk and uncertainty

There is no explicit provision for risk and uncertainty in the definition of the building blocks above. Instead, provision for risk and uncertainty is provided within OPEX, return on capital and regulatory depreciation (where for example certain risks may be reflected in judgments over economic asset lives). Risk and uncertainty is also addressed in setting of key parameters that feed into other primary building blocks – such as the allowance for capital expenditure.

The OPEX building block enables recovery of efficient insurance expenses, for example relating to buildings, cars and information and communications equipment. It also enables recovery of prudent security related costs, including security staff to protect premises and facilities.

The return on capital building block enables compensation for capital investment and asset financing related risks. This is discussed further under section 3.7 below.

The determination of the regulatory depreciation building block provides a mechanism for taking into account predictable risks that affect the economic life of key transmission assets. For example, if transmission towers in certain coastal areas are systematically more liable to salt corrosion damage, compared with other transmission towers; this could be addressed by applying a higher depreciation rate for a defined set of coastal towers.

Comments have been made in relation to the Issues Paper for RDWR that the absence of a building block specifically for risk, uncertainty, and related costs, may

result in a lower level of transparency over the setting of appropriate allowances for risk and uncertainty. These comments raised the possibility that any reduced transparency may mean less attention by ERC over the allocation of costs arising from risk and uncertainty as between the regulated entity and its customers, or between customers.

Working capital

The return on capital primary building block is increased by an allowance for working capital. The purpose of this allowance is to compensate for the delay between those payments made to staff and suppliers, on one hand, and cash received from customers, on the other. The RTWR specify that the working capital allowance should be set at a proportion of the difference between forecast operating and maintenance expenditure, on one hand, and the ERC-approved level of bad debts, on the other.

In the 2nd Reset, the RTWR stipulate the use of a lead-lag analysis for computing the Working Capital allowance. For the 3rd and subsequent resets, the RTWR leave open the possibility of applying alternative approaches for estimating the Working Capital allowance. These might include reference to relevant benchmarks or industry norms.

3.5.3 *NGCP view*

Risk and uncertainty

A building block specifically for risk, uncertainty, and related costs, may initially appear to increase the level of transparency over the setting of appropriate allowances for risk and uncertainty. However, the new building block would require extensive work on redefining and developing new methodologies for both determining this new building block and for amending the calculation of the other major building blocks to reflect the resulting allocation of risk. There are no internationally accepted methods for either:

1. Determining the new building block; or
2. making adjustments to the other building blocks.

There is also no experience internationally with how risk would in practice be allocated between the regulated entity and its customers, or between customers under a method with a specific building block for risk. The result would likely be less transparency and increased uncertainty over the allocation of risks.

For example, if a new cost building block is created to compensate for risk and uncertainty, then retention of the existing WACC methodology may result in over-compensation for risk. There is, however, no available internationally accepted method for setting the WACC that is exclusive of risk and uncertainty. This is

because a key feature of all methods for setting the WACC is an attempt to account for risk and uncertainty so that investors receive a normal return on the investment risk.

The new building block would therefore require changes to other building blocks. Those changes would not be consistent with internationally acceptable rate setting methodology (which do not make the changes envisaged), and hence may be contrary to EPIRA. The changes would be experimental, in the sense they have not been applied elsewhere nor studied in the academic literature; as changes would be untried and untested, the outcome of the adjustments to the building block methods would therefore be highly uncertain and the resulting allocation of risk between customers and the regulated entity unclear.

Working capital

With respect to Working Capital, NGCP considers that the lead-lag approach to calculating the working capital requirement should be retained. This approach ensures that the estimated working capital requirement corresponds to actual customer billing, payroll and supplier contract terms. Use of benchmark studies or industry averages could give rise to misleading conclusions based on customer payment, payroll and supplier contract terms that do not apply to the regulated entities in question. For example, if a regulated entity sought to defer payments to suppliers in order to reduce working capital, then (in the absence of market power), supplier costs could be expected to increase to compensate for the shift in part of the working capital requirement from regulated entities to suppliers.

The RTWR implements the working capital requirement by converting the value obtained from the lead lag analysis into a percentage figure, calculated as a proportion of the difference between forecast operating and maintenance expenditure, on one hand, and the ERC-approved level of bad debts. NGCP proposes that this calculation would be more transparent if the working capital is based on working capital percentage of the Net OPEX of Bad Debts plus Bad Debt provision attributed uncontrollable non-paying customer account such as LASURECO as proposed on section 3.9.3 below.

3.6 Asset Valuation (5.6)

3.6.1 Context

For the third regulatory period, the RTWR required an asset re-valuation under Section 4.6 of the RTWR. For the 4th Reset, the ERC may require that either the regulatory asset base (RAB) is re-valued, or the previous value of the regulatory asset base is rolled forward.

If the regulatory asset base is revalued then the revaluation must value plant and equipment at the optimized deprival value (ODV), or some other method of internationally accepted valuation methodology, as determined by the ERC. ODV is defined in the Rules as the lesser of the optimized, depreciated, replacement cost and the recoverable amount; or the greater of their economic value and their net realizable value.

The RTWR set out key optimization principles (Section 4.6.6.) These include:

- Identification of any redundant assets
- Use of a 15 year planning horizon (or as otherwise determined by the ERC)
- Identification of redundant assets is based on there being no changes to the location of supply and demand, but existing network elements can be re-rated or re-designated to assess their optimized value.
- Any other optimization principles approved by the ERC following expert advice

For the 4th Reset, any assets previously optimized out of the regulatory asset base will be returned to the regulatory asset base, if the ERC is satisfied that those assets are required to support the provision of Regulated Transmission Services.

Following a public consultation process, the list of asset categories used in previous resets may be changed for the 4th reset.

3.6.2 *Issue*

Due to the capital-intensive nature of electricity networks, capital-related costs represent a significant portion of the regulated entity's annual revenue requirement (ARR). Return of capital and return on capital typically constitutes over 70% of electricity transmission organization's revenue requirement. Both these building blocks are heavily influenced by the determination of the Regulatory Asset Base (RAB).

Asset Valuation Methodology

The value of the RAB is a critical input into the determination of regulated charges, and provides an important signal for a transparent and efficient acquisition mechanisms, use of scarce resources, efficient usage or asset management, as well as efficient pricing and future investment. A well-defined asset valuation methodology is required in order that the regulatory objectives of transparency and consistency are achieved.

The RTWR do not detail 'some other method of internationally-accepted valuation methodology' under rule 4.8.4(b). Similarly, the RTWR do not detail how a roll-forward of the previous value of the regulatory asset base under rule 4.8.4(a) would be undertaken.

The asset roll-forward approach set out in section 4.9 applies within a regulatory period, and assumes that the opening RAB values were set by way of a revaluation under rule 4.8.13.

There is an existing detailed guideline on the method for undertaking an ODV. No such guideline currently exists for a roll-forward. A move to a roll-forward methodology would require extensive development of an equivalent to the ODV guideline, in order to attain the legitimacy and clarity that already exists for an ODV valuation.

Developing a satisfactory roll forward method takes time because there are a range of issues that need to be considered. For the Philippines, a move from ODRC to a roll forward method would represent a significant development in the regulatory framework and would require consideration of at least the following issues:

- Development of appropriate depreciation schedules for various asset classes (e.g. forecast or actual);
- Any adjustments from the previous regulatory period. An example could be the basis on which capital expenditure over the previous period is brought into the asset base;
- Treatment of partially completed assets (construction work in progress);
- Valuation of any acquisition of existing assets (for example following a reclassification of assets);
- Treatment of uncertainty in the final year of the roll-forward, for example, whether actual or forecast inflation is applied for this period;
- Valuation of asset disposals;
- Allocation of any gains from asset disposals (where assets are sold for a higher value than their rolled forward value in the RAB immediately prior to sale);
- Method for indexing assets to account for inflation;
- Consideration of broader interactions between the roll forward method and other aspects of the regulatory methodology set out in the relevant Rules.

Unplanned CAPEX

The RTWR state that the definition of the previous regulatory period's CAPEX to be used to determine the opening valuation is the actual or budgeted CAPEX, to the extent such expenditure is deemed reasonable, and to the extent they would be included in the RAB (section 4.6.10). The CWIP Factor is included.

The requirement for unplanned CAPEX to be 'reasonable' may not sufficiently address the treatment of unplanned CAPEX. Unplanned CAPEX arises where CAPEX has been incurred but were outside the allowance in the relevant Regulatory Determination.

The proportion of unplanned CAPEX can be significant. For example, the ERC's Final Determination for the 3rd Reset presented a comparison of the Regulated Entity's actual CAPEX over the Second Regulatory Period with the CAPEX amounts allowed for in the 2006 Final determination (see Table 3.19 on page 44). This table shows a difference of Php5,506.1 million between the amount approved for 2010 CAPEX in the 2006 Final Determination and the revised amount used for the 2010 Final Determination.

3.6.3 *NGCP view*

Asset Valuation Methodology

NGCP considers that the current RAB is not yet sufficiently stable to transition to a roll-forward approach at the 4th reset. There are still issues on the following:

- Boundaries on the existing assets of the transmission and generator customers;
- Unaccounted (missing) assets;
- Uncertainty on the sub-transmission assets that will be reverted to RAB due to various extension (ERC Resolution No. 18, Series of 2009, ERC Resolution No. 26, Series of 2010, ERC Resolution No. 26, Series of 2010, ERC Resolution No. 4, Series of 2013) provided by the ERC in the sale of sub-transmission assets; and
- Remaining NPC switchyards (Agus) that should be turned-over to NGCP.

A further revaluation using an ODV approach for the 4th RP would assist in stabilizing the RAB by:

- ensuring the asset registry is robust, including the correct grouping and classification of assets;
- ensuring that there are no further missing assets; and

- considering the valuation of sub-transmission assets that were not acquired by the distribution utilities that will form part of the RAB due to ERC's previous resolutions on sub-transmission assets. The value of these assets may require further assessment given that the ERC – approved purchase price may not have been updated to include improvements.

This further revaluation could be completed using the ODRC methodology and handbook already determined by the ERC (and used for the 3rd Regulatory Period). NGCP considers that there are no apparent gains from substantially modifying the asset categories used in previous revaluations. Modifying the categories could make comparisons between revaluations more complex and less transparent.

If the ERC wishes to consider alternative methodologies in future resets, NGCP suggests that the consultation process begin shortly after the 4th Reset is completed so that all parties have sufficient time to consider the proposed changes and develop robust rules that achieve fair and reasonable prices for customers and regulated entities.

Unplanned CAPEX

NGCP considers that unplanned CAPEX incurred in the 3rd RP be included in the opening RAB for the 4th RP. There are some capital expenditures that are urgent, important and unavoidable for the Regulated Entity. This expenditure includes transmission projects driven by the generators consistent with Section 4.9.1 of the Draft Determination, to wit:

"A significant driver for the recommended reduction in CAPEX is the deferral of projects due to the reduction in the load forecast for Luzon and Mindanao. The ERC notes the volatility of the historic demand in Mindanao and does not want a situation to develop whereby necessary investment in generation does not occur because of transmission constraints. As far as it is aware, this is not the present situation and the current shortage of investment in generation is due to other reasons. Given this, the ERC believes that it would be potentially inefficient to accelerate transmission grid development to supply demand that cannot be met by available generation. Such a strategy not only requires customers to pay more in order to fund the construction of transmission infrastructure before it can be effectively utilized but also implies a risk of sub-optimal development by constructing infrastructure to support a generation development scenario that does not materialize. It would be more efficient to adopt a "wait and see" approach and to ask customers to fund the augmentation of the grid in a way that is known will support planned new generation investment." (Emphasis supplied)

3.7 Rolled forward regulatory asset base (5.7) (within the 4th Regulatory Period)

3.7.1 Context

For the 4th Reset, the ERC may change its approach to rolling forward the regulatory asset base (within the 4th Regulatory Period) provided that it is consistent with the approach it adopts in relation to the Primary Building Blocks (section 5.5) and the RAB (5.6).

3.7.2 Issue

In the 3rd Regulatory Reset, the ERC found that the wording in the RTWR in respect of the requirements for rolling forward the initial asset valuation to produce the opening RAB at the beginning of the next regulatory period was “ambiguous”.¹⁴ This is because the rules applying to the roll-forward calculation utilizes both the “as commissioned” and the “as spent” approaches to capex. Whilst the RTWR generally arrives at the correct outcome (the rules are careful to ensure that only one approach is applied to any given set of capital expenditures), the rules require careful interpretation.

In the Final Decision, the ERC made the following adjustments to the ODRC valuation to ensure consistent treatment of capital expenditure in establishing the opening RAB:

- CWIP factors were applied to the transmission lines and substation components of the ODRC valuation.
- Construction work in progress (CWIP) (excluding allocated overheads and any finance during construction incurred during the prior regulatory period) needed to be added to the opening valuation; and
- An adjustment was made to capital expenditure during the third regulatory period so that financing during construction (FDC) would not be double counted. In this adjustment, actual capex over the period 2006-08 was indexed to December 2008 PhP at CPI and then the FDC component of this expenditure was subtracted from the CWIP to provide an adjusted CWIP value that was used in the roll forward.

The ERC considered the approach taken in its Final Determination was a pragmatic approach that resulted in “a sound outcome from an economic perspective”.

However, the ERC expressed a reservation that the process of deducting the prior-period financing costs from CWIP will be more difficult to implement in the 4threset

in a way that does not result in windfall gains or losses to the Regulated Entity and to its customers, as the prior-period CAPEX will extend over two regulatory periods.

3.7.3 *NGCP view*

NGCP agrees that the approach taken in the Final Determination resulted in a sound outcome from an economic perspective. While the RTWR may be a little difficult to interpret, the rules relating to the ODRC and the roll-forward of the RAB have now been applied correctly in two regulatory resets.

NGCP does not consider that the adjustments made by the ERC to the ODRC valuation to achieve a “sound outcome” will be difficult to implement during the 4th regulatory reset. The calculations involved are straightforward as long as the data is presented in a suitable format. NGCP should be one to provide the ERC with the data required so that the calculations can be completed accurately.

Requiring NGCP to present the data so that the same adjustments that were made for the 3rd RP can be applied to the 4th RP is a lower risk approach than adopting a new method that might also turnout to be ambiguous when first applied.

3.8 **Regulatory Depreciation (5.8)**

3.8.1 *Context*

The setting of regulatory depreciation requires taking a view on the remaining life of an asset (the lesser of economic or physical life) and reflecting that view in a depreciation schedule that apportions the RAB value for each asset over its expected remaining life. The resulting annual depreciation amounts are included in the cost building block model. Depreciation is sometimes referred to as ‘the return of capital’ as the depreciation charge returns to the investor the value of the investment as the asset is used up (depreciated) in providing the service.

For the 4th Reset, the ERC may change its approach to regulatory depreciation provided that, if regulatory lives for any asset category are changed, the depreciation should be changed as well. This is to avoid under or over recovery of the value of the regulated asset base.

3.8.2 *Issue*

Sinking Fund

During its public consultation on its Issues Paper for the Distribution Utilities, the ERC has suggested that it may require a “Sinking Fund” to be established. This sinking fund would be funded with the cash flows generated from depreciation

charges. The funds deposited into the 'sinking fund' could not be used for any other purpose except for the replacement of assets or payment of obligations incurred to purchase qualified assets.¹⁵

Interpretation of the RTWR on disposals

If assets are disposed of in the future at a value less than the depreciated amount, and the policy is to remove the asset from the RAB at its RAB value, the Regulated Entity faces a loss (gain) if the disposal value is below (above) the RAB value.

The current practice under the RTWR is that the rules have been interpreted to mean that a disposed asset should be removed from the RAB at its disposal value, and if that value is less than the RAB value the residual value is carried forward as a separate asset. The carried forward 'asset' is depreciated at a rate that reflects the weighted average of the expected lives of the assets that contributed to this "asset". This approach to disposals ensures that the Regulated Entity would not be disadvantaged financially if it sold connection and sub transmission assets to distributors at values below the RAB values, as the costs of such write-downs would be captured in the residual value "asset" and thereby reflected in future transmission tariffs. As the sold assets enter the distribution utility RAB at purchase value, there is no net change in the total cost (transmission and distribution) to the consumer as a result of these transactions.

Timing of asset disposals

The RTWRs appear silent on when an asset is to be recognized in the cost building block model as disposed. For example, the rules do not state that a disposal is deemed to be recognized at the mid-point of a regulatory year, or at the beginning or end. The timing of disposal recognition is required to calculate depreciation and the cost of capital in the year of the disposal.

To remain consistent, with other provisions in the RTWR, the practice has been to account for disposals (and transfers and capital expenditure) in the MAR model as occurring at the end of the year. This is a convenient assumption for revenue calculation and provides the basis for a straightforward calculation of depreciation and cost of capital. However, some of the input calculations (aspects of the CWIP, roll-forward to establish the initial RAB, etc) assumed a mid-year point.

Either assumption, that disposals (and transfers and capital expenditure) occur at a mid-point, or an end of year, are relatively straightforward in practice to implement. The primary issue with respect to these points is the need to codify the assumption to ensure consistency is maintained (or improved) and that uncertainty is minimized.

¹⁵ The ERC presentation - 'Issues Paper on the implementation of PBR', dated May 20, slide 10.

3.8.3 NGCP View

Sinking Fund

The depreciation charge is the means by which an investor recovers the value of the investment as the asset is used up (depreciated) in providing the service. The practical effect of the sinking fund would be to deny the investor the return of the funds invested in the provision of the regulated services. The investor would receive a return on the funds invested through the application of the WACC to the RAB, but on a decreasing scale as the asset against which the WACC is applied is reduced by depreciation.

NGCP is not aware of any regulatory regime anywhere in which a regulator prevents an investor, having made investment capital available for the provision of services, from achieving a return of its investment. The usual objective of regulatory regimes is to ensure investors retain incentives to invest when investing would increase the long-term benefit to consumers. The incentive created by a 'sinking fund' concept would have the opposite incentive effect – an investor is unlikely to make additional capital available if the regulator has established a rule that prevents the return of that capital to the investor.

NGCP considers that the Sinking Fund concept would be contrary to EPIRA as it conflicts with the EPIRA Declaration of Policy:

- 2(a) to ensure and accelerate the total electrification of the country (because the sinking fund would discourage new investment capital being made available)
- 2(b) to ensure the quality, reliability, security and affordability of the supply of electric power (as the quality, reliability, and security of the supply of electricity will deteriorate if new investment capital is discouraged);
- 2(d) to enhance the inflow of private capital and broaden the ownership base of the power generation, transmission and distribution sectors (as the sinking fund would likely choke the inflow of private capital as investors would know their investment would not be returned to them).

The sinking fund concept would also not be consistent with any internationally accepted rate setting methodology.

Asset Lives

Current asset lives were set by the ERC on the recommendations of SKM, based largely on SKM's Australian database and experience. NGCP considers that amendments to these asset life assumptions should only be made if the Regulated

Entity can provide and substantiate evidence that the assumed lives are substantially wrong. NGCP should be invited to submit with its regulatory filing sufficient evidence to support any proposed change to assumed asset lives.

Timing of recognition of disposals

NGCP proposes that the RTWR be amended so that disposals are recognized consistently at either the mid-point or end of year. As the MAR model current accounts for disposals at year end, NGCP suggests that this approach should be standardized through the RTWR.

3.9 Weighted Average Cost of Capital (WACC) (5.9)

3.9.1 Context

The return on capital building block represents the sum of the RAB plus working capital multiplied by the WACC. Hence, alongside the determination of the RAB, the determination of the WACC is a key determinant of the MAR.

In the RDWR, the method for estimating the WACC is referred to as the “classical model”, and is closely related to the Capital Asset Pricing Model (CAPM). The RTWR require that the ERC must continue to apply the approach to the calculation of the WACC used in the 3rd Reset, provided there is no change to the definition of the primary building blocks. This implies retention of the “classical” model if the primary building blocks (Section 5.5) remain largely unchanged.

If a different building block analysis is adopted for the 4th Reset, then the ERC must also alter the methodology for calculating the WACC. The new methodology must provide the ‘best financial consistency’ between the new Building Block analysis and the WACC methodology.

The ERC may vary its approach to calculating the WACC for any subsequent regulatory period following the 3rd RP, provided that it uses an internationally accepted methodology.

The ERC must require the Regulated Entity to retain an independent expert of experts pursuant to Article XIV for the purpose of assisting the ERC to determine both the method for calculating the WACC and the selection of input parameters. Following consultation, the ERC may change the locked balance sheet parameters toward or equal to, the actual or target gearing ratio for the Regulated Entity.

3.9.2 *Issue*

The CAPM is widely accepted internationally as being the best available model for estimating the cost of capital; it is applied by all jurisdictions that apply revenue and price control to regulated entities using similar regulatory regimes as apply in the Philippines.

Although widely accepted as the best available model for estimating the cost of equity, there is growing evidence in the finance literature that the CAPM does not fully capture the true costs facing a company when making investment decisions. Estimates of WACC may vary from the true WACC for a regulated entity due to the inadequacy of the CAPM as a description of the investment world that it attempts to describe; that is, from model error.

Model error arises because the model is an approximation and simplification of the real world it seeks to represent. The model assumes away numerous real world conditions and limitations. These include uncertainty and risk, information asymmetries, market frictions and transaction costs, and firm resource constraints.

As a result of its substantial simplifications, there is model error. There is a wealth of literature highlighting that the model is not capable of explaining actual variations in returns over time. Most notably this includes the existence of high impact events such as the global financial crisis beginning in 2008.

The second problem is the fact that the key variables required by the classical model (the risk free rate, systematic risk for a benchmark firm and the market risk premium) are not directly observable. They must therefore be inferred from numerous proxy data. Available data may not represent accurate or representative proxies of the key variables. Data may be incomplete or otherwise imperfect. Hence, the estimates are subject to parameter error. The RTWR locked in some parameters when it was first drafted over a decade ago. The ERC addressed these errors in the 3rd Reset mainly by way of selecting input parameters.

If the Building Blocks were changed, a set of issues arise as to the development of an alternative methodology for calculating the WACC that provides the best financial consistency between the new building block analysis and the WACC methodology. In particular, if a new cost building block is created to compensate for risk and uncertainty, then retention of the existing WACC methodology could result in over-compensation for risk.

There is, however, no obvious available internationally accepted method for setting the WACC that is exclusive of risk and uncertainty. This is because a key feature of all methods for setting the WACC is an attempt to account for risk and uncertainty.

3.9.3 *NGCP View*

If there is a change to the basic building blocks, substantial effort will be required to develop a new method for calculating the WACC. Further, it is not obvious that an internationally accepted method for determining WACC that excludes risk would be available. These considerations favor retention of the existing building block approach.

If the existing building block methodology is retained, then the ERC is obliged to retain the existing classical method for determining the WACC. To reduce the probability of setting, in error, an allowed WACC less than the true WACC, and hence to reduce the probability of under investment, ERC should retain its approach adopted in the 3rd RP Final Determination on observable market data.

NGCP suggests there would be merit in considering an amendment to the “locked” WACC parameters relating to balance sheet structure. This would be consistent with the treatment of NGCP’s capital structure for the purpose of estimating the WACC applied in the Commission’s 2010 final determination for the Third Regulatory Reset under the RTWR.

Financial theory does not lead to a specific conclusion on an efficient capital structure, and there are difficulties in acquiring accurate and representative data on capital structures for benchmark entities in other markets. Given these difficulties, it appears reasonable to refer to the actual capital structures of the entity being regulated.

3.10 **Capital Expenditure Forecast (5.10)**

3.10.1 *Context*

The capital expenditure (CAPEX) forecast is a major driver of changes in the transmission revenue requirement over the course of a given regulatory period. This is because capital expenditure is the main dynamic factor for changes in the RAB other than depreciation over the course of a regulatory period.

CAPEX influences both the return on capital and the depreciation building blocks directly. In addition, CAPEX has implications for operating expenditure (and vice versa). Replacement or refurbishment of aging equipment may reduce operating expenditure requirements. On the other hand, new assets to meet growing demand will increase operating expenditure requirements. Other things being equal, if capital expenditure is increasing in real terms, then the overall revenue requirement is also likely to increase.

The CAPEX forecast has also an important implication for service quality, and hence service quality measures and targets (Article x). It also has implications for the capital expenditure component of the Net Efficiency Adjustment (Article IX).

Section 5.10.1 of the RTWR states that the ERC must continue to apply the approach to capital expenditure forecasts set out in Section 4.10 of the RTWR. A key characteristic of this approach is that it is project based. Each capital expenditure project with a value greater than PhP 50m needs to be identified. Each project must also be ranked in relative importance and the impact on Grid performance.

Forecast costs broken down into the same asset categories as those used for the RAB valuation. Each project must also be classified in terms of

- i) Load growth (identifying the load growth expected to be met over the electricity transmission network planning horizon of 15 years referred to in Section 4.6.6 (b));
- ii) Non-load growth (identifying the primary reasons for the expenditure) are further sub-categorized as follows:
 - (1) Network; or
 - (2) Non-network; or
 - (3) Network control, safety or metering.

Based on advice from an independent expert or experts, the ERC is required by the RTWR to assess the capital expenditure forecast including whether the program is based on the best available prices, is reasonably efficient, consistent with connection and demand forecasts

3.10.2 *Issue*

Capex forecasts

CAPEX forecasts are inherently subject to uncertainty in relation to future demand growth from existing connections, and associated future capital costs. It is also subject to uncertainty over the number, location and type (including scale) of future connections (both demand and generation), and the extent consequential augmentations or extensions to the regulated transmission service are necessary, and associated capital costs.

A further source of uncertainty arises in relation to the timing of individual projects. Projects may be delayed for a number of reasons including the time required to obtain rights of way, undertake design and engineering studies, engage in procurement processes, and a range of other matters including the availability of suitably qualified resources to manage capital expenditure projects.

This makes accurate forecasting capital expenditure in each year of a given regulatory period highly problematic. Some projects may be delayed. At the same time, other projects may need to be brought forward due for example to higher than expected demand growth from existing connections or from new connections or new generation development. Difficulties with forecasting CAPEX are most substantial toward the latter part of the regulatory period. This reflects the fact the forecast horizon will be well in excess of five years. As a result, it can be difficult to identify specific projects that will be required at the time.

For both the second and third regulatory periods, use of a project based forecast approach led to the adoption of unusual CAPEX profiles. For example during the third regulatory period, the average approved level of CAPEX per annum is Php 9.7 billion (in constant 2010 terms). The approved CAPEX for the first year of this period was 1.5 times the average (Php 14.6billion), whereas the approved CAPEX for the last year of the period was less than 40 per cent of the average (Php 3.8 billion).

An area of particular difficulty is the forecasting of expenditure for historical and new rights of way (ROW). The level of expenditure in any given year, or even over an entire regulatory period is dependent on judicial and commercial processes that are largely beyond the control of the regulated entity. In recognition of the problems relating to ROW, for the third regulatory reset, the ERC made a provisional allowance for ROW. This provisional allowance would be subject to an ex post prudence review so that any windfall gains or losses associated with variances between allowances and outcomes would be netted off.

NGCP also highlights to the Commission another challenge on CAPEX for this 4th regulatory period is the implementation of several submarine interconnection facilities. The ERC already approved the conduct of the feasibility study for one of this transmission links – the proposed Leyte – Mindanao Interconnection Project. NGCP understands that the Department of Energy has placed this project as one of the major infrastructure project that need to be undertaken.

As a result of the uncertainties and difficulties set out above, inaccuracies in capital expenditure forecasts can result in windfall gains and losses for the regulated entity. These windfall gains and losses are partly addressed by the capital component of the net efficiency adjustment (NEA), discussed in further detail below. On the other hand, inaccuracies in the capital expenditure forecasts itself reduces the effectiveness of the NEA.

CWIP factor

The RTWR provide a mechanism for the inclusion of the time value of money of costs incurred during construction (construction work in progress – CWIP). CWIP Factors are used to account for the time value of money during the construction period through to the commissioning date of the assets.

For the 3rd Reset, the RTWR and the ERC's Position Paper provided the guidelines in the determination of the CWIP Factors. Section 4.6.10 of the RTWR provides that:

CWIP Factor must not be applied to the extent the asset is categorized as part of spares, easement, buildings, civil works and establishment, or non-network assets.

The RTWR and the ERC's 2009 Position Paper suggested that a uniform CWIP factor could potentially be used for all projects. The difficulty with applying a uniform factor is that different assets can have different project expenditure profiles. The spending profile and construction period of a particular ECP may depend on the length of line, voltage/capacity and location.

3.10.3 NGCP View

Capital expenditure forecasts

NGCP proposes to adopt the same approach to preparing its capital expenditure forecasts for the 4th Reset as used for the 3rd RP. Nonetheless, in order to improve the accuracy of capital expenditure forecasts, NGCP proposes that it be allowed to undertake the pre-construction activities of any proposed projects even if the said projects are yet to be approved by the ERC. Based on experience, the cost of pre-construction activities is approximately 1% over the total cost of the project.

Estimates of CWIP

NGCP suggests that the RTWR could be changed to specify the use of different CWIP Factors to apply to different asset types according to their typical expenditure profile, and at a minimum would include the following:

- Transmission Lines.
- Transmission Substations.
- Interconnection Submarine Cables¹⁶ and Facilities.

These three categories provide a minimum set – more could be added. It is possible to look at sample projects considered to be representative of the typical expenditure profile for each major asset category. These projects can be used to generate a standard expenditure curve for each asset category based on the average spending pattern and construction period of the sample projects. The time needed to complete a transmission project is a critical aspect in the calculation of the CWIP Factor, along with construction profile and cost of capital. The factors which will affect construction period and profile include:

¹⁶ Note, submarine cable was not considered in the determination of the CWIP Factor for the third regulatory period since there is currently no on-going submarine cable project.

- **Length of Line:** The time needed to construct or upgrade a transmission line is dependent on its length.
- **Voltage/Capacity:** Transmission Lines and Substations with higher voltages will take longer to construct or upgrade. Since voltages in each sub-grid are different, standardization should be based on the recently completed and currently on-going projects.
- **Location:** Depending on the delivery infrastructure and terrain, it may be more difficult to implement projects in less developed locations such as Mindanao and in other remote areas. The sample projects obtained should include projects located in various parts of the country and which are believed to be representative of the general conditions considered in calculating the CWIP Factor.

The changes would also clarify the provisions around which time value of money estimate to apply to the CWIP Factor. The CWIP Factor provisions in section 4.6 require the upcoming period's WACC (section 4.9) to be used to account for the time value of money. These provisions would be amended to clarify that the CWIP factor is determined on the basis of the WACC to be applied during the next regulatory period and is applied to both the opening RAB and to the forward CAPEX.

Value-Added-Tax

NGCP's tax status means that it pays VAT on capital purchases in the Philippines, but cannot claim an input tax credit on these purchases. For the 3rd Reset, the ERC recognized this tax treatment and allowed VAT on capex (and opex) to be included in the Building Block as an 'Other Tax'. NGCP proposes to adopt the same approach for the 4th Reset.

3.11 Operating and Maintenance Expenditure Forecast (5.11)

3.11.1 Context

The operating and maintenance expenditure (OPEX) forecast relates to the forecast for a primary building block. This building block relates to identifiable operating expenditure such as labor, software licenses, lease costs and other operating costs that are expensed in a given reporting period rather than capitalized and amortized over a number of years. This building block also includes risk related expenditure such as security and insurance costs, foreign exchange gains and losses, and an allowance for unrecoverable debts.

For the 4th reset, the ERC is required to follow the relevant rules set out in section 4.11, unless the definition of the primary building blocks has been changed.

Section 4.11 requires the Regulated Entity to furnish annual historical and forecast data for OPEX. This is to be grouped according to pay-roll sub-categories and major functional activities.

The OPEX forecasts must be accompanied by justifications as to why forecasts expenditures are necessary and of a reasonable magnitude. Forecasts could be supported by an analysis of costs compared with comparable benchmark transmission businesses applying relevant performance parameters.

Following receipt of this information, accompanied by expert advice procured by the regulated entity, the ERC must decide whether the forecasts are reasonable and efficient, taking into consideration relevant factors such as growth in customer connections, peak coincident demand and throughput. The ERC must also determine a reasonable allowance for bad debt and whether the forecast exchange rate is reasonable. If the specified conditions are met, the ERC must, after consulting with the regulated entity, approve forecasts, with any amendments considered necessary.

3.11.2 *Issue*

OPEX Forecast

As with CAPEX, forecasts of future OPEX are subject to uncertainty and error. In addition, assessing the reasonableness of expenditure forecasts by way of reference to other transmission companies is far from straight forward.

There are no obvious comparator transmission companies. Hence adjustments need to be made for differences in the nature and extent of the transmission network and the broader economy in which it operates. Informed experts may arrive at different judgments about the extent of adjustments and hence the reasonableness of proposed operating and maintenance expenditure forecasts.

Forecasts of OPEX are more likely to be in error toward the latter part of a regulatory period. This is because there is less information and more uncertainty regarding demand and cost trends further into the future.

If the primary building blocks are modified, then the operating and maintenance expenditure building block would need to be modified to remove compensation for risk and uncertainty. This might include for example removal of certain cost items such as security, insurance and possibly bad debts.

Bad Debts

Assessing a reasonable level of bad debts is also problematic. This is because they may often reflect factors outside the control of the regulated entity rather than the efficiency of its billing and collections systems. For example, bad debts are far more likely if the regulated entity is unable to require security deposits as a condition of supply.

Provision for Retirement Fund

Republic Act 7641 of 1993 provides that

“In case of retirement, the employee shall be entitled to receive such retirement benefits as he may have earned under existing laws and any collective bargaining agreement and other agreements: Provided, however, That an employee’s retirement benefits under any collective bargaining and other agreements shall not be less than those provided herein.

“In the absence of a retirement plan or agreement providing for retirement benefits of employees in the establishment, an employee upon reaching the age of sixty (60) years or more, but not beyond sixty-five (65) years which is hereby declared the compulsory retirement age, who has served at least five (5) years in the said establishment, may retire and shall be entitled to retirement pay equivalent to at least one-half (1/2) month salary for every year of service, a fraction of at least six (6) months being considered as one whole year.

As a private entity holding Congressional Franchise to perform transmission business in the Philippines, NGCP will have to abide and comply with the promulgated law.

3.11.3 NGCP View

OPEX Forecast

NGCP proposes for the ERC to consider NGCP’s flexibility in managing the operating expenditure which it deems necessary to meet its obligations.

Bad Debts

NGCP proposes that the ERC would consider allowing the regulated entity with an adequate percent (%) of bad debts to cover the additional, or exceptional, risk brought about by non-payment of some customers for the services that have already

been provided. For example the financial obligation of Lanao del Sur Electric Cooperative (LASURECO) to NGCP is already PhP1,435,591,138.86 as of December 2013. It is foreseeable that Non-payment of LASURECO will continue. This amount could already support the cost of almost thirty-five (35) units of 50MVA transformers or the necessary money to fund the cost of restoring damaged facilities by super typhoons.

NGCP proposes that for this 4th RP debts should be included in its recoverable OPEX when the following conditions are met:

- Systems loss is more than the limit set by ERC of 13%;
- Unpaid power bill to PSALM/NPC and NGCP of more than PhP2B; and
- With political interventions, issues and concerns which make disconnection impossible.

LASURECO would meet the above conditions.

Provision of Retirement Fund

Retirement fund adopted by NGCP, following the provision of RA 7641 should be allowed as recovery forming part of its operating expenditures.

3.12 Revenue Smoothing (5.13)

3.12.1 Context

Within a revenue control period, the regulated entity's allowable cost profile may vary substantially from year to year. This reflects the nature of transmission CAPEX which is characterized by large, lumpy investments compared with typical distribution CAPEX.

The regulatory objective is to allow NGCP to achieve the sum of annual revenue requirements over the course of the regulatory period without undue volatility in transmission rates from year to year. This is achieved by the application of an efficiency factor "X" and the addition of a P naught parameter. By setting one, the present value calculation can be solved by altering the other.

The RTWR (rule 4.13.3) includes the parameter P_0 to:

- deal with windfall gains and losses caused by external events; and
- smooth the annual revenue between regulatory periods so there is not a step change between one regulatory period and the next.

3.12.2 *Issue*

Efficiency factor (X)

The intention of a price cap (or CPI-X) form of regulation is to replicate the continuous efficiencies (productivity gains) that occur in competitive markets and at the same time allow regulated entities to benefit from out-performing the required level of efficiency. The way this is achieved in practice in the RTWR, and equivalent forms of price control in other jurisdictions, is that the potential for productivity improvements are considered in constructing the Annual Revenue Requirement for each year. As the revenue cap set on the basis of the projected ARR, the regulated entity has an incentive to achieve further efficiencies.

The X factor is then calculated to smooth the resulting ARRs in an NPV neutral manner. Hence, when the X factor is applied in Rule 4.13.3 and the corresponding 5.13.4, it is a smoothing factor, rather than an efficiency factor.

Rule 5.13.4 relies on a single unknown value to calculate a unique value for the X factor. As the ERC stated in its Final Determination for the 3rd Reset (paragraph 7.5.3): “It is thus possible to determine a number of possible smoothed revenue paths, all of which will return the regulated entity the same required total revenue in NPV terms over the regulatory period.”

In some regulatory regimes, an explicit process is established for setting the “X” as an efficiency factor rather than as revenue smoothing within a regulatory period. Under these methods, the revenue for the forthcoming period is generally set by reference to historic revenue (rather than expected efficient costs). This past revenue level is projected forward, increased by the CPI, and then the X factor is applied to adjust for anticipated efficiency achievements.

This approach, of setting X independently of the expected costs of the regulated entity, is usually only used for a transition period or for setting a ‘default’ path, and the regulator or regulated entity can choose to enter into a reset process. This is because calculating X as the efficiency adjustment is inherently more prone to error than the approach adopted under the RTWRs where each ARR is built up from expected efficient costs. Setting an efficiency factor without reference to the firms cost information risks rewarding those firms that have not achieved cost savings in the previous period and punishing those firms that have already achieved efficiency gains. The current approach of estimating efficient costs in constructing the ARRs is less arbitrary and more consistent with the objective of ensuring consumers only pay for efficient costs.

P naught

Under the rules, the P naught is fixed and the X factor varied; that is, the Rules anticipate that the regulator would determine the P naught adjustment, and then

calculate the x factor that achieves a smooth revenue profile. In practice, in the previous transmission resets, the X factor has been set, with the P naught term being varied.

The practice of varying the P naught term has introduced unintended complications into setting the ARR. This is because the P naught term is used in the RTWR formulas to achieve two separate functions:

1. address windfall gains and losses; and
2. smooth the transition between periods (with the X factor smoothing the revenue within the regulatory period).

However, it is not possible to calculate a P naught term that both addresses windfalls and calculates the smoothing element. This is because the parameter would introduce two unknowns into the revenue calculation preventing a unique solution.

The use of P_0 in smoothing also introduces a problem in the revenue formula, requiring the ERC to adopt an adjusted MAR to account for the P naught. That is, the ERC has applied the formula:

$$MAR_t = (MAR_{t-1} - P_0) * (1 + CWI_t - X) - K_t - RBR_t$$

Not the formula specified in the RTWR which is:

$$MAR_t = MAR_{t-1} * (1 + CWI_t - X) - K_t - RBR_t$$

Thus, the general approach is one where the X factor is set, and the P_0 is used to adjust the allowed revenue in the first year of a regulatory period. The intent being that a movement in one factor will result in an adjustment in the other to maintain the present value calculation over the regulatory period

3.12.3 NGCP View

P naught

NGCP proposes that the calculation of P naught should occur prior to the calculations that are set out in rule 4.13.3 and the corresponding 5.13.4. This would include windfall gains or losses. However, as the P naught has a dual function, the term should be split into a P1 and P2 parameters to clearly identify these two functions:

P1: A parameter for the external influences that have resulted in windfall gains or losses. This formulation of a P1 term would therefore be a known input for the present value calculation and the smoothing formula.

P2: A parameter that allows for smoothing of the step in revenue between regulatory periods, if required. This term would serve to correctly calculate the present value of the smoothed MAR, while allowing the transition between the revenue calculated for the initial year of the regulatory period and the revenue obtained in the last year of the previous regulatory period to be moderated.

As an adjustment factor for revenue transition, P2 could be used as an unknown parameter in the formula present in 5.13.4 for a given X factor. Further, the size of the P2 parameter would also be influenced by the X factor, and could be set in conjunction with the X factor to moderate the progression of annual revenues in each year across the regulatory period, along with any transition step between periods.

The corresponding formulas in rules 5.2.3, 5.13.3 and 5.13.4 would become:

5.2.3 incorporating the transition step:

$$\text{MAR}_t = (\text{MAR}_{t-1} - P_2 * F) * (1 + \text{CWI}_t - X) - K_t - \text{RBR}_t$$

F a factor = 1 if "t" is the first year of the regulatory period, 0 otherwise

5.13.3 incorporating the adjustment to allowable revenue inclusive of windfall gains and losses:

$$\text{PV}_{\text{RAW}} = (\text{MAR}_{t-1} - P_1) + \text{ARR}_t / (1 + \text{WACC}) + \text{ARR}_{t+1} / (1 + \text{WACC})^2 + \text{ARR}_{t+2} / (1 + \text{WACC})^3 + \text{ARR}_{t+3} / (1 + \text{WACC})^4 + \text{ARR}_{t+4} / (1 + \text{WACC})^5$$

5.13.4 incorporating both the transition step, windfalls and the X factor:

$$\begin{aligned} \text{PV}_{\text{RP}} = & (\text{MAR}_{\text{RP-1}} - P_1 - P_2) * [1 + (1 + \text{inflation}_t - X) / (1 + \text{WACC}) \\ & + (1 + \text{inflation}_t - X) (1 + \text{inflation}_{t+1} - X) / (1 + \text{WACC})^2 + \\ & + (1 + \text{inflation}_t - X) (1 + \text{inflation}_{t+1} - X) (1 + \text{inflation}_{t+2} - X) / (1 + \text{WACC})^3 \\ & + (1 + \text{inflation}_t - X) (1 + \text{inflation}_{t+1} - X) (1 + \text{inflation}_{t+2} - X) (1 + \text{inflation}_{t+3} - X) / (1 + \text{WACC})^4 \\ & + (1 + \text{inflation}_t - X) (1 + \text{inflation}_{t+1} - X) (1 + \text{inflation}_{t+2} - X) (1 + \text{inflation}_{t+3} - X) (1 + \text{inflation}_{t+4} - X) / (1 + \text{WACC})^5] \end{aligned}$$

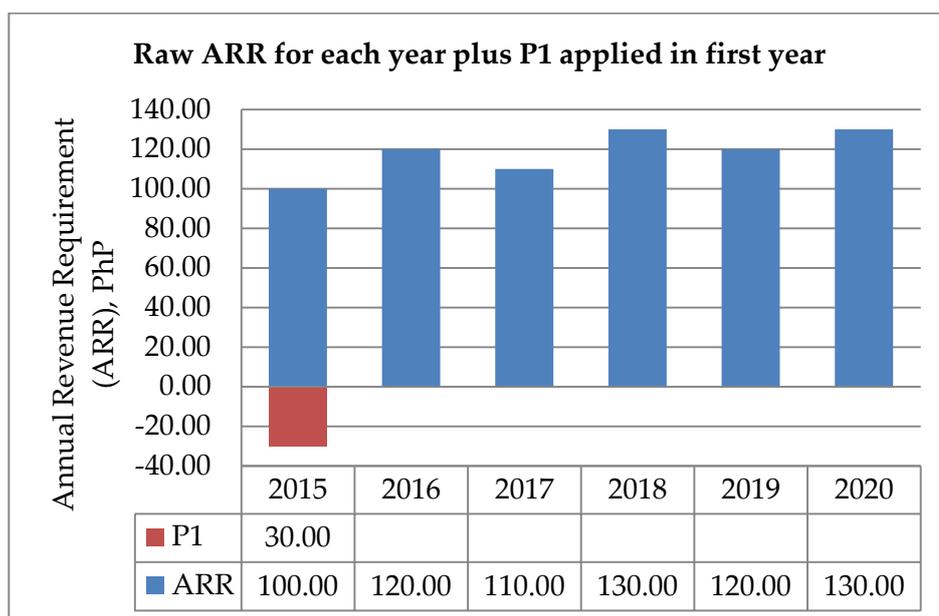
Example of revised smoothing formula with P1 as a windfall loss of PhP30.

The following illustrates the application of this revised formula, in circumstances where the regulated entity has suffered a windfall loss in the previous regulatory period.

Un-smoothed Revenue

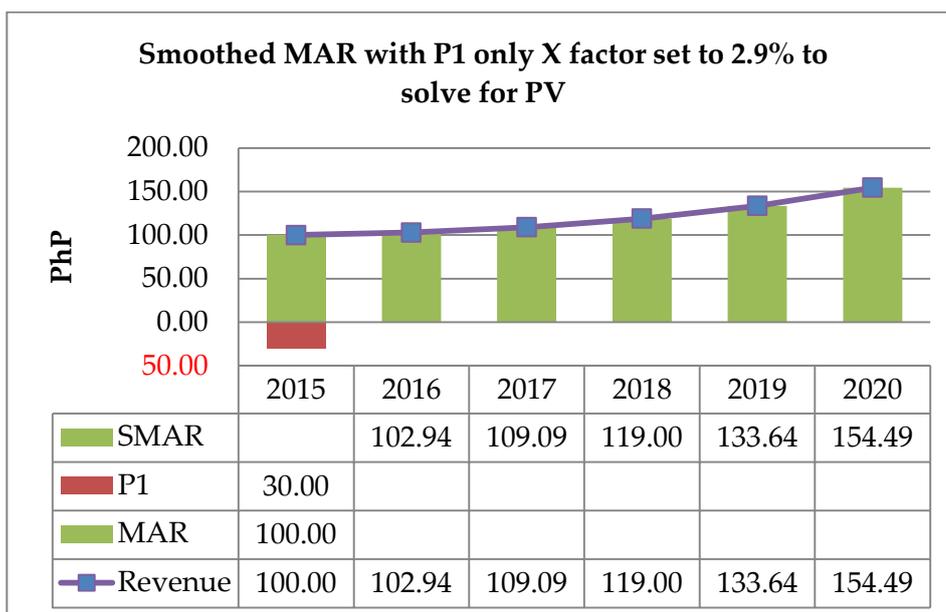
The graph below assumes a starting 2015 revenue level of Php100. An assessed windfall gain of Php30 has been applied as an adjustment, lowering the overall revenue.

The ARR values for the regulatory period would be calculated and can be expected to vary over time. The present value of the same series shown is Php 530 inclusive of the Php 30 adjustment as calculated by rule 5.13.3.



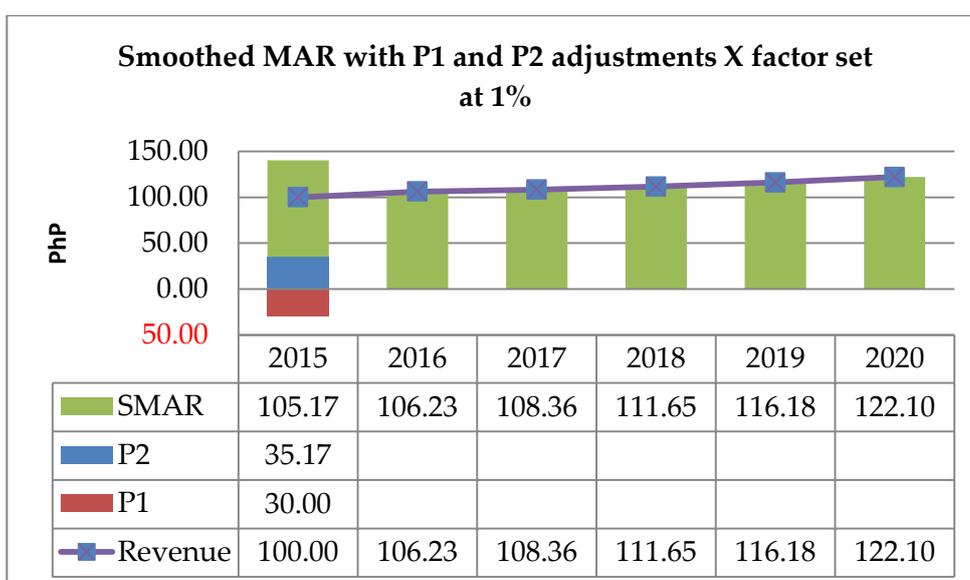
Smoothing Revenue – no step adjustment (current formula)

- Under the current rules, given a fixed adjustment labelled here as P1 (currently P₀) rule 5.13.4 varies the X factor to obtain the same present value.
- In this worked example, solving for X results in a factor of 2.9%. This value is large as it needs to account for the low starting position, and to recover sufficient value over time, results in a very high ending revenue. The PV of the SMAR sequence is Php 530 as required.
- It is also useful to note that there is a large step transition between 2015 (the last year of the previous regulatory period) and 2016 (the first year of the next regulatory period).



Smoothed revenue with step adjustment

- To moderate the between period transition a second adjustment parameter P2 is introduced. As this is separate from the windfall gain/loss parameter P1, the value of P2 is excluded from the initial PV calculation.
- If the X factor is defined, then the P2 value can be calculated. In the current example, setting the X factor at 1% results in P2 = Php 35. The PV is Php 530 as required and the transition between periods is moderate.



3.13 Side Constraints

3.13.1 Context

The primary purpose of side constraints is to balance the risks of rate shock, on the one hand, with the desirability of maintaining prices at cost reflective levels, on the other.

3.13.2 Issue

NGCP understands that the ERC is considering setting side constraints as low as 2 per cent. NGCP suggests this may raise equity issues whereby other rates have to increase at a higher rate than otherwise to offset the effect of the side constraint.

3.13.3 NGCP View

NGCP does not support the setting of side constraints as low as 2 per cent. It suggests this may give rise to equity issues by favoring some customer groups (where side constraints bind) relative to others.

NGCP suggests for the ERC to consider that the side constraints need not be the same percent to all customer segmentation. Thus, it can be set different for each customer segment.

Further, NGCP suggests that the side constraints be reviewed and adjusted relative to the proposed changes of the Load Billing Determinants¹⁷ from rolling a 12-month average of the non-coincident peak to rolling 12-months of the customer's system coincident peak.

3.14 Financial ratios

3.14.1 Context

Section 5.19.1 of the RTWRs gives the ERC the discretion to require the Regulated Entity to provide forecast financial ratios for each Regulatory Year. The financial ratio forecast must be of a kind and calculated in a manner specified by the ERC. Such financial ratios must, to the extent reasonably possible, be "consistent with the manner of calculation adopted by the Grid Code or reputable financial institutions." As the Grid Code does not specify a method for calculating financial ratios, NGCP interpret the standard required by the RTWR to be that of a "reputable financial institution." As a reputable financial institution would comply with the Philippine

¹⁷ Clause F(AI)2.2 and F(AI)3.2, Module F, of the Proposed Revisions to the Open Access Transmission Service Rules submitted dated 4 December 2013

Financial Reporting Standards (PFRSs) NGCP concludes that these are the relevant standards for providing forecast financial ratios.

The intent of Section 5.19.1 of the RTWR is to provide a cross-check that the MAR determined for each Regulatory Year is reasonable and sufficient for an efficient entity to provide the Regulated Transmission Services. This intent is reflected in the requirement of section 5.19.3, which stipulates that the ERC must take into account the estimated credit rating of the Regulated Entity which results from the financial ratios when determining the annual revenue requirement for a Regulatory Year to achieve the general principles set out in Section 4.4.1. These objectives include commercial viability, stability in rates, outcomes consistent with competition in the market for Regulated Transmission Services, and sustainable maintenance of the grid.

3.14.2 *Issue*

The RTWR does specify the form and manner of calculation of financial ratios required to be prepared by the regulated entity.

The MAR model provided by ERC however did include worksheets that calculate financial ratios from the inputs used to determine the Annual Revenue Requirement for RAB assets. In NGCP's view, retaining a formula-based calculation of financial ratios and analysis in the MAR model does not provide a meaningful basis for assessing whether the general principles in section 4.4.1 have been achieved. There are several reasons why the financial ratio calculations in the MAR model will not achieve the intended objective.

First, the MAR model obtains results only for the RAB assets, whereas the financial position of the Regulated Entity depends on all revenues and costs, including connection assets and sub-transmission assets.

Second, the MAR considers only unconstrained MAR. If revenue is constrained by the application of the side-constraint, the modeled revenue forecasts that inform the income statements, balance sheet and financial ratios produced by the model, could be meaningless.

Third, the financial ratios and modeled financial statements are derived from same cost and revenue data as is used in the MAR model. Hence, an error in the MAR model in estimating the MAR could be carried forward into the modeled revenue forecasts, and the ratios therefore are limited in providing a cross-check of the annual revenue requirement.

Finally, a formulaic approach does not allow for context of the Regulated Entity to be taken into account. While the ratios contained in the MAR model appear to be a typical set used by an agency like Standard and Poors, NGCP asserts that the process

of deriving a credit rating process is not as simple as testing against simple ratios. Instead, it requires the application of both financial and non-financial tests.

3.14.3 NGCP view

In NGCP's view, a more practical and robust approach would be to forecast financial statements independently from the MAR model, once the operation of the side constraints has been determined. The steps in preparing these forecast financial statements would be as follows:

- The SMAR projected for each year of the Third Regulatory Period would be assessed against the side constraints using the same demand and other forecasts as used in the MAR model.
- The SMAR for each year (or the constrained revenue if the side-constraints are projected to bind) would be taken into NGCP's financial forecasting models, along with other revenue and cost projections.
- NGCP would prepare forecast balance-sheet, profit and loss, and cash-flow statements for each year of the Regulatory Reset Period, following the same standards and accounting policies it applies in determining its annual financial statements.
- NGCP would also prepare such financial ratios as it considers necessary to assess whether the resulting financial projections would allow it to achieve the general principles in section 4.4.1. This assessment would include an assessment of the impact, if any, on the Regulated Entity's, credit rating.
- NGCP would submit to the ERC its projected balance-sheet, profit and loss, and cash-flow statements, the financial ratios, and its assessment as to whether the projected revenue would allow it to achieve the general principles in section 4.4.1.

NGCP submits that the most appropriate time for it to provide these projected financial statements, financial ratios, and assessment are in response to the Draft Determination. Section 5.19.3 states that the ERC is to use the financial ratio information "in determining the annual revenue requirement". The ERC determines the annual revenue after considering responses to the Draft Determination. Financial ratios submitted with the application, such as those calculated in the MAR model, are unlikely to assist the Honorable Commission in determining the annual revenue requirement, as the figures on which those financial ratios were prepared may well have changed following the Honorable Commission's review of the application.

CHAPTER 4 Other Matters

4.1 Service Quality Measures and Targets

4.1.1 *Context*

The RTWR include provisions regarding service quality measures and targets, as set out under Article VIII. This is to address a potential issue under PBR whereby the regulated entity seeks to reduce its costs in ways that pose risks to service performance.

The first component of this aspect of the RTWR is the identification of service quality measures or indices used to measure performance. The regulated entity is then required to report actual outcomes against quality measures over time.

The RTWR provide for the establishment of a performance incentive scheme with rewards and penalties applied to the extent that the actual level of performance by the regulated entity exceeds or falls short of performance measures and incentives. Rewards and penalties may take the form of increases or decreases in the MAR for a regulatory year. They may also take the form of a surcharge or rebate for some or all of the regulated entity's customers.

The RTWR establish principles regarding the operation of the performance incentive scheme. Rewards and penalties should be reasonable and proportional. They should also be symmetrical. There are caps on the level of rewards and penalties in a given year expressed in both revenue and unit price terms.

There is a link between the performance incentive scheme and allowances for CAPEX and OPEX. Other things being equal, higher allowances for CAPEX and OPEX could increase the probability performance targets are exceeded, with corresponding rewards. Conversely, lower allowances for CAPEX and OPEX could increase the probability performance targets are not met, with corresponding penalties.

4.1.2 *Issue*

NGCP, being a Regulated Entity and governed by the ERC through a Performance Based Regulation (PBR), is tasked to extend quality service to its customers in adherence to a set of performance standards set forth under Article VIII of the RTWR and the provisions stipulated under Section 4.9 of the 3rdRP Final Determination (FD). Under these rules, the performance of the Regulated Entity shall be measured annually throughout the regulatory period such that the Regulated Entity earns an incentive when the quality of its delivered service is beyond certain measures

approved by the Regulator and is penalized when the said service falls below the standard.

Based on the 3rd RP FD, NGCP's performance will be continuously measured using the existing five (5) indices set forth during the 2nd Regulatory Period (2nd RP), i.e., the System Interruption Severity Index (SISI), Frequency of Tripping (FOT), System Availability (SA), Frequency Limit Compliance (FLC), and Voltage Limit Compliance (VLC). In addition, three (3) new indices shall be included, i.e., the Congestion Availability (ConA) for Luzon grid only, Ancillary Services Availability Indicator (ASAI), and Customer Satisfaction Indicator (CSI).

Setting of Targets

For each performance measure, the ERC must prescribe a target, dead band, a collar and a cap such that if the actual performance against the measure is within the dead band, there is neither a reward nor a penalty. A reward or penalty is applied on a pro rata basis if the actual performance lies between the dead band and the cap or collar. Outside this region, the reward or penalty is limited to the maximum that can be applied to that measure.

In the 2nd and 3rd Regulatory Periods, the target for each performance measure was established using the 5-year historical performance of TransCo's/NGCP's transmission assets consistent with Section 9.4.2 of the Philippine Grid Code.

Given the numerous sub-transmission assets that have been reverted to the RAB pursuant to 3rd RP Final Determination, the target for each performance measure in the forthcoming 4th RP shall be established using the 5-year historical performance of both the transmission assets and the reverted sub-transmission assets.

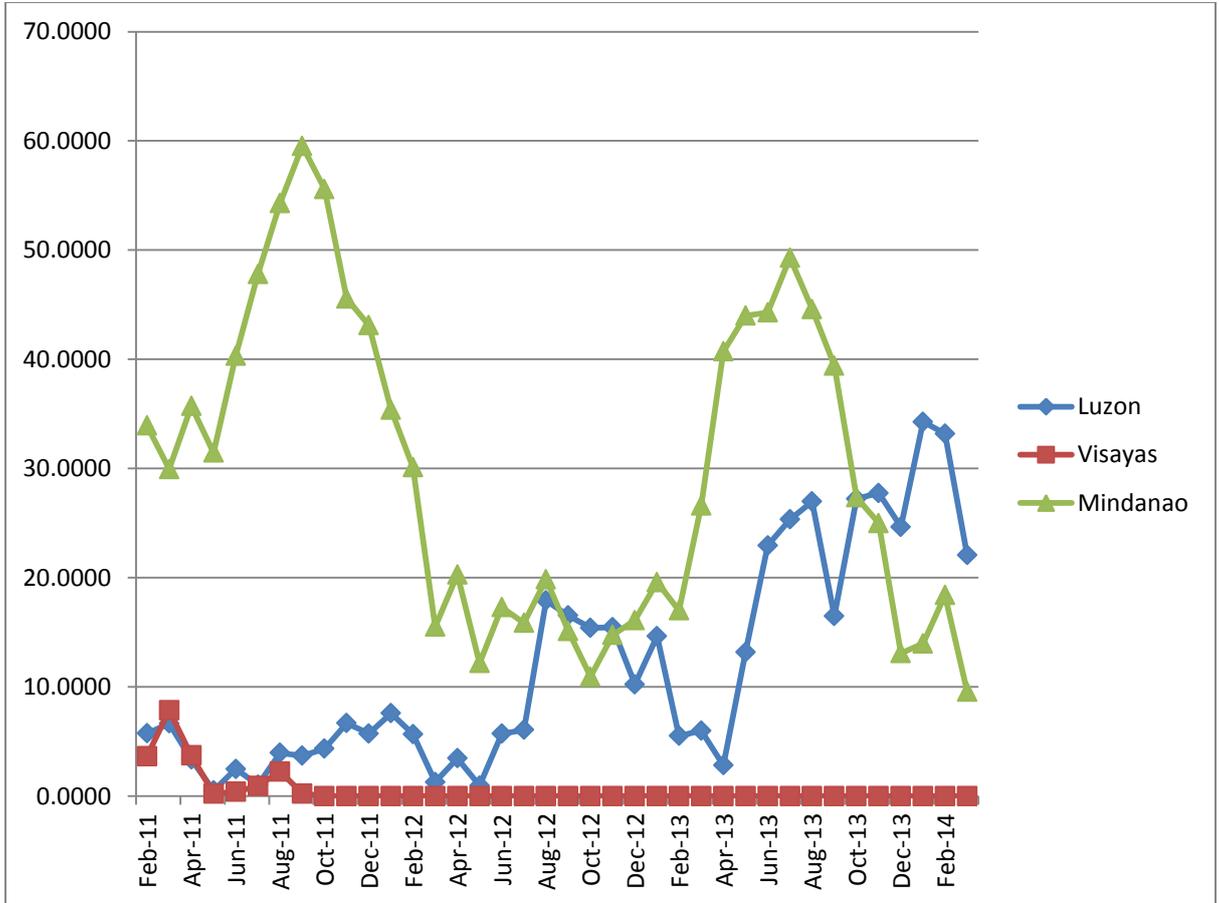
ASAI

In the 3rd RP Final Determination, the ERC provides that NGCP shall commence measuring its performance on the availability of ancillary services starting 1 February 2011 and the data recorded between this date and 31 August 2011 shall be used as a basis for developing the ASAI parameters. Further, the ERC directed NGCP to set the parameters in conjunction with the 2012 rate adjustment case to provide an opportunity for stakeholders consultation.

With the yearly monitoring of the availability of ancillary services, the samples provide insufficient data to establish realistic and statistically sound ASAI parameters.

A graphical representation of the ASAI scores considered is presented below. It can be observed that the scores are scattered for Luzon and Mindanao while for Visayas

the scores remained zero. These existing percentage scores of ASAI considered as either erratic or zero values make it difficult to derive statistically sound parameters.



Unrecovered Amount

Section 8.2.3 (c) of the RTWR states,

“the levels of reward and penalty must be set such that:

- (i) If the scheme is a scheme described in Section 8.2.2 (a), the rewards and penalties applying in respect of any Regulatory Year do not exceed 3% of the ARR_t for that Regulatory Year determined for the purposes of the Regulatory Reset Process undertaken under Article VII in respect of the Regulatory Period in which that Regulatory Year occurs; and xxx”*

This translates into:

Index	Weight, %	Allocated 3% ARR
SISI	25%	25% x 3% ARR
FOT	20%	20% x 3% ARR
SA	10%	10% x 3% ARR
FLC	10%	10% x 3% ARR
VLC	10%	10% x 3% ARR
ConA	10%	10% x 3% ARR
ASAI	5%	5% x 3% ARR
CSI	10%	10% x 3% ARR
Total	100%	100% x 3% ARR

With the setting of zero (0) incentive/penalty while maintaining a 5% weighting on ASAI during the 3rd RP due to non-implementation of ASAI (caused by insufficient data), NGCP did not recover the full 3% ARR.

Customer Satisfaction Index

Under the Final Determination for NGCP's 3rd RP, the CSI shall be measured by customer responses to an annual survey conducted by a research provider using an objective and quantitative scoring system. Said survey shall be done by an independent research company that will be engaged by the ERC and paid for by the Regulated Entity.

On 24 April 2012, NGCP sought the ERC's directions on the conduct of Customer Satisfaction Survey (CSS) for the 2012 Net Performance Incentive Application. The ERC, in its letter-response dated 25 July 2012, resolved that the engagement of the market research organization for the survey be undertaken through a competitive process in compliance with Republic Act No. 9184¹⁸.

At the time NGCP submitted its application for the 2013 Annual Rate Verification Process (Article VI of the RTWR), the ERC has not advanced with the conduct of the CSS. Thus, NGCP, prayed for the ERC to adopt and apply the 2011 ERC-approved CSI ratings in the computation of 2012 Net Performance Incentive.

Notwithstanding the foregoing, NGCP, having received a certification from TÜV Rheinland Philippines, Inc. proceeded with the conduct of CSS. It is worthy to note that this CSS is not only an ERC parameter to measure NGCP's customer care, but it is also a required performance measurement by the quality management system per Section 8.2.1 of ISO 9001:2008 (E). The survey activities and results are mandatory and NGCP must show compliance during the Integration Management System (IMS) External Audit conducted semi-annually every January and November.

¹⁸ Government Procurement Reform Act

Likewise, this survey result is used as measurement for NGCP's corporate Key Performance Indicator (KPI) which forms part of the overall actual result of the Corporate Performance Management System (CPMS).

In compliance thereto, NGCP engaged UP Statistical Center Research Foundation, Inc. (UPSCRFI) for the conduct of 2012 CSS with the objective of measuring, in quantitative terms, the following:

- The extent to which the NGCP customers are satisfied with its services in 2012; and
- The relative performance of NGCP for the current year with the baseline results.

In the conduct of 2012 CSS, UPSCRFI, the same organization commissioned by the ERC in CY 2011, considered similar approach and methodology during the 2011 survey. Similar set of questionnaires was also used containing 35 scale items and categorically measures NGCP's Customer Communication, Communication on Billing Reconciliation/Orientation, Customer Relationship, Provision of Technical Services and Other Issues. UPSCRFI's report states,

"The instrument used for the CSS this year is the same questionnaire used last year, except for a few additional items. These additional items are part of the analysis, but they are excluded in the computation of the CSI to ensure comparability with the 2011 results."

4.1.3 NGCP view

Setting of Targets

NGCP considers the establishment of targets for the existing performance measures, as applicable, using the 5-year historical performance of both the transmission assets and the reverted sub-transmission assets.

ASAI

On the other hand, NGCP considers the removal of ASAI for the following reasons:

- The samples provide insufficient data to establish realistic and statistically sound ASAI parameters; and
- NGCP foresees the implementation of reserve market.

Unrecovered Amount

NGCP proposes that unrecovered amount be recognized by the ERC as a windfall loss and be recovered by NGCP in the 4th RP.

Customer Satisfaction Index

NGCP proposes that for the ERC to allow and recognize the Customer Satisfaction Survey undertaken by an independent research company engaged/to be engaged by NGCP in the absence of the ERC's engagement with other providers.

4.2 OPEX and CAPEX Efficiency Adjustments

4.2.1 Context

A financial performance incentive is a key component of PBR. Article IX of the RTWR provide for this by way of a Net Efficiency Adjustment (NEA) mechanism. The purpose of the NEA is to ensure that the regulated entity has an incentive to achieve reductions in controllable costs relative to the allowed costs in forecasts approved by the regulator.

The operation of the NEA is contingent on service delivery levels being achieved. This is to minimize the risk that financial incentives compromise the maintenance of service delivery.

The NEA applies both to CAPEX and OPEX and therefore has CAPEX (CEA) and OPEX (OEA) components. For the CEA component, the CEA is calculated as allowed WACC multiplied by the allowed CAPEX minus the actual CAPEX. Thus the CEA penalty or reward is based on the avoided capital (financing) cost associated with a reduction in CAPEX relative to forecast for a given year.

For the OEA component, two formulae apply. For the first year of a regulatory period, the formula for calculating the OEA is simply forecast OPEX minus actual OPEX. For the second and succeeding years of a regulatory period, the formula is based on the difference between the forecast and actual movement in OPEX between the year in question and the preceding year. This is to ensure the regulated entity is rewarded (or penalized) only for incremental improvements in efficiency between years.

The NEA operates both within and between regulatory control periods. This is intended to provide constant incentives for the regulated entity to seek and implement efficiencies. In the absence of a carryover between periods, the regulated entity's incentives would weaken toward the end of a regulatory period.

If the NEA for a given year is a positive amount, then that amount may be retained by the regulated entity for the following five years. Conversely, if the NEA is a negative amount, then that amount must be borne for the following five years.

This implies that the NEA is a “high powered” incentive scheme. Rewards and penalties are leveraged by five times the positive or negative amount determined for a given year. To illustrate, if the NEA for a given year has a positive value of Php100m, then its carry-over value in succeeding years is Php500m.

The impact of NEA carry-overs on allowed revenues for any given year therefore depends on the net effect of NEA balances for the preceding five years. The net NEA carry-over impact on allowed revenues is likely to vary from year to year.

The RTWR provide that, for the purpose of calculating the NEA for a given year, the ERC may, at its discretion, after taking into account submissions from the regulated entity, adjust the *ex-ante* CAPEX and OPEX forecasts used for the purpose of calculating OEA and CEA balances. This is consistent with the notion that the incentive mechanism should apply to controllable costs. The RTWR explicitly allows for adjustments to reflect:

- Changes to the scope of services; and
- Material differences in the level of output beyond certain thresholds.

The RTWR require that any retrospective adjustments to CAPEX and OPEX forecasts for a given year (in the preceding RP) will be made at the time of the Regulatory Reset process for the following Regulatory Period. This means it is not possible to determine NEA carry over values for a given year within a Regulatory Period. It also means it is not possible to determine net carry-over (within the regulatory period) or carry-forward (for the following regulatory period) NEA values.

In addition to the requirements set forth in Article IX of the RTWR, Section 5.17.1 of the RTWR provides that, as part of the regulatory reset process for the subsequent regulatory period, the ERC will also consider:

- Separately identifying those cost reductions and increases which are due to improved or reduced efficiency and those which have been caused by external factors (i.e., are ‘windfall’ gains or losses), and removing those latter gains or losses from the efficiency adjustment calculation, so that better efficiency incentives are provided to the Regulated Entity;
- The introduction of a mechanism to reward the Regulated Entity for advances in universal access which has the potential to benefit End-users through improved access to the Grid; and
- The introduction of a mechanism to reward the Regulated Entity for the elimination of network constraints which would enhance the operation of the WESM and potentially benefit End-users through lower electricity prices.

4.2.2 Issue

The NEA represented one of the more challenging aspects of the Third Regulatory Reset and indicated significant shortcomings in this aspect of the RTWR.¹⁹ The eventual outcome was a significant negative NEA carry-forward balance reducing allowed revenues over the course of the Third Regulatory Period by a total of 5.6 billion pesos or 3 per cent of the total revenue cap for the period.²⁰

Actual (and budgeted²¹) levels of CAPEX and OPEX varied substantially from the CAPEX and OPEX provided for at the time of the second regulatory reset. In seeking to determine the extent variations from allowed ex-ante CAPEX and OPEX were controllable by the regulated entity,²² the ERC sought to ensure the Regulated Entity was neither rewarded nor penalized for windfall gains and losses.

This led to an after the fact review of the efficiency and prudence of the actual levels of CAPEX and OPEX incurred by the regulated entity over the course of the second regulatory period. This required developing “reforecast” or “benchmark” CAPEX and OPEX levels for each year of the second regulatory period, for the purpose of applying the CEA and OEA formulae set out in the RTWR.

The NEA calculation process adopted by the ERC in the course of the third regulatory reset used five major steps, as summarized in the graphic below.



Each of these steps is discussed in detail below.

Step one: The ERC required auditing of actual CAPEX and OPEX, including Construction Work In Progress (CWIP).

Step two: In the time available, the Regulated Entity was unable to complete an external review of benchmark CAPEX and OPEX in its regulatory application. Indeed, these became available only after delivery of the ERC’s Draft Determination. The proposed CEA and OEA benchmarks eventually submitted were close to the actual and budgeted levels of CAPEX and OPEX. In other words, the regulated

¹⁹See paragraph 8.3.2 of the FD.

²⁰See table 7.2 of the FD.

²¹At the time the regulated entity’s application was submitted to the ERC in late 2009, actual cost data were available for 2006-2008 and for the first half of 2009. Therefore budgeted data were required for the second half of 2009 and all of 2010.

²²See paragraph 5.29.3 of the FD

entity proposed that actual CAPEX and OPEX for each year was close or identical to efficient benchmarks.

In its final decision, the ERC rejected the CEA and OEA benchmarks proposed by the regulated entity and substituted benchmarks developed by its consultants.²³ The final decision acknowledged the difficulty, in a dynamic environment, in determining whether differences between actual and forecast costs are consequences of external or internal factors.²⁴

The ERC accepted the principle that the following factors need to be taken into account in developing benchmarks.

For capital expenditures:

1. Adjustment for Actual CPI and Exchange Rate;
2. Failure of Bidding Processes;
3. Change in the Co-incident Demand;
4. Change in the Cost for ROW;
5. Inclusion of New Projects in 2009 & 2010; and
6. Isolation of VAT in 2009 & 2010.

For operations and maintenance expenditures:

1. Adjustment for Actual CPI and Exchange Rate;
2. Changes in OPEX and costs;
3. Unforeseen expenditures.

A key problem to emerge was the treatment of Right of Way (ROW) expenditure. The first problem is that ROW expenditure is often dependent on legal proceedings, over which the regulated entity has little control. The second problem is that TransCo is responsible in the case of assets existing at the time the concession agreement took effect. During the second regulatory period, TransCo was often capital constrained by PSALM and hence deferred settlements. This did not, of course, represent a real decrease in ROW related CAPEX. Accordingly, in its final decision, the ERC modified the CEA benchmark to account into account the actual ROW expenditure profile over the second regulatory period.

In addition to uncertainty over the timing of ROW expenditure, ROW difficulties were a key factor behind some of the variances between actual and forecast CAPEX for new transmission links. In the Draft Determination, the ERC proposed addressing this issue by excluding recovery of ROW related CAPEX entirely from the duration of the third regulatory period. In the Final Decision, in line with

²³Paragraph 5.1 of the FD.

²⁴Paragraph 5.29.3 of the FD

submissions from the regulated entity, the ERC allowed recovery of ROW CAPEX, subject to an ex post review.

Step three: Determine CEA and OEA balances for each year of the second regulatory period. Broadly speaking, the ERC made the following key findings on CEA and OEA balances for the period:

1. For 2006 there was a substantially positive CEA but this was more than offset by a negative CEA for 2009.
2. Similarly, there was a strongly positive OEA in 2006 and OEA was positive for all other years except 2007 and 2010.
3. The overall CEA balances within the second regulatory period were positive. In other words, the ERC found that the regulated entity had under-spent efficient CAPEX.
4. While the OEA balance for 2007 was negative (Php427m), actual OPEX was significantly lower than benchmark OPEX (Php189.8m). This highlights that, other than for the first year of a regulatory period, the OEA formula can produce a penalty even where the OPEX benchmark has been outperformed. This is because the formula is based on the movement between actual and forecast OPEX between years.
5. The OEA for 2010 was strongly negative. This reflects the ERC's decision that OPEX levels in 2010 were not efficient in that they reflected rises in labor costs (wages and salaries) which were in its view not efficient or prudent.
6. Again, the overall OEA balances within the second regulatory period were positive. In addition, actual OPEX over the entire period was significantly lower than benchmark OPEX. In other words, over the entire period, the regulated entity had under-spent relative to an efficient benchmark OPEX.

Step four: Carry over: In this step, any positive NEA balances due within the second regulatory period would be carried over into the third regulatory period, as a form of 'catch up'. This reflects the lag in recovery of positive NEA balances due within the second regulatory period due to the fact NEA balances are not determined until 3rd reset. However, under conditions where side constraints bind and allowed revenues are not fully recoverable, there was no carry-over of positive NEA balances (relating mainly to the earlier part of the second regulatory period).

Step five: Remaining NEA balances determined for each year of the second regulatory period, (but not due within the second regulatory period) are carried *forward* into the third regulatory period. Due to the one year lag, the first year of the third regulatory period represents the net outcome of NEA balances for each year of

the second regulatory period – the 2006 NEA balance applies up to 2011 but not to 2012 and beyond.

As noted earlier, the aggregate NEA balance carried forward to the third regulatory period is negative. This is mainly associated with the OEA variable and in particular the negative OEA balances for 2007 and 2010.

The aggregate negative OEA balances carried forward to the third regulatory period offset almost exactly the aggregate positive OEA balances due within the second regulatory period that should have been carried over to the third regulatory period. Due to the binding of side constraints, the regulated entity was unable to benefit from the positive OEA balances within the second regulatory period.

An important point to note is that, except for 2011, the net NEA balances for the second regulatory period, as determined in the 2010 Final Determination, do not represent NEA balances for each year within the third regulatory period. This is because these balances will not be determined until the 4th reset has been determined. Once again, NEA balances will need to be carried over into the fourth regulatory period. This creates a high level of uncertainty over NEA balances and substantially weakens its incentive effects and potential benefits.

The experience of the 3rd reset suggests that the NEA mechanism is flawed and does not fulfill its intended objectives of creating incentives for the regulated entity to outperform allowed OPEX and CAPEX. Most notably, while the ERC determined that OPEX and CAPEX levels over the entire third regulatory period were significantly lower than benchmark efficient OPEX and CAPEX levels, the net NEA carry-forward into the third regulatory period was negative. This reflected the interaction between the carry-over mechanism and the side constraint mechanism, which meant that positive NEA balances in the early part of the second regulatory period were not carried over into the third regulatory period.

A further set of issues arise from unsatisfactory interactions between the NEA mechanism and other aspects of the RTWR. For example, the NEA mechanism highlights the limitation of a project based approach to CAPEX forecasting. Due to the forecast CAPEX profile, there is a high probability that NEA balances for the early years of a regulatory period are positive while they are negative in the latter years. Similarly, if the OPEX forecast for the first year of a regulatory period turns out to be too low, or there is a one off decrease in OPEX. Then for every peso “saved” a liability of 5 pesos is created in subsequent periods.

4.2.3 *NGCP view*

NGCP considers reform of the NEA is essential to ensure it fulfills its function within the regulatory framework both efficiently and effectively. This implies change to Article IX. If a satisfactory reform cannot be designed within the timeframe for the

4th reset process, it may be necessary to suspend the NEA for the 4th reset while it is redesigned and then apply a redesigned NEA for the 5th and subsequent reset.

Change proposals for consideration include the following:

- Reduce the leverage – because of the difficulties in estimating NEA balances, NGCP recommends that the current 1:5 ratio should be substantially reduced by way of amendment to section 9.3.1. The appropriate ratio may depend on the broader package of NEA related reforms adopted, for example whether the CAPEX forecasting methodology would also be reformed. NGCP should be invited to submit with its regulatory filing sufficient evidence to support any proposed change to leverage.
- NGCP recommends reform the OEA mechanism to address the clear failings of the present mechanism where OPEX variations between years can be volatile for a range of reasons, not envisaged at the time OPEX forecasts are determined. At minimum this entails deleting Section 9.2.3 (b) so that the formula in 9.2.3 (a) is the only OEA formula applied
- Change the NEA process so that the ERC and the Regulated Entity are able jointly to develop an agreed methodology for developing NEA balances for the third regulatory period prior to submission of the regulatory application, pursuant to Sections 9.2.4 and 9.2.5. The aim is to agree the methodology in sufficient time to enable it to be implemented by NGCP in time for it to submit NEA balances in its main proposal. This would also be beneficial over the course of the fourth regulatory period, as it would reduce uncertainty over the size of NEA balances, and thereby contribute to a more effective incentive.

4.3 Force Majeure and Tax Event Pass through

4.3.1 Context

At present, events that are deemed to be force majeure (FM) are excluded from the ex-ante rate setting process altogether. Loss or damage from FM events, such as extreme weather events (for example typhoons), cannot be efficiently insured. Instead, following a FM event, the regulated entity is required to submit an ad hoc request to increase the revenue cap sufficient to recover efficient costs associated with the event for a subsequent period.

4.3.2 Issue

This process creates an additional overhead cost and delay for both the regulated entity and the ERC. It also creates a high level of uncertainty for both customers and

the regulated entity as to the extent of additional FM related costs to transmission tariffs in any given year during an RP.

It is possible that a better solution could be worked out for FM events. This could include the creation of a suitably governed and managed self-insurance fund.

Under this fund, approved transmission rates over the entire regulatory period would include an additional component to contribute to the FM fund. NGCP would be responsible for depositing this component into the long term FM fund and ensuring the fund is governed prudently. It would also be responsible for reporting changes in flows and stocks over time.

The level of contributions to the FM fund from the outset would need to be determined following actuarial advice on the historical and forecast incidence of extreme weather or other FM related events. The initial setting would need to take into account the forecast increasing frequency and severity of extreme weather related events attributable to global warming. The initial setting would be reviewed and if necessary adjusted in subsequent pricing determinations.

Any withdrawals from the fund following an FM event would be subject to approval from the ERC to ensure that the quantity withdrawn matches the actual and efficient cost of recovery. Hence the ERC would still have a role in determining the efficient cost of recovery from a defined FM event. However, no change to tariff levels would be required, and the FM process could be shorter and simpler than the current FM process.

A possible advantage of the creation of an FM fund is that the cost of FM related events would be recovered at a lower average rate than otherwise because it would be spread across an entire RP. The peak level of recovery of FM related costs would be lower and volatility in FM related costs could be avoided or minimized.

4.3.3 *NGCP View*

NGCP proposes that the ERC consider the possible advantage of the creation of an FM fund/self-insurance but that Article X of the RTWR should not be removed.

4.4 **Reopening and Adjustment Events**

4.4.1 *Context*

Section 5.20,1 of the RTWR, Re-Opening Events, states that:

'As part of the Regulatory Reset Process for a Subsequent Regulatory Period under Article VII, the ERC must determine the circumstances (if any) in which the formula for the calculation of the revenue cap, price cap or hybrid cap (as applicable) may be altered, or the

value of a component of that formula may be changed, during that Subsequent Regulatory Period.'

Re-opening and adjustment events are addressed under Article XII of the RTWR. The existing thresholds are described under section 12.1. This provides that one or more of three conditions are required to trigger an application for reopening of the MAR:

- the change in the CPI between two consecutive quarters (as defined) is greater than 0.07;
- a change in the PhP/\$US exchange rate for a quarter in the second regulatory period is more than 120% of PhP/\$US exchange rate approved by the ERC for the purposes of the capital expenditure program that is approved by the ERC; and
- the absolute value of the change in the three month average of non-coincident peak demands between two consecutive regulatory years (within the then current regulatory period) is greater than 0.50.

The remainder of Article XII refers to the process and timing for a decision on an application for a MAR reopening.

4.4.2 *Issue*

NGCP submits there is a strong case for the ERC considering a revision of the existing thresholds for the reopening of the MAR. The thresholds need to be set so that there is an appropriate balance between ensuring the regulated entity:

- has sufficient incentives to manage risks, including via prudent procurement and exchange rate management practices; and
- is not bearing uncontrollable risks that exceed the substantially exceed the level of overall compensation provided for in the regulatory package.

NGCP considers that in combination the existing threshold for a reopening is set at a level that leaves NGCP bearing excessive uncontrollable risks. NGCP's financial position would be substantially damaged before any of one of the three thresholds would be triggered:

- Inflation would have to run at a rate equivalent to 28 percent per annum, far outstripping the likely allowance for inflation in building blocks;

- The PhP/\$US cross rate could fall substantially but this may take place over a period greater than within a single quarter, again far outstripping relevant allowances; and
- Three-month average non-coincident peak demands between two consecutive years would need to increase by 50 percent. It is unlikely the planned capacity of the transmission system could manage anywhere near such an increase in demand.

Well before any of the three thresholds above were triggered, regulated revenues would have fallen substantially below the levels necessary to recover efficient costs.

4.4.3 *NGCP View*

NGCP considers the reopening triggers should be set at significantly lower levels. In setting the triggers, consideration should be given to the allowance for non-controllable risk provided for in the overall regulatory package.

NGCP emphasizes that Article XII merely creates an opportunity for the regulated entity to submit an application for the reopening of a revenue determination. The decision whether to accede to an application for a reopening of the MAR and if so, the extent of any changes to the MAR, remains with the ERC. Under these circumstances, NGCP suggests any risks with reducing the existing thresholds are modest. Conversely, the potential risks with leaving the thresholds at inappropriate levels are material.

4.5 **Independent Experts**

4.5.1 *Context*

The RTWR requires the ERC (and the regulated entity) to be assisted by independent experts.

4.5.2 *Issue*

During the public consultation for the DU Issues Paper, comments have been expressed about the cost of engaging experts.

4.5.3 *NGCP View*

Employing (a mix of local and international) consultants for specific tasks for the regulatory reviews ensure that decisions benefit from expert input. It also provides a means of ensuring regulatory processes in the Philippines are informed by developments elsewhere, as regulators in other jurisdictions also use some of the

same experts. It is a comparatively low cost means of achieving substantial transfer of experience and understanding from other jurisdictions, which might otherwise have to be learnt through trial and error.

The experts engaged by the ERC, and the regulated entities, are engaged in a detailed level of scrutiny that provides consumers with the assurance that they are paying only for assets used in providing the services they demand. The amount of resources committed to this scrutiny and assurance, for the benefit of consumers, is very small relative to the total amounts paid by consumers for network services.

4.6 Land-Related Costs

4.6.1 *Context*

NGCP, during the 3rd Reset Process, has submitted its proposed capital expenditures (CAPEX) which include provision for land-related costs such as payment for the Right-of-Ways (ROW).

However, in the Draft Determination issued by the ERC on 15 July 2010, all expenditures on land-related costs were excluded from the allowed CAPEX for the 3rd RP. Instead, the ERC stated that the recovery of the actual land-related costs to be incurred in 2011-2015 could be recovered by NGCP in the 4th Regulatory Period (4th RP) upon execution of prudence review during the 4th RP Reset Process. This statement is of the viewpoint that land-related costs, particularly the settlement of ROW, are difficult to forecast accurately and therefore, should not be recovered through the Maximum Allowed Revenue (MAR).

There have been various documents/justifications/proposals submitted by NGCP to the ERC, e.g. development of a “contingency projects” framework for managing recovery of ROW expenditures on a contingent basis, provision of allowance for expected ROW subject to prudence review on Net Efficiency Adjustment (NEA), and modifying Article IX of the RTWR as part of a broader package to improve the effectiveness of the NEA mechanism.

The ERC, in its issuance of the Final Determination dated 22 November 2013, allowed a certain amount as provision for funding land-related CAPEX where the net difference between this allowed cost vs. the actual land-related expenditures shall be recovered by NGCP during the 4th RP in a manner that ensures that there is no windfall loss or gain to either the party, provided that the actual land-related CAPEX is found to be reasonable and efficient following an ex-post prudence review.

4.6.2 *Issue*

The RTWR do not provide the mechanisms on:

- How the prudency review be done; and
- How to recover reasonable and efficient land-related cost incurred by the Regulated Entity.

4.6.3 *NGCP View*

NGCP proposes that the ERC and the Regulated Entity jointly develop an agreed methodology for the ex post prudency review of land-related CAPEX. This should include consideration of the recovery of any prudent land related CAPEX incurred that exceeds the ERC's allowed level of land related CAPEX (or conversely the return to customers in the event the allowed level of land related CAPEX exceeded the prudent level of this CAPEX). NGCP proposes that this process be undertaken in parallel with the process for determining the opening regulatory asset base for the fourth regulatory period.

In addition, NGCP proposes for the ERC to allow the Regulated Entity with a sufficient amount of 2016-2020 land-related costs.