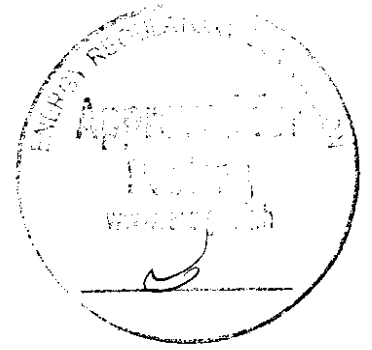


Republic of the Philippines  
**ENERGY REGULATORY COMMISSION**  
San Miguel Avenue, Pasig City



**RESOLUTION NO. 21, Series of 2009**

**A RESOLUTION ADOPTING THE AMENDMENTS TO THE  
TRANSMISSION WHEELING RATE GUIDELINES (TWRG)  
TO BE RENAMED AS THE RULES FOR SETTING  
TRANSMISSION WHEELING RATES (RTWR)**

**WHEREAS**, Section 43 (f) of Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA) empowers the Energy Regulatory Commission (Commission), in the public interest, to establish and enforce a methodology for setting transmission and distribution wheeling rates and retail rates for the captive market of a distribution utility;

**WHEREAS**, on May 23, 2003, the Commission adopted the Transmission Wheeling Rates Guidelines (TWRG) embodying the new alternative rate setting methodology for the National Transmission Corporation (TRANSCO), now the National Grid Corporation of the Philippines (NGCP);

**WHEREAS**, on June 13, 2006, the Commission issued its *Decision and Final Determination* on TRANSCO's Reset Application in *ERC Case No. 2005-041 RC* setting its price-control mechanism for the Second Regulatory Period from 2006 to 2010;

**WHEREAS**, during the public consultations and various fora conducted by the Commission, several issues and concerns were raised regarding the need to amend the TWRG to harmonize it with other existing laws and rules;

**WHEREAS**, on November 11, 2008, the Commission issued a *Notice* requesting all interested parties to submit their proposed amendments and comments on the TWRG, on or before December 15, 2008;

**WHEREAS**, four (4) parties of record submitted their proposals or comments, namely: 1) Manila Electric Company (MERALCO); 2) Visayan Electric Company (VECO); 3) Philippine Chamber of Commerce and Industry (PCCI); and 4) TRANSCO;

**WHEREAS**, on January 28, 2009, the proposed amendments to the TWRG were posted at the Commission's website and all interested parties were given until March 2, 2009 within which to submit their comments;

**WHEREAS**, on February 17 and 19, 2009, Expository Public Consultations on the proposed amendments to the TWRG were held in Manila and Cebu, respectively;

**WHEREAS**, on March 17, 2009, a public consultation was conducted on the submitted comments attended by the representatives from private distribution utilities, electric cooperatives and TRANSCO (NGCP);

**WHEREAS**, on July 23, 2009, the proposed amendments to the TWRG were posted anew at the Commission's website and all interested parties were given until August 7, 2009 to submit further comments, if any;


**WHEREAS**, the Commission considered all the comments submitted by the parties in the finalization of the amendments to the TWRG;

**NOW THEREFORE**, the Commission, after thorough and due deliberation, **RESOLVED**, as it hereby **RESOLVES** to **ADOPT** the "Amendments to the TWRG to be renamed as RTWR", hereto attached as **ANNEX "A"**.

This Resolution shall take effect fifteen (15) days following its publication in a newspaper of general circulation in the Philippines.

Let copies of this Resolution be furnished the University of the Philippines Law Center-Office of the National Administrative Register (UPLC-ONAR), NGCP, PCCI and all distribution utilities.

**Pasig City, September 22, 2009.**

  
**ZENAIDA G. CRUZ-DUCUT**  
Chairperson

  
**RAUF A. TAN**  
Commissioner

  
**ALEJANDRO Z. BARIN**  
Commissioner

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

  
**JOSE C. REYES**  
Commissioner

  
MVA/NJS



**RULES FOR SETTING  
TRANSMISSION WHEELING RATES  
for  
2003 to around 2027**

September 22, 2009

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**Republic of the Philippines**  
**Energy Regulatory Commission**  
Pacific Center, San Miguel Avenue, Pasig City

**RULES FOR SETTING**  
**TRANSMISSION WHEELING RATES**  
**for 2003 to around 2027**

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) hereby promulgates the following Rules for the Setting of Transmission Wheeling Rates.

This set of Rules is an amendment to the Guidelines on the Methodology for Setting Transmission Wheeling Rates for 2003 to around 2027, dated May 29, 2003, and sometimes referred to in shortened form as the Transmission Wheeling Rate Guidelines (TWRG).

**PHILIPPINE ELECTRICITY INDUSTRY  
 RULES FOR SETTING  
 TRANSMISSION WHEELING RATES  
 for 2003 to around 2027**

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**ARTICLE I  
GENERAL PROVISIONS**

**1.1 Purpose**

1.1.1 The purpose of these Rules is to set out the methodology to be used in setting the maximum transmission wheeling rates that may be charged for the provision of Regulated Transmission Services by the Regulated Entity.

**1.2 Content of the Rules**

1.2.1 These Rules set out:

- (a) the methodology to be used in setting the maximum transmission wheeling rates that may be charged for the provision of Regulated Transmission Services by the Regulated Entity during the First Regulatory Period and the Second Regulatory Period;
- (b) the pricing principles with which the ERC must comply for the purposes of regulating the maximum transmission wheeling rates that may be charged for the provision of Regulated Transmission Services by the Regulated Entity during a Subsequent Regulatory Period;
- (c) the annual rate verification and adjustment process which the ERC must undertake in relation to the maximum transmission wheeling rates that may be charged for the provision of Regulated Transmission Services by the Regulated Entity during a Regulatory Period;
- (d) the regulatory processes and timelines to which both the Regulated Entity and the ERC must adhere in order for the methodology established by these Rules to be administered and applied in a timely manner; and
- (e) the performance indicators, performance targets and reporting arrangements with which the Regulated Entity must comply during the Second Regulatory Period and each Subsequent Regulatory Period, and which the ERC must monitor, in order to ensure the effective and efficient delivery of Regulated Transmission Services to consumers.

**1.3 Definitions**

In these Rules, unless the contrary intention appears, the following words and phrases have the following meanings:

<b>Accredited Expert</b>	An expert who satisfies the requirements set out in Section 14.1.2 and who is included on a list established and maintained by the Regulated Entity pursuant to that Section.
<b>Ancillary Services</b>	Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining the reliable operation of the Grid in accordance

## **Rules for Setting Transmission Wheeling Rates**

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	with good utility practice and the Grid Code, as further defined in clause 3.3.1.1 of the WESM Rules (examples of Ancillary Services are given in clause 3.3.1.2 of the WESM Rules).
<b>Application Year</b>	The Regulatory Year that immediately follows a Calculation Year (see Section 6.2.1(a)(v)).
<b>Approved FM Pass Through Amount</b>	The lesser of an FM Pass Through Amount proposed by the Regulated Entity in relation to a Force Majeure Event and the Eligible FM Pass Through Amount in respect of that Force Majeure Event as referred to in Section 10.3.1(b).
<b>Approved Tax Pass Through Amount</b>	The lesser of a Positive Tax Pass Through Amount proposed by the Regulated Entity in relation to a Tax Change Event and the Eligible Tax Pass Through Amount in respect of that Tax Change Event as referred to in Section 11.2.2(b).
<b>Business Day</b>	A day other than a Saturday or a Sunday or an official Philippine national public holiday.
<b>Business Separation Guideline</b>	The Guideline promulgated by the ERC under Rule 10, Section 1 of the IRR.
<b>Calculation Year</b>	The Regulatory Year that immediately precedes an Application Year (see Section 6.2.1(a)).
<b>Connection Point</b>	The point of connection of a User System or Equipment to the Grid.
<b>CPI</b>	The All Items Consumer Price Index published by the National Statistics Office of the Philippines.
<b>Customer</b>	A person whose User System or Equipment is directly connected to the Grid and who purchases or receives, or who is seeking to purchase or receive, Regulated Transmission Services. For the avoidance of doubt, this may include a person who operates a Generation Facility, a Distribution Utility, a Retail Electricity Supplier, or an End-user. In addition, and notwithstanding the foregoing, a Customer includes an Embedded Generator (as that term is defined in the Grid Code) in so far as that Embedded Generator purchases or receives, or is seeking to purchase or receive, the Regulated Transmission Services referred to in paragraphs (e) or (g) of the definition of “Regulated Transmission Services”.

## Rules for Setting Transmission Wheeling Rates

<b>Customer Segment</b>	A category of Customers which have similar consumption characteristics for Regulated Transmission Services, based on their geographic location and consumption profile, as measured by the number of connections, the energy throughput (MWh), the non-coincident peak load (MW), the co-incident peak load (MW), the time-of-day or any other physical measure as approved from time to time by the ERC. A Customer Segment is likely to include all of the Customers who are charged the same tariff by the Regulated Entity for the provision of Regulated Transmission Services.
<b>Decision Period</b>	In respect of a Force Majeure Event Claim, the period within which the ERC must give a notice to the Regulated Entity under Section 10.3.1 to avoid a deemed notification of its decision under Section 10.3.2 (see Section 10.3.3).
<b>Effectivity Date</b>	The date on which these Rules take effect.
<b>Eligible FM Pass Through Amount</b>	<p>At any time in respect of a Force Majeure Event, the increase in costs that the Regulated Entity has actually incurred at that time (as calculated by the Regulated Entity under Section 10.1.1 or determined by the ERC under Section 10.3.1, as appropriate):</p> <ul style="list-style-type: none"><li>(a) in the transmission of electricity to Connection Points; and</li><li>(b) in complying with the provisions of any legislation, or of any rules, regulations or Rules made under the EPIRA, including the IRR and the Grid Code, which must be complied with in relation to the transmission of such electricity,</li></ul> <p>as a result of the occurrence of that Force Majeure Event.</p>
<b>Eligible Tax Pass Through Amount</b>	In respect of a Tax Change Event, the increase in costs in the transmission of electricity to Connection Points that the Regulated Entity has incurred and is likely to incur, until the end of the Regulatory Period in which the Tax Change Event occurs, as a result of that Tax Change Event (as calculated by the Regulated Entity under Section 11.2.1(c) or determined by the ERC under Section 11.2.2(a), as appropriate).
<b>EPIRA</b>	Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001.
<b>Equipment</b>	Equipment as defined in the Grid Code.
<b>ERC</b>	The Energy Regulatory Commission created by Section 38 of the EPIRA.
<b>Excluded</b>	A service that is provided in the ordinary course of an

## Rules for Setting Transmission Wheeling Rates

<b>Service</b>	electricity transmission business that is neither a Regulated Transmission Service nor a service that is contestable (for these purposes, whether or not a service is contestable is a matter that, if disputed, will be determined by the ERC).
<b>First Regulatory Period</b>	The period commencing on the Effectivity Date and ending on the First Regulatory Period End Date (both dates inclusive).
<b>First Regulatory Period End Date</b>	The date on which the First Regulatory Period ends in accordance with Sections 2.2 and 2.3.
<b>First Regulatory Year</b>	The period commencing on the Effectivity Date and ending on 31 December 2003 (both dates inclusive).
<b>FM Pass Through Amount</b>	An amount that is not greater than an Eligible FM Pass Through Amount as referred to in Section 10.1.1.
<b>FM Threshold Amount</b>	In respect of a Regulatory Year, the amount calculated in accordance with Section 10.2.5.
<b>Force Majeure Event</b>	<p>(a) A typhoon, storm, tropical depression, flood, drought, volcanic eruption, earthquake, tidal wave or landslide; or</p> <p>(b) an act of public enemy, war (declared or undeclared), sabotage, blockade, revolution, riot, insurrection, civil commotion or any violent or threatening actions,</p> <p>which results or is likely to result in an increase in the costs incurred by the Regulated Entity in the transmission of electricity to Connection Points, or in complying with the provisions of any legislation, or of any rules, regulations or Rules made under the EPIRA, including the IRR and the Grid Code, which must be complied with in relation to the transmission of such electricity.</p>
<b>Force Majeure Event Claim</b>	A written claim that satisfies the requirements set out in Section 10.2.3.
<b>Force Majeure Event Notice</b>	A written notice that satisfies the requirements set out in Section 10.2.2.
<b>Forecast Period</b>	A twelve month period ending on 30 September in an Application Year (see Section 6.3.3(c)).
<b>Grid</b>	The high voltage backbone system of interconnected transmission lines, substations and related facilities, located

	in each of the island groups of Luzon, Visayas and Mindanao, or as may otherwise be determined by the ERC in accordance with Section 45 of the EPIRA, together with such Subtransmission Systems as are connected to that system and as are operated by the Regulated Entity.
<b>Historical Period</b>	A twelve month period ending on 30 September in a Calculation Year (see Section 6.2.1(a)).
<b>Initial Re-valuation</b>	The asset re-valuation that is referred to in Section 4.6.1.
<b>Initial Re-valuation Report</b>	The report that is referred to as the Initial Re-valuation Report in Section 4.6.2(c) or (d) (as the case may be).
<b>IRR</b>	The Implementing Rules and Regulations issued pursuant to the EPIRA.
<b>Local Government</b>	Local Government as defined in Executive Order No. 292, otherwise known as the Administrative Code of 1987.
<b>National Government</b>	The National Government as defined in Executive Order No. 292, otherwise known as the Administrative Code of 1987.
<b>Negative Tax Change Event</b>	A Tax Change Event which results in the Regulated Entity incurring materially lower costs than it would have incurred but for that event in the transmission of electricity to Connection Points.
<b>Negative Tax Pass Through Amount</b>	An amount that is not greater than a Required Tax Pass Through Amount as referred to in Section 11.1.2.
<b>Network Service Provider</b>	Network Service Provider as defined in the WESM Rules.
<b>OATS Rules</b>	The Open Access Transmission Service Rules that have been filed by the Regulated Entity with the ERC and approved by the ERC.
<b>person</b>	Refers to a natural or juridical person, as the case may be.
<b>PhP</b>	Philippine Peso.
<b>Positive Tax Change Event</b>	A Tax Change Event which results in the Regulated Entity incurring materially higher costs than it would have incurred but for that event in the transmission of electricity to Connection Points.
<b>Positive Tax Pass Through</b>	An amount that is not greater than an Eligible Tax Pass

## Rules for Setting Transmission Wheeling Rates

<b>Amount</b>	Through Amount as referred to in Section 11.1.1.
<b>Quarter</b>	A period of three months from 1 January to 31 March (both dates inclusive), 1 April to 30 June (both dates inclusive), 1 July to 30 September (both dates inclusive) or 1 October to 31 December (both dates inclusive).
<b>Regulated Entity</b>	Collectively, any entity or entities who provide any Regulated Transmission Services. For the purposes of these Rules, this shall refer to TransCo and its Concessionaire/s, who is currently National Grid Corporation of the Philippines (NGCP).
<b>Regulated Transmission Services</b>	<p>The following services:</p> <ul style="list-style-type: none"><li>(a) the conveyance of electricity through the Grid and the control and monitoring of electricity as it is conveyed through the Grid (including any services that support such conveyance, control or monitoring or the safe operation of the Grid);</li><li>(b) the planning, maintenance, augmentation and operation of the Grid;</li><li>(c) the provision, installation, commissioning, testing, repair, maintenance and reading both of meters that are used to measure the delivery of electricity to Customers and of other meters that are used (for the purposes of the WESM) to measure the flow of electricity into or through the Grid;</li><li>(d) until the commencement of the Second Regulatory Period, Transmission Connection Services;</li><li>(e) the provision of Ancillary Services that are provided using assets which form part of the Grid<sup>1</sup> (excluding any such Ancillary Services to the extent they are provided to the System Operator under contract or through a spot market established under the WESM Rules);</li><li>(f) billing, collection and customer service for Customers purchasing (or seeking to purchase) any of the services referred to in paragraphs (a), (b), (c) and (e) and for persons purchasing (or seeking to purchase) any Transmission Connection Services; and</li><li>(g) those services provided by the System Operator under</li></ul>

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<sup>1</sup> An example of such Ancillary Services is services provided by a series reactor or a static VAR compensator.

## Rules for Setting Transmission Wheeling Rates

	the Grid Code, the Distribution Code or the WESM Rules in its capacity as such, but do not include such of these services as are determined by the ERC to be contestable.
<b>Regulatory Period</b>	The First Regulatory Period, the Second Regulatory Period or a Subsequent Regulatory Period (as the case may be).
<b>Regulatory Year</b>	The First Regulatory Year and any subsequent calendar year that occurs during a Regulatory Period.
<b>Relevant Tax</b>	Any Tax payable by the Regulated Entity other than: <ul style="list-style-type: none"><li>(a) corporate income tax or other income tax; or</li><li>(b) any tax on fringe benefits or capital gains; or</li><li>(c) real property tax or any other tax on the ownership or occupancy of premises; or</li><li>(d) customs and import duties; or</li><li>(e) rates, taxes, fees and charges imposed by any Local Government or other local authority having taxation powers; or</li><li>(f) withholding tax; or</li><li>(g) documentary stamp taxes or similar taxes and duties; or</li><li>(h) any donor's tax; or</li><li>(i) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax; or</li><li>(j) any Tax that replaces or is the equivalent of any of the Taxes referred to in paragraphs (a) to (h).</li></ul>
<b>Required Tax Pass Through Amount</b>	In respect of a Tax Change Event, the costs in the transmission of electricity to Connection Points that the Regulated Entity has saved and is likely to save, until the end of the Regulatory Period in which the Tax Change Event occurs, as a result of that Tax Change Event (as determined by the ERC under Section 11.1.2).
<b>Rolled-forward depreciated regulatory asset base</b>	The regulatory asset base as determined by the ERC under Section 4.6.12 or as calculated in accordance with Section 4.7.2 (see also Section 4.7.1) (as the case may be).
<b>Second Regulatory Period</b>	The period commencing on the day immediately following the First Regulatory Period End Date and ending on the fifth anniversary of the First Regulatory Period End Date (both

## **Rules for Setting Transmission Wheeling Rates**

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	dates inclusive).
<b>Significant Project</b>	<p>A capital expenditure project:</p> <ul style="list-style-type: none"><li>(a) which is contained in the capital expenditure program that is approved by the ERC under Section 4.10.5; and</li><li>(b) for which the capital expenditure forecast in any Regulatory Year for that project (as contained in that program) is greater than 10% of the total capital expenditure forecast for that Regulatory Year under that program.</li></ul>
<b>Subsequent Regulatory Period</b>	A Regulatory Period other than the First Regulatory Period or the Second Regulatory Period, the duration of which is determined in accordance with Section 2.5.
<b>System Operator</b>	System Operator as defined in the WESM Rules.
<b>Tax</b>	Any tax, levy, impost, deduction, charge, rate, duty or withholding which is levied or imposed by the National Government or a Local Government or any agency, department, instrumentality or other authority of the National Government or a Local Government.
<b>Tax Change Event</b>	<ul style="list-style-type: none"><li>(a) A change in (or a change in the application or official interpretation of) a Relevant Tax or the way in which a Relevant Tax is calculated; or</li><li>(b) the removal of a Relevant Tax; or</li><li>(c) the imposition of a Relevant Tax,</li></ul> <p>which results in the Regulated Entity incurring materially higher or lower costs than it would have incurred but for that event in the transmission of electricity to Connection Points. For these purposes:</p> <ul style="list-style-type: none"><li>(i) if the Tax Change Event occurs in the First Regulatory Period, the Regulated Entity will only be deemed to incur materially higher or lower costs where the change in costs that the Regulated Entity has incurred and is likely to incur until the end of the First Regulatory Period, as a result of that Tax Change Event, exceeds an average of PhP 16.7 million for each month in the period from the occurrence of that Tax Change Event to the end of the First Regulatory Period; and</li><li>(ii) if the Tax Change Event occurs in a Regulatory Period other than the First Regulatory Period,</li></ul>

the Regulated Entity will only be deemed to incur materially higher or lower costs where the change in costs that the Regulated Entity has incurred and is likely to incur until the end of that Regulatory Period, as a result of that Tax Change Event, exceeds 1% of such of the total forecast operating and maintenance expenditure in nominal terms (excluding forecast taxes, levies and duties) as is used for the purposes of the Regulatory Reset Process under Article VII for that Regulatory Period and as pertains to the period from the occurrence of that Tax Change Event to the end of that Regulatory Period.

<b>Third Regulatory Period</b>	The Regulatory Period which immediately follows the Second Regulatory Period.
<b>Transmission Connection Assets</b>	The components of the Grid used to provide Transmission Connection Services.
<b>Transmission Connection Services</b>	<p>The following services:</p> <ul style="list-style-type: none"> <li>(a) the provision of capability at a Connection Point to deliver electricity to or take electricity from the Connection Point;</li> <li>(b) the conveyance of electricity: <ul style="list-style-type: none"> <li>(i) from the User System or Equipment of a Customer to the Connection Point; or</li> <li>(ii) from the Connection Point to the User System or Equipment of a Customer;</li> </ul> </li> <li>(c) the planning, installation, maintenance, augmentation, testing and operation of Transmission Connection Assets; and</li> <li>(d) the provision of services that support any of the services referred to in paragraphs (a) to (c).</li> </ul>
<b>Trigger Condition</b>	A condition the occurrence of which entitles the Regulated Entity to apply to the ERC for a change in the method used to calculate the Maximum Annual Revenue cap as referred to in Section 12.1.1.
<b>User System</b>	User System as defined in the Grid Code.

In addition, words and phrases used in these Rules which are defined in the EPIRA or the IRR have the meaning given to them in the EPIRA or the IRR (as the case may be).

**1.4 Interpretation**

1.4.1 In these Rules, unless the contrary intention appears:

- (a) the singular includes the plural and conversely;
- (b) where a term is defined, its other grammatical forms have a corresponding meaning;
- (c) a reference to any law or the rules and regulations issued implementing such a law or to any particular provision of a law or of any rules or regulations issued implementing such a law is taken to include any modification, consolidation, amendment, re-enactment, replacement or codification of the law, rules and regulations, or provision; and
- (d) mentioning anything after include, includes or including does not limit what else might be included.

1.4.2 All calculations made under or for the purposes of these Rules must be rounded to four significant digits, except that any amount which is calculated solely in PhP (as opposed to, for example, PhP/kWh) must be rounded to the nearest peso. For these purposes, significant digits are all the non-zero digits of a number and the zeros that are included between them or that are final zeros and signify accuracy (eg. the significant digits of 0.01230 are 1, 2, 3 and the final 0, which signifies accuracy to five places).<sup>2</sup>

1.4.3 When a calculation is required under these Rules:

- (a) Regulatory Year “t” or calendar year “t” is the Regulatory Year or calendar year (as the case may be) in respect of which the calculation is being made;
- (b) Regulatory Year “t-1” or calendar year “t-1” is the Regulatory Year or calendar year (as the case may be) immediately preceding Regulatory Year “t” or calendar year “t”;
- (c) Regulatory Year “t-2” or calendar year “t-2” is the Regulatory Year or calendar year (as the case may be) immediately preceding Regulatory Year “t-1” or calendar year “t-1”; and
- (d) Regulatory Year “t-3” or calendar year “t-3” is the Regulatory Year or calendar year (as the case may be) immediately preceding Regulatory Year “t-2” or calendar year “t-2”.

**1.5 Rights and Obligations of Regulated Entity**

1.5.1 Where more than one entity provides any Regulated Transmission Services, with the result that the Regulated Entity comprises more than one entity, the rights of the Regulated Entity under these Rules may be exercised by any of those entities and such exercise of those rights by such an entity will be deemed, for the

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<sup>2</sup> Webster's College Dictionary, Random House, New York, 1991.

purposes of these Rules, to irrevocably and unconditionally bind each of those entities.

- 1.5.2 Where more than one entity provides any Regulated Transmission Services, with the result that the Regulated Entity comprises more than one entity, each of those entities will be jointly and severally liable for the performance of the obligations of the Regulated Entity under these Rules and the performance of such obligations by any of those entities will be deemed, for the purposes of these Rules, to be the performance of those obligations by each of those entities.
- 1.5.3 Where more than one entity provides any Regulated Transmission Services, with the result that the Regulated Entity comprises more than one entity, the performance by the ERC of its obligations under these Rules in respect of any one of those entities will be deemed, for the purposes of these Rules, to be the performance of those obligations in respect of all of those entities.
- 1.5.4 Where more than one entity provides any Regulated Transmission Services, with the result that the Regulated Entity comprises more than one entity, these Rules must be construed and applied in such a manner that, as far as is reasonably practicable, results in all of those entities being treated (in the aggregate) in the same manner as a single entity would have been treated in those circumstances if that single entity alone had comprised the Regulated Entity.
- 1.5.5 It is acknowledged that a range of ownership, operating, corporate and other structures may be implemented in relation to the provision of Regulated Transmission Services (including structures which are put in place in connection with the award of a Concession Contract to a Concessionaire and subcontracting arrangements). Accordingly, these Rules must be construed and applied by the ERC in such a manner that accommodates such structures but that does not permit the use of such structures to avoid the tenor of the obligations imposed by these Rules (even if this means a departure from a literal interpretation of these Rules).

### **1.6 Services other than Regulated Transmission Services**

- 1.6.1 Except as otherwise provided in the OATS Rules, a person may only be charged a fair and reasonable charge for an Excluded Service.
- 1.6.2 In the event of a dispute in respect of the amount of a charge for an Excluded Service, what is a fair and reasonable charge will be determined by the ERC.
- 1.6.3 For the purposes of determining what is a fair and reasonable charge for an Excluded Service, both where a charge for an Excluded Service is being negotiated and where a dispute in respect of such a charge is being determined by the ERC, the following matters must be taken into account (without limitation to any other matters that may be taken into account for those purposes):
  - (a) the reasonable costs incurred in efficiently providing the Excluded Service, including:
    - (i) an allowance for appropriately attributable operating and maintenance and overhead costs;

- (ii) an allowance for the depreciation of the assets used to provide the Excluded Service over the economic life of those assets;
  - (iii) a reasonable return on the depreciated value of the assets used to provide the Excluded Service (such reasonable return might, for example, be the then-applicable weighted average cost of capital as calculated pursuant to Section 4.9 or Section 5.9); and
  - (iv) an allowance for taxes paid in connection with the provision of the Excluded Service or the income derived from the provision of the Excluded Service;
- (b) the charge that would have been likely to be negotiated for the provision of the Excluded Service in an arm's length commercial negotiation between a willing seller and a willing buyer if the market for the Excluded Service were competitive;
  - (c) whether any assets used to provide the Excluded Service to the person purchasing (or seeking to purchase) the Excluded Service will be or have been specifically constructed for that purpose;
  - (d) any special value of the Excluded Service to the person purchasing (or seeking to purchase) the Excluded Service (for example, as a result of any assets used to provide the Excluded Service being dedicated to the provision of that Excluded Service to that person); and
  - (e) whether any costs incurred in providing the Excluded Service (including any return on assets used to provide the Excluded Service) have been or are likely to be recovered from other persons (for example, as a result of any assets used to provide the Excluded Service subsequently being used to provide that Excluded Service to such other persons).
- 1.6.4 Without in any way limiting the services that may constitute an Excluded Service, Transmission Connection Services will, with effect from the commencement of the Second Regulatory Period, be treated as Excluded Services (except to the extent they are determined by the ERC to be contestable). For the purposes of determining what is a fair and reasonable charge for such Transmission Connection Services, both where a charge for such Transmission Connection Services is being negotiated and where a dispute in respect of such a charge is being determined by the ERC (and without limiting any other matters that may be taken into account for those purposes):
- (a) the matters referred to in Section 1.6.3 must be taken into account; and
  - (b) to the extent any assets used to provide such Transmission Connection Services as at the commencement of the Second Regulatory Period were, immediately prior to the commencement of the Second Regulatory Period, included in the regulatory asset base (see Section 4.6.8), those assets will be valued at the value that was then attributed to them as part of the regulatory asset base (to the extent such assets are used to provide Transmission Connection Services following the expiry of the First

Regulatory Period, those assets will cease to form part of the regulatory asset base: see Section 4.6.8(a).

**1.7 Subtransmission Assets**

- 1.7.1 The Regulated Entity must maintain an asset register which clearly identifies each asset owned by it that is a Subtransmission Asset.

**1.8 Provision of Information**

- 1.8.1 The Regulated Entity must, on the written request of the ERC, provide the ERC with such information, calculations, forecasts and other data as the ERC requires from time to time for the purposes of these Rules and for the purposes of assisting the ERC to perform its functions under these Rules.

**1.9 Amendment**

- 1.9.1 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.

**1.10 Separability**

- 1.10.1 If, for any reason, any provision or part of a provision of these Rules is declared unconstitutional or invalid, those provisions which are not thereby affected will continue to be in full force and effect.

**1.11 Effectivity**

- 1.11.1 Subject to the provisions of any other applicable law, these Rules take effect 15 days after notice of their making has been given in two newspapers of general circulation.

**ARTICLE II**

**TIMING FOR REGULATORY PERIODS**

**2.1 Steps to Incentive Based Rate Regulation**

- 2.1.1 Subject to Articles X, XI and XII, the Maximum Annual Revenue cap ( $MAR_t$ ) as calculated in accordance with the formula set out in Section 3.2.1 will apply for the First Regulatory Period (excluding the First Regulatory Year).
- 2.1.2 Subject to Section 4.3.4 and Articles VIII, X, XI and XII, the Maximum Annual Revenue cap ( $MAR_t$ ) as calculated in accordance with the formula set out in Section 4.2.1 will apply for the Second Regulatory Period.
- 2.1.3 Subject to Articles V, X and XI, the revenue cap, price cap or hybrid cap that is calculated in a manner determined by the ERC in accordance with the provisions of Article V will apply for the relevant Subsequent Regulatory Period.
- 2.1.4 Once the Effectivity Date has occurred, the provisions of these Rules will apply, irrespective of whether or not a Concessionaire has been awarded a Concession Contract.

**2.2 Conclusion of First Regulatory Period**

- 2.2.1 The First Regulatory Period will end on 31 December 2005 unless:
  - (a) the Regulated Entity provides a written request to the ERC to terminate the First Regulatory Period in accordance with Section 2.2.2 – in which case the First Regulatory Period will end on 31 December 2004; or
  - (b) the ERC extends the First Regulatory Period End Date to 31 December 2006 in accordance with Section 2.3.1 – in which case the First Regulatory Period will end on 31 December 2006.
- 2.2.2 The Regulated Entity may only request the ERC to terminate the First Regulatory Period under Section 2.2.1(a) if:
  - (a) that request is provided to the ERC by 30 June 2003;
  - (b) the Regulated Entity's financial and operational information systems are up to date, are in a condition which will allow an audit to be undertaken (if required by the ERC), and can provide the information required for the ERC to undertake the Regulatory Reset Process for the Second Regulatory Period under Article VII;
  - (c) the Regulated Entity is able to provide to the ERC such information as is required under the Business Separation Guideline;
  - (d) the Regulated Entity has up to date and reliable records of the assets which it uses in the provision of Regulated Transmission Services and such records include all of the information required to enable those assets to be re-valued in accordance with Section 4.6; and

- (e) the Regulated Entity has sufficient information and data which is documented to enable it to prepare the forecasts contemplated by Sections 4.10 and 4.11 and to enable those forecasts to be properly reviewed by an independent expert in accordance with Sections 4.10 and 4.11.

### **2.3 Extension of First Regulatory Period**

2.3.1 The ERC may extend the First Regulatory Period End Date to 31 December 2006 if:

- (a) in the ERC's opinion, the requirements referred to in Section 2.2.2(b) to (e) will not be satisfied by 30 July 2004; or
- (b) the Regulated Entity applies in writing to the ERC, before 30 July 2004, for an extension of the First Regulatory Period End Date on the grounds that the requirements referred to in Section 2.2.2(b) to (e) are unlikely to be satisfied by 30 July 2004.

2.3.2 If the ERC extends the First Regulatory Period End Date pursuant to this Section 2.3, the value of X for the purposes of calculating  $MAR_{2006}$  in accordance with the formula contained in Section 3.2.1 will be 0.03 plus the value of X (if any) determined by the ERC under Section 12.8.2.

### **2.4 Second Regulatory Period**

2.4.1 The Second Regulatory Period will end on the fifth anniversary of the First Regulatory Period End Date.

### **2.5 Subsequent Regulatory Periods**

2.5.1 Subject to Section 2.5.2, each Subsequent Regulatory Period must be five calendar years in duration.

2.5.2 The ERC may, during the Regulatory Reset Process for a Subsequent Regulatory Period under Article VII, determine that the duration of that Subsequent Regulatory Period is greater than five calendar years provided that:

- (a) the relevant Subsequent Regulatory Period is not the Third Regulatory Period;
- (b) the duration of that Subsequent Regulatory Period as determined by the ERC is such duration (if any) as is requested by the Regulated Entity, being a duration which:
  - (i) is a whole number of calendar years;
  - (ii) is not less than five calendar years and is not more than ten calendar years; and
  - (iii) is such that the Subsequent Regulatory Year commences on 1 January and ends on 31 December;
- (c) the Regulated Entity has provided to the ERC such forecasts of capital expenditure and operating and maintenance expenditure, for each

Regulatory Year occurring during that Subsequent Regulatory Period, as the ERC requires for the purposes of the Regulatory Reset Process; and

- (d) the ERC has available to it forecasts of inflation for each Regulatory Year occurring during that Subsequent Regulatory Period, being forecasts that are made by a reputable and appropriately qualified entity such as the National Economic Development Authority of the Philippines.

2.5.3 The last Subsequent Regulatory Period will be the Regulatory Period in which 31 December 2027 occurs.

ARTICLE III  
FIRST REGULATORY PERIOD

**3.1 General Price Control Principles**

3.1.1 Subject to Section 6.2.1(f) and (g), the maximum transmission wheeling rates that the Regulated Entity may charge for the provision by it of Regulated Transmission Services during the First Regulatory Year are the rates set out in or calculated in accordance with:

- (a) the ERC Order on the Matter of the Application for the Approval for the Revised Unbundled Power Rates (ERC Case No. 2001-901) by National Power Corporation dated 20 September 2002 and 27 September 2002; or
- (b) any superseding decision should there be a reconsideration of that order.

3.1.2 The Regulated Entity must ensure that the total revenue that is derived from the provision by it of Regulated Transmission Services during a Regulatory Year t (other than the First Regulatory Year) that occurs in the First Regulatory Period does not exceed the Maximum Annual Revenue cap for that Regulatory Year t as calculated in accordance with Section 3.2.1. Notwithstanding the foregoing, a failure to comply with this obligation will not be a violation of these Rules (any revenue that exceeds the Maximum Annual Revenue cap will effectively be applied as a reduction in the Maximum Annual Revenue cap for the following Regulatory Year t+1).

**3.2 Price Control Formula**

3.2.1 Subject to Articles X, XI and XII, the maximum allowed revenue (expressed in PhP) for a Regulatory Year t (other than the First Regulatory Year) that occurs during the First Regulatory Period (the Maximum Annual Revenue cap for that Regulatory Year t or  $MAR_t$ ) is calculated in accordance with the following formula<sup>3</sup>:

$$MAR_t = [MAR_{t-1} \times \{1 + CWI_t - X\}] - K_t - RBR_t$$

Where:

$MAR_{t-1}$  = Maximum allowed revenue (expressed in PhP) for Regulatory Year t-1 as calculated in accordance with this Section 3.2.1. Subject to Section 6.6, where Regulatory Year t commences on 1 January 2004,  $MAR_{t-1}$  equals PhP 24,591 million;

<sup>3</sup> Within the formulas provided in these Rules, “x” means multiply, “/” means divide, “+” means add, “-” means subtract, and “^” means “raised to the power of”. Normal mathematical concepts apply.

- $CWI_t$  = Change in Weighted Index for Regulatory Year t as calculated in accordance with Section 3.3;
- $X$  = A productivity or efficiency factor for Regulatory Year t. Subject to Sections 2.3.2 and 12.8.2, X equals 0 (zero) for each Regulatory Year occurring during the First Regulatory Period;
- $K_t$  = Correction Factor to adjust for over or under recovery of revenue in Regulatory Year t-1. Where Regulatory Year t commences on 1 January 2004,  $K_t$  equals 0 (zero) and for subsequent Regulatory Years is calculated in accordance with Section 3.4; and
- $RBR_t$  = A portion (expressed in PhP) of the net income derived, during the 12 month period ending on 30 September in Regulatory Year t-1, from each related business engaged in by the Regulated Entity or (if the Regulated Entity does not include TRANSCO) by TRANSCO, which business utilizes assets that form part of the regulatory asset base (see Section 4.6.8), being a portion that is determined by the ERC pursuant to Section 20 of the EPIRA and that may vary as between such businesses but which, for each such business, does not exceed 50% of the net income that is so derived from that business.

### **3.3 Change in Weighted Index**

- 3.3.1 The change in Weighted Index for Regulatory Year t ( $CWI_t$ ) is calculated as follows:

$$CWI_t = \{ (W1 \times \Delta CPI_t) + (W2 \times \Delta USER_t) \}$$

Where:

Subject to Section 4.18:

- (a) if Section 12.9.1 applies in respect of Regulatory Year t,  $W1 = 0.455$ ; or
- (b) if Section 12.9.1 does not apply in respect of Regulatory Year t,  $W1 = 1$ ;

Subject to Section 4.18:

- (a) if Section 12.9.1 applies in respect of Regulatory Year t,  $W2 = 0.545$ ; or
- (b) if Section 12.9.1 does not apply in respect of Regulatory Year t,  $W2 = 0$ ;

$\Delta CPI_t$  is the change in CPI for Regulatory Year t and is calculated in accordance with Section 3.3.2; and

$\Delta USER_t$  is the change in the PhP/\$US exchange rate for Regulatory Year t and is calculated in accordance with Section 3.3.3.

3.3.2 The change in CPI for Regulatory Year t (DeltaCPI<sub>t</sub>) is calculated as follows (assuming all index data is derived from, or adjusted to, the same base year<sup>4</sup>):

$$\text{DeltaCPI}_t = (\text{CPI}_{t-1} / \text{CPI}_{t-2}) - 1$$

Where:

$$\text{CPI}_{t-1} = \{\text{CPI}_{(Q4, t-2)} + \text{CPI}_{(Q1, t-1)} + \text{CPI}_{(Q2, t-1)} + \text{CPI}_{(Q3, t-1)}\}; \text{ and}$$

$$\text{CPI}_{t-2} = \{\text{CPI}_{(Q4, t-3)} + \text{CPI}_{(Q1, t-2)} + \text{CPI}_{(Q2, t-2)} + \text{CPI}_{(Q3, t-2)}\}$$

where:

CPI<sub>(Q4, t-2)</sub> is the CPI for the Quarter ending on 31 December in calendar year t-2;

CPI<sub>(Q1, t-1)</sub> is the CPI for the Quarter ending on 31 March in calendar year t-1;

CPI<sub>(Q2, t-1)</sub> is the CPI for the Quarter ending on 30 June in calendar year t-1;

CPI<sub>(Q3, t-1)</sub> is the CPI for the Quarter ending on 30 September in calendar year t-1;

CPI<sub>(Q4, t-3)</sub> is the CPI for the Quarter ending on 31 December in calendar year t-3;

CPI<sub>(Q1, t-2)</sub> is the CPI for the Quarter ending on 31 March in calendar year t-2;

CPI<sub>(Q2, t-2)</sub> is the CPI for the Quarter ending on 30 June in calendar year t-2; and

CPI<sub>(Q3, t-2)</sub> is the CPI for the Quarter ending on 30 September in calendar year t-2.

As an example, using National Statistics Office data dated 2 December 2002, where 1994 was the base year with index of 100:

CPI<sub>(Q4, 2000)</sub> = 157.8, CPI<sub>(Q1, 2001)</sub> = 159.4, CPI<sub>(Q2, 2001)</sub> = 161.5, CPI<sub>(Q3, 2001)</sub> = 163.2, CPI<sub>(Q4, 2001)</sub> = 164.3, CPI<sub>(Q1, 2002)</sub> = 165.2, CPI<sub>(Q2, 2002)</sub> = 166.3 and CPI<sub>(Q3, 2002)</sub> = 167.9.

Consequently:

DeltaCPI<sub>2003</sub> = 0.0340 (Note this escalation is not required under Section 3.2 or 3.3, but is provided only as an example of the calculation of DeltaCPI<sub>t</sub>).

3.3.3 The change in the PhP/\$US exchange rate for Regulatory Year t (DeltaUSER<sub>t</sub>) is calculated as follows (assuming all US consumer price index data is derived from, or adjusted to, the same base year<sup>5</sup>):

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<sup>4</sup> CPI information from the National Statistics Office of the Philippines (NSO) currently uses an index base of "1994 = 100". In the future, should the NSO change the base year for its reported CPI, the CPI values used in Section 3.3.2 must all be adjusted to use the same base year (see Section 3.3.4).

## Rules for Setting Transmission Wheeling Rates

$$\text{DeltaUSER}_t = \{ (\text{USER}_{t-1} / \text{USER}_{t-2}) \times (\text{USCPI}_{t-1} / \text{USCPI}_{t-2}) \} - 1$$

Where:

$$\text{USER}_{t-1} = \{ \text{USER}_{(Q4, t-2)} + \text{USER}_{(Q1, t-1)} + \text{USER}_{(Q2, t-1)} + \text{USER}_{(Q3, t-1)} \}; \text{ and}$$

$$\text{USER}_{t-2} = \{ \text{USER}_{(Q4, t-3)} + \text{USER}_{(Q1, t-2)} + \text{USER}_{(Q2, t-2)} + \text{USER}_{(Q3, t-2)} \}$$

where:

USER for a Quarter (Q) is the average of the Philippine Peso/United States Dollar inter-bank mid-rates prevailing on each of the last 5 Business Days of that Quarter, each such rate being as published by the Bangko Sentral ng Pilipines, expressed as PhP/US\$1 (for example, if PhP50 can purchase US\$1, then USER is 50);

USER<sub>(Q4, t-2)</sub> is the USER for the Quarter ending on 31 December in calendar year t-2;

USER<sub>(Q1, t-1)</sub> is the USER for the Quarter ending on 31 March in calendar year t-1;

USER<sub>(Q2, t-1)</sub> is the USER for the Quarter ending on 30 June in calendar year t-1;

USER<sub>(Q3, t-1)</sub> is the USER for the Quarter ending on 30 September in calendar year t-1;

USER<sub>(Q4, t-3)</sub> is the USER for the Quarter ending on 31 December in calendar year t-3;

USER<sub>(Q1, t-2)</sub> is the USER for the Quarter ending on 31 March in calendar year t-2;

USER<sub>(Q2, t-2)</sub> is the USER for the Quarter ending on 30 June in calendar year t-2; and

USER<sub>(Q3, t-2)</sub> is the USER for the Quarter ending on 30 September in calendar year t-2; and

$$\text{USCPI}_{t-1} = \{ \text{USCPI}_{(Q4, t-2)} + \text{USCPI}_{(Q1, t-1)} + \text{USCPI}_{(Q2, t-1)} + \text{USCPI}_{(Q3, t-1)} \}; \text{ and}$$

$$\text{USCPI}_{t-2} = \{ \text{USCPI}_{(Q4, t-3)} + \text{USCPI}_{(Q1, t-2)} + \text{USCPI}_{(Q2, t-2)} + \text{USCPI}_{(Q3, t-2)} \}$$

where:

USCPI for a Quarter (Q) is the Consumer Price Index for all urban customers, US city average published by the US Bureau of Labour Statistics for the last month of that Quarter in series CUUR 0000SAO;

USCPI<sub>(Q4, t-2)</sub> is the USCPI for the Quarter ending on 31 December in calendar year t-2;

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<sup>5</sup> If the base year for any such US consumer price index data should change, the values used in Section 3.3.3 must all be adjusted to use the same base year (see Section 3.3.4).

USCPI<sub>(Q1, t-1)</sub> is the USCPI for the Quarter ending on 31 March in calendar year t-1;

USCPI<sub>(Q2, t-1)</sub> is the USCPI for the Quarter ending on 30 June in calendar year t-1;

USCPI<sub>(Q3, t-1)</sub> is the USCPI for the Quarter ending on 30 September in calendar year t-1;

USCPI<sub>(Q4, t-3)</sub> is the USCPI for the Quarter ending on 31 December in calendar year t-3;

USCPI<sub>(Q1, t-2)</sub> is the USCPI for the Quarter ending on 31 March in calendar year t-2;

USCPI<sub>(Q2, t-2)</sub> is the USCPI for the Quarter ending on 30 June in calendar year t-2; and

USCPI<sub>(Q3, t-2)</sub> is the USCPI for the Quarter ending on 30 September in calendar year t-2.

- 3.3.4 If a source of data described in this Section 3.3 is no longer published, or if any other change occurs in relation to such data which would cause the continued use of the source to result in inaccurate comparisons between data calculated using the source prior to the change and data calculated using the source after the change, then such alternative source as the ERC reasonably determines, after consultation with the Regulated Entity, will be substituted.

### **3.4 Over / Under Recovery Formula**

- 3.4.1 The Correction Factor for Regulatory Year t ( $K_t$ ) is calculated in accordance with Section 3.4.2. For the purposes of Section 3.4.2, the Differential Amount for Regulatory Year t ( $DA_t$ ) is calculated as follows:

$$DA_t = (TR_{t-1} - MAR_{t-1})$$

Where:

$TR_{t-1}$  = The total qualifying revenue (expressed in PhP) of the Regulated Entity for the 12 month period ending on 30 September in Regulatory Year t-1 and is calculated as:

$$TR_{t-1} = CR_{t-1} + MR_{t-1}$$

Where:

$CR_{t-1}$  is the amount (expressed in PhP) billed to Customers for the provision by the Regulated Entity of Regulated Transmission Services during that period (adjusted to exclude any amounts by which the Regulated Entity's revenue is increased due to the application of Articles X or XI and to include any amounts by which that revenue is decreased due to the application of Article XI); and

$MR_{t-1}$  is the net payments (expressed in PhP) payable to or by the Regulated Entity during that period pursuant to the WESM Rules in

its capacity as either a Network Service Provider or the System Operator and which are referable to that period (including such amounts, if any, as are payable to the Regulated Entity as a result of the operation of clauses 3.13.15 or 3.13.16 of the WESM Rules). If such amounts as are payable to the Regulated Entity exceed such amounts as are payable by the Regulated Entity, then  $MR_{t-1}$  will be a positive amount that is equal to that difference. If such amounts as are payable by the Regulated Entity exceed such amounts as are payable to the Regulated Entity, then  $MR_{t-1}$  will be a negative amount that is equal to that difference. The value of  $MR_{t-1}$  will be zero (0) until such time as the WESM commences to operate; and

$MAR_{t-1}$  = Maximum allowed revenue (expressed in PhP) for Regulatory Year t-1 as calculated in accordance with Section 3.2.1.

3.4.2 The Correction Factor for Regulatory Year t ( $K_t$ ) is calculated as follows:

(a) if  $DA_t > 0$  and  $DA_t < (0.05 \times MAR_{t-1})$ ,

then

$$K_t = DA_t \times (1 + i_t / 100);$$

(b) if  $DA_t > 0$  and  $DA_t \geq (0.05 \times MAR_{t-1})$  (where  $\geq$  means greater than or equal to),

then

$$K_t = \{ [DA_t - (0.05 \times MAR_{t-1})] \times [1 + (i_t + 4\%) / 100] \} + [(0.05 \times MAR_{t-1}) \times (1 + i_t / 100)];$$

(c) if  $DA_t = 0$ ,

then

$$K_t = 0; \text{ and}$$

(d) if  $DA_t < 0$ ,

then

$$K_t = DA_t \times (1 + i_t / 100) \text{ (in such a case } K_t \text{ will be a negative amount because } DA_t \text{ is a negative amount),}$$

Where:

$i_t$  = the simple average of the monthly 180 day weighted-average Manila Reference Rate in nominal percent per annum terms published by the Bangko Sentral ng Pilipinas for the period from 1 October of calendar year t-2 to 30 September of calendar year t-1; and

$MAR_{t-1}$  has the same meaning as in Section 3.4.1.



**ARTICLE IV**

**SECOND REGULATORY PERIOD**

**4.1 General Price Control Principles**

- 4.1.1 Subject to Section 6.2.1(f) and (g), the maximum transmission wheeling rates that the Regulated Entity may charge for the provision by it of Regulated Transmission Services during the first Regulatory Year of the Second Regulatory Period will be set under a Maximum Annual Revenue cap determined by the ERC during the last Regulatory Year of the First Regulatory Period in accordance with the Regulatory Reset Process for the Second Regulatory Period under Article VII.
- 4.1.2 The Regulated Entity must ensure that the total revenue that is derived from the provision by it of Regulated Transmission Services during a Regulatory Year  $t$  that occurs in the Second Regulatory Period does not exceed the Maximum Annual Revenue cap for that Regulatory Year  $t$  as calculated in accordance with Section 4.2.1. Notwithstanding the foregoing, a failure to comply with this obligation will not be a violation of these Rules (any revenue that exceeds the Maximum Annual Revenue cap will effectively be applied as a reduction in the Maximum Annual Revenue cap for the following Regulatory Year  $t+1$ ).

**4.2 Price Control Formula**

- 4.2.1 Subject to Section 4.3.4 and Articles VIII, X, XI and XII, the maximum allowed revenue (expressed in PhP) for a Regulatory Year  $t$  that occurs during the Second Regulatory Period (the Maximum Annual Revenue cap for that Regulatory Year  $t$  or  $MAR_t$ ) is calculated in accordance with the following formula:

$$MAR_t = [MAR_{t-1} \times \{1 + CWI_t - X\}] - K_t - RBR_t$$

Where:

- $MAR_{t-1}$  = Maximum allowed revenue (expressed in PhP) for Regulatory Year  $t-1$  as calculated in accordance with this Section 4.2.1. ;
- $CWI_t$  = Change in Weighted Index for Regulatory Year  $t$  as calculated in accordance with Section 3.3;
- $X$  = An Efficiency Factor for Regulatory Year  $t$ .  $X$  equals the value calculated by the ERC for the Second Regulatory Period under Section 4.13.3 or recalculated under Sections 12.7.2 or 12.8.4 (as the case may be) (subject to any recalculation under Sections 12.7.2 or 12.8.4, it is constant for the whole of the Second Regulatory Period). For the avoidance of doubt, as a result of such calculation or recalculation  $X$  may be a positive or negative value or may be zero;
- $K_t$  = Correction Factor to adjust for over or under recovery of revenue in Regulatory Year  $t-1$ ; and

$RBR_t$  = A portion (expressed in PhP) of the net income derived, during the 12 month period ending on 30 September in Regulatory Year t-1, from each related business engaged in by the Regulated Entity or (if the Regulated Entity does not include TRANSCO) by TRANSCO, which business utilizes assets that form part of the regulatory asset base (see Section 4.6.8), being a portion that is determined by the ERC pursuant to Section 20 of the EPIRA and that may vary as between such businesses but which, for each such business, does not exceed 50% of the net income that is so derived from that business.

4.2.2 All the provisions in this Article IV apply for the Second Regulatory Period only, except to the extent Article V specifically carries forward all or a part of those provisions for the purposes of their application in a Subsequent Regulatory Period.

### **4.3 Over / Under Recovery Formula**

4.3.1 The Correction Factor for Regulatory Year t ( $K_t$ ) is calculated in accordance with Section 4.3.2. For the purposes of Section 4.3.2, the Differential Amount for Regulatory Year t ( $DA_t$ ) is calculated as follows:

$$DA_t = (TR_{t-1} - MAR_{t-1})$$

Where:

$TR_{t-1}$  = The total qualifying revenue (expressed in PhP) of the Regulated Entity for the 12 month period ending on 30 September in Regulatory Year t-1 and is calculated as:

$$TR_{t-1} = CR_{t-1} + MR_{t-1}$$

Where:

$CR_{t-1}$  is the amount (expressed in PhP) billed to Customers for the provision by the Regulated Entity of Regulated Transmission Services during that period (adjusted to exclude any amounts by which the Regulated Entity's revenue is increased due to the application of Articles X or XI and any surcharges of the kind referred to in Section 8.2.2(b), and to include any amounts by which that revenue is decreased due to the application of Article XI or the payment of any rebates of the kind referred to in Section 8.2.2(b)); and

$MR_{t-1}$  is the net payments (expressed in PhP) payable to or by the Regulated Entity during that period pursuant to the WESM Rules in its capacity as either a Network Service Provider or the System Operator and which are referable to that period (including such amounts, if any, as are payable to the Regulated Entity as a result of the operation of clauses 3.13.15 or 3.13.16 of the WESM Rules). If such amounts as are payable to the Regulated Entity exceed such amounts as are payable by the Regulated Entity, then  $MR_{t-1}$  will be a positive amount that is equal

to that difference. If such amounts as are payable by the Regulated Entity exceed such amounts as are payable to the Regulated Entity, then  $MR_{t-1}$  will be a negative amount that is equal to that difference. The value of  $MR_{t-1}$  will be zero (0) until such time as the Financial Transmission Rights as defined in the WESM are defined in relevant Rules and commence to operate; and

$MAR_{t-1}$  = Maximum allowed revenue (expressed in PhP) for Regulatory Year t-1, as calculated in accordance with Section 4.2.1. Where Regulatory Year t is the first Regulatory Year of the Second Regulatory Period,  $MAR_{t-1}$  is the  $MAR_t$  for the last Regulatory Year of the First Regulatory Period as calculated under Section 3.2.1.

4.3.2 The Correction Factor for Regulatory Year t ( $K_t$ ) is calculated as follows:

(a) if  $DA_t > 0$  and  $DA_t < (0.05 \times MAR_{t-1})$ ,

then

$$K_t = DA_t \times (1 + i_t / 100);$$

(b) if  $DA_t > 0$  and  $DA_t \geq (0.05 \times MAR_{t-1})$  (where  $\geq$  means greater than or equal to),

then

$$K_t = \{ [DA_t - (0.05 \times MAR_{t-1})] \times [1 + (i_t + 4\%) / 100] \} \\ + [(0.05 \times MAR_{t-1}) \times (1 + i_t / 100)];$$

(c) if  $DA_t = 0$ ,

then

$$K_t = 0; \text{ and}$$

(d) if  $DA_t < 0$ ,

then

(i) where Regulatory Year t is the first Regulatory Year of the Second Regulatory Period,  $K_t$  will be a negative amount that is the greater of:

(A)  $DA_t \times (1 + i_t / 100)$  (which is a negative amount); and

(B) minus  $(0.05 \times MAR_{t-1})$  (which is a negative amount); and

(ii) where Regulatory Year t is any Regulatory Year (other than the first Regulatory Year) occurring during the Second Regulatory Period,  $K_t = DA_t \times (1 + i_t / 100)$  (in such a case  $K_t$  will be a negative amount because  $DA_t$  is a negative amount),

Where

$i_t$  = the simple average of the monthly 180 day weighted-average Manila Reference Rate in nominal percent per annum terms published by the Bangko Sentral ng Pilipinas for the period from 1 October of calendar year  $t-2$  to 30 September of calendar year  $t-1$ ; and

$MAR_{t-1}$  has the same meaning as in Section 4.3.1.

- 4.3.3 If the Correction Factor for the first Regulatory Year of the Second Regulatory Period is calculated pursuant to Section 4.3.2(d)(i) and the absolute value of the Differential Amount for that Regulatory Year (as calculated in accordance with Section 4.3.1) is greater than 5% of the maximum allowed revenue for the last Regulatory Year of the First Regulatory Period (as calculated under Section 3.2.1), then the Regulated Entity may apply to the ERC in writing for the recovery by it of that excess amount, such application to be made at the same time as the Regulated Entity, acting pursuant to Section 6.2.1(b), submits to the ERC its proposal for the maximum transmission wheeling rates that may be charged by it for the provision of Regulated Transmission Services during the second Regulatory Year of the Second Regulatory Period.
- 4.3.4 Upon receiving an application under Section 4.3.3, the ERC must:
- (a) determine how much of the Differential Amount for the first Regulatory Year of the Second Regulatory Period is the result of circumstances that are outside the control of the Regulated Entity; and
  - (b) permit the Regulated Entity to recover such of the amount determined pursuant to Section 4.3.4(a) as exceeds 5% of the maximum allowed revenue for the last Regulatory Year of the First Regulatory Period (as calculated under Section 3.2.1) by determining to increase the maximum allowed revenue for all or any of the second, third and fourth Regulatory Years of the Second Regulatory Period (as calculated under Section 4.2.1) by such an amount or amounts that equal, in the aggregate, the amount that the Regulated Entity is permitted to so recover under this Section 4.3.4(b) (together with interest at the same rate  $i_t$  as applies under Section 4.3.2).

#### **4.4 General Building Block Principles**

- 4.4.1 As part of the Regulatory Reset Process for the Second Regulatory Period under Article VII, the ERC must determine the Annual Revenue Requirement for each Regulatory Year  $t$  in the Second Regulatory Period ( $ARR_t$ ), based on a forward-looking analysis of forecast cash flow requirements, to ascertain the optimal forecast revenue requirement of the Regulated Entity in each Regulatory Year of the Second Regulatory Period. The  $ARR_t$  must reasonably compensate the Regulated Entity for the economically efficient costs and risks it incurs in providing Regulated Transmission Services in order to encourage:
- (a) a commercial environment which is transparent and stable, and which does not discriminate between the users of Regulated Transmission Services;

- (b) the same outcomes in the market for Regulated Transmission Services as would be achieved if that market were competitive;
  - (c) competition in the provision of Regulated Transmission Services wherever practicable;
  - (d) the commercial viability of the Regulated Entity through allowing it to recover its efficient costs, together with a reasonable return on its approved capital invested in the Grid, as determined by the ERC;
  - (e) competition in upstream and downstream markets;
  - (f) stability in the transmission wheeling rates charged for Regulated Transmission Services;
  - (g) recovery of only those costs which are related to the provision of Regulated Transmission Services (eg. costs associated with responsibilities as Market Operator are excluded from the transmission wheeling rates);
  - (h) fairness in the charges made for Regulated Transmission Services, including through the progressive removal of cross-subsidies;
  - (i) as a minimum, maintenance of service delivery levels subsisting at the beginning of the Second Regulatory Period and an improvement of service delivery levels during that period as contemplated by Article VIII; and
  - (j) maintenance of the Grid such that, at the end of the term of the Second Regulatory Period, the Grid is able to continue to provide sustainable electricity transmission service delivery into the future without above average expenditure on upgrades or critical maintenance, and with the ability of continuing the service delivery levels previously achieved.
- 4.4.2 The  $ARR_t$  must result from an economic and financial analysis of the forecast cash flow requirements of the Regulated Entity based on a Building Block analysis pursuant to Section 4.5, which uses a 'classical' weighted average cost of capital as defined in Section 4.9.
- 4.4.3 For financial analysis integrity and for transparency purposes, the corporate income tax cash flow requirements of the Regulated Entity must be included as a specific line item in the Building Blocks, thus ensuring the  $ARR_t$  includes the estimated cash flows necessary for the Regulated Entity to meet its expected corporate income tax payment obligations each Regulatory Year as and when they fall due.
- 4.4.4 Any taxes, other than corporate income tax, must be included as a specific line item in the Building Blocks alongside the operating and maintenance expenditures to which they are related.
- 4.4.5 When undertaking the economic and financial analysis to determine the  $ARR_t$ , the ERC will adequately compensate the Regulated Entity for all identified and justifiable risks inherent in an electricity transmission business in the Philippines, it being recognised that the over compensation for such risks will be to the disadvantage of Customers because it will permit unjustifiably high tariffs and

that the under compensation for such risks will be to the disadvantage of the Regulated Entity (and ultimately Customers) because it will adversely affect the viability of the Regulated Entity.

**4.5 Primary Building Blocks**

4.5.1 The financial Building Blocks which will form the basis of calculating the  $ARR_t$  are as follows:

- operating and maintenance expenditure;
- taxes other than corporate income tax;
- regulatory depreciation;
- return 'on' capital; and
- corporate income tax.

4.5.2 The operating and maintenance expenditure for Regulatory Year  $t$  is constituted by the forecasts of such expenditure for that Regulatory Year as approved by the ERC in accordance with Section 4.11.

4.5.3 The taxes, other than corporate income tax, for Regulatory Year  $t$  are constituted by the forecasts of payments of such taxes for that Regulatory Year as approved by the ERC in accordance with Section 4.11.

4.5.4 The Regulatory Depreciation for Regulatory Year  $t$  is that which is determined by the ERC on the basis of the methodology for its determination set out in Section 4.8.2.

4.5.5 The return 'on' capital for Regulatory Year  $t$  is the Regulatory Asset Base for that Regulatory Year ( $RAB_t$ ), as determined by the ERC on the basis of the methodology for its determination set out in Section 4.7, increased by an allowance for working capital in accordance with Section 4.5.7, multiplied by the classical weighted average cost of capital (WACC), as determined by the ERC in accordance with Section 4.9.

4.5.6 The corporate income tax for Regulatory Year  $t$  is the estimated corporate income tax payable by the Regulated Entity in that Regulatory Year as determined by the ERC in accordance with Sections 4.12.1 to 4.12.3 (an income tax adjustment, as determined by the ERC in accordance with Section 4.12.4, is also included for the purposes of calculating  $ARR_t$ ).

4.5.7 The Building Block formula to be used in calculating  $ARR_t$  is as follows:

$$ARR_t = Opex_t + Tax_{m,t} + RegDepr_t + [ ( RAB_t + WC_t ) \times WACC ] + Tax_{p,t} + ITA_t$$

Where:

## **Rules for Setting Transmission Wheeling Rates**

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$Opex_t$	=	The nominal <sup>6</sup> operating and maintenance expenditure for Regulatory Year t which is forecast for that Regulatory Year and approved by the ERC in accordance with Section 4.11;
$Tax_{m,t}$	=	The payment of taxes, other than corporate income tax, for Regulatory Year t in nominal terms which are forecast for that Regulatory Year and approved by the ERC in accordance with Section 4.11;
$RegDepn_t$	=	The Regulatory Depreciation for Regulatory Year t in real <sup>7</sup> terms as determined by the ERC on the basis of the methodology for its determination set out in Section 4.8.2;
$RAB_t$	=	The Regulatory Asset Base for Regulatory Year t in real terms as determined by the ERC on the basis of the methodology for its determination set out in Section 4.7;
$WC_t$	=	The working capital allowance for Regulatory Year t, which is set at a proportion of the difference between: <ul style="list-style-type: none"><li>(a) the nominal operating and maintenance expenditure which is forecast for that Regulatory Year and approved by the ERC in accordance with Section 4.11; and</li><li>(b) the nominal amount of the bad debts which are forecast for that Regulatory Year and approved by the ERC in accordance with Section 4.11,</li></ul> such proportion being determined by the ERC, as part of the Regulatory Reset Process for the Second Regulatory Period under Article VII, after a lead/lag study of relevant payables and receivables;
$WACC$	=	The weighted average cost of capital calculated using a 'classical' formula and as determined by the ERC in accordance with Section 4.9. This value is determined by the ERC as part of the Regulatory Reset Process for the Second Regulatory Period under Article VII and remains constant for each Regulatory Year in the Second Regulatory Period;

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<sup>6</sup> In these Rules the word 'nominal' is used with its financial meaning, such that nominal peso numbers are represented with inflation applied, and are in pesos of the day. Notionally these are end of year (EoY) figures unless stated otherwise.

<sup>7</sup> In these Rules the word 'real' is used with its financial meaning, such that real peso numbers are represented without inflation applied. Notionally these are end of year (EoY) figures unless stated otherwise.

- $Tax_{p,t}$  = The estimated corporate income tax payable by the Regulated Entity in Regulatory Year t as determined by the ERC in accordance with Sections 4.12.1 to 4.12.3; and
- $ITA_t$  = The income tax adjustment amount for Regulatory Year t as determined by the ERC in accordance with Section 4.12.4.

#### **4.6 Asset Valuation**

4.6.1 Prior to the commencement of the Second Regulatory Period an asset re-valuation must be undertaken in accordance with this Section 4.6 (the "Initial Re-valuation").

4.6.2 The asset re-valuation referred to in Section 4.6.1 must be undertaken by either:

- (a) an independent appraisal company engaged by the Regulated Entity, in which case the ERC must also require the Regulated Entity to retain an independent expert or experts pursuant to Article XIV for the purposes of reviewing that re-valuation; or
- (b) an independent expert or experts, being an independent expert or experts who the ERC requires the Regulated Entity to retain pursuant to Article XIV for the purposes of undertaking that re-valuation,

the choice of which option is adopted being at the discretion of the ERC after consulting with the Regulated Entity. Where:

- (c) paragraph (a) applies - both the independent appraisal company and the independent expert or experts referred to in that paragraph must comply with the requirements relating to the Initial Re-valuation, and (in so far as their reports are concerned) the requirements relating to the Initial Re-valuation Report, as set out in this Section 4.6, the independent appraisal company must provide its asset re-valuation report to the ERC at the latest by 11 months prior to the commencement of the Second Regulatory Period and the review of that report by the independent expert or experts referred to in paragraph (a) must be provided to the ERC at the latest by 10 months prior to the commencement of the Second Regulatory Period (for the purposes of this Section 4.6, the report of the independent appraisal company as modified by the report of the independent expert or experts is referred to as the "Initial Re-valuation Report");
- (d) paragraph (b) applies – the independent expert or experts referred to in that paragraph must comply with the requirements relating to the Initial Re-valuation, and (in so far as their asset re-valuation report is concerned) the requirements relating to the Initial Re-valuation Report, as set out in this Section 4.6, and those experts must provide their asset re-valuation report to the ERC at the latest by 11 months prior to the commencement of the Second Regulatory Period (for the purposes of this Section 4.6, the report of the independent expert or experts is referred to as the "Initial Re-valuation Report").

- 4.6.3 The Initial Re-valuation must be undertaken using an optimised replacement cost approach, for which purposes the following applies:
- (a) the criteria which must be used in undertaking the Initial Re-valuation must be determined by the ERC prior to the commencement of the Initial Re-valuation and in any event not later than 31 December 2003 (unless the First Regulatory Period is to end on 31 December 2004 pursuant to Section 2.2.1(a), in which case those criteria must be determined by the ERC as soon as is reasonably practicable); and
  - (b) the principles referred to in Sections 4.6.4, 4.6.5 and 4.6.6 must be applied.
- 4.6.4 For the purposes of the Initial Re-valuation, and in the circumstances specified below in connection with them, the following methods of re-valuation may be used for different Asset Categories (as defined in, or otherwise approved by the ERC pursuant to, Section 4.6.5):
- (a) **Indexation** - this method is appropriate for assets where there has been little technological change and most, if not all, direct costs that have been incurred and capitalised in respect of those assets would have to be incurred if they were replaced. This method has the feature that the valuation is directly linked to the historical value of the relevant assets, thereby ensuring that all relevant costs are included in the valuation.
  - (b) **Absolute valuation by replacement cost analysis** - this method of valuation involves valuing the relevant assets at their current unit prices multiplied by their volumes. Such prices may be verified by reference to the purchase price of like assets within the last twelve (12) months or by reference to recent documented arm's length quotations for the sale of those (or similar) assets. Such prices should include the discounts available from purchasing in the volumes which have been used in the normal course of business and must be increased to cover relevant costs arising from design, procurement, mobilisation, construction and commissioning. This approach may be used in valuing an asset where there has not been significant technological change and where it has not been possible to develop an appropriate index for the valuation of that asset for the purposes of the re-valuation method referred to in paragraph (a).
  - (c) **Absolute valuation using modern equivalent asset analysis** - this method of valuation involves valuing the relevant assets at the cost of a modern equivalent asset with similar service potential (for example, an asset which replicates at least their current capacity and functionality). It may be used when it is not possible to determine the current replacement cost for an asset, eg. because that asset is no longer manufactured.
- 4.6.5 The Initial Re-valuation must be undertaken utilising more than a single weighted average asset category, the detail of the re-valuation must be reconciled back to the Regulated Entity's asset register or general ledger (as required), and such reconciliation must be fully documented in advance of the submission of the

Initial Re-valuation Report to the ERC. The Initial Re-valuation Report must specify the reported re-valued asset values, the sources of the information used in calculating those values, the weighted average age of the assets, and the proposed weighted average economic life, of the following Asset Categories j (or of such other asset categories as the ERC approves):

- (a) for transmission lines, the relevant Asset Categories are as follows:
  - (i) buildings, civil works and establishment;
  - (ii) towers and associated lines;
  - (iii) poles and associated lines;
  - (iv) underground cables;
  - (v) sub-sea cables;
  - (vi) easements owned by the Regulated Entity;
  - (vii) other;
  - (viii) spares;
- (b) for transmission substation components, the relevant Asset Categories are as follows:
  - (i) buildings, civil works and establishment;
  - (ii) transformers;
  - (iii) circuit breakers;
  - (iv) instrument transformers;
  - (v) meters and protection;
  - (vi) reactors;
  - (vii) buswork;
  - (viii) other;
  - (ix) spares;
- (c) for communications plant, the relevant Asset Categories are as follows:
  - (i) buildings, civil works and establishment;
  - (ii) communications plant and infrastructure;
  - (iii) ancillary infrastructure;
  - (iv) other;
  - (v) spares;
- (d) for system operations, the relevant Asset Categories are as follows:
  - (i) buildings, civil works and establishment;
  - (ii) control room and control infrastructure;

- (iii) ancillary infrastructure;
- (iv) other;
- (e) for non-network assets, the relevant Asset Categories are as follows:
  - (i) computers and office equipment;
  - (ii) plant, tools and equipment;
  - (iii) furniture and fittings;
  - (iv) commercial buildings;
  - (v) land;
  - (vi) other.

4.6.6 In undertaking the optimisation of the re-valuation of the assets based on replacement cost, at least the following optimisation principles must be employed:

- (a) assets which are assessed to have an unreasonable degree of over capacity or excess redundancy (ie. assets which are unreasonably over-designed or have unreasonably excessive installed capacity) will have their value split between the value of that capacity or redundancy which is reasonably necessary to meet Customer requirements for Regulated Transmission Services within the electricity transmission network planning horizon (see paragraph (b)) and the value of that capacity or redundancy which is in excess of this requirement – for these purposes, what is reasonable must be assessed having regard to the need to ensure reliability in the provision of Regulated Transmission Services into the future, and investment that is reasonably undertaken to meet the target levels of performance determined by the ERC pursuant to Article VIII will be deemed to be reasonable;
- (b) the electricity transmission network planning horizon will be taken to be 15 years or as otherwise determined by the ERC based on reasonable planning policies in the context of an electricity transmission network in the Philippines; and
- (c) the analysis of over capacity or excess redundancy will be based on there being no changes to the location of supply and demand (ie. take-off points for generators and loads), transmission line or cable routes, easements or substation locations, but existing network elements can be re-rated or re-designed in a notional sense to assess their optimised value.

Other optimisation principles may be used as approved by the ERC following advice from an independent expert or experts referred to in Section 4.6.2. Such principles must include the manner in which windfall gains and losses arising from the Initial Re-valuation are to be treated.

4.6.7 The date of the Initial Re-valuation must be twelve (12) months prior to the commencement of the Second Regulatory Period.

- 4.6.8 The Initial Re-valuation Report must differentiate between those assets which are to be included in the regulatory asset base and those assets which are to be excluded from the regulatory asset base on the basis that the regulatory asset base must only include assets to the extent that such assets:
- (a) are necessary to meet Customer requirements for Regulated Transmission Services within the electricity transmission network planning horizon referred to in Section 4.6.6(b);
  - (b) except in the case of spares, are in service (ie. have been commissioned and are providing a service);
  - (c) in the case of spares, are in reasonable quantities as determined by the ERC (following the provision to the ERC, pursuant to Section 7.1.2(b), of information relating to usage and delivery lags); and
  - (d) in the case of easements, are clearly documented as being owned by the Regulated Entity.
- 4.6.9 For the purposes of Section 4.6.10, the CWIP Factor as it applies in respect of all assets or an Asset Category is intended to compensate for the investment cost (ie. the time value of money), calculated using a typical spend profile for assets of the relevant type (at the weighted average cost of capital determined by the ERC in accordance with Section 4.9), over the typical period from the commencement of the construction of such assets to the commissioning of those assets (excluding any periods of unjustified delay). The CWIP Factor must be derived from a calculation method approved by the ERC which could take the form of:
- (a) uniformly escalating the optimised depreciated replacement cost of the revalued assets by a constant factor; or
  - (b) directly estimating the investment cost for specific past projects and adding this cost to the optimised replacement cost of the revalued assets; or
  - (c) another method approved by the ERC.

The CWIP Factor may be the same for all revalued assets or may differ as between Asset Categories.

- 4.6.10 The Initial Re-valuation Report must estimate the rolled-forward depreciated regulatory asset base for each Asset Category  $j$  as at the commencement of the first Regulatory Year ( $t$ ) in the Second Regulatory Period ( $RAB_{oj,t}$ ). For these purposes,  $RAB_{oj,t}$  is equal to  $RAB_{cj,t-1}$  as calculated in accordance with the formula specified in Section 4.7.2 except that, for the purposes of applying that formula:
- (a)  $RAB_{oj,t-1}$  will be deemed to be the value of each asset in Asset Category  $j$  that is to be included in the regulatory asset base (as defined in Section 4.6.8) and that is in existence as at the date of the Initial Re-valuation, such value being its optimised depreciated replacement cost as at the date of the Initial Re-valuation increased by the application of the relevant CWIP

Factor (except that the CWIP Factor must not be applied to the extent the asset is categorised as part of spares, easements, buildings, civil works and establishment, or non-network assets);

- (b)  $Capex_{j,t-1}$  will be deemed to be the actual or budgeted capital expenditure of the Regulated Entity on assets within Asset Category  $j$  for the period from the date of the Initial Re-valuation to the date of commencement of the Second Regulatory Period to the extent such expenditure is reasonable and to the extent it is attributable to assets which would (if they had been in existence as at the date of the Initial Re-valuation) be included in the regulatory asset base (as defined in Section 4.6.8), increased by the application of the relevant CWIP Factor (except that the CWIP Factor must not be applied to the extent the relevant capital expenditure is on an asset that is categorised as part of spares, easements, buildings, civil works and establishment, or non-network assets);
- (c)  $RegDepn_{oj,t-1}$  will be deemed to be the Regulatory Depreciation of those assets in Asset Category  $j$  that are to be included in the regulatory asset base (as defined in Section 4.6.8) and that are in existence as at the date of the Initial Re-valuation, excluding spares, easements and land, such Regulatory Depreciation being calculated in accordance with Section 4.8.1 (but as if the reference to Regulatory Year  $t$  in that Section were instead a reference to the period from the date of the Initial Re-valuation to the date of commencement of the Second Regulatory Period);
- (d)  $RegDepn_{cj,t-1}$  will be deemed to be the Regulatory Depreciation of the capital expenditure on assets within Asset Category  $j$ , which is referred to in Section 4.6.10(b), excluding spares, easements and land, such Regulatory Depreciation being calculated consistently with the methodology set out in Section 4.8.1 (but as if the reference to Regulatory Year  $t$  in that Section were instead a reference to the period from the actual or budgeted date of commissioning of the asset to the date of commencement of the Second Regulatory Period); and
- (e)  $Disposals_{j,t-1}$  will be deemed to be the actual or budgeted net receipts from the disposal, during the period from the date of the Initial Re-valuation to the date of commencement of the Second Regulatory Period, of assets within Asset Category  $j$  that are to be included in the regulatory asset base (as defined in Section 4.6.8) to the extent such net receipts are reasonable. The net receipts from the disposal of such an asset will be determined as the receipts from the disposal of that asset, minus the value of that asset at the actual or budgeted date of its disposal. The value of that asset at the actual or budgeted date of its disposal will be determined as the rolled-forward depreciated regulatory asset base value of that asset at that time. Where the net receipts from the disposal of an asset are negative and are materially different from the rolled-forward depreciated regulatory asset base value of that asset, the net value must be retained in a separate asset category, and must be amortized over the remaining life of the disposed

asset, as if it constituted an asset which continues to be used to provide services.

- 4.6.11 The Initial Re-valuation Report must also identify the historical cost of the regulatory asset base (as defined in Section 4.6.8) at the date of the Initial Re-valuation. Such historical cost must be depreciated in a similar manner to the rolled-forward depreciated regulatory asset base under Section 4.6.10 to obtain the opening written-down historical cost of the regulatory asset base at the commencement of the first Regulatory Year in the Second Regulatory Period. Further, the opening written-down historical cost must be rolled-forward for the Second Regulatory Period in a similar manner to the rolled-forward depreciated regulatory asset base under Section 4.7 to obtain an opening written-down historical cost of the regulatory asset base at the commencement of each subsequent Regulatory Year in the Second Regulatory Period. These written-down historical costs are used in the Building Block methodology to determine the  $HCDep_{t-1}$  as set out in Section 4.12.3.
- 4.6.12 The ERC must determine the rolled-forward depreciated regulatory asset base for each Asset Category (as defined in, or otherwise approved by the ERC pursuant to, Section 4.6.5) as at the commencement of the first Regulatory Year in the Second Regulatory Period based on consideration of the information available to it including the estimate of the rolled-forward depreciated regulatory asset base for that Asset Category as contained in the Initial Re-valuation Report pursuant to Section 4.6.10.

#### **4.7 Regulatory Asset Base**

- 4.7.1 The Regulatory Asset Base for any Regulatory Year  $t$  ( $RAB_t$ ) is derived from a roll-forward calculation of the value of each Asset Category  $j$  and is calculated as follows:

$$RAB_t = (RAB_{o,t} + RAB_{c,t}) / 2$$

Where:

$RAB_{o,t}$  = In the case where Regulatory Year  $t$  is the first Regulatory Year in the Second Regulatory Period, the sum across the Asset Categories  $j$  of the rolled-forward depreciated regulatory asset base for each Asset Category  $j$  as at the commencement of the first Regulatory Year in the Second Regulatory Period ( $RAB_{oj,t-1}$ ) as determined by the ERC under Section 4.6.12; or

= In the case where Regulatory Year  $t$  is a Regulatory Year (other than the first Regulatory Year) in the Second Regulatory Period, the sum across the Asset Categories  $j$  of the opening rolled-forward depreciated regulatory asset base for each Asset Category  $j$  for that Regulatory Year  $t$  ( $RAB_{oj,t} = RAB_{cj,t-1}$ ), as defined in Section 4.7.2.

$RAB_{c,t}$  = The sum across the Asset Categories  $j$  of the closing rolled-forward depreciated regulatory asset base for each Asset

Category j for Regulatory Year t ( $RAB_{cj,t}$ ), as defined in Section 4.7.2.

4.7.2 The closing rolled-forward depreciated regulatory asset base for Asset Category j for Regulatory Year t ( $RAB_{cj,t}$ ) is calculated as follows:

$$RAB_{cj,t} = RAB_{oj,t} - RegDepn_{oj,t} + Capex_{j,t} - RegDepn_{cj,t} - Disposals_{j,t}$$

Where:

$RAB_{oj,t}$  = The opening rolled-forward depreciated regulatory asset base for Asset Category j for Regulatory Year t, which is numerically equal to  $RAB_{cj,t-1}$  except that, where Regulatory Year t is the first Regulatory Year in the Second Regulatory Period,  $RAB_{oj,t}$  is the rolled-forward depreciated regulatory asset base for Asset Category j as at the commencement of the first Regulatory Year in the Second Regulatory Period as determined by the ERC under Section 4.6.12;

$RegDepn_{oj,t}$  = The Regulatory Depreciation, for Regulatory Year t, of those assets in Asset Category j (excluding spares, land and easements) that were included in the rolled-forward depreciated regulatory asset base for Asset Category j as at the commencement of the first Regulatory Year in the Second Regulatory Period as determined by the ERC consistently with its determination under Section 4.6.12 and with the method for calculating the Regulatory Depreciation for that Asset Category as set out in Section 4.8.1;

$Capex_{j,t}$  = The forecast capital expenditure of the Regulated Entity on assets within Asset Category j for Regulatory Year t as approved by the ERC under Section 4.10.5;

$RegDepn_{cj,t}$  = The Regulatory Depreciation, for Regulatory Year t, of the forecast capital expenditure of the Regulated Entity on assets (excluding spares, land and easements) within Asset Category j (as approved by the ERC under Section 4.10.5) to the extent that such forecast capital expenditure relates to a Regulatory Year in the Second Regulatory Period which precedes Regulatory Year t, such Regulatory Depreciation being calculated consistently with the methodology set out in Section 4.8.1; and

$Disposals_{j,t}$  = The forecast receipts from the disposal, during Regulatory Year t, of assets within Asset Category j, as determined by the ERC as part of the Regulatory Reset Process for the Second Regulatory Period under Article VII.

Such forecast receipts will be at the rolled-forward depreciated regulatory asset value for the relevant assets.

- 4.7.3 For the purposes of this Section 4.7 and Section 4.8, assets are to be included in the same categories as defined in, or otherwise approved by the ERC pursuant to, Section 4.6.5 or in smaller categories (Asset Categories  $j = 1 \dots n$ ) such that each category includes similar assets with similar economic lives (such lives being calculated in accordance with Section 4.8.1).

**4.8 Regulatory Depreciation**

- 4.8.1 The Regulatory Depreciation for Asset Category  $j$  for Regulatory Year  $t$  ( $RegDepn_{j,t}$ ) is calculated on a straight line basis using either of the following methods depending on the available data :

$$RegDepn_{j,t} = ORC_{j,t} / RegL_{j,t} \text{ or } ODRC_{j,t} / RemL_{j,t}$$

Where:

$ORC_{j,t}$  = the optimised replacement cost for the assets that are within Asset Category  $j$  as at the commencement of Regulatory Year  $t$ ;

$RegL_{j,t}$  = the Regulatory Life of Asset Category  $j$  and is equal to the weighted average<sup>8</sup> economic life of the assets that are within Asset Category  $j$  as at the commencement of Regulatory Year  $t$ , where the economic life of an asset is taken to expire when the costs of maintenance and repair of that asset exceed the efficient replacement cost of it on a project comparison basis, using a forward looking discounted cash flow analysis, or as otherwise determined by the ERC. As a result of the report referred to in Section 4.8.3,  $RegL_{j,t}$  may differ from the asset life used for financial reporting or taxation purposes;

$ODRC_{j,t}$  = the optimised depreciated replacement cost for the assets that are within Asset Category  $j$  as at the commencement of Regulatory Year  $t$ , calculated (on the basis of the application of straight line depreciation of the optimised replacement cost for those assets) by multiplying their optimised replacement cost by the weighted average Remaining Life of Asset Category  $j$  ( $RemL_{j,t}$ ) and dividing that product by the Regulatory Life of Asset Category  $j$  ( $RegL_{j,t}$ );

$RemL_{j,t}$  =  $(RegL_{j,t} - Age_{j,t})$ ; and

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<sup>8</sup> Weighted by optimised replacement cost or by optimised depreciated replacement cost, depending on the information availability for asset age in the Regulated Entity's asset register systems.

$Age_{j,t}$  = the weighted average age of the assets that are within Asset Category j as at the commencement of Regulatory Year t.

4.8.2 The Regulatory Depreciation for Regulatory Year t in real terms ( $RegDepn_t$ ) is calculated as follows:

$$RegDepn_t = (RegDepn_{o,t} + RegDepn_{c,t})$$

Where:

$RegDepn_{o,t}$  = Sum of  $RegDepn_{oj,t}$  for Regulatory Year t for each Asset Category j, as defined in Section 4.7.2; and

$RegDepn_{c,t}$  = Sum of  $RegDepn_{cj,t}$  for Regulatory Year t for each Asset Category j, as defined in Section 4.7.2.

4.8.3 For the purposes of this Section 4.8, the ERC must require the Regulated Entity to retain an independent expert or experts pursuant to Article XIV for the purpose of preparing a written report in respect of:

- (a) the condition of such assets as are used by the Regulated Entity to provide Regulated Transmission Services and as are specified by the ERC (either specifically or by reference to a category of assets); and
- (b) the regulatory life which should be attributed to such assets.

Such report must also recommend the manner in which windfall gains and losses arising from changes in the regulatory life of the assets referred to in this Section 4.8.3 are to be treated.

#### **4.9 Weighted Average Cost of Capital Determination**

4.9.1 The purpose of calculating the weighted average cost of capital is to provide a cost of capital for regulatory purposes which can be applied to a Building Block cash flow model that generates a regulated revenue stream over a defined regulatory period for the Regulated Entity providing Regulated Transmission Services.

4.9.2 For these purposes a classical weighted average cost of capital (WACC) is to be used as, in the ERC's view, it best balances the financial Building Blocks in Section 4.5.7 and the principles in Section 4.4.1. The ERC must require the Regulated Entity to retain an independent expert or experts pursuant to Article XIV for the purpose of assisting the ERC to determine the WACC during the Regulatory Reset Process for the Second Regulatory Period under Article VII.

4.9.3 The WACC (expressed in decimal, as opposed to percentage, terms) is to be calculated as follows:

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

Where:

$r_e$  = the cost of equity and is calculated in accordance with Section 4.9.4;