

**Revised Rules, Terms and Conditions
for the provision of**

**OPEN ACCESS
TRANSMISSION SERVICE**

Energy Regulatory Commission

ERC Case No. 2006-015RC

**CORPORATE PLANNING
NATIONAL TRANSMISSION CORPORATION
December 2006**

FOREWORD

The Rules, Terms and Conditions for the Provision of Open Access Transmission Service (OATS Rules) describe the services provided by the party that operates the high voltage backbone Transmission System. These outline the responsibilities of the Transmission Provider and the functions of the System Operator as specified in the Grid Code and the Wholesale Electricity Spot Market (WESM) Rules. The OATS Rules set out the responsibilities accepted by Transmission Customers as a condition of receiving the services.

The OATS Rules are grounded on Implementing Rules and Regulation of R.A. 9136 (EPIRA), the Grid Code and the WESM Rules. The OATS Rules complement the Transmission Wheeling Rate Guidelines and the WESM Manuals. This set of Rules is expected to ensure the development of an appropriate, equitable and transparent electricity market, along with the safe, reliable, and efficient operation of the power system.

Module A: General Terms and Conditions	8
A1 Defined Terms and Interpretation	8
A1 Defined Terms and Interpretation (continued).....	19
A2 Effectivity.....	20
A3 Applicability of these OATS Rules.....	20
A4 Regulatory Filings	22
A5 Force Majeure.....	22
A6 Emergency situations.....	23
A7 Liability and Indemnity.....	23
A8 Creditworthiness	24
A9 Dispute Resolution Procedures	25
A10 Confidentiality	25
A11 Assignment.....	26
A12 Notices.....	27
A13 Default and Termination	28
A14 Survival	29
A15 Relationship between the parties	30
A16 Entire Agreement.....	30
A17 Governing Law	30
A18 Waiver	30
A19 Non-Merger.....	30
A20 Severability	31
A21 Service Agreements.....	31
A22 Transitory Arrangements	33
A23 Transmission Provider/System Operator's obligations to the Grid Management Committee.....	33
A24 Transmission Provider/System Operator's obligations to the Market Operator	33

A25	Prudent Operator.....	34
A26:	Review of OATS Rules.....	34
Module B: Connections to the Grid.....		35
Section I: Existing Connections to the Grid		35
B1	Right to remain connected and disconnect.....	35
B2A	Identification of Connection Facilities, Connection Point(s), and Metering	35
B2B	Identification, Operation, Control and Maintenance of Facilities Performing Grid Functions	35
B3	Safety, Power Quality and Reliability.....	36
B4	Data Requirements	36
B5	Communication and SCADA Equipment Requirements	36
B6	Protection Arrangements	38
B7	Critical Events List.....	39
B8	Contingency Procedures.....	39
B9	Property access.....	39
B10	Transformer Connection and Grounding	40
B11	Generation Customer’s Requirements.....	40
B12	Load Customers’ Requirements	41
Section II. New Points of Connection to the Grid or Modifications to Existing Connections to the Grid.....		42
B13	Applications for New Connection(s) including Connections to the Grid by End-users	42
B14	Evaluation of Applications including Grid Impact Studies (GIS) and System Impact Studies (SIS)	42
B15	Facilities Study	45
B16	Entering into Service Agreement and disputes over study results	46
B17	Procurement of Connection Assets for a new Connection to the Grid by an End-users	47
B18	Arrangements to be completed Prior to Commissioning Date following execution of Service Agreement.....	49

Section III	Conditions	51
Section IV	Sub-transmission Assets	52
B20	Transmission Connection Assets and Residual Sub-transmission Assets	52
B21	Principles of Connection Charge and Residual Sub-transmission Charge	52
B22	Sale of Sub-Transmission Assets	53
B23	Asset Replacement	53
Module C:	Power delivery service.....	55
C1	General undertaking to operate Grid	55
C2	Power Quality	55
C3	Reliability	55
C4	Available Transmission Capacity of Power Delivery Service.....	55
C5	Firm versus Non Firm Power Delivery Service	56
C6	Safety and reasonableness.....	58
C7	Management of Outages.....	58
C8	Information.....	58
C9	Transmission Customer obligations	58
C10	Change to Power Delivery Service.....	59
C11	Conditions	59
	Annex I, Module C: Allocation of Firm Power Delivery Service.....	61
Module D:	System Operator functions	62
D1	Dispatch and re-dispatch services.....	62
D2	Power Quality	62
D3	Safety and reasonableness.....	62
D4	Security of power system	62
D5	Load Shedding and Interruptions.....	63
D6	Assessment of availability.....	63
D7	Management of Ancillary Services	64
D8	Alternative Ancillary Services Arrangements.....	65

D9	Transition to new market conditions.....	67
D10	Management of Energy Imbalance	67
D11	Transmission Customer Obligations	68
D12	Conditions	68
Annex I, Module D: Re-dispatch Procedures up until the Spot Market Commencement Date.....		70
Module E: Metering.....		72
E1	Metering Service	72
E2	Metering Requirements	72
E3	Provision of Revenue Metering Equipment	73
E4	Provision of Metering Installation Information	73
E5	Metering equipment testing and maintenance.....	74
E6	Meter reading.....	74
E7	Validation of metering data	74
E8	Settlement	75
E9	Treatment of metering data.....	75
E10	Application for new Metering Points, or changes to existing Metering Points.	75
E11	Transmission Customer or Joint Obligations	75
E12	Changes in Metering Arrangements.....	76
Module F: Rates, Methodology, Billing and Settlement.....		77
F1	Charges applicable to each category of Transmission Customer	77
F2	Adjustments to Transmission Customers	78
F3	All amounts are exclusive of value-added tax	79
F4	Billing and settlement service	79
F5	Transmission Customer obligations	80
F6	Billing Disputes.....	80
F7	Non Firm Power Delivery Service for Load Customers	81
Annex I, Module F: Charges for the Power Delivery Service		82
F(AI)1	Power Delivery Service Charge.....	82

F(AI)2	Power Delivery Service Charge payable by Generation Customers.....	82
F(AI)3	Power Delivery Charge payable by Load Transmission customers	83
F(AI)4	Customer Segment Power Delivery Revenue Requirement	84
F(AI)5	Generator Power Delivery Service Rate	86
F(AI)6	Load Power Delivery Service Rate.....	87
	Annex II, Module F: System Operator Charges	88
F(AII)1	System Operator Charges.....	88
	Annex III, Module F: Metering Service Provider Charge.....	90
F(AIII)1	Metering Service Provider Charge	90
F(AIII)2	Metering Service Charge payable by Connected Transmission Customers	90
F(AIII)3	Components of Metering Service Provider Charge.....	91
F(AIII)4	Additional Metering Services	93
F(AIII)5	Calculation of Loss Factors.....	94
	Annex IV, Module F: Connections Charges and Residual Sub-transmission Charges	95
F(AIV)1	Connection Charge.....	95
F(AIV)3	Calculating the Connection Charge	96
F(AIV)4	Components of Connection Charge.....	97
F(AIV)5	Residual Sub-transmission Charge	100
F(AIV)7	Calculating the Residual Sub-transmission charge	100
F(AIV)8	Components of Residual Sub-transmission Charge	102
	Annex V, Module F: Technical Services Charges.....	106
F(AV)1	Charges for System Impact Study and Facilities Study	106
F(AV)2	Special billing provisions for System Impact and Facilities	106
	Annex VI, Module F: Billing Adjustments.....	107
	Annex VII, Module F: Other Adjustments and Charges.....	109
	Annex A to these OATS Rules: Pro forma Service Application and Service Agreement ..	111

Module A: General Terms and Conditions

A1 Defined Terms and Interpretation

Act: Republic Act (R.A.) No. 9136 also known as the “Electric Power Industry Reform Act of 2001” or the EPIRA.

Active Power: As defined in Grid Code.

Alternative Ancillary Services Arrangement: An arrangement for the provision of ancillary services approved by the System Operator as a substitute for ancillary services arranged on behalf of the Transmission Customer by the System Operator.

Acting Reasonably: Is where an Industry Participant acts in a manner which balances its commercial and operational obligations under the EPIRA and associated law, with its public service obligations, and without exploitation of its market and/or monopoly power. Such behaviour must comply with the Competition Rules promulgated by the ERC from time-to-time.

Ancillary Services: As defined in Grid Code and the WESM Rules.

Ancillary Services Procurement Plan: An annual plan prepared by the System Operator in accordance with Module D describing the Ancillary Services it intends to procure and the means by which it shall procure those services.

Ancillary Services Purchase Agreement: A contract covering the provision of Ancillary Services in accordance with Module D.

Applicable Law: The Constitution and all laws, statutes, treaties, Rules, codes, ordinances, regulations, certificates, orders, decrees, resolutions, directives, rulings, interpretations, approvals, licenses and permits of any Philippine governmental agency or authority, and judgements, decrees, injunctions, writs, orders or like actions of any court, arbitrator or other administrative, judicial or quasi-judicial tribunal or agency of competent jurisdiction, including, without limitation, R.A. No. 9136 and its implementing Rules, the Grid Code, Distribution Code, the WESM Rules, in each case as applicable to this Agreement and as may be amended, modified, supplemented or replaced from time to time.

Asset Boundary: The delineation of control, ownership, and accountability of Facilities associated with the interconnection of Transmission Customer’s Facilities to the Transmission Provider’s Facilities.

Available Transmission Capacity: Means the maximum level of Electricity transfer, measured in MW (at the power factor specified in these OATS Rules), at which the Transmission Provider’s facilities are capable of conveying electricity to or from a Connection Point.

Backup Reserve: See Dispatchable Reserve.

Billing Period: The time interval specified by the Transmission Provider/System Operator in which the Transmission Customer's level of service is regularly recorded, accumulated, and read for the purpose of billing. The Billing Period starts from the 26th day of the current month to the 25th day of the following month.

Billing Statement: A billing invoice and statement issued by the Transmission Provider to a Transmission Customer detailing all charges and credits for Services delivered to the Transmission Customer under these OATS Rules.

Black Start: As defined in the Grid Code.

Business Day: Every day except a Saturday, Sunday or national or local holiday.

Commissioning Date: The date at which Power Delivery Service commences and as agreed in the Service Agreement or agreed subsequently between the parties.

Completion Date: As defined in the Grid Code and as agreed in the Service Agreement.

Conditions: Circumstances if occurring or requirements if not met that may affect the delivery of the specified service.

Confidential Information: Any commercial, technical and/or financial information or data (including but not limited to any intellectual property or trade secrets) relating to either the Transmission Provider, System Operator or Transmission Customer and/or their subsidiary businesses and interests, provided or made available in written, oral or machine readable form, which the provider has identified to be confidential or which would be understood by a reasonable person to be confidential or proprietary information of the disclosing party.

Connected Transmission Customer: Any Transmission Customer with Facilities connected to the Facilities of the Transmission Provider at one or more Connection Points, as differentiated from Prospective Transmission Customers. For the avoidance of doubt, this includes Generation Customers and Load Customers.

Connection Facilities: The Transmission Provider's Connection Facilities are those Facilities on the Transmission Provider's side of a Connection Point which are primarily provided to connect one or more Connected Transmission Customers to the Grid, and the Connected Transmission Customer's Connection Facilities are those Facilities on the Connected Transmission Customer's side of a Connection Point which are primarily provided to connect it to the Grid, where Connection Facilities are used for purposes of Transmission Connection Services (refer ERC Resolution 41 Series of 2006) for the conveyance of electricity.

Connection Point: The Asset Boundary between the Transmission Customer's Facilities and the Transmission Provider's Facilities

Connection Assets. Those assets that are put in primarily to connect a Customer to the Grid and used for purposes of Transmission Connection Services for the conveyance of electricity.

Contingency: A condition or situation that, based on the reasonable judgement of the Transmission Provider/System Operator or the Transmission Customer: (i) presents an imminent physical threat of danger to life or a significant threat to health or property, or (ii) could cause imminent significant disruption on or significant damage to the Connection Facilities or the Grid; provided that any condition or situation that results from lack of sufficient generation facility to meet load requirements shall not constitute an Contingency.

Contingency Reserve: As defined in the WESM Rules.

Contracted Transmission Capacity: The transmission capacity agreed between the Transmission Provider and the Transmission Customer for the relevant Connection Point and recorded in the Transmission Customer's Service Agreement for the Connection Point under C4 of these OATS Rules

Contribution in Aid of Construction: Amounts paid by the Transmission Customer or Prospective Transmission Customer for the construction and/or extension of Connection Assets. The Transmission provider or Distribution Utility maintains a separate account of these amounts and the assets never appear in the rate base nor in the asset appraisal.

Credit Support: Refers to the Financial Instrument or guarantee provided in Rule 8 in this Module A of the OATS Rules.

Critical Events List: (1) A list of significant operating events and conditions of which the Transmission Provider wishes to receive notice in the event of the occurrence or existence of any such events or conditions on the Transmission Customer's Facilities, and (2) a list of significant operating events and conditions of which the Transmission Customer wishes to receive notice, in the event of the occurrence or existence of any such event or condition on the Grid.

Curtailement: A reduction in transmission capacity below the Contracted Transmission Capacity resulting from the actions of the System Operator operating in accordance with the Grid Code, the WESM Rules and applicable WESM Manuals, and these OATS Rules.

Customer Segment: These are those Customer Segments approved by the ERC defined in the TWRG under Section 1.3, as required under Sections 6.3 and 6.4.

Designated Agent: Any entity that performs actions or functions required under these OATS Rules on behalf and under a contract with the Transmission Provider/System Operator and/or Transmission Customer.

Dispatch: As defined in the Grid Code.

Dispatch Instruction: As defined in the Grid Code.

Dispatchable Reserve: As defined in the WESM Rules.

Disputes Procedures: The procedures that the Transmission Provider/System Operator and Transmission Customer agree to invoke in the event of a dispute between them as outlined in Section 9 of this Module A.

Distribution Code: The set of rules, requirements, procedures, and standards promulgated and approved by the ERC governing Distribution Utilities and users of the distribution system in the operation, maintenance and development of the distribution system.

Distribution Utility: As defined in the Grid and Distribution Codes.

DSOAR: The Distribution Services and Open Access Rules as promulgated by the ERC and any amendment to that document by the ERC.

Electric Disturbance: Any sudden, unexpected, changed or abnormal electric condition occurring in or on the Power System that may cause damage. A single Electric Disturbance shall be deemed to continue from its inception until all affected elements of the Power System are restored to a stable condition of normal voltage and frequency and are capable of carrying normal electrical loads.

Electricity: The movement of electrons through a conductor where its physical properties are measured in many ways, including as either voltage in kilo-volts (kV) or electrical energy in kilowatt-hours (kWh) or electrical power (or load) in mega-watts (MW).

Embedded Generator: As defined in the Grid Code.

Embedded Generator Billing Determinant: A determinant for the calculation of an Embedded Generator's charge for Services delivered to it under these OATS Rules.

Embedded Generating Plant: As defined in the Grid Code.

End-user: Refers to any Person or entity requiring the supply and delivery of electricity for its own use.

Energy Imbalance: Occurs in any hour in which actual generation from any generating unit differs from its scheduled generation without suitable cause. Suitable cause may include dispatch instructions from the System Operator, forced outage, or other event as may be provided in these OATS Rules.

Energy Imbalance Service: The provision of generating capacity to correct a mismatch arising from the failure of a Generator Customer's Generation Facilities to provide Electricity to the Grid at a Connection Point within the range that the Generation Facilities were scheduled or instructed to provide.

Energy Regulatory Commission (ERC): The independent, quasi-judicial regulatory body created pursuant to R.A. No. 9136, which is mandated to promote competition, encourage market development, ensure customer choice, and

penalize abuse of market power in the restructured electricity industry and among other functions, to promulgate and enforce the Grid Code and the Distribution Code.

Equipment: As defined in the Grid Code.

Excluded Services: As defined in the TWRG.

Existing Agreement: All contracts existing between the Transmission Provider/System Operator and a party subject to the Grid Code at the date these OATS Rules first become effective pursuant to Rule A2.1.

Existing OATS Agreement: All contracts existing between the Transmission Provider/System Operator and a party subject to the Grid Code and an earlier version of these OATS Rules at the date these amended OATS Rules become effective pursuant to Rule A2.1.

Facilities: A generic term describing the apparatus, equipment, buildings and necessary supporting resources for the generation, transmission, supply, sale, ancillary support, and consumption of Electricity.

Facilities Study: An engineering study conducted by the Transmission Provider or Transmission Customer to determine the modification to the Transmission Provider's facilities, or the new facilities required by the Transmission Customer, including the cost and scheduled completion date for such modifications or new facilities, required to provide services under these OATS Rules.

Fault Clearance Time: As defined in the Grid Code and specified in Module B of these OATS Rules.

Financial Instrument: Means an irrevocable letter of credit or other similar financial instrument from a Philippine bank or financial institution executed in favour of the System Operator, in a form and substance acceptable to the System Operator, and obtained at the sole cost of the Transmission Customer or Ancillary Service Provider.

Firm Power Delivery Service: The provision of Power Delivery Service to Transmission Customers with (i) dispatch priority over those Transmission Customers with Non Firm Power Delivery Service in the event of a Curtailment by the System Operator and (ii) monthly as opposed to daily billing calculation arrangements.

Flicker: As defined in the Grid Code.

Force Majeure Event: An event beyond the reasonable control of the Participant claiming force majeure which, through the exercise of due foresight and Good Industry Practice, that Participant could not have avoided and which, by exercise of due diligence, that Participant is unable to overcome. Such events include, but are not limited to the following, to the extent that such event prevents performance of a Participant of an obligation: typhoon, storm, tropical depression, flood or inundation; lightning strikes; earthquake; volcanic

eruption, fire; epidemic; war; invasion; riot; national emergencies, civil disturbance; sabotage; explosion; insurrection; military or usurped power; action of any court or governmental authority, or any civil or military authority de facto or de jure; act of God or the public enemy; or any other event or cause of a similar nature beyond the reasonable control of the Participant claiming force majeure. A strike or labor dispute is not a Force Majeure Event.

Frequency: As defined in the Grid Code.

Frequency Regulation: The form of Ancillary Service managed by the System Operator to ensure Frequency stays within the standard limits as prescribed under the Grid Code.

Generation: As defined in the WESM Rules.

Generation Capacity: The rated continuous load-carrying ability, expressed in megawatts (MW), of Generation Facility.

Generation Customer: Any Transmission Customer injecting Electricity into the Grid.

Generation Facility: The facility, consisting of one or more generating units, where Electricity is produced from some other form of energy by means of suitable apparatus. It includes property owned, leased or in any manner controlled by the Generator at the generation facility described in the Transmission Customer's Service Agreement including, but not limited to: (i) the real property, (ii) all buildings structures and other improvements located on the real property and (iii) all machinery, equipment and other chattel located at the site and all additions, modifications or replacements.

Generation Ratio Share: A Generation Customer's generation, measured at, or adjusted to a Point(s) of Receipt, within the immediate hour prior to the Transmission Constraint as a proportion of the total generation by Generation Facilities whose Generation affects the constraint, measured in the same manner.

Generator Billing Determinant : A determinant for the calculation of a Generation Customer's charge for Services delivered to it under the OATS Rules.

Good Industry Practice: As defined in the Grid Code.

Grid: As defined in the Grid Code.

Grid Code: The set of rules, requirements, procedures, and standards to ensure the safe, reliable, secured and efficient operation, maintenance, and development of the high voltage backbone Transmission System and its related facilities promulgated and approved by the ERC.

Grid Impact Studies: As defined in the Grid Code and includes Grid planning studies.

Grid Facilities: Apparatus, equipment, buildings and supporting resources necessary for the proper operation of the Grid.

Grid Maintenance Programs: As outlined in the Grid Code and defined under “Maintenance Programs” in the Grid Code.

Grid Management Committee: As defined in the Grid Code.

Grid Operating Programs: As outlined in the Grid Code.

Grid Upgrade: A modification or addition to Grid-related facilities that are integrated with and support the Grid.

Harmonics: As defined in the Grid Code.

Initial OATS Rules: The version of these OATS Rules that was approved by the ERC in 2004, and took effect on November 10, 2004.

Interruption: As defined in the Grid Code.

Installation Database: As defined in the WESM Rules.

Large Customer: As defined in the Grid Code.

Load: As defined in the Grid Code.

Load Billing Determinant: A determinant for the calculation of a Load Customer’s charge for services delivered to it under the OATS Rules.

Load Customer: Any Connected Transmission Customer taking off electricity from the Transmission Provider’s Facilities which, for the avoidance of doubt, includes but is not restricted to, Generators while taking power from the Grid, Distribution Utilities and End-users.

Load Following and Frequency Regulation Service: See Regulating Reserve

Load Shedding: The systematic reduction of system demand by temporarily disconnecting or decreasing load in response to Grid or area capacity shortages, system instability, or voltage control considerations under these OATS Rules.

Market Operator: As defined in the WESM Rules.

Material Effect: As defined in the Grid Code.

Maximum Annual Revenue Cap: The maximum annual revenue that may be earned by the Transmission Provider for the current Regulatory Year, as calculated under sections 3.2, 4.2, or 5.2 of the TWRG.

Metering Asset Register: Register recording the assets owned by the Metering Service Provider at each Metering Installation.

Metering Database: As defined in the WESM Rules.

Metering Installation: The set of devices, equipment and apparatus used to measure and record the consumption and production of electricity installed by the Transmission Provider and the Transmission Customer, or their respective metering services provider/s, at or near a Connection Point.

Metering Equipment: The apparatus necessary for metering of electrical power and energy, against relevant engineering standards.

Metering Point: As defined in the WESM Rules.

Metering Service Provider: As defined in the WESM Rules.

Non-Firm Power Delivery Service: The provision of Power Delivery Service to Transmission Customers (i) without priority dispatch over those Transmission Customers with Firm Power Delivery Service in the event of a necessary curtailment by the System Operator and (ii) with daily as opposed to monthly billing calculation arrangements.

OATS Rules: These OATS Rules that govern the implementation of the Open Access Transmission Service, as approved by the ERC.

Offer of Service: A contract offer referred to in Module B.

Outage: As defined in the Grid Code.

Participant: As defined in Rule A3.1 in this Module A.

Plant Gate: A point where the measurement and recording of the production or consumption of Electricity is taken as agreed between the Connected Transmission Customer and Transmission Provider.

Point of Delivery: A Connection Point where Electricity may flow from the Transmission Provider's facilities to the Transmission Customer's facilities.

Point of Receipt: A Connection Point where Electricity may flow from the Transmission Customer's facilities to the Transmission Provider's facilities.

Power Delivery Service (PDS): The conveyance of Electricity to or from Connection Points.

Power Factor: As defined in the Grid Code.

Power Quality: As defined in the Grid Code.

Power System: A single integrated electric power facility consisting of electric Distribution Facilities or Generation Facilities or Grid Facilities, or any combination of the three, and includes transmission lines, distribution lines, substations, switching stations, generating plants and all associated Equipment for generating, transmitting, distributing or controlling the flow of power.

Prospective Transmission Customer: An existing or new Transmission Customer applying for a Service Agreement or a modification to their existing Service Agreement prior to the time when both parties subsequently execute a new or modified Service Agreement. (Following the execution of a Service Agreement, they become a Transmission Customer or Connected Transmission Customer).

Protective Device: As defined in the Grid Code.

Reactive Power: As defined in the Grid Code.

Reactive Power Supply and Voltage Control Service: The injection or absorption of reactive power from Generators to maintain transmission system voltages within required ranges.

Regulated Transmission Services: As defined in the TWRG.

Regulating Reserve: As defined in the WESM Rules.

Regulatory Period: As defined in the TWRG.

Regulatory Year: As defined in the TWRG.

Reliability: As defined in the Grid Code.

Representative: In relation to a party, means any duly authorized officer, employee, or agent of that party.

Residual Sub-transmission Assets: As defined in clause F(AIV)6.1 of these OATS Rules.

Security: As defined in the Grid Code.

Service Agreement: The contract entered into by the Transmission Provider/System Operator and each Transmission Customer in the form contained in Annex 1 to these OATS Rules and shall incorporate the Connection Agreement and Amended Connection Agreement as defined in the Grid Code. The Service Agreement shall bind the Transmission Customer to these OATS Rules. All Existing Agreements shall be deemed to be Service Agreements as per Rule A22 to this Module A.

Service Application: A request for a new Service Agreement or modification to an existing Service Agreement by a prospective or an existing Transmission Customer prepared in the format outlined in Annex I to these OATS Rules. Once completed and executed by the Transmission Provider/System Operator and the Prospective Transmission Customer, the Service Application becomes the Service Agreement.

SCADA: Acronym for Supervisory Control and Data Acquisition, as defined in the Grid Code.

Service Commencement Date: The execution date of a Service Agreement.

Spinning Reserve Service: See Contingency Reserve.

Spot Market Commencement Date: As defined in the WESM Rules or such other date as determined by the ERC.

Start-up Service: The supply of Available Transmission Capacity and Electricity to a generating unit in preparation for its commissioning and/or synchronization to the Grid from a shutdown condition.

System Operator: As defined in the Grid Code.

System Impact Study (SIS): An assessment made or conducted by the Transmission Provider/System Operator in addition to the Grid impact studies prepared by it in accordance with the Grid Code, to determine: (i) the adequacy of the Transmission System and its capability to accommodate a request for Power Delivery Service; and (ii) the costs, if any, that may be incurred in order to provide Power Delivery Service to a Transmission Customer.

Trading Participants: As defined in the WESM Rules.

Transmission Constraint: A limitation of the Available Transmission Capacity of the Grid to convey electricity caused by limitations in the capability of available assets forming the Grid or limitations in the performance of the integrated Power System.

Transmission Customer: Any party purchasing and/or receiving any services from the Transmission Provider or System Operator including, for the avoidance of doubt, Electric Power Industry Participant (as defined in the EPIRA) or WESM Participant (as defined in the WESM Rules) who are customers taking service without an existing contract. This includes Connected Transmission Customers and Prospective Transmission Customers.

Transmission Customer Obligations: Actions or processes that the Transmission Customer shall comply with as part of these OATS Rules.

Transmission Customer Rights and Privileges: Actions or processes that the Transmission Provider shall comply with as part of these OATS Rules.

Transmission Provider: The party that operates the high voltage backbone Transmission System and has the responsibilities of the Transmission Provider's facilities as specified in the Grid Code and WESM Rules.

Transmission System: As defined in the Grid Code, Transmission System has the same meaning as Grid.

Transient Voltages: As defined in the Grid Code.

TWRG : Transmission Wheeling Rate Guidelines promulgated by the Energy Regulatory Commission.

Voltage Fluctuation: As defined in the Grid Code.

Voltage Unbalance: As defined in the Grid Code.

Voltage Variation: As defined in the Grid Code.

Willful Action or Misconduct: An action taken or not taken by a Participant, which action is knowingly or intentionally taken or failed to be taken, with intent that injury or damage would result therefrom or which action is wantonly reckless. Willful Action or Misconduct does not include any act or failure to act which is involuntary, accidental, or negligent.

Wholesale Electricity Spot Market (WESM): The electricity market established by the Department of Energy pursuant to Section 30 of the Electric Power Industry Reform Act of 2001 (R.A. No. 9136).

WESM Metering Service Provider: as defined in the Guidelines for the Issuance of Certificate of Authority for WESM Metering Service Providers dated May 31, 2006 or as approved by the ERC.

WESM Rules: The Rules and regulations promulgated and agreed upon by the Participants of the WESM and approved by the Department of Energy to govern the WESM procedures and operations.

A1 Defined Terms and Interpretation (continued)

Except to the extent that the context requires otherwise in these OATS Rules:

- (a) headings are inserted for convenience only and shall be ignored in construing these OATS Rules;
- (b) the singular includes the plural and vice versa;
- (c) references to individuals include companies and other corporations and vice versa;
- (d) references to any legislation or to any provision of any legislation (including regulations and orders) includes that legislation or provision as from time to time amended, re-enacted or substituted and any statutory instruments, regulations and orders issued under any such legislation or provision;
- (e) a reference to any document includes reference to that document (and, where applicable, any of its provisions) as amended, novated, supplemented, or replaced from time to time;
- (f) reference to a party, person or entity includes:
 - (i) an individual, partnership, firm, company, corporation, association, trust, estate, state or agency of a state, government or government department or agency, municipal or local authority and any other entity, whether or not incorporated and whether or not having a separate legal personality; and
 - (ii) an employee, agent, successor, permitted assign, executor, administrator and other representative of such party, person or entity;
- (g) "written" and "in writing" include any means of reproducing words, figures or symbols in a tangible and visible form;
- (h) where any word or expression is defined in these OATS Rules any other grammatical form of that word or expression has a corresponding meaning;
- (i) reference to a section, clause, subclause or schedule is a reference to that section, clause, subclause or schedule in these OATS Rules unless specifically stated otherwise;
- (j) reference to monetary amounts, money or money's worth are to Philippine pesos unless specifically stated otherwise;
- (k) references to times of day or dates are to Philippines' times and dates respectively unless in each case specifically stated otherwise; and
- (l) words and expressions defined or explained in the Grid Code shall (unless expressly defined or explained in these OATS Rules) have the same meaning in these OATS Rules.

A2 Effectivity

- A2.1 The amended or replaced OATS Rules shall take effect immediately upon publication in at least one (1) newspaper of general circulation, or the publication of the amended or replaced OATS Rules in the Government Gazette.
- A2.2 These OATS Rules may be amended or replaced from time to time according to the processes set out in A26. Following approval by the ERC, the amended or replaced OATS Rules shall be automatically binding on each Participant, defined in Rule A3.1 of this Module A.

A3 Applicability of these OATS Rules

- A3.1 These OATS Rules apply to:
- (a) Prospective Transmission Customers; and
 - (b) Transmission Customers; and
 - (c) the Transmission Provider; and
 - (d) the Transmission Provider acting as System Operator; and
 - (e) the Transmission Provider acting as WESM Metering Service Provider.
- (together "the **Participants**").

- A3.2 These OATS Rules are divided into the following modules:

- Module A - General Terms and Conditions
- Module B - Connections
- Module C - Power Delivery Service
- Module D - System Operator
- Module E - Metering
- Module F - Rates, Methodology, Billing and Methodology
- Annex 1 - Pro forma Service Application and Service Agreement

- A3.3 All Modules apply to the Transmission Provider/System Operator. This Module A applies to all Participants. Modules D and F apply to all Transmission Customers. Modules B and C apply to all Connected Transmission Customers. Module E applies to all Connected Transmission Customers prior to the Spot Market Commencement Date and after this date until such time that they choose an alternative WESM Metering Service Provider. This is summarised in the table below:

Table A3.3: OATS Module applicability for respective customers

Module	Participant	Transmission Customer	Connected Transmission Customer
A - General Terms and Conditions	Applicable	Applicable	Applicable
B - Connections			Applicable
C - Power Delivery Service		-	Applicable
D - System Operator		Applicable	Applicable
E - Metering		-	Applicable prior to Market Start. Applies after Market Start till alternative WESM Metering Service Provider is appointed.
F - Rates and Charges	Applicable	Applicable	Applicable

A3.4 In interpreting and complying with these OATS Rules, the Participants shall take into account that:

- (a) the Grid is used by multiple parties to convey electricity; and
- (b) the physical characteristics of electricity necessitate a degree of co-ordination to ensure quality and reliability in transmission of electricity.

A3.5 These OATS Rules set out the terms on which the Transmission Provider/System Operator shall:

- (a) connect a Transmission Customer to the Grid;
- (b) provide the following services to the Transmission Customer:
 - i. Power Delivery Service;
 - ii. Transmission Connection Service;
 - iii. Residual Sub-Transmission Service;
 - iv. System Operation Service; and
 - v. Metering Service.
- (c) perform the System Operator functions;
- (d) provide services related to management, procurement and dispatch of the Ancillary Services;
- (e) perform the Metering Service function; and
- (f) provide services to the Transmission Customer incidental to the above.

A4 Regulatory Filings

A4.1 Nothing in these OATS Rules limit the right of the Transmission Provider/System Operator to apply to the ERC for a change in rates, terms and conditions, or charges, or to apply to the Department of Energy or other lawful authority with regard to any regulation or relevant policy matters as may be provided under Applicable Law.

A5 Force Majeure

A5.1 Subject to A13.1(d) and A5.4 of this Module A, no Participant shall be considered in breach of its obligations under these OATS Rules if it is prevented from fulfilling its obligations under these OATS Rules due to a Force Majeure Event.

A5.2 A Participant claiming a Force Majeure Event shall:

- (a) give immediate notice to the Transmission Provider/System Operator by telephone, electronic mail, text message, facsimile or any other more reliable means upon the occurrence of a Force Majeure Event;
- (b) give written confirmation to the Transmission Provider/System Operator , either by courier or personal delivery, or as a last resort by registered mail, of the occurrence of the Force Majeure Event and provide full information concerning the Force Majeure Event including an estimate of the time likely to be required to overcome the event no later than three (3) Business Days after learning of the occurrence of the event;
- (c) use its best endeavors to resume performance of its obligations under these OATS Rules as soon as practicable;
- (d) take all commercially reasonable means to mitigate, minimize, correct and/or cure the effects of a Force Majeure Event as soon as practicable provided, however, that settlement of strikes or other labor disputes are completely within the sole discretion of the Participant affected by such strike or labor dispute;
- (e) exercise all reasonable efforts to mitigate or limit damage to the other Participants; and
- (f) provide prompt written notice to the Transmission Provider/System Operator of the cessation of the adverse affect of the Force Majeure Event on its ability to perform its obligations under these OATS Rules.

A5.3 Where the Transmission Provider/System Operator has received a notice or confirmation pursuant to Rule A5.2, or is itself claiming Force Majeure, it shall notify such other affected Participants within a reasonable time and by such manner as required in clause A5.2(a) and A5.2(b).

A5.4 No Force Majeure Event shall affect the obligation of a Transmission Customer to make payments to the Transmission Provider or System Operator as provided under Module F of these OATS Rules.

A6 Emergency situations

A6.1 Prior to the Spot Market Commencement Date, the Transmission Provider and all Transmission Customers shall comply with the instructions of the System Operator and provide all necessary information prior to, during, and following an emergency declared by the System Operator in accordance with the Grid Code.

A6.2 Subsequent to the Spot Market Commencement Date, the Transmission Provider and all Transmission Customers shall comply with the instructions of the System Operator and provide all necessary information prior to, during, and following an emergency declared by the System Operator in accordance with the Grid Code and the WESM Rules.

A6.3 Any action by the Transmission Provider or the System Operator in compliance with the emergency procedures provided in the Grid Code and WESM Rules shall not constitute a breach of the OATS Rules and except in the case of an act committed in bad faith or gross negligence, the Transmission Provider and System Operator shall not be liable for any loss incurred by a Transmission Customer as a result of that action.

A7 Liability and Indemnity

A7.1 Subject to Rules A7.2 to A7.4, the Transmission Provider/System Operator (together), and/or each Transmission Customer ("Indemnifying Party") shall be liable for, and shall indemnify, defend and hold harmless the other ("Indemnified Party") against any claim, loss or liability:

- (a) arising from any physical damage to public property, the environment or other third party asset where such damage arises from the operation of, or failure to operate, the Grid or a Connected Facility;
- (b) arising from third party personal injury and/or death (including, but not limited to, the Indemnified Party's employees, agents, contractors and subcontractors) resulting from the breach of these OATS Rules or any negligent act, negligent omission, or reckless misconduct of the Indemnifying Party or its employees, agents and contractors; or
- (c) suffered or incurred by the Indemnified Party as a result of a breach of these OATS Rules by the Indemnifying Party or any negligent act, negligent omission, or reckless misconduct of the Indemnifying Party or its employees, agents and contractors.

- A7.2 Notwithstanding Rule A7.1, the either party shall not be liable:
- (a) to the extent that any claim, loss or liability suffered or incurred by the other occurs as a result of a breach of this agreement;
 - (b) for any loss of profit, consequential loss or indirect loss suffered by the Indemnified Party; or
 - (c) for more than 25 million pesos to the Indemnified Party in relation to any event or series of events or for more than 50 million pesos in aggregate to the Indemnified Party over any 12 month period.
- A7.3 The Indemnified Party shall not be entitled to make a claim more than 12 months after the date on which it became aware or ought reasonably to have become aware of the event giving rise to that claim.
- A7.4 The Indemnified Party shall not make any claim whatsoever against the Indemnifying Party in relation to these OATS Rules except under this Rule A7.

A8 Creditworthiness

A8.1 **Credit Support.** The Transmission Customer shall, if requested by the Transmission Provider/System Operator, provide credit support or additional credit support in a form and on terms acceptable to the Transmission Provider/System Operator. Types of credit support that may be provided include:

- (a) a guarantee;
- (b) a letter of credit;
- (c) a charge over assets; or
- (d) a cash bond,

in each case (other than a cash bond) from a person acceptable to the Transmission Provider/System Operator. The Transmission Provider / System Operator shall publish a list of persons acceptable to it who can provide credit support and update this list on a semi-annual basis. Further the Transmission Provider / System Operator shall consider additional persons who can provide credit support who are proposed by the Transmission Customer or Prospective Transmission Customer, and shall provide feedback on acceptability within thirty (30) days of a written request for feedback on the proposal.

A8.2 **Application of Credit Support.** The Transmission Provider/System Operator may call on any credit support provided under Rule A8.1 and apply such credit support against amounts due under Module F of these OATS Rules and not paid within six (6) Business Days of the due date.

A9 Dispute Resolution Procedures

A9.1 Internal Dispute Resolution Procedures. If both parties agree, any dispute between a Prospective Transmission Customer or Transmission Customer and the Transmission Provider/System Operator ("Disputing Parties") in relation to these OATS Rules (excluding applications for rate changes or other changes to the Tariff, which shall be presented directly to the ERC, or dispute over System Operation WESM function) shall be referred to a designated senior representative of each Disputing Party for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days from referral (or such other period as agreed), such dispute will be referred to the ERC for resolution.

A9.2 Disputes over System Operator WESM functions to be dealt with under WESM Rules. In the event of a dispute over or an alleged breach of the System Operator's obligations under the WESM Rules, all Participants agree that such disputes or alleged breaches shall be dealt with exclusively through the processes set out in the WESM Rules.

A9.3 Disputes involving other Applicable Laws. Subject to A9.2, where a dispute involves more than one Applicable Law:

- (a) The ERC may, to such extent necessary for the resolution of the dispute, interpret the other Applicable Laws even if it does not have jurisdiction to enforce such Applicable Laws; and
- (b) The Parties who are in dispute will act in good faith to consolidate any dispute processes under different Applicable Laws to the greatest extent possible.

A10 Confidentiality

A10.1 General. The Participants undertake that they shall preserve the confidentiality of and shall not directly or indirectly reveal, report, publish, disclose or transfer Confidential Information received from the other party under these OATS Rules except:

- (a) in the circumstances and to the extent set out in the Grid Code, Distribution Code or the WESM Rules; and
- (b) where at the time of receipt by the Participant the Confidential Information is already in the public domain; or
- (c) where after the time of receipt by the Participant the Confidential Information enters the public domain, except where it does so as a result of a breach by the Participant of its obligations under this Rule A10 or a breach by any other person of any obligation of confidence to the party which is not the Participant and the Participant is aware of such breach; or

- (d) where the Participant is required:
 - (i) by any statutory or regulatory obligation, body or authority; or
 - (ii) by any judicial or arbitration process; or
 - (iii) by the regulations of any stock exchange upon which the share capital of the Participant or the other party (or either of their holding company) is from time to time listed or dealt in.

A10.2 Notification. The Participant shall promptly notify the disclosing party if it receives notice or otherwise concludes that the production of any of that party's Confidential Information is being sought under any provision of law or regulation, but the Participant shall have no obligation to oppose or object to any attempt to obtain such production except to the extent it is requested to do so by the disclosing party and at the disclosing party's expense. If either party desires to object or oppose such production, it shall do so at its own expense. The disclosing party may seek appropriate injunctive relief to prevent any Confidential Information from being made public.

A10.3 Use of Information or Documentation. The Participant may utilise information or documentation furnished by the disclosing party in any proceeding or in an administrative agency or court of competent jurisdiction addressing any dispute arising under the Rules, subject to a confidentiality agreement with all participants (including, if applicable, any arbitrator) or a protective order.

A11 Assignment

A11.1 Assignment of Rights and Obligations. Subject to the terms of this Rule A11, the Transmission Provider/System Operator or any Transmission Customer (the "Assigning Party") may, with notice to:

- (a) the Transmission Provider/System Operator where the Assigning Party is a Transmission Customer; or
- (b) all other Participants where the Assigning Party is the Transmission Provider/System Operator;

assign, novate, pledge, or transfer all or any part of, or any right or obligation under, these Rules and any Service Agreement to any person or entity:

- (i) with which the Assigning Party is merged or consolidated; or
- (ii) to which the Assigning Party sells, transfers, or assigns all or substantially all of its facilities or rights thereto subject to these Rules;

(the "Successor Party"), provided that the Successor Party provides a valid and binding written assurance of the Successor Party's ability to perform and

assume all the obligations of the Assigning Party under these Rules and any Service Agreement.

A11.2 Assignment for Security Purposes. Any Participant may pledge or assign all or any portion of its facilities covered by these Rules for financing purposes without the other Participants' consent but must provide prior written notice to:

- (a) the Transmission Provider/System Operator where the Assigning Party is a Transmission Customer; or
- (b) all other Participants where the Assigning Party is the Transmission Provider/System Operator.

A11.3 Effectivity of Permitted Transfer

- (a) **Assumption of Rights and Obligations.** Upon the effective date of a permitted assignment, novation, pledge or transfer under this Rule A11, the Successor Party shall be deemed to be a Participant and shall automatically take the place of the Assigning Party including the assumption of all of its rights and obligations under these Rules and any Service Agreement.
- (b) **No Additional Rights.** No additional rights or obligations shall arise as a result of an assignment, novation, pledge or transfer under this Rule A11.
- (c) **Surviving Obligations.** In the event of any permitted assignment, novation, pledge or transfer, the Assigning Party shall to the extent of the transferred or assigned obligations, and only to such extent, be relieved of obligations accruing from and after the effective date. However, the Assigning Party shall not be relieved of any liability that occurred before the effective date.

A11.4 Successors and Assigns. These Rules are binding on the Participants and their respective successors, permitted assigns and legal representatives.

A12 Notices

A12.1 Unless otherwise specified, every notice to be given under, or in connection with, these OATS Rules shall be given in writing in English and delivered to the addresses specified in the Service Agreement. If a written notice of change of address has been given to the other party, then the notice shall be delivered to the new address. Delivery of notices shall be by:

- (a) Hand delivery;
- (b) Mailing by pre-paid registered airmail post, and shall be deemed to be received by the addressee on the date indicated in the return card;

- (c) Facsimile transmission, and shall be deemed to be given at the time specified in the facsimile transmission report of the facsimile from which the transmission was made which evidences full transmission, free of errors, to the facsimile number of the party given notice unless that party proves that, contrary to the transmission report, it was not transmitted, or it was not transmitted in a complete and legible state, to that party's facsimile; or
- (d) E-mail (or electronic mail) transmission, shall be deemed to be given at the time specified in the e-mail 'read receipt' (which can be requested from most e-mail systems) from which the e-mail was made which evidences full transmission, free of errors, to the e-mail address of the party given notice unless that party proves that, contrary to the read receipt, it was not transmitted, or it was not transmitted in a complete and legible state, to that party's e-mail. But only where the e-mail addresses of the sending and receiving persons have been previously agreed, and backup addresses (one for each party) have also been previously agreed, and at least one of the receiving persons received the e-mail.

A13 Default and Termination

A13.1 Termination Events. Without prejudice to the imposition of other/additional administrative sanctions as the Transmission Provider/System Operator may provide, the Transmission Provider/System Operator may give notice to the Transmission Customer terminating its Service Agreement (if any), if any of the following shall occur:

- (a) A Transmission Customer fails to pay any amount due and owing to the Transmission Provider/System Operator under these OATS Rules, and the default has not been remedied prior to the expiry of six (6) Business Days following receipt by the relevant Transmission Customer of notice of such non-payment; or
- (b) A Transmission Customer fails in any other material respect to perform or comply with any of its obligations under these OATS Rules and (if the failure is capable of remedy) it is not remedied to the reasonable satisfaction of the Transmission Provider/System Operator within six (6) Business Days of receiving a notice of the failure and requiring it to be remedied; or
- (c) A Transmission Customer:
 - (i) becomes subject to any distress, attachment, execution or other legal process levied, enforced, sued out on or against any material part of its property which is not discharged or stayed within 14 days; or

- (ii) has a receiver appointed or consents to the appointment of a receiver, trustee or liquidator to the whole or any substantial part of its undertaking, property or assets; or
 - (iii) files a voluntary petition for bankruptcy, insolvency, reorganization or relief from its creditors or have an involuntary petition for bankruptcy, insolvency or reorganization filed against it, or proposes or makes a general assignment, or an arrangement or composition with or for the benefit of its creditors; or
 - (iv) is removed from the register of companies, except where removal from the register is pursuant to a merger or consolidation under the Philippine Corporation Code or any other Applicable Law, or an application for an order is made, or an effective resolution is passed, for its liquidation; or
 - (v) fails to be a party to a Service Agreement with the Transmission Provider/System Operator, or other arrangement, to enable it to be connected to the Grid , within otherwise agreed between the time frames specified by these OATS Rules, or otherwise agreed between the Transmission Customer and the Transmission Provider/System Operator; or
- (d) A Transmission Customer claims the benefit of one or more Force Majeure Events for either 15 consecutive days or for more than a total of 30 days in any 12 month period.

A13.2 **Termination.** Upon the expiry of the notice given by the Transmission Provider under Rule A13.1, the Transmission Customer shall immediately cease use of the Transmission Provider's facilities and the Transmission Provider may immediately disconnect the Transmission Customer. The Transmission Customer shall comply with the Transmission Providers' reasonable directions in relation to the disconnection of equipment.

A13.3 **Suspension.** Where the Transmission Provider/System Operator has the right to terminate the Transmission Customer's Service Agreement and participation under Rule A13.1, it may as an interim measure suspend the provision of services to that Transmission Customer under these OATS Rules. Notice of such suspension shall be included in the notice served by the Transmission Provider in Rule A13.1.

A13.4 **Termination by notice.** A Transmission Customer may terminate its Service Agreement under these OATS Rules on six (6) months written notice and shall comply with the Transmission Provider's reasonable directions in relation to the disconnection of equipment.

A14 Survival

A14.1 The following sections shall survive termination of these OATS Rules either in relation to a particular Participant or in their entirety:

- (a) Rule A10 (Confidentiality); and
- (b) Rule A7 (Liability and Indemnity).

A15 Relationship between the parties

A15.1 Nothing in these OATS Rules shall create, constitute or evidence any partnership, joint venture, agency, trust or employer / employee relationship between any of the Participants, and a Participant may not make, or allow to be made, any representation that any such relationship exists. No Participant shall have any authority to act for, or to incur any obligation on behalf of, any other party, except as expressly provided in these OATS Rules.

A16 Entire Agreement

A16.1 These OATS Rules and the Service Agreements constitute the entire agreement, understanding and arrangement (express and implied) between the Transmission Provider/System Operator and each Transmission Customer relating to the subject matter of these OATS Rules and supersede and cancel any previous agreement, understanding and arrangement relating thereto, whether written or oral.

A17 Governing Law

A17.1 These OATS Rules are governed by the laws of the Philippines.

A18 Waiver

A18.1 Any delay, failure or forbearance by a party to exercise (in whole or in part) any right, power or remedy under, or in connection with, these OATS Rules shall not operate as a waiver of such right, power or remedy. A waiver of any breach of any provision of these OATS Rules shall not be effective unless that waiver is in writing, signed by the party by whom it is given. A waiver of any breach shall not be, or be deemed to be, a waiver of any other or subsequent breach.

A19 Non-Merger

A19.1 The provisions of these OATS Rules and any act, matter or thing done in connection with, or in connection with any other agreement, instrument, document, judgement or order of any court, or in connection with the expiry or earlier termination of these OATS Rules, shall not operate as a merger of any of the rights, powers or remedies of any of the parties under, or in connection with, these OATS Rules or at law, and those rights, powers and remedies shall survive and continue in full force and effect to the extent that they are unfulfilled or are not exhausted.

A20 Severability

A20.1 If any section is, or becomes unenforceable, illegal or invalid for any reason it shall be deemed to be severed from these OATS Rules without affecting the validity of the remainder of these OATS Rules or their enforceability, legality or application.

A21 Service Agreements

A21.1 All Prospective Transmission Customers shall apply to enter into a Service Agreement with the Transmission Provider by completing the pro-forma Application Form/Service Agreement provided as Annex I to these OATS Rules.

A21.2 Each application shall:

- (a) outline the specific services sought by the Prospective Transmission Customer under Modules B, C, D, and E; and
- (b) be accompanied by a non-refundable processing fee, unless otherwise agreed with the Transmission Provider/System Operator, and such fee shall comply with the cost recovery provisions of the TWRG as an Excluded Service.

A21.3 An existing Transmission Customer may seek changes to a Service Agreement by submitting a further Service Application to the Transmission Provider/System Operator containing all information reasonably required by the Transmission Provider. To the extent such changes are covered by the Service Application, the existing Transmission Customer shall likewise be deemed a Prospective Transmission Customer.

A21.4 The Prospective Transmission Customer shall provide the Transmission Provider with as much advance notice as reasonably practicable when seeking a new Service Agreement or a modification to its Service Agreement.

A21.5 The Transmission Provider/System Operator shall make every reasonable effort to assist the Prospective Transmission Customer in preparing and, if necessary, revising an application submitted by a Prospective Transmission Customer in order to comply with the Grid Code, the Distribution Code, and these OATS Rules.

A21.6 The Transmission Provider shall use its reasonable endeavors to accommodate changes to the Service Agreement sought by the Transmission Customer where such changes shall not require a Grid Upgrade and are consistent with the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules. Changes to a Service Agreement which necessitate capital expenditure on shared Grid facilities which has not been approved by the ERC at the previous regulatory reset under the TWRG,

where such approval is required by the EPIRA, shall be at the discretion of Transmission Provider, provided that such approvals shall be sought at the subsequent regulatory reset.

- A21.7 Unless the Transmission Provider and the Prospective Transmission Customer agree to a different time frame, the Transmission Provider shall acknowledge a Service Application within 15 days of receipt. If the Service Application fails to meet the requirements of these OATS Rules or the Grid Code, the Transmission Provider shall also notify the Prospective Transmission Customer and specify the reasons for such non-compliance, by this time. In the event the Application is non-compliant, the Prospective Transmission Customer may then submit a revised application within 15 further days from the date they receive such notice from the Transmission Provider otherwise their Service Application shall be deemed to be withdrawn.
- A21.8 Except in the case of an End-user, the Transmission Provider and the Prospective Transmission Customer shall execute a Service Agreement within 30 days from the Prospective Transmission Customer's receipt of notice of the approval of the Service Application by the Transmission Provider, or completion of the relevant SIS or Facilities Study as outlined in Module B, as appropriate. If the Service Agreement is not executed within this period, the application shall lapse and be deemed to be withdrawn.
- A21.9 In the case of an End-user, once it has received the notice of the approval of the Service Application by the Transmission Provider, including the completion of the relevant SIS or Facilities Study as outlined in Module B, as appropriate, the draft Service Agreement shall be submitted in a joint application to the ERC for approval. Such approval can only be provided following public hearing processes which allow the franchised Distribution Utility an opportunity to be heard on the application thereof, and from such a public hearing it is established that said franchised Distribution Utility is incapable or unwilling to match the reliability and the charge offered by the Transmission Provider for connection to the Grid.
- A21.10 A draft Service Agreement between an End-user and the Transmission Provider cannot be signed and implemented unless it incorporates any amendments required by the ERC approval.
- A21.11 Once the Transmission Provider and Transmission Customer have signed a Service Agreement, both parties shall use their reasonable endeavors to complete their obligations and commitments for implementing the Service Agreement within the times agreed between the parties.
- A21.12 In the event that the Transmission Provider is required to provide new Facilities or Grid Upgrades to meet its obligations under the new or modified Service Agreement, the Transmission Customer shall provide the Transmission Provider with a letter of credit in the form specified in Module A to these OATS Rules before the Transmission Provider commences the necessary work, if requested to do so by the Transmission Provider.

A22 Transitory Arrangements

- A22.1 All contracts existing between the Transmission Provider/System Operator and a party subject to the Grid Code at the date these OATS Rules become effective pursuant to Rule A2.1 (the "Existing Agreements") shall continue to be in force and effect.
- A22.2 Each Existing Agreement shall be deemed to be a Service Agreement under the OATS Rules and accordingly the parties to each Existing Agreement will be bound by these OATS Rules as if the Existing Agreement was a Service Agreement entered pursuant to these OATS Rules to the extent that the OATS Rules do not impair the obligations arising from the Existing Agreements.
- A22.3 The parties to each Existing Agreement will enter into a replacement Service Agreement when the Existing Agreement is due to expire by following the process set out in Rule A21 for Participants seeking to be Transmission Customers. The Transmission Provider/System Operator shall endeavor to ensure that the replacement Service Agreement is entered into on or before the date on which the Existing Agreement expires.
- A22.4 Notwithstanding Rule A22.1 and Rule A22.2 each Existing Agreement will be deemed to be amended at the Spot Market Commencement Date so that the Transmission Provider/System Operator and the Transmission Customer are bound by Rules D1.2 and C5.4.
- A22.5 The parties to each Existing OATS Agreement or Service Agreement will incorporate any amendments to the OATS Rules into that Service Agreement, where the OATS Rules are modified and subsequently approved by the ERC. These amendments shall be modified by the Transmission Provider only in a manner which incorporates the amendments approved by the ERC, unless the Transmission Provider or the Transmission Customer seek other changes to the Service Agreement, which shall be addressed by following the process set out in Rule A21 for Participants seeking to be Transmission Customers. The Transmission Provider/System Operator shall endeavor to ensure that the replacement Service Agreement incorporates the approved changes in the OATS Rules from the date of effectivity of ERC's approval.

A23 Transmission Provider/System Operator's obligations to the Grid Management Committee

- A23.1 The Transmission Provider and the System Operator shall fund the operations of the GMC and its subcommittees.

A24 Transmission Provider/System Operator's obligations to the Market Operator

A24.1 The Transmission Provider and the System Operator shall provide information as requested by the Market Operator and which is required by the Market Operator to fulfil its functions under the WESM Rules.

A25 Prudent Operator

A25.1 The Transmission Provider/System Operator shall act as a reasonable and prudent operator in relation to the performance of its obligations under the Grid Code, these OATS Rules and, subsequent to the Spot Market Commencement Date, the WESM Rules.

A26: Review of OATS Rules

A26.1 For the first Regulatory Period, the Transmission Provider / System Operator shall review the OATS Rules once each year and:

- (i) Invite submissions of changes on the OATS Rules from Transmission Customers;
- (ii) Consider any submissions received from Transmission Customers;
- (iii) Recommend in an objective manner to the ERC such change to the OATS Rules as the Transmission Provider thinks appropriate.

A26.2 For the second and subsequent Regulatory Periods, the ERC may choose to initiate amendments to the OATS Rules at any time. Such course of action may result from the ERC's observation of the operation of the OATS Rules or through complaints submitted to it from Transmission Customers.

A26.3 In addition, the Transmission Provider / System Operator may apply for amendments to the OATS Rules, but only once each Regulatory Period.

A26.4 Where the Transmission Provider / System Operator seeks to amend the OATS Rules, the following process shall be used. The Transmission Provider / System Operator shall:

- (i) Invite submissions on amendments to the OATS Rules from Transmission Customers;
- (ii) Consider any submissions received from Transmission Customers; and
- (iii) Recommend, through application to the ERC, such amendments to the OATS Rules as the Transmission Provider thinks appropriate, and a summary of the submissions it does not think are appropriate.

A26.3 Following receipt of Transmission Provider/System Operator recommendation on amendments to the OATS Rules, ERC shall follow its procedure leading to its approval of amended OATS Rules.

Module B: Connections to the Grid

Section I: Existing Connections to the Grid

B1 Right to remain connected and disconnect

- B1.1 A Connected Transmission Customer may continue to connect and may disconnect its existing Facilities to the Transmission System subject to the rules contained in this Module B of these OATS Rules.
- B1.2 Contract specific charges, including termination charges, may be payable should a Transmission Customer disconnect its facilities. Any such charges will be set out in the Service Agreement.

B2A Identification of Connection Facilities, Connection Point(s), and Metering

- B2A.1 Each Connected Transmission Customer's Connection Point(s) (including location and all related equipment) shall be listed in Schedule E to the Service Agreement.
- B2A.2 The location of all metering devices at the Connection Point(s) and any necessary adjustment factors if the location of a metering device is not at the Connection Point, shall also be listed in Schedule E to the Service Agreement.
- B2A.3 The Connection Facilities of the Transmission Provider and each Connected Transmission Customer shall be identified in the asset boundary single-line diagram attached as Schedule F to the Service Agreement in accordance with the Grid Code and these OATS Rules.

B2B Identification, Operation, Control and Maintenance of Facilities Performing Grid Functions

- B2B.1 In the circumstance where Connection Facilities perform grid function, the asset boundary single-line diagram attached as Schedule F to the Service Agreement, shall also identify the Connected Transmission Customer Facilities that primarily perform grid functions as defined in B2B.3. The Transmission Provider and the Connected Transmission Customer must agree on which of the Connected Transmission Customer's Facilities perform grid function.
- B2B.2 In the circumstance where Transmission Customer Facilities perform grid function, the single-line diagram attached as Schedule F to the Service Agreement, shall identify the Transmission Customer Facilities that primarily perform grid functions as defined in B2B.3. The Transmission Provider and the Transmission Customer must agree on which of the Transmission Customer's Facilities perform grid function.

B2B.3 In circumstances where either an existing Connected Transmission Customer or an existing Transmission Customer owns facilities that primarily perform functions necessary to maintain the integrity, security and safety of the grid, the Connected Transmission Customer or the Transmission Customer shall transfer operation, control and ownership of such assets to the Transmission Provider. Such facilities shall be treated as a Contribution in Aid of Construction and shall not form part of the Transmission Providers Regulatory Asset Base.

B3 Safety, Power Quality and Reliability

B3.1 The Transmission Provider and each Connected Transmission Customer shall ensure that all Equipment that each Participant provides at a Connection Point shall comply with Good Industry Practices, the Grid Code and the Philippine Electrical Code, and for Load Customers, the Distribution Code.

B3.2 The Transmission Provider and each Connected Transmission Customer shall operate and maintain their Connection Facilities and other Facilities in a safe and efficient manner and in accordance with Good Industry Practice and the Grid Code (including but not limited to the voltage performance and harmonics standards) and, for Load Customers, the Distribution Code.

B4 Data Requirements

B4.1 Each Connected Transmission Customer shall provide any data, reports, forecasts, and specific information regarding the electrical characteristics of their Facilities as specifically required under these OATS Rules and the Grid Code or as requested by the Transmission Provider, acting reasonably, to enable it to meet its obligations under the Grid Code and these OATS Rules.

B5 Communication and SCADA Equipment Requirements

B5.1 **Communication Equipment for Monitoring and Control.** Subject to B5.5 through to B5.10, the Transmission Provider shall provide all communication equipment required for monitoring and controlling the Connection Point and Generation Facilities, in accordance with the Grid Code. The Connected Transmission Customer shall provide, at its own cost, appropriate reasonable space and access for the installation of the required facilities for this purpose.

B5.2 **Real Time Telemetry and Data.** The Transmission Provider/System Operator shall select the Connected Transmission Customer's real time telemetry and data to be received by the Transmission Provider's Control Centers, as the Transmission Provider/System Operator acting reasonably deems necessary for reliability, security, efficiency, and/or monitoring of system operations. This telemetry shall include, but not be limited to the following at any of the Connected Transmission Customer's Connection Facilities:

- (a) Line flows (MW & MVAR), voltages, currents, frequency, and, breaker status.
 - (b) For Generation Customers, generator output (MW & MVAR).
 - (c) For Load Customers, loads (MW & MVAR).
- B5.3 **Remote Control Functions.** The Transmission Provider, in agreement with the Connected Transmission Customer, shall determine the remote control functions as required, including but not limited to circuit breaker control (open/close) and, for Generation Customers, Automatic Generation Control (AGC), from the Connected Transmission Customer.
- B5.4 **SCADA Facilities.** The Transmission Provider shall provide the SCADA facilities set out in the Grid Code and additional SCADA facilities as agreed with the Connected Transmission Customer and recorded in the Service Agreement, unless the Transmission Provider and Connected Transmission Customer agree otherwise.
- B5.5 **Facilities to Interface SCADA.** The Connected Transmission Customer shall be responsible for the installation and maintenance of all necessary facilities to interface with the Transmission Provider's SCADA system.
- B5.6 **Telecommunications Facilities to Link Station(s) to Existing Telecommunications Network.** The Connected Transmission Customer shall be responsible for providing all telecommunication facilities necessary to link/connect its station(s) to the existing telecommunication network of the Transmission Provider. In particular, this obligation includes providing radio and/or an optical link of appropriate bandwidth to accommodate the communication requirements stated in these OATS Rules from the Connected Transmission Customer to the nearest or most feasible telecommunication node within the Transmission Provider's telecommunication network. Such telecommunication facilities provided by the Connected Transmission Customer could include facilities it leases, hires or rents from existing telecommunications companies, provided such facilities meet the technical quality and reliability specifications required by the Transmission Provider to meet the provisions of the Grid Code.
- B5.7 **Telecommunication Network Extension.** Connected Transmission Customers shall provide all required multiplexers, channel interfaces, signalling and terminating equipment, relay facilities (where necessary), power supply, supervisory functionality and other pertinent accessories from its Facilities to the telecommunication node of the Transmission Provider. Such network extension(s) shall conform to telecommunication and data-communication standards as well as reliability thresholds in use by the Transmission Provider. Such telecommunication facilities provided by the Connected Transmission Customer could include facilities it leases, hires or rents from existing telecommunications companies, provided such facilities meet the technical quality and reliability specifications required by the Transmission Provider to meet the provisions of the Grid Code.

- B5.8 **Right-of-Way Requirements.** The Connected Transmission Customer shall be responsible for any right-of-way requirements necessary to establish any network extension required under Rule B5.7.
- B5.9 **Tele-protection paths.** The Connected Transmission Customers shall provide redundant tele-protection paths between its station and the adjacent substations of the Transmission Provider, by using either of the following:
- (a) Power Line Carrier and Microwave Radio; or
 - (b) Optical Fiber and Microwave Radio.
- B5.10 **Telecommunication Links.** The Transmission Provider shall be responsible for linking the Transmission Customer's telecommunication systems with the Transmission Provider's telecommunication systems in accordance with the Grid Code.
- B5.11 **Additional Signalling and Communication Equipment.** The Connected Transmission Customer shall be responsible for all additional signalling and communication equipment necessary for grid protection in accordance with the Grid Code arising from the connection of the Connected Transmission Customer's Facility to the Grid.
- B5.12 **Transmission Customer may seek provision by Transmission Provider.** The Transmission Customer may seek the agreement of Transmission Provider/System Operator for the Transmission Provider/System Operator to provide some or all of the facilities specified in B5.5, B5.6, B5.7, B5.8, B5.9, and B5.11, subject to the Transmission Customer agreeing to pay the required costs or charges.

B6 Protection Arrangements

- B6.1 **Respective responsibility for Protective Devices.** The Transmission Provider and each Connected Transmission Customer shall be solely responsible for their Equipment at Connection Point and shall ensure that such Equipment is protected in accordance with the Grid Code and that their Protective Devices meet the standards set out in the Grid Code.
- B6.2 **Installation of new Protective Devices.** The Transmission Provider and Connected Transmission Customers may install, upgrade, operate and maintain Protective Devices to separate the Connected Transmission Customer's Facility from the Transmission System sufficiently to avoid injury or damage, and to comply with the Grid Code at all times; provided that the Transmission Provider and the Connected Transmission Customer shall install, operate and maintain their own Protective Devices in accordance with the Grid Code. The Transmission Provider and the Connected Transmission Customer shall give prior written notice to the other of all such Protective Devices that it intends to install and/or upgrade, and of the settings of such devices.

B6.3 **Fault Clearance Time.** The applicable Fault Clearance Time shall be specified in the Service Agreement within the parameters set by the Grid Code.

B7 Critical Events List

B7.1 **Exchange of Lists.** Promptly after executing a Service Agreement, the Transmission Provider and the Connected Transmission Customer shall, after consultation, provide to the other its Critical Events List. A Participant may amend its Critical Events List from time to time, in consultation with the other.

B7.2 **Prompt Notification.** If the Transmission Provider or Connected Transmission Customer experiences an event on its Critical Events List, it shall promptly notify the other by the quickest means possible.

B8 Contingency Procedures

B8.1 **Prompt notification of Contingency.** The Transmission Provider and each Connected Transmission Customer shall provide the other with prompt verbal notification by telephone of any Contingency involving their Facilities or Connection Facilities that may reasonably be expected to affect the other's operation of its Facilities or Connection Facilities. This notification shall indicate the reasons for the Contingency, the Contingency's expected effect on the operation of the other party's Facilities and operations, the Contingency's expected duration, and the corrective action to be taken. Telephone notification shall be followed by written notification by the close of business hours the next day.

B8.2 **Contingency Actions.** The Transmission Provider and the Connected Transmission Customer shall agree on a mutually acceptable set of specific actions that the Transmission Provider and the Connected Transmission Customer shall take in response to a Contingency and record these in the Service Agreement.

B8.3 **Access to each other's Connection Facilities.** The Transmission Provider and each Connected Transmission Customer may open and/or disconnect the Connection Facilities of the other party in the event of, and for the duration of, any Contingency, if such opening or disconnection would reasonably be expected to mitigate or remedy the Contingency in accordance with Good Industry Practice and the Grid Code. A Participant exercising this right shall notify the other party of their actions in accordance with B8.1.

B9 Property access

B9.1 **Access Rights.** Unless otherwise agreed, the Transmission Provider and each Connected Transmission Customer agree to grant the other and its agents and subcontractors such access to its Facilities and Connection Facilities as is necessary and appropriate, both parties acting reasonably, for the

construction, installation, testing, operation and maintenance of the first Participant's own Facilities and Connection Facilities (including any Protective Devices), in accordance with the terms and provisions of the Grid Code, Distribution Code and these OATS Rules.

B9.2 Procedure. When exercising the access rights outlined in Rule B9.1 above, the Transmission Provider and the Connected Transmission Customer shall:

- (a) Provide the other party with as much advance notice as is appropriate under the circumstances;
- (b) Not unreasonably disrupt or interfere with the normal operations of the business of the other party;
- (c) Adhere to the safety rules and procedures established by the other party; and
- (d) Act consistent with Good Industry Practice.

B10 Transformer Connection and Grounding

B10.1 High-Voltage Connection. If the Connected Transmission Customer's Equipment is connected to the Grid at a voltage that is equal to or greater than 115 kV, the Connected Transmission Customer shall ensure the high-voltage side of the transformer shall be connected in accordance with the Grid Code.

B10.2 Technical Requirements. The Connected Transmission Customer shall ensure that its Equipment meets the following connection and grounding requirements for the low-voltage side of the transformer:

- (a) At nominal voltages of 115 kV and above, the Grid shall be effectively grounded with an Earth Fault Factor of less than 1.4.
- (b) At nominal voltages below 115 kV, the grounding requirements and the applicable Earth Fault Factor at the Connection Point shall be specified by the Transmission Provider.

B11 Generation Customer's Requirements

B11.1 Generation Facility to be Synchronized. Each Generation Customer shall be responsible for ensuring that whenever the Generation Facility is brought on-line, the Facility is synchronized to the Grid before actual connection to the Grid and remains so synchronized once connected to the Grid.

B11.2 Automatic Voltage Regulators. Each Generation Customer shall operate its Generation Facility with automatic voltage regulators consistent with the applicable provisions of the Grid Code and Good Industry Practice. The automatic voltage regulators shall control voltage at the Connection Point

when the Generation Facility is operating within the voltage range schedule provided by the Transmission Provider to the Generation Customer. This voltage range may be revised from time to time by the Transmission Provider, provided the voltage schedule remains within the Generation Facility's operating limits and consistent with Good Industry Practice. The Generator shall be compensated by the System Operator for any reactive power or VAR support provided by the Generation Facility in accordance with Module F.

B11.3 Voltage Requirements. Each Generation Customer shall ensure that its Generation Facility(s) meet the requirements laid out in the Grid Code.

B11.4 Power Factor. Every Generation Customer shall ensure its specified active power output is maintained with the power factor limits specified in the Grid Code.

B12 Load Customers' Requirements

B12.1 Operational Responsibilities. The Transmission Customer shall comply with the operational requirements as provided under Article 7.3.4 of the Grid Code and its amendments, if any.

B12.2 Power Factor. Every Load Customer shall maintain a power factor, within the limits of 0.85 lagging and unity power factor at its Connection Point(s).

Section II. New Points of Connection to the Grid or Modifications to Existing Connections to the Grid

B13 Applications for New Connection(s) including Connections to the Grid by End-users

B13.1 Applications. Subject to securing the approval of the Transmission Provider in the manner outlined in these OATS Rules and in accordance with the process set out in the Grid Code, a Prospective Transmission Customer may submit a Service Application to the Transmission Provider seeking:

- (a) A new Service Agreement for a first Connection Point; or
- (b) A modification to an existing Service Agreement,

B13.2 Approval of Transmission Provider and if applicable, the ERC, required before connection. A Prospective Transmission Customer seeking a new Connection Point or modification to their Connection Point shall secure the consent of the Transmission Provider to a change in their Service Agreement prior to making any changes to their Connection Point in the manner outlined in the Grid Code and these OATS Rules. Also, where necessary, a Prospective Transmission Customer shall notify its Generator about this new Connection Point, or a change or modification to the Connection Point, where required in its Contract for the Supply of Electric Energy. A Prospective Transmission Customer who is an End-user seeking a new Connection Point or modification to their Connection Point shall secure the approval of the ERC prior to making any changes to their Connection Point in the manner outlined in these OATS Rules.

B13.3 Compliance with process. The Transmission Provider and each Prospective Transmission Customer shall comply with the processes set out in these OATS Rules and the Grid Code for processing of new or modified connection arrangements.

B13.4 Service Application involving a New Connection. The Transmission Customer shall complete the Service Application contained in Annex I to these OATS Rules involving a new Connection Point, containing all necessary information for the provision of the required services. Prior to the Spot Market Commencement date for the applicable Grid, the Service Application shall include a request for Available Transmission Capacity at each Connection Point(s). Each service application shall be accompanied by a non-refundable processing fee, unless otherwise agreed with the Transmission Provider.

B14 Evaluation of Applications including Grid Impact Studies (GIS) and System Impact Studies (SIS)

- B14.1 Evaluation under the GIS.** The Transmission Provider shall develop and maintain a set of Grid Impact Studies for evaluating service applications in accordance with the Grid Code.
- B14.2 Determination whether SIS necessary.** After receiving the service application, the Transmission Provider shall determine on a non-discriminatory basis whether a specific System Impact Study (SIS) is necessary to process the application, in addition to the information already available from its own Grid Impact Studies and any previous System Impact Studies.
- B14.3 Agreement on Service Application or Offer of Service for SIS.** If the Transmission Provider agrees with the Service Application and considers no SIS is necessary, it shall so advise the Prospective Transmission Customer within thirty (30) days from receipt of the Service Application. If the Transmission Provider determines that a specific SIS is necessary in addition to that information already available as outlined in B14.2, it shall so inform the Prospective Transmission Customer within thirty (30) days from receipt of the service application by issuing an Offer of Service for SIS to the Transmission Customer.
- B14.4 Requirements of an Offer of Service for SIS.** The Transmission Provider shall specify clearly in the Offer of Service for SIS:
- (a) The scope of the study, including identification of whether any Transmission Constraints, re-dispatch options, additional Direct Assignment Facilities, or Grid Upgrades shall be required to provide the requested service.
 - (b) The estimated time for completion of the SIS and acknowledgement of the Transmission Provider's obligations under Rule B14.10 and Rule B14.12.
 - (c) The maximum charge, based on the Transmission Provider's estimate of the actual cost, exclusive of VAT.
- B14.5 Action on Offer of Service.** The Prospective Transmission Customer may:
- (a) accept the Transmission Provider's Offer of Service;
 - (b) respond with its own Offer of Service to the Transmission Provider whereby an independent third party undertakes the study; or
 - (c) reject the Transmission Provider's Offer of Service.
- B14.6 Notification of Acceptance or Non Acceptance of Offer of Service for SIS.** The Prospective Transmission Customer shall reply to the Transmission Provider's Offer of Service outlining its decision in relation to B14.5 (a) , (b) , or (c) within fifteen (15) days from receipt of any such offer.
- B14.7 Effect on Application.** If the Prospective Transmission Customer accepts the Transmission Provider's Offer of Service, it shall agree to advance funds for the Transmission Provider to conduct the required study. If the Prospective

Transmission Customer wishes to undertake the Study itself or commission an independent third party to do so, it shall provide an equivalent proposal outlining the matters contained in Rule B14.5 to the Transmission Provider within fifteen (15) days of the receipt of the Transmission Provider's Offer of Service. If the Prospective Transmission Customer rejects the Offer of Service, does not offer an alternative Offer of Service, or does not reply to the Offer of Service within fifteen (15) days, its application shall be deemed withdrawn.

- B14.8 Proposal to Undertake SIS.** Should the Prospective Transmission Customer propose to commission an independent third party to undertake the SIS, the Transmission Provider, acting reasonably, may consider such a request and shall respond within fifteen (15) days. An independent third party study shall only occur by agreement between the Transmission Provider and the Prospective Transmission Customer. Information required to undertake the study, will need to be provided to the third party under a confidentiality agreement. The results of the SIS shall be reviewed by the Transmission Provider subject to the corresponding fee, which is less than for a full SIS study undertaken by the Transmission Provider. Should the Transmission Provider not agree to the Prospective Transmission Customer's SIS proposal, then the Transmission Provider shall provide the Prospective Transmission Customer with a further fifteen (15) days to re-consider its initial Offer of Service or modification thereof. Should the Prospective Transmission Customer not respond to the Transmission Provider within these further fifteen (15) days, then its Service Application shall be deemed to be withdrawn.
- B14.9 Cost of SIS Study.** Unless otherwise agreed with the Transmission Provider, the Prospective Transmission Customer shall be responsible for the cost of any SIS.
- B14.10 Deposit for undertaking SIS.** Should the Prospective Transmission Customer agree to the Transmission Provider's Offer of Service for SIS, the Prospective Transmission Customer shall pay the deposit outlined in Module F to these OATS Rules.
- B14.11 Submission of Data for SIS Study.** The Prospective Transmission Customer shall submit the required data needed for the SIS as specified in the Service Application before the SIS is conducted.
- B14.12 Time Period for Completion of SIS.** The party responsible for providing the SIS shall use its reasonable endeavors to complete the required SIS within a sixty (60) day period of the agreement to an Offer of Service for an SIS unless otherwise agreed between the parties.
- B14.13 Reliance on existing GIS.** The Transmission Provider shall rely, to the extent reasonably practicable, on its existing GIS and information supplied by the Prospective Transmission Customer.
- B14.14 Notification of Extended Completion Date for SIS.** In the event that the party responsible for providing the SIS is unable to complete the SIS within

the time period specified or agreed in B14.12, it shall notify the other party and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required SIS.

B14.15 Provision of SIS Issues and Results. In undertaking or taking responsibility for the provision of the SIS, the Transmission Provider/Prospective Transmission Customer shall inform the other party of key issues arising from the SIS as they arise. Following the completion of the SIS, the party that undertook or commissioned the SIS shall provide the other party with a copy of the completed SIS results and related work papers as soon as is practicable thereafter and no later than 5 days after its completion.

B14.16 Notification of Adequacy of Grid. The Transmission Provider shall notify the Prospective Transmission Customer immediately upon completion of the SIS or no later than fifteen (15) days after receiving the copy of the SIS, if the Grid shall be adequate to accommodate all or part of the service application or if no costs are likely to be incurred for new Facilities or Grid Upgrades.

B15 Facilities Study

B15.1 Offer of Service for Facilities Study. If the SIS indicates that new Facilities or Grid Upgrades are needed to provide the requested services, the Transmission Provider shall tender to the Prospective Transmission Customer an Offer of Service for Facilities Study within thirty (30) days of completing the SIS, and shall allow the Prospective Transmission Customer fifteen (15) days to respond from the date of its receipt of the Offer of Service.

B15.2 Options for Prospective Transmission Customer in Undertaking Facilities Study. In responding to the Offer of Service provided by the Transmission Provider within the timeframe provided in B15.1, the Prospective Transmission Customer may decide to:

- (a) Undertake the Facilities Study itself and advise the Transmission Provider accordingly;
- (b) Contract with a third party and advise the Transmission Provider accordingly; or
- (c) Agree to the Offer of Service for Facilities Study from the Transmission Provider.

The Transmission Provider shall be bound by the Prospective Transmission Customer's decision in relation to (a), (b) or (c).

B15.3 Completion of Facilities Study. In the event that the Prospective Transmission Customer agrees to proceed with a Facilities Study and:

- (a) The Facilities Study is to be completed by the Prospective Transmission Customer, or by a third party contracted by the Prospective Transmission Customer, the Prospective Transmission Customer shall use its reasonable endeavors to ensure the Facilities

Study is completed within the period of time specified in the Offer of Service.

- (b) The Facilities Study is to be completed by the Transmission Provider, the Transmission Provider shall use its reasonable endeavors to ensure the Facilities Study is completed within the period of time specified in the Offer of Service.

B15.4 Cost of Facilities Study. The Prospective Transmission Customer shall be responsible for the cost of any Facilities Study.

B15.5 Submission of Data for Facilities Study. Where the Transmission Provider is undertaking the Facilities Study, the Prospective Transmission Customer shall submit the data needed for the Facilities Study, as specified in the Service Application, before the Facilities Study is conducted.

B15.6 Notification of Additional Time to Complete Facilities Study. Where the Transmission Provider is undertaking the Facilities Study and requires additional time, the Transmission Provider shall notify the Prospective Transmission Customer and provides an estimate of the time needed to reach a final determination along with an explanation of the reasons why additional time is required to complete the Facilities Study.

B15.7 Results of Facilities Study. When completed, the Facilities Study shall include a good faith estimate of:

- (a) The cost of Connection Facilities which shall be the responsibility of the Prospective Transmission Customer.
- (b) The time required to complete such construction and initiate the requested service.

B15.8 Provision of results from Facilities Study. The party that undertook or commissioned the Study shall provide the other party with a copy of the completed Study results and related work papers as soon as is practicable after the completion of the Facilities Study and no later than 5 days after its completion.

B16 Entering into Service Agreement and disputes over study results

B16.1 Parties to enter Service Agreement. If the Prospective Transmission Customer and the Transmission Provider agree on the Service Application and the results of any SIS and any Facilities Study, the Transmission Provider and the Prospective Transmission Customer shall execute a Service Agreement within:

- (a) thirty (30) days of the approval of the Service Application or completion of the SIS or completion of Facilities Study, whichever is the later; or

- (b) the time period for which the results of the SIS or Facilities Study are valid as specified in the SIS or Facilities Study.

B16.2 Withdrawal of Application. In the event that the Service Agreement is not executed by the Transmission Provider/System Operator and Prospective Transmission Customer within the time period determined under B16.1, the Service Application shall be deemed terminated and withdrawn.

B16.3 Disputes over study results. In the event that the Transmission Provider/System Operator and Prospective Transmission Customer do not agree on the results of the SIS or Facilities Study, they shall invoke the Dispute Resolution Procedures outlined in Module A.

B16.4 Approval by ERC. In the case of a Service Agreement involving a new Connection to the Grid by an End-user an application shall be filed with the ERC for approval of the Service Agreement. The application shall be jointly filed by the Transmission Provider and the End-user. Such filing shall include the following:

- (a) The executed Service Agreement;
- (b) Applicable GIS;
- (c) Applicable SIS;
- (d) Applicable Facilities Study;
- (e) Proof of notification of the Distribution Utility within whose Franchise Area the End-user is located of its intent to connect to the Grid; and
- (f) Other information determined to be relevant by the ERC.

The ERC shall issue an order accepting, rejecting or accepting with modifications the application within ninety (90) calendar days from acceptance of the application.

B17 Procurement of Connection Assets for a new Connection to the Grid by an End-users

B17.1 General policy statement. End-users shall be financially responsible for all costs associated with the procurement and installation of Connection Assets identified in the Facilities Study including financing costs. The End-user shall also be responsible for the payment of associated Operation and Maintenance costs. Connection Assets shall ultimately be owned by a Qualified Distribution Utility. However, should there be no Qualified Distribution Utility, the Connection Assets shall become the property of the Transmission Provider, such assets shall be treated as a Contribution in Aid of Construction and shall not form part of the Transmission Providers Regulatory Asset Base. When the assets paid for and constructed by the End-user becomes the property of the Qualified Distribution Utility, such assets shall be treated as a Contribution in Aid of Construction and shall not form part of the Qualified Distribution Utility's Regulatory Asset Base.

B17.2 Financing Options Available to the End-user. While the End-user shall be financially responsible for all costs associated with a Connection to the Grid, the following financing options may be available to him:

- (a) Financing provided by the Transmission Provider;
- (b) Financing provided by the Qualified Distribution Utility; or
- (c) Financing provided by the End-user.

The Transmission Provider and / or the Qualified Distribution Utility are under no obligation to provide financing for the End-user. Whether to offer such service is at the option of the Transmission Provider and / or the Qualified Distribution Utility. These financing arrangements are at the option of the End-user with the concurrence of the Transmission Provider and / or the Qualified Distribution Utility.

B17.3 Financing by the Transmission Provider. In cases where the Transmission Provider provides financing, the End-user shall pay a Connection Charge to the Transmission Provider based on the capital and financing cost associated with the Connection Assets. In addition the operation and maintenance costs shall also be reflected in such Connection Charge. These shall be treated as Excluded Services under the TWRG and the details in F(AIV) shall be applied to compute the charges.

B17.4 Transfer of Connection Assets by the Transmission Provider to the Qualified Distribution Utility. Where the financing is provided by the Transmission Provider, the Connection Assets shall be transferred to the Qualified Distribution Utility within a reasonable period of time, such assets shall be treated as a Contribution in Aid of Construction and shall not form part of the Qualified Distribution Utility's Regulatory Asset Base. In cases where there is no Qualified Distribution Utility the Transmission Provider shall maintain ownership of the Connection Assets. Upon the transfer of the Connection Assets to the Qualified Distribution Utility shall pay to the Transmission Provider an amount equal to the outstanding principal balance of the financing and any unpaid financing cost. Thereafter , the End-user shall no longer pay Connection Charges to the Transmission Provider but will pay Connection Charges to the Qualified Distribution Utility.

B17.5 Financing by the Qualified Distribution Utility. In cases where the Qualified Distribution Utility provides financing, the End-user shall pay a Connection Charge to the Distribution Utility based on the capital and financing cost associated with the Connection Assets. In addition the operation and maintenance costs shall also be reflected in such Connection Charge. The approach to Connection Charge shall be defined by the relevant provisions of the DSOAR.

B17.6 Financing by the End-user. In cases where the End-user provides the financing, the Connection Assets shall be transferred to the Qualified Distribution Utility, such assets shall be treated as a Contribution in Aid of Construction and shall not form part of the Qualified Distribution Utility's Regulatory Asset Base. Should no Qualified Distribution Utility be available the End-user shall transfer the Connection Assets to the Transmission

Provider, such assets shall be treated as a Contribution in Aid of Construction and shall not form part of the Transmission Providers Regulatory Asset Base. In the event that a Qualified Distribution Utility becomes available the Transmission Provider shall transfer the Connection Assets within a reasonable period of time from the availability of such Qualified Distribution Utility. In cases where the End-user has financed the Connection Assets the Connection Charges paid to the Qualified Distribution Utility will only reflect operation and maintenance costs.

B17.7 Calculation on Connection Charge to End-users when financing of Connection Assets is provided by the Transmission Provider or the Qualified Distribution Utility. The Connection Charge to be paid by the End-user to the Transmission Provider of the Qualified Distribution Utility shall include the following components:

- (a) An amount reflective of the monthly amortization of the principle amount of the financing.
- (b) An amount reflective of the monthly interest due on the amount of the financing.
- (c) An amount reflective of the estimated monthly operation and maintenance expense associated with the Connection Assets.
- (d) An amount reflective of the applicable taxes.

B17.8 Accounting for Financing provided by the Transmission Provider or the Qualified Distribution Utility. The Transmission Provider or the Qualified Distribution Utility shall account for the financing provided to the End-user with a debit to the appropriate accounts receivable account and a credit to cash. As Connection Charges are collected the Transmission Provider or the Qualified Distribution Utility shall record the transaction with a debit to cash for the full amount collected and corresponding credits to the appropriate accounts receivable account, interest income and the appropriate operation and maintenance accounts based on the components of the Connection Charge calculated in accordance with section B16.12.

B17.9 Accounting for Contributions in Aid of Construction by the Transmission Provider or the Qualified Distribution Utility. Upon the commissioning of the Connection Assets the Transmission Provider or the Qualified Distribution Utility which takes ownership of the Connection Assets shall record the assets with a debit to the appropriate plant in service account and a corresponding credit to Contribution in Aid of Construction.

B18 Arrangements to be completed Prior to Commissioning Date following execution of Service Agreement

B18.1 Completion of connection arrangements. The Transmission Provider and Transmission Customer, taking into consideration the agreed target Completion Date, shall use their reasonable endeavors, in coordination with each other, to complete their respective connection arrangements as agreed in the Service Agreement.

- B18.2 Security for New Facilities or Facility Upgrades.** In the event that new Facilities or Grid Upgrades are required to meet the Transmission Provider's obligations under the new or modified Service Agreement, and the Transmission Customer is responsible for these costs, the Transmission Customer shall provide the Transmission Provider with a letter of credit in the form specified in Module A to these OATS Rules, if requested to do so by the Transmission Provider, before the Transmission Provider commences the necessary work.
- B18.3 Design and specification requirements.** The design and specifications of any additional Facilities required for Connection shall:
- (a) Conform to the Grid Code;
 - (b) Conform to any engineering standards specified by the Transmission Provider, acting reasonably; and
 - (c) Be approved by the Transmission Provider.
- B18.4 Installation of Necessary Equipment.** Power Delivery Service shall not commence until the Transmission Provider and the Transmission Customer have ensured that the Equipment specified under Module B of these OATS Rules has been installed consistent with the Grid Code and Good Industry Practice, and any additional requirements imposed by the Transmission Provider, acting reasonably, to ensure the reliable operation of the Grid, as recorded in the Service Agreement, have been met.
- B18.5 Provision of Required Information and Tests of Equipment.** The Transmission Customer shall provide the required information set out in the Grid Code to the Transmission Provider prior to the Commissioning Date and shall test the Equipment required at the Connection Point to connect the Transmission Customer's Facilities in accordance to the Grid Code.
- B18.6 Approval of Load Shedding and Curtailment Procedures.** Prior to the Commissioning Date, the Transmission Customer shall seek the approval of the System Operator to its Load Shedding and Curtailment procedures and any other requirements the System Operator imposes in order to meet its obligations under these OATS Rules, the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules. These Load Shedding and Curtailment procedures shall be recorded in the Service Agreement.
- B18.7 Data Requirements Upon Execution of Service Agreement.** The Transmission Customer shall comply with all data requirements specified in the Grid Code within thirty (30) days of the execution of a Service Agreement unless otherwise agreed between the Transmission Provider and the Transmission Customer.
- B18.8 Costs of Processing and Modification.** The Transmission Customer shall be liable for any costs reasonably incurred by the Transmission Provider in processing and, if agreed, implementing a modification in the Service

Agreement, in the event that the Transmission Customer subsequently wishes to cancel or amend its Service Application or its Service Agreement.

Section III Conditions

B19.1 Additional Conditions pertaining to this service. The Transmission Provider shall not be held liable for a failure to deliver the services in this Module B where the following events have had a material effect on its ability to deliver the service and the Transmission Provider has used its reasonable endeavors to mitigate their impact on the service:

- (a) The Prospective Transmission Customer/Transmission Customer failing to comply with its obligations under these OATS Rules, the Grid Code or subsequent to the Spot Market Commencement Date, the WESM Rules.
- (b) The Prospective Transmission Customer/Transmission Customer providing the Transmission Provider with incomplete or inaccurate information.
- (c) Any other Prospective Transmission Customer/Transmission Customer failing to comply with their obligations under these OATS Rules, the Grid Code or, subsequent to the Spot Market Commencement Date, the WESM Rules.
- (d) The ERC failed to approve the Service Agreement related to a new Connection to the Grid by an End-user.

B19.2 Connected Transmission Customer's Non-Compliance. If the Prospective Transmission Customer/Transmission Customer fails to comply, when so required, with any of its obligations in this Module B, the Transmission Provider shall have the right to require the Prospective Transmission Customer/Transmission Customer to take any and all such measures, including but not limited to the installation of new or additional equipment, as necessary to comply with such requirements. In the event that the Prospective Transmission Customer/Transmission Customer fails to take any or all of such measures within thirty (30) days after receipt of notice of non-compliance, the Transmission Provider shall have the right itself to take (or cause to be taken) such measures without further notice. The Prospective Transmission Customer/Transmission Customer shall be responsible for any and all costs and expenses incurred as a result of its non-compliance.

Section IV Sub-transmission Assets

B20 Transmission Connection Assets and Residual Sub-transmission Assets

B20.1 For charging purposes, the Sub-transmission Assets (STA) shall be classified into two components:

- (a) Connection Assets (CA); and
- (b) Residual Sub-transmission Assets (RSTA).

B20.2 For the avoidance of doubt, these classification of STA does not preclude the need for the Transmission Provider to sell the STA to Qualified Distribution Utilities. The separate approach to charging allows the Transmission Provider to sell the STA and reduce the charges for recovery of CA and RSTA, without the need to adjust the MAR between Regulatory Reset.

B20.3 For the purpose of identifying CA which provide Transmission Connection Services, the approach approved by the ERC in its document titled "Definition and Boundaries of Connection Assets for Customers of the National Transmission Corporation" shall be used, as amended and approved from time to time.

B20.4 The CA are defined for Load and Generation Customers.

B20.5 CA are a subset of the STA defined in the ERC's "Guidelines to the Sale and Transfer of the Transco's Sub-Transmission Assets and Franchising of Qualified Consortiums" developed under Section 7 and 8 of the EPIRA and Rule 6 of its IRR.

B20.6 The STA which are not categorised as CA shall be categorised as RSTA.

B21 Principles of Connection Charge and Residual Sub-transmission Charge

B21.1 Transmission Connection Services and Residual Sub-transmission Services shall be treated as Excluded Services as defined in Section 1.6 of the TWRG.

B21.2 Connection Charges will allow the Transmission Provider to recover the cost for providing Transmission Connection Services which is associated with connecting the customers to the Grid. Connection Charges shall be payable by all Load Customers, and where applicable Generation Customers, for the period until STAs are sold to Qualified DUs at each Connection Point.

B21.3 Residual Sub-transmission Charges will allow the Transmission Provider to recover the cost for providing Residual Sub-transmission Services. Residual Sub-transmission Charges shall be payable by all Load Customers, and

where applicable Generation Customers, for the period until STAs are sold to Qualified DUs at each Connection Point.

B21.4 Reasonable cost for Excluded Services shall be recovered using the following principles from Section 1.6.3 of the TWRG:

- (a) an allowance for appropriately attributable operating and maintenance and overhead costs;
- (b) an allowance for the depreciation of the assets used to provide the Excluded Service over the economic life of those assets;
- (c) 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 of the TWRG); and
- (d) 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.

B21.5 The manner outlined prescribed in Rule F(AIV), of Module F of these OATS Rules shall represent the Transmission Provider's adoption of these principles.

B22 Sale of Sub-Transmission Assets

B22.1 Qualified DU or Consortium purchasing Sub-transmission Assets will simply see their Connection Charge and Residual Sub-transmission Charge fall to zero upon purchase of the Sub-transmission Assets. Should the Qualified DU or Consortium require the Transmission Provider to undertake the maintenance (or expansion) of the Sub-transmission Assets they have purchased, they will be charged the appropriate amount for such Excluded Services, based on Rule F(AIV).

B23 Asset Replacement

B23.1 Early Asset Replacement

- i. For Connection Asset provided by the Transmission Provider, if for any reason, such Connection Asset requires replacement before it reached its replacement period as defined by the regulatory lives under the TWRG, the Transmission Provider shall be the one to provide replacement for such asset, and with agreement from the Transmission Customer, will either continue to charge for the original asset and make no charges to the existing customers for the new asset until the replacement period of the original asset has elapsed, or charge for the written down value of the replaced assets under terms

and over a period agreed with the Transmission Customer and charge for the new assets over their economic life.

- ii. Where there has initially been no charge for the new assets, upon the expiration of the original replacement period, the Transmission Customer will then be charge an accelerated depreciation for the new assets over their remaining life.
- iii. If the replacement asset is not commissioned until after the replacement period, then the Transmission Customer's charges will solely cover ongoing site specific operating and maintenance costs and overhead costs. Charges for the replacement assets will only begin on the notified charging date of the replacement asset.

B23.2 Assets Operating after their Replacement Period

- i. Once the Connection Assets have reached the end of the replacement period, there are a number of different types of additions or amendments to the existing Service Agreement that may be reached between the Transmission Provider and the Transmission Customers.
- ii. If the Transmission Provider has notified that assets will remain in service beyond their replacement period and after thirty (30) days from receipt no counter notice has been received from the Transmission Customers, then the following alternative types of agreement are offered to the Transmission Customers.
- iii. The Transmission Provider and the customer will agree on a date beyond the replacement period on which the assets will be replaced and the customer accepts the obligation to pay for the charges of those new assets upon commissioning.
- iv. The Transmission Provider and the Transmission Customer will agree on a firm price agreement for a set period of time covering the assets, which have remained in service beyond their replacement period.
- v. Pending agreement as to enduring arrangement above, the Transmission Customer agrees to sign an offer to vary the Service Agreement for those assets currently or which will be operating beyond their replacement period.

Module C: Power delivery service

C1 General undertaking to operate Grid

The Transmission Provider shall plan, construct, operate, and maintain the Grid in accordance with the Grid Code and Good Industry Practice in order to provide the Transmission Customer with the Power Delivery Service. The capital expenditure and operations & maintenance expenditure undertaken by the Transmission Provider support the quality and reliability of the Power Delivery Service.

C2 Power Quality

The Transmission Provider shall use its reasonable endeavors, subject to the Conditions to this service, to deliver the Power Quality standards in the Grid Code, including but not limited to, as defined in the Grid Code:

- (a) Voltage Variations;
- (b) Harmonics;
- (c) Voltage Unbalance;
- (d) Voltage Fluctuation and Flicker severity;
- (e) Transient Voltages.

C3 Reliability

C3.1 General. The Transmission Provider shall use its reasonable endeavors to achieve the Reliability targets as approved by the ERC in accordance with the Grid Code for the Power Delivery Service that it provides to the Transmission Customer.

C3.2 Report on Interruptions. The Transmission Provider shall report on Interruptions in the manner prescribed by the ERC in accordance with the Grid Code and shall compensate the Transmission Customer in the manner prescribed in Rule F(AVI)2, Annex VI, of Module F of these OATS Rules when the Transmission Customer's Power Delivery Service is interrupted or curtailed below a level(s) specified in their Service Agreement and the Interruption or Curtailment was caused by the Transmission Provider.

C4 Available Transmission Capacity of Power Delivery Service

The Transmission Provider shall use its reasonable endeavors to provide the Available Transmission Capacity and if appropriate, the time period over which the Available Transmission Capacity shall be provided, at the

Connection Points(s) agreed between the Transmission Provider and Transmission Customer and recorded in the Transmission Customer's Service Agreement.

C5 Firm versus Non Firm Power Delivery Service

C5.1 Pre-Market Operations. Prior to the Spot Market Commencement Date, the Transmission Provider shall provide Generation Customers with either Firm Power Delivery and/or Non Firm Power Deliver Service as agreed with the Transmission Provider in accordance with the processes set out in these OATS Rules, including but not limited to Annex I to this Module C.

C5.2 Non Firm Power Delivery Services to Load Customers. In general, the Transmission Provider shall provide only Firm Power Delivery Service to Load Customers. The Transmission Provider may consider providing Non Firm Power Delivery Services for Load Customers in the following circumstances (refer to Rule F7 for further detail):

- a. If the Load Customer has sources of electricity that do not require use of the Transmission Provider's facilities and those sources of electricity are sufficient to allow the Load Customer to be temporarily disconnected from the Grid from time to time.
- b. If there are technical constraints in the transmission facilities.

C5.3 Criteria for Non Firm Service. Non Firm Power Delivery Service for Load Customers shall only be provided by the Transmission Provider where the Load Customer provides a Service Application which proves it meets the following criteria:

- (a) Load Customers must have embedded generation or self-generation access to a level which meets 100% of their normal demand requirements during normal operation; and
- (b) During planned or unplanned interruption to the embedded generation require the use of PDS to wheel electricity from the Grid; and
- (c) Must have valid contract(s) with Distribution Utility(ies), Supplier(s) or Generator(s), which provide for back-up power over the contract period during which Non Firm Service is sought;

Or where the Load Customer meets the following criteria:

- (d) Load Customers must be connected to transmission facilities which have technical constraints such that the Transmission Provider cannot deliver electricity at the same level of reliability as is generally available to other Load Customers in that region; and
- (e) The Load Customers must have interruptible contracts with the Transmission Provider, or the Distribution Utility, or Generator(s),

which are clearly documented and remain valid over the billing period in which Non Firm Service is sought; and

- (f) The Load Customers must have experienced an interruption to their load for cumulative periods of greater than or equal to 168 hours in the last twelve (12) months.

C5.4 Disputes Related to Non Firm Service Application. Where a Load Customer disputes a decision by the Transmission Provider to reject provision of Non Firm Service, it can apply to the ERC for resolution of such dispute. The ERC shall adopt the following approach:

- (a) The ERC accepts that an approval for Non Firm PDS to a Load Customer shall not be issued unless at least the criteria in C5.3 have been proved to be satisfied;
- (b) Following its processes; and
- (c) Non Firm Service applies only to the Power Delivery Service Charge, and other transmission charges applicable to that Load Customer continue to apply.

C5.5 Re-dispatch. In the event that re-dispatch procedures are required in the circumstances outlined in Annex I to Module D of these OATS Rules, the Transmission Provider shall ensure the System Operator follows the re-dispatch procedures set out in Annex I to Module D as they affect Firm and Non Firm Power Delivery Customers.

C5.6 WESM Operations. Subsequent to the Spot Market Commencement Date, all Transmission Customers shall be subject to the scheduling and dispatch procedures and processes as specified in the WESM Rules.

C5.7 Non Firm Service and Curtailment Adjustment. Load Customers committing to Non Firm Service, cannot receive an Interruption and Curtailment Billing Adjustment under F(AVI)1.

C5.8 Voluntary Load Curtailment. Load Customers committing to Firm Service, can receive an Interruption and Curtailment Billing Adjustment as described in F(AVI)1, under the following circumstances:

- (a) where a Load Customer commits to a Voluntary Load Curtailment provision in Schedule L of their Service Agreement; and
- (b) the Transmission Provider cannot deliver electricity at the same level of reliability as is generally available to other Load Customers in that region, due to short term technical constraints in the transmission network; and
- (c) the System Operator exercises the curtailment under the Voluntary Load Curtailment provision in Schedule L of their Service Agreement.

C6 Safety and reasonableness

The Transmission Provider shall use its reasonable endeavors to ensure the safe operation and maintenance of the Grid in accordance with the Section 7.3.2 of the Grid Code.

C7 Management of Outages

C7.1 Consultations. The Transmission Provider shall prepare the Grid Maintenance Programs in consultation with Transmission Customers as required by the Grid Code.

C7.2 Management of Outages. The Transmission Provider shall use its reasonable endeavors to manage outages of Grid Facilities in a manner consistent with the Grid Maintenance Programs.

C8 Information

The Transmission Provider shall consider any request for additional information from the Transmission Customer and shall use reasonable endeavors to provide such additional information and may charge a reasonable fee, if appropriate.

C9 Transmission Customer obligations

C9.1 Connection arrangements. The Transmission Customer shall comply with all the connection arrangements laid out in Module B of these OATS Rules.

C9.2 Information. The Transmission Customer shall provide the Transmission Provider with the Standard and Detailed Planning Data required under Section 6.4 and 6.5 of the Grid Code, including:

- (a) Its Generation and/or Load forecasts in the manner outlined in the Grid Code.
- (b) Annual updates of their likely demand for Power Delivery Service on a date reasonably specified by the Transmission Provider in advance.
- (c) Written notice of material changes in any other information provided in the Transmission Customer's Service Agreement agreed with the Transmission Provider that may affect the Transmission Provider's ability to provide the Power Deliver Service as soon as practicable.
- (d) Any information the Transmission Customer is required to provide the Transmission Provider under the WESM Rules.

- (e) Any other information that the Transmission Provider, acting reasonably, shall deem necessary in accordance with Good Industry Practice and the Grid Code in order for it to provide the services in this Agreement.

C9.3 Operations Standard. The Transmission Customer shall use its reasonable endeavours to operate and manage all of its Equipment that may impact on the Grid in accordance with the Grid Code and the Distribution Code (for Load Customers).

C9.4 Management of Outages. The Transmission Customer shall use its reasonable endeavours to manage outages of all of the Transmission Customer's Equipment and of the Equipment and Facilities connected to the Transmission Customer's Facilities that may impact on the Transmission Grid in a manner consistent with the Grid Maintenance Programs as specified in the Grid Code and the Distribution Code (for Load Customers).

C10 Change to Power Delivery Service

If the Transmission Customer intends to change any arrangements relating of its Power Delivery Service in its Service Agreement, it may submit a modified Service Application to the Transmission Provider under the process outlined in Rule 21 of Module A of these OATS Rules.

C11 Conditions

C11.1 Failure to Deliver. In addition to all other Conditions pertaining to the provision of the services under these OATS Rules, the Transmission Provider shall not be held liable for a failure to deliver the services in this Module C where the following events have had a material effect on the Transmission Provider's ability to deliver the service and the Transmission Provider has used its reasonable endeavors to mitigate their impact on the service:

- (a) The System Operator having to curtail the Power Delivery Service as a result of its obligations under the Grid Code, or these OATS Rules, and, subsequent to the Spot Market Commencement Date, the WESM Rules.
- (b) Where the Transmission Provider, in a non-discriminatory manner, has to curtail the Power Delivery Service in accordance with the Grid Code and Good Industry Practice, for the following purposes:
 - (i) In the event where the continuance of Power Delivery Service would endanger persons or property, and by the discontinuance of such Service the Transmission Provider is to make necessary adjustments to, changes in, or repairs on its lines, substations and Facilities to alleviate such danger;

- (ii) To limit the extent or damage of the adverse condition(s) or disturbance(s);
 - (iii) To prevent damage to the generating or transmission facilities;
 - (iv) To expedite the restoration of service in the event of any adverse condition(s) or disturbance(s) on the Grid or on any other system(s) directly or indirectly interconnected with the Grid.
- (c) The Transmission Customer failing to comply with their obligations under the Grid Code, these OATS Rules or, subsequent to the Spot Market Commencement Date, the WESM Rules.
 - (d) The Transmission Customer providing the Transmission Provider with incomplete or inaccurate information.
 - (e) Any other Transmission Customer failing to comply with their obligations under the Grid Code, these OATS Rules or, subsequent to the Spot Market Commencement Date, the WESM Rules.

C11.2 **Term.** The minimum term for Firm Power Delivery Power service shall be one year. The minimum term for Non-Firm Power Delivery Service shall be one day. From the Spot Market Commencement Date, all Transmission Customers shall be subject to the WESM Dispatch Rules.

Annex I, Module C: Allocation of Firm Power Delivery Service

C(AI)1 On the date the Initial OATS Rules took effect in 2004, those Transmission Customers who were receiving Firm Power Delivery Service on the day immediately prior to the Initial OATS Rules taking effect shall continue to receive Firm Power Delivery Service, namely:

- (a) National Power Corporation (NPC) owned generating plants;
- (b) All Private Sector Generating Facilities (PSGFs) that have existing contracts with NPC under the various types of power purchase agreements such as Build-Operate-Transfer (BOT), Build-Own-Operate (BOO) and the like, to the extent of the capacity contracted with the NPC;
- (c) All PSGFs and Load Customers with existing Firm Transmission Service Agreements with NPC or the National Transmission Corporation (TransCo) prior to the effectivity of the Initial OATS Rules.

C(AI)2 Prior to the Spot Market Commencement Date, current Firm Power Delivery Service Customers have first priority for continuing to take Firm Power Delivery Service from the Transmission Provider when their Service Agreements expire. This transmission reservation priority for current Firm Transmission Customers may be exercised at the end of their Firm Service Agreement terms for one year or longer, until either a new Service Agreement is executed by and between the parties or one year after the expiration of the Service Agreement, whichever is the earlier, subject to Rule C(AI)4.

C(AI)3 The Transmission Provider will determine whether Firm or Non Firm Power Delivery Service will be available to meet any request for a new Power Delivery Service or an expanded Power Delivery Service for Generation Transmission Customers. The Transmission Provider will offer a Firm Power Delivery Service if it concludes as a result of the System Impact Study that there is sufficient available transmission capacity for the Generator to operate at its nominated level of output without giving rise to a transmission constraint.

C(AI)4 If, however, the Transmission Provider cannot accommodate all the requests for Firm Power Delivery Service at this time, the affected Transmission Customer shall agree to accept a contract term at least equal to a competing request by any new Transmission Customer and to pay the charge to be determined by Annex I of Module F to these OATS Rules, for such service.

C(AI)5 Subsequent to the Spot Market Commencement Date, all Transmission Customers shall be subject to the scheduling and dispatch procedures and processes as specified in the WESM Rules and the Transmission Provider shall not distinguish between Firm and Non-firm services for Generation Transmission Customers.

Module D: System Operator functions

D1 Dispatch and re-dispatch services

- D1.1 **Pre-Market.** Prior to the Spot Market Commencement Date, the System Operator shall carry out the central Dispatch of Generation Facilities, Ancillary Services, and Loads connected directly or indirectly to the Grid in a manner consistent with Grid Code and these OATS Rules.
- D1.2 **WESM Operations.** Subsequent to the Spot Market Commencement Date, the System Operator shall carry out the central Dispatch of Generation Facilities, Ancillary Services, and Loads connected directly or indirectly to the Grid in a manner consistent with the Grid Code, the WESM Rules and applicable WESM Manuals and these OATS Rules.
- D1.3 **Pre-Market Redispatch.** Prior to the Spot Market Commencement Date, the System Operator shall follow the re-dispatch procedures outlined in Annex I to this Module D.

D2 Power Quality

The System Operator shall use its reasonable endeavors to deliver the Power Quality standards in the Grid Code, including but not limited to:

- (a) Frequency variations;
- (b) Voltage Variations;
- (c) Harmonics;
- (d) Voltage Unbalance;
- (e) Voltage Fluctuation and Flicker severity;
- (f) Transient Voltage Variations.

D3 Safety and reasonableness

The System Operator shall use its reasonable endeavors to ensure the safe operation of the Grid in accordance with Section 7.3.1 of the Grid Code.

D4 Security of power system

- D4.1 **Security Standard - General.** The System Operator shall use its reasonable endeavors to minimise the risk of Interruptions and Power System failure in a manner consistent with its obligations under the Grid Code, and subsequent

to the Spot Market Implementation Date, the WESM Rules and applicable WESM Manuals.

- D4.2 **Security Standard - Restoration.** The System Operator shall use its reasonable endeavors to restore the normal operation of the Power System as soon as possible following an Interruption, a threat to the Security of the Power System, or a Force Majeure Event in a manner consistent with the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.

D5 Load Shedding and Interruptions

- D5.1. **Standard.** The System Operator shall follow the agreed Load Shedding procedures recorded in the Transmission Customer's Service Agreement and act in a manner consistent with its obligations under the these OATS Rules, the Grid Code and, subsequent to the Spot Market Implementation Date, the WESM Rules and applicable WESM Manuals.

- D5.2 **Prior Notice.** The System Operator shall give the Transmission Customer as much advance notice as is practicable of any Interruption to the Transmission Customer's Power Delivery Service.

- D5.3 **Interruption Schedule.** The System Operator shall take into account any views of the Transmission Customer as to the effect of the timing of the proposed Interruption on the Transmission Customer, before finalising the timing and duration of the Interruption. Any Interruption of the Power Delivery Service shall not be unjustifiably biased towards any Transmission Customer. Those Transmission Customers using Non-firm PDS under C5.3 (d), (e) & (f), or accepting Voluntary Load Curtailment under C5.8 should expect to have their PDS interrupted before Transmission Customers using Firm PDS. However, the Transmission Provider should ensure that interruption to Transmission Customers availing of Embedded Generation are not adversely interrupted where the use of the Non-firm PDS has been scheduled with the Transmission Provider for maintenance of the Embedded Generator.

- D5.4 **Restoration of Service.** The System Operator shall use its reasonable endeavors to restore service as soon as possible in the event that an Interruption to the Power Delivery Service is required in accordance with Good Industry Practice.

- D5.5 The System Operator shall report on Interruptions in the manner specified in the Grid Code.

D6 Assessment of availability

The System Operator shall prepare the Grid Operating Program in accordance with the Grid Code and use it to:

- (a) Provide the services outlined in these OATS Rules; and
- (b) Comply with its obligations under the Grid Code and, subsequent to the Spot Market Implementation Date, the WESM Rules and applicable WESM Manuals.

D7 Management of Ancillary Services

D7.1 Pre-Market. Prior to the Spot Market Commencement Date, the System Operator shall develop each year, in consultation with the Grid Management Committee, an Ancillary Services Procurement Plan covering the forthcoming year.

D7.2 WESM Operations. Subsequent to the Spot Market Commencement Date, the System Operator shall develop each year, in consultation with the Market Operator and the Grid Management Committee an Ancillary Services Procurement Plan covering the forthcoming year.

D7.3 Ancillary Services Procurement Plan. The Ancillary Services Procurement Plan shall, for each Ancillary Service:

- (a) Describe the Ancillary Service in sufficient detail such that prospective providers of the service can determine whether they have the capability to provide the service.
- (b) Specify the minimum technical requirements that plant and equipment providing Ancillary Services shall meet.
- (c) Describe the tests that the System Operator shall use to verify that the plant and Equipment meet the minimum technical requirements.
- (d) Specify the quantity or level of Ancillary Services required by the System Operator to meet its obligations under these Rules and to meet the Power Quality and Reliability performance standards outlined in the Grid Code.
- (e) Describe the reasoning or principles applied by the System Operator in determining the required quantity or level of Ancillary Services.

D7.4 Considerations. The Ancillary Services Procurement Plan shall outline the processes that the System Operator shall use to procure each Ancillary Service taking into account the following:

- (a) The System Operator shall use market mechanisms to procure each Ancillary Service wherever technology and transaction costs make this practical and efficient; and
- (b) Until such time as ancillary service markets are developed, the System Operator shall use transparent processes which encourage

all potential providers to compete to supply the Ancillary Services required for the System Operator at the best economic cost; and

- (c) Subsequent to the Spot Market Commencement Date, the processes and mechanisms contained in the WESM Rules and applicable WESM Manuals.

D7.5 **ERC Approval.** Every Ancillary Services Procurement Plan development by the System Operator in conjunction with the Grid Management Committee shall have been approved by the ERC before they are implemented by the Transmission Provider.

D7.6 Prior to the System Operator finalising its first Ancillary Services Procurement Plan, the System Operator shall procure or otherwise ensure the provision of the quantity or level of Ancillary Services as authorised by ERC.

D7.7 **Pre-Market; Standard.** Prior to the Spot Market Commencement Date, the System Operator shall direct any Ancillary Service Provider to provide Ancillary Services in a manner consistent with the Grid Code and these OATS Rules.

D7.8 **WESM Operations; Standard.** Subsequent to the Spot Market Commencement Date, the System Operator shall direct any Ancillary Service Provider to provide Ancillary Services in a manner consistent with the Grid Code, the WESM Rules and applicable WESM Manuals and these OATS Rules.

D7.9 When contracting for the provision of Ancillary Services, the System Operator shall use the template Ancillary Services Procurement Agreement, as approved by the ERC.

D8 **Alternative Ancillary Services Arrangements**

D8.1 **When Allowed.** Where the Transmission Customer is able to provide its own Ancillary Services, or contracts with a third party to provide Ancillary Services, it may apply to the System Operator to have that arrangement authorized as an Alternative Ancillary Services Arrangement.

D8.2 **Requirements.** A Transmission Customer seeking an Alternative Ancillary Services Arrangement shall:

- (a) Provide such information as requested by the System Operator, acting reasonably; and
- (b) Shall test their Equipment to the satisfaction of the System Operator, acting reasonably, and provide the test results to the System Operator, as required by the System Operator.

D8.3 **Conditions.** The System Operator shall authorise an arrangement as an Alternative Ancillary Services Arrangement if:

- (a) The proposed arrangement complies with the technical requirements for that Ancillary Service as set out in Ancillary Services Procurement Plan.
- (b) The implementation of the proposed arrangement shall make the Ancillary Service available for Dispatch by the System Operator in substantially the same manner as if that Ancillary Service had been procured pursuant to the process described in the Ancillary Services Procurement Plan.
- (c) The Transmission Customer enters into arrangements the System Operator considers necessary to ensure that the System Operator can meet its obligations under these OATS Rules and the Power Quality and Reliability performance standards outlined in the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.

D8.4 **Terms of arrangement.** A Transmission Customer holding an Alternative Ancillary Services Arrangement shall:

- (a) Be relieved of any obligation to pay costs for Ancillary Services in the manner provided for in Module F of these OATS Rules to the extent set out in the Alternative Ancillary Services Arrangement authorized by the System Operator;
- (b) Use all reasonable endeavors to cooperate with the System Operator to restore compliance with the Alternative Ancillary Services Arrangement at any time that the System Operator notifies the Transmission Customer that the System Operator, in its opinion believes the Transmission Customer is not in compliance with said Arrangement; and
- (c) Be required to meet its share of ancillary costs outlined in Module F as if the Alternative Ancillary Services Arrangement had not been authorised whenever ancillary services are not made available to the System Operator in accordance with the Alternative Ancillary Services Arrangement or whenever there is a failure, suspension or cancellation of the Alternative Ancillary Services Arrangement.

D8.5 **Suspension or cancellation.** The Transmission Customer, acting reasonably, may at any time give written notice to the System Operator of suspension or cancellation of the Alternative Ancillary Services Arrangement which shall come into effect on the date specified in the notice but no earlier than three (3) days from the date the System Operator receives the notice.

D8.6 **Amendment, suspension or revocation.** The System Operator may require the amendment of the Alternative Ancillary Services Arrangement or suspend or revoke its authorization of the Alternative Ancillary Services

Arrangement if at any time the System Operator is satisfied that one or more of the following factors apply:

- (a) The Alternative Ancillary Services Arrangement was authorized on information that was false or misleading in relation to a material item;
- (b) A prerequisite of the Alternative Ancillary Services Arrangement has changed;
- (c) A condition upon which the authorization was granted has not been complied with;
- (d) Such amendment, suspension, or revocation is provided for under the terms of any authorization;
- (e) The Alternative Ancillary Services Agreement has become materially inconsistent with the Ancillary Services Procurement Plan; or
- (f) Subsequent to the Spot Market Commencement Date, the WESM Rules do not provide for Alternative Ancillary Services Arrangements.

D8.7 Notice and submissions. The System Operator shall not revoke or amend an Alternative Ancillary Services Arrangement unless the Transmission Customer to whom the authorization were granted has been given reasonable notice of the System Operator's intentions and a reasonable opportunity to make submissions to the System Operator and the System Operator has had regard to those submissions.

D9 Transition to new market conditions

Prior to the Spot Market Commencement Date, the System Operator shall perform the functions specified in the WESM Rule 10.4 to allow for the smooth transition to the new market arrangements.

D10 Management of Energy Imbalance

D10.1 Pre-Market arrangement. Prior to the Spot Market Commencement Date, the System Operator shall prepare a schedule of generation levels for each hour in each day for each Generation Facility including Embedded Generating Plant within each Power System. Transmission Customers shall provide all data necessary to enable the System Operator to prepare said schedules.

D10.2 Hourly monitor. The System Operator shall continuously monitor, and record on an hourly basis, the Energy Imbalance of each Generation Facility and Embedded Generating Plant.

D10.3 Subsequent to the Spot Market Commencement Date, Energy Imbalance will be governed by the WESM Rules and applicable WESM Manuals.

D11 Transmission Customer Obligations

D11.1 **Information.** The Transmission Customer shall supply information that the System Operator deems necessary in accordance with Good Industry Practice and the Grid Code in order for it to provide the services in this Module D and its obligations under the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.

D11.2 **Compliance.** The Transmission Customer shall comply with all directions and instructions of the System Operator issued under these OATS Rules and all relevant obligations under the Grid Code and, subsequent to the Spot Market Commencement Date, all relevant obligations under the WESM Rules and applicable WESM Manuals. Any Transmission Customer who fails to act in accordance with the directions and instructions of the System Operator without suitable cause, may be liable for a penalty imposed by the System Operator in accordance with a methodology approved by the ERC. The revenues from any such penalties shall count towards the System Operator Revenue Requirement in F(AIII)1.

D11.3 **Load Shedding.** Connected Transmission Customers shall comply with the Load Shedding (Manual and Automatic) procedures in their Service Agreements during any period when the System Operator determines that a Contingency exists and such procedures are necessary to alleviate such Contingency. Subsequent to the Spot Market Commencement Date, Connected Transmission Customers shall also comply with Load Shedding procedures in the WESM Rules and applicable WESM Manuals.

D11.4 **Generator's Obligation.** Except during a Contingency condition or situation affecting the Generator's Facilities, the Generation Customer shall be responsible for ensuring that its Generation Facility shall not disconnect from the Transmission System during an Electric Disturbance except when the Frequency or Voltage Variation would damage the Generation Facility and/or Connection Facilities, as provided under the Grid Code, or when there is an issue of public or personnel safety, or with the consent of the System Operator.

D11.5 **Embedded Generation.** Transmission Customers with an Embedded Generation Facility above the level prescribed by the Grid Management Committee shall comply with the Grid Code and seek the approval of the System Operator prior to connecting directly or indirectly with the Grid. Such connection shall be undertaken in a manner consistent with the Grid Code and the Distribution Code.

D12 Conditions

D12.1 **Right to open and disconnect facilities.** Subject to the System Operator's obligations in D5, in the event of an Electric Disturbance, the System Operator shall have the unilateral right to open, or order to be opened, and/or disconnect any Connection Facility in accordance with its obligations under

these OATS Rules, the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules.

D12.2 **Exceptions to liability.** The System Operator shall not be held liable for a failure to deliver the services in this Module D where the following events have had a material effect on its ability to deliver the service and the System Operator has used its reasonable endeavors to mitigate the impact of these events on the service:

- (a) The Transmission Customer failing to comply with their obligations under the Grid Code, these OATS Rules or, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.
- (b) The Transmission Customer failing to comply with an instruction from the System Operator issued in accordance with these OATS Rules, the Grid Code or, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.
- (c) The Transmission Customer providing the System Operator with incomplete or inaccurate information.
- (d) Any other Transmission Customer failing to comply with their obligations under these OATS Rules, the Grid Code or, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.

Annex I, Module D: Re-dispatch Procedures up until the Spot Market Commencement Date

D(AI)1 Conditions for Re-dispatch

D(AI)1.1 Prior to the Spot Market Commencement Date, the System Operator shall immediately undertake generation re-dispatch procedures in the manner outlined in Rules D(AI)2 and D(AI)3 and in accordance with Good Industry Practice where a Transmission Constraint arises or if necessary to immediately contain and mitigate the effect of system disturbances.

D(AI)1.2 Subsequent to the Spot Market Commencement Date, the System Operator will undertake dispatch (including re-dispatch) in accordance with the WESM Rules and applicable WESM Manuals.

D(AI)2 Re-dispatch Guidelines With Transmission Constraints

D(AI)2.1 The System Operator shall determine the magnitude of the reduction required in flows across the constrained Grid Equipment to ensure the Grid Code requirements can be met and that Equipment is operated within the ratings set by the Transmission Provider.

D(AI)2.2 The System Operator shall curtail the Power Delivery Service for the Generation Facilities of Non-Firm Power Delivery Customers before the Generation Facilities of Firm Power Delivery Customers on a last-in-first-out basis. Firm Power Delivery Customers will be restored before Non-Firm Power Delivery Customers on a last-out-first-in basis.

D(AI)2.3 If the actions under D(AI)2.2 are not sufficient to remove the Transmission Constraint, and when conditions allow, the System Operator shall determine the Generation Ratio Share for each Generation Facility of the Firm Power Delivery Customers whose generation affects the Transmission Constraint. The System Operator shall curtail the Power Deliver Service for each Firm Power Delivery Customer in proportion to their Generation Ratio Shares, subject to minimum loading of generation units, in order to limit flows across constrained Equipment to acceptable levels.

D(AI)2.4 If a Generation Facility cannot be re-dispatched in accordance with its Generation Ratio Share, any Facility that is as a consequence over-curtailed beyond its Generation Ratio Share shall receive an Electricity credit to be offset in the next dispatch contingency if possible. The Electricity credit shall be offset as much as possible within the same Billing Period. However, if the Electricity credit is not offset within the same Billing Period, or in subsequent Billing Periods, it shall be allowed to accumulate up to the end of the operating year, after which the System Operator and the Generation Customer shall mutually agree on the manner of settlement.

D(AI)3 Re-dispatch Guidelines for system disturbances

Prior to the Spot Market Commencement Date, the System Operator shall issue Dispatch Instructions to increase or decrease the output of Transmission Customers' Generation Facilities as required to contain and mitigate the effect of Electric Disturbances. An Electric Disturbance may arise in any of, but not limited, to the following circumstances:

- (a) Load forecast error;
- (b) Change in generation availability;
- (c) National security measures;
- (d) Force Majeure Events.

Module E: Metering

E1 Metering Service

E1.1 **Pre-Market.** The Transmission Provider shall provide metering services as outlined in this Module E and in accordance with these OATS Rules and in the standards set out in the Grid Code.

The scope of OATS metering service shall include:

1. Provision of revenue metering equipment to be part of the OATS revenue metering facilities in accordance with these OATS Rules.
2. Installation, testing and commissioning services of revenue metering equipment that the Transmission Provider provides for new OATS metering facilities.
3. Metering Installation operation and maintenance, covering the following activities:
 - a. Monthly reading and/or retrieval of metered demand and energy data for the billing system of the Transmission Provider in accordance with the Transmission Provider billing procedures;
 - b. Provision to the Transmission customer of Metering Installation data and metered data used in billing for transmission service;
 - c. Periodic calibration, testing, maintenance and inspection of Metering Installation and its equipment as prescribed in the Grid Code.

E1.2 **WESM Conditions.** From the Spot Market Commencement Date, the Transmission Provider shall continue to undertake the role of Metering Service Provider for the Transmission Customer in accordance with the Grid Code and these OATS Rules. In addition to the scope of services indicated in E1.1, the Transmission Provider shall likewise provide additional Metering Services in accordance with the WESM Rules and applicable WESM Manuals, if the Transmission Customer becomes a WESM trading participant.

E2 Metering Requirements

E2.1 **Standard.** All Metering Installations shall be in accordance with the requirements of the Grid Code.

The metering point shall be at the Connection Point. Otherwise, adjustment of Demand and Energy to account for the losses between the actual metering point and the Connection Point shall be performed.

The Transmission Provider and the Transmission Customer shall both ensure that Metering Installations are provided, tested and maintained in accordance with the requirements of the Grid Code for their respective scope of responsibility in relation with the Metering Installations.

E2.2 WESM Conditions. From the Spot Market Commencement Date, the Transmission Provider, if it is likewise the WESM Metering Service Provider for the Transmission Customer, shall:

- (a) Ensure that Metering Installations are provided, tested and maintained in accordance with the WESM Rules and applicable WESM Manuals in addition to the requirements of the Grid Code.
- (b) Ensure that the Market Operator is able to obtain the metering data from each Metering Point.
- (c) Assist the Transmission Customer in the registration of Meter Installations with the Market Operator, including in the provision of the information required for the Metering Database as described in the WESM Rules.

E3 Provision of Revenue Metering Equipment

E3.1 Pre-Market. The Transmission Provider shall provide the revenue metering equipment, unless otherwise agreed upon with the Transmission Customer in accordance with these OATS Rules.

E3.2 WESM Conditions. From the Spot Market Commencement Date, the Transmission Provider, if the Transmission Provider is likewise the WESM Metering Service Provider, shall provide the WESM Metering Equipment in accordance with the Metering Service Provider obligations under the WESM Rules and applicable WESM Manuals.

E4 Provision of Metering Installation Information

E4.1 Pre-Market. The Transmission Provider shall provide metering information to those entitled parties requiring this information.

E4.2 WESM Conditions. From the Spot Market Commencement Date, the Transmission Provider, if the Transmission Provider is likewise the WESM Metering Service Provider, shall:

- (a) Provide the metering information to those entitled parties requiring the information as prescribed in the WESM Rules and applicable WESM Manuals.
- (b) Maintain a Metering Database in accordance with the WESM Rules and applicable WESM Manuals.

E5 Metering equipment testing and maintenance

The Transmission Provider shall:

- (a) Test and calibrate the revenue meters and instrument transformers or ensure that these are tested and calibrated in accordance with the Grid Code.
- (b) Arrange for a qualified third party to undertake any test requested by the Transmission Customer or Market Operator.
- (c) Allow the Transmission Customer to witness any test requested by that Transmission Customer.
- (d) Maintain the Metering Equipment at the Metering Installation, in accordance with the Grid Code.

E6 Meter reading

E6.1 Pre-Market. The Transmission Provider shall perform on-site and/or remote meter-reading in accordance with the Grid Code and as required by the billing system of the Transmission Provider.

E6.2 WESM Conditions. From the Spot Market Commencement Date, if the Transmission Provider is likewise the WESM Metering Service Provider, it shall provide on-site and/or remote meter-reading services in accordance with the Grid Code and the WESM Rules and applicable WESM Manuals.

E7 Validation of metering data

E7.1 Pre-Market. The Transmission Provider shall undertake the basic validation and substitution of metering data, using check metering where available and where not available, using the best available method and data acceptable to all concerned parties.

E7.2 WESM Conditions. The validation and substitution of metering data shall be in accordance with the WESM Rules and applicable WESM Metering Manuals. The result of such validation and substitution shall be used for OATS billing and settlement.

E8 Settlement

- E8.1 **Metering Data.** The Transmission Provider shall use the metering data of Demand and Energy that is either visually read from the meter display or the electronically-retrieved Demand and Energy data for billing and settlement purposes in accordance with these OATS Rules.
- E8.2 **Cooperation.** In the event that a Transmission Customer requests an audit of settlement data related to its account, the Transmission Provider shall cooperate in the auditing process in accordance with the Grid Code.

E9 Treatment of metering data

The Transmission Provider shall ensure that all metering data is kept secure and in accordance with the Confidentiality provisions in Module A to these OATS Rules and, subsequent to the Spot Market Commencement Date, in accordance with the WESM Rules.

E10 Application for new Metering Points, or changes to existing Metering Points

- E10.1 **Standard.** The Transmission Provider shall use reasonable endeavours to consider, respond to, and, if agreed between the parties, implement requests for additional Metering Points, or for changes to existing Metering Points by the Transmission Customer, via the Service Application process outlined in Module A and in a manner consistent with the Grid Code and, subsequent to the Spot Market Commencement Date, the WESM Rules and applicable WESM Manuals.
- E10.2 **WESM Conditions.** From the Spot Market Commencement Date, if the Transmission Provider is likewise the WESM Metering Service Provider, it shall record all details of a new Metering Installation and subsequent changes to Metering Installations and shall provide the information to the Market Operator for inclusion in the Installation Database, in accordance with the WESM Rules and applicable WESM Manuals.

E11 Transmission Customer or Joint Obligations

- E11.1 **Space.** At each Metering Installation at the Transmission Customer's Connection Point, the Transmission Customer shall provide, at its own cost, the space for the Metering Installation. This space shall be fully secured by the Transmission Customer against access by any party other than Transmission Provider authorized personnel.
- E11.2 **Access.** The Transmission Customer shall make the Metering Installation accessible, at all times, to the Transmission Provider's authorized personnel and representatives.

- E11.3 **Metering Equipment.** The Transmission Customer may provide the required Metering Equipment (except for the revenue meters) at the Connection Point in accordance with the Grid Code when so agreed between the Parties.
- E11.4 **Additional Metering Equipment.** If the Transmission Customer requires additional Metering Equipment, other than the primary Metering Installation provided at each Connection Point, the Transmission Customer shall, at their own cost, provide the additional Metering Equipment, including all associated items, with the exception of the revenue meters. The additional equipment shall comply with all technical requirements of the Transmission Provider. The revenue meters shall be provided by the Transmission Provider. The metering services for the additional Metering Equipment shall be charged with applicable charges as set out in Module F.
- E11.5 **Record and Modification.** Both parties shall ensure that the number and location of Metering Installations are recorded in Schedule F of the Transmission Customer's Service Agreement. The parties agree to amend Schedule F of the Transmission Customer's Service Agreement as necessary to reflect any additions or modifications to the Metering Installations.
- E11.6 **Testing and Calibration.** Where the Transmission Customer has sought the testing and calibration of one or more Metering Installations, the Transmission Customer shall pay for the testing and calibration if the test finds the Metering Installation to be within the accuracy specification of the Grid Code. Otherwise, the Transmission Provider shall assume the cost of the testing and calibration. The Transmission Provider shall correct the metering error and make the necessary billing adjustments in accordance with section F4 (Billing and Settlement Service) of these OATS Rules.
- E11.7 **Payment for Testing and Calibration.** Where the Transmission Customer is required to pay for the testing and calibration of one or more Metering Installations under section E11.6, any such charge must be fair and reasonable and reflect the costs to the Transmission Service Provider in providing the testing and calibration service.
- E11.8 **Relocation of Metering Point.** Where there is a need to relocate a Metering Installation that was earlier installed by the Transmission Customer at a location that is not the Connection Point as prescribed in the Grid Code, the Transmission Customer shall assume the cost of relocation.

E12 Changes in Metering Arrangements

If the Transmission Customer wishes to change any arrangements relating to its Metering provided by the Transmission Provider in its Service Agreement, it may submit a Service Application to the Transmission Provider under the process outlined in Rule 21 of Module A of these OATS Rules.

Module F: Rates, Methodology, Billing and Settlement

F1 Charges applicable to each category of Transmission Customer

The charges which the Transmission Provider shall charge are summarized in Figure F1.1. Different charges apply depending on the Transmission Customer's circumstances, and the charges to apply are described in F1.1, F1.2, F1.3 and F1.4. For those periods of time where Generation Customers and Embedded Generators revert to Load Customer status, the charges relevant to that customer type shall apply.

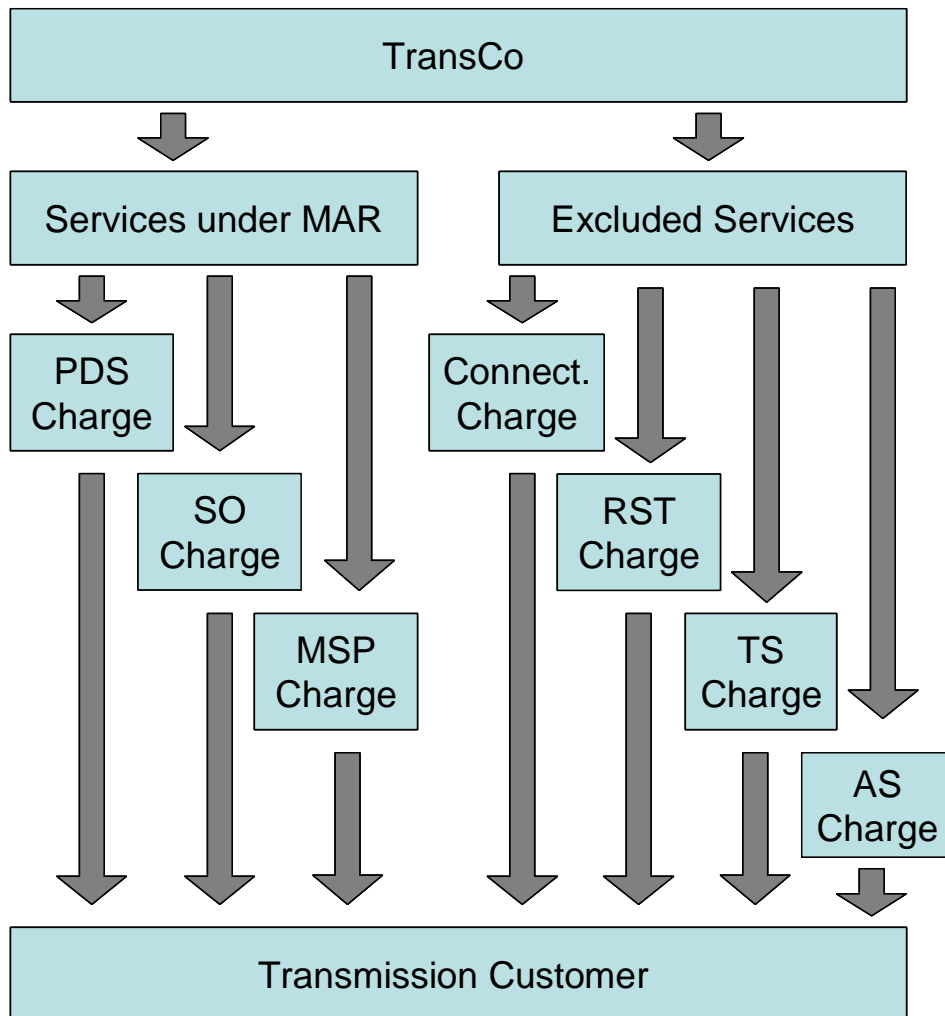


Figure F1.1 : Summary of Transmission Provider Charges

F1.1 **Generation and Load.** Generation Customers and Load Customers shall pay the following charges for Regulated Transmission Services:

- (a) The Power Delivery Service Charge as determined by the method set out in Annex I to this Module F.

- (b) The System Operator Charge as determined by the method set out in Annex II to this Module F.
- (c) The Metering Service Provider Charge as determined by the method set out in Annex III to this Module F.

F1.2 **Generation and Load.** Generation Customers and Load Customers shall pay the following charges for Excluded Services and other services:

- (a) The Connection Charge as determined by the method set out in Annex IV to this Module F.
- (b) The Residual Sub-transmission Charge as determined by the method set out in Annex IV to this Module F.
- (c) Any charges for technical services such as System Impact Studies, as determined by the methods set out in Annex V to this Module F.
- (d) Ancillary Services Charges as determined by the methods set out in Annex VI to this Module F.

F1.3A **Embedded Generator.** Embedded Generators shall pay the following charges for Regulated Transmission Services:

- (a) The System Operator Charge as determined by the method set out in Annex II to this Module F.

F1.3B **Embedded Generator.** Embedded Generators shall pay the following charges for Excluded Services and other services:

- (a) Any charges for technical services such as System Impact Studies, as determined by the methods set out in Annex V to this Module F.
- (b) Ancillary Services Charges as determined by the methods set out in Annex VI to this Module F.

F1.4 **Other Customers.** Any person or entity purchasing services from the Transmission Provider/System Operator other than a Generation Customer, Load Customer, or Embedded Generator shall pay the charges corresponding to the OATS services listed in Schedule A of their Service Agreement using the methodologies outlined in the Annexes to this Module F.

F1.5 **Designated Agent.** References to the Transmission Customer, Generation Customer, Load Customer, and Embedded Generators in this entire Module F include references to their Designated Agents.

F2 Adjustments to Transmission Customers

F2.1 The amount that may be charged to any Transmission Customer as determined under F1 shall be adjusted by:

- (a) Any billing adjustments as determined by Annex VII to this Module F.
- (b) Any other charge payable by any Transmission Customer to the Transmission Provider / System Operator under any applicable law or management discretion and set out in Annex VIII to this Module F.

F3 All amounts are exclusive of value-added tax

- F3.1 All amounts determined under F1 and F2 are exclusive of value-added-tax and other taxes, if applicable.

F4 Billing and settlement service

- F4.1 **Billing Statement.** Within ten (10) days after the Billing Period, the Transmission Provider shall issue a billing invoice and statement ("Billing Statement") to each Transmission Customer, detailing all charges and credits for that previous Billing Period for the services provided under these OATS Rules. The Billing Statement shall list separately the charges for all services provided by the Transmission Provider/System Operator under these OATS Rules during the preceding Billing Period and present the net amount due from or to the Transmission Customer. The Billing Statement shall include all supporting data necessary to enable the Transmission Customer to verify the amount payable to, or owed by, the Transmission Provider for that Billing Period.

- F4.2 **Errors; Correction.** In the event that the Transmission Provider identifies an error in the Billing Statement, the Transmission Provider shall issue a debit/credit notice within ninety (90) days from the date of bill's receipt to correct the error; *Provided* that metering errors, such as but not limited to the following, incorrect use of multiplier, partial metering failure, inaccurate meter registration due to drift and others, shall be corrected within ninety (90) days from detection; *Provided further*, that the metering error was detected within one (1) year from its occurrence.

- F4.3 **Procedure.** If the Transmission Customer identifies an error in the Billing Statement, it shall immediately notify the Transmission Provider within seven (7) days from receipt thereof. Upon verification of an error, the Transmission Provider at its discretion shall either:

- (a) Issue a new Billing Statement to correct the error within seven (7) days from receipt of notice from the Transmission Customer; or
- (b) Issue a debit/credit notice within ninety (90) days from date of its receipt of notice from the Transmission Customer.

- F4.4 **Billing Statement binding.** If no error is notified by either the Transmission Customer or the Transmission Provider within the periods of time specified

in F4.2 and F4.3, the Billing Statement shall be deemed correct and binding upon the Transmission Customer and the Transmission Provider.

F5 Transmission Customer obligations

F5.1 Payment. The Transmission Customer shall pay the amount stated in the Billing Statement without necessity of demand no later than twelve noon (12:00 p.m.) of the last working day of the succeeding Billing Period ("Due Date"), via immediately available funds or by wire transfer to a bank designated by the Transmission Provider, unless otherwise agreed.

F5.2 Interest. The Transmission Customer shall pay interest on any amounts unpaid after the Due Date (and including amounts placed in escrow), on the daily balance outstanding for each day that the unpaid amount remains outstanding after the Due Date. The rate to be imposed on the Transmission Customer's overdue account, regardless of age of account, shall be based on the highest non-prime lending rate for the current quarter among the commercial banks designated by the Transmission Provider.

F6 Billing Disputes

F6.1 Non-interruption of Service. In the event of a billing dispute between the Transmission Provider and the Transmission Customer, both parties shall follow the Disputes Procedures set out in Module A of these OATS Rules and the Transmission Provider shall continue to provide service under these OATS Rules as long as the Transmission Customer:

- (a) Continues to make all payments due to the Transmission Provider not in dispute; and
- (b) Pays into an independent escrow account the portion of the amounts due to the Transmission Provider in the Billing Statement in dispute, pending resolution of such dispute.

F6.2 Suspension of Service. If the Transmission Customer fails to meet the requirements in Rule F6.1, then the Transmission Provider may notify the Transmission Customer of its intention to suspend service to the Transmission Customer upon the lapse of ten (10) days from Transmission Customer's receipt of notice, and the Transmission Provider may suspend service following such period.

F7 Non Firm Power Delivery Service for Load Customers

F7.1 Charges for Non Firm Service. The approach to the Power Delivery Service Charge described in F(AI)3.1 shall apply, with the change for Non Firm PDS, such that the Load Billing Determinant (LBD) shall be the highest non-coincident peak demand in kW, measured in fifteen (15) minute intervals, of that Non-Firm Load Customer for each day (measured from 0000H to 2400H), for which the Non Firm PDS were provided during the whole or part of that billing cycle.

Annex I, Module F: Charges for the Power Delivery Service

F(AI)1 Power Delivery Service Charge

F(AI)1.1 The Power Delivery Service Charges recover that proportion of the Transmission Provider's annual revenue requirement approved by ERC under the TWRG that is associated with the cost of conveying electricity to or from Connection Points and is payable by Generation Customers and Load Customers. PDS Charges include the cost of operations of the Grid Management Committee and subcommittees.

F(AI)2 Power Delivery Service Charge payable by Generation Customers

F(AI)2.1 Generation Customers shall pay a Power Delivery Service charge each month for each of its Points of Receipt, determined as follows:

$$GPDS = GBD_i * GR$$

Where:

GPDS = Generator Power Delivery Service Charge

GBD_i = Generator Billing Determinant, as determined under F(AI) 2.2

GR = Generator Power Delivery Service Rate, as determined under F(AI)5

F(AI)2.2 The Generator Billing Determinant for each Point of Receipt shall be the average of the 12 monthly non-coincident peak injection in kW, measured in fifteen (15) minute intervals, at that Point of Receipt. The Generator Billing Determinant for new Generators or those reconnecting to the Transmission Provider's facilities and for those without a 12 month history would be determined by the Transmission Provider from the information provided in the Service Agreement.

F(AI)2.3 At a date after the billing date in August 2007 and before the last billing date in 2008, the ERC requires that Transmission Provider shall move to an alternate Generator Billing Determinant defined in F(AI)2.4, or to an alternative subsequently approved by the ERC. Such date is dependent on finalization by the Transmission Provider of interval meters to all of its three and single phase connection points, and shall be notified by the ERC to the Transmission Provider by order and following due process.

F(AI)2.4 The Generator Billing Determinant for each Point of Receipt shall be the average of the 12 highest non-coincident peak injection in kW within the last twelve months, measured in fifteen (15) minute intervals, at that Point of Receipt. The Generator Billing Determinant for new Generators or those reconnecting to the Transmission Provider's facilities and for

those without a 12 month history would be determined by the Transmission Provider from the information provided in the Service Agreement.

F(AI)3 Power Delivery Charge payable by Load Transmission customers

F(AI)3.1 Load Customers shall pay a monthly Power Delivery Service charge for each of their Points of Delivery, determined as follows:

$$\text{LPDS} = \text{LBD}_i * \text{LR}$$

Where:

$$\text{LPDS} = \text{Load Power Delivery Service Charge}$$

$$\text{LBD}_i = \text{Load Billing Determinant, as determined under F(AI)3.2}$$

$$\text{LR} = \text{Load Power Delivery Service Rate, as determined under F(AI)6}$$

F(AI)3.2 The Load Billing Determinant for each Point of Delivery shall be the average of the 12 monthly non-coincident peak demand in kW, measured in fifteen (15) minute intervals, at that Point of Delivery. The Load Billing Determinant for new load customers or for those reconnecting to the Transmission Provider's facilities and for those without a 12 month history would be determined by the Transmission Provider from the information provided in the Service Agreement.

F(AI)3.3 At a date after the billing date in August 2007 and before the last billing date in 2008, the ERC requires that Transmission Provider shall move to an alternate Load Billing Determinant defined in F(AI)3.4, or to an alternative subsequently approved by the ERC. Such date is dependent on finalization by the Transmission Provider of interval meters to all of its three and single phase connection points, and shall be notified by the ERC to the Transmission Provider by order and following due process.

F(AI)3.4 The Load Billing Determinant for each Point of Delivery shall be the average of the 12 highest non-coincident peak injection in kW within the last twelve months, measured in fifteen (15) minute intervals, at that Point of Delivery. The Load Billing Determinant for new Loads or those reconnecting to the Transmission Provider's facilities and for those without a 12 month history would be determined by the Transmission Provider from the information provided in the Service Agreement.

F(AI)4 Customer Segment Power Delivery Revenue Requirement

F(AI)4.1 (a) The Customer Segment Power Delivery Revenue Requirement (PDR) is that proportion of the Maximum Allowable Revenue that is allocated by the Transmission Provider to each ERC-approved Customer Segment shall be based on the Regulatory Asset Base (RAB) values that related to the MAR cap approved by the ERC at the regulatory reset for the relevant Regulatory Period under the TWRG. The PDR shall reflect, to the extent practicable and subject to the application of the Side Constraints in Section 6.4 of the TWRG, the relative or proportional value of the Regulatory Asset Base required for the provision of the Regulated Services in each Customer Segment compared with the total value of all the Regulatory Asset Base. The relative or proportional value of the RAB shall be treated as described in F(AI)4.1(b).

F(AI)4.1 (b) The value of the RAB related to submarine interconnections, including converter station and substation assets associated with the linking of the submarine interconnections with the transmission system, shall be separated from the remaining RAB. The remaining RAB shall be grouped into three sub-categories representing those used exclusively within the Luzon, Visayas and Mindanao Grids. The submarine interconnection Assets shall be grouped into four sub-categories, three representing those used exclusively within the Luzon, Visayas and Mindanao Grids, and the fourth representing those submarine interconnection Assets which interconnect these Grids. The proportion of the total value represented by these two asset categories (one with three and the other with four sub-categories) shall be treated as follows:

- (i) The PDR proportion represented by the remaining RAB shall be recovered from each Customer Segment in proportion to the RAB (excluding the submarine interconnection Assets) which supports services provided to that Customer Segment within that Grid;
- (ii) Until and if ever, such time as a Leyte-Mindanao interconnection is approved by the ERC and is subsequently commissioned, the PDR proportion represented by the proportion of the RAB related to submarine interconnections (excluding any RAB related to submarine interconnections in the Mindanao Grid), shall be recovered from each Customer Segment within the Luzon and Visayas Grids in proportion to their Billing Determinant. And the PDR proportion represented by the RAB related to submarine interconnections in the Mindanao Grid shall be recovered from each Customer Segment within the Mindanao Grids in proportion to their Billing Determinant.

(iii) After such time as a Leyte-Mindanao interconnection is approved by the ERC and is subsequently commissioned, the PDR proportion represented by the submarine interconnection sub-categories of the RAB for each Grid shall be recovered from each Customer Segment within the relevant Luzon, Visayas and Mindanao Grids in proportion to their Billing Determinant, and the sub-categories of the RAB representing the interconnection between Grids shall be recovered from all Customer Segments across all Grids in proportion to Billing Determinant.


F(AI)4.1 (c) To the extent the Side Constraints determined by the ERC for the relevant Regulatory Period constrain the revenue recovery from each Customer Segment otherwise defined by the revenue proportions in F(AI)4.1 (a) and (b), such side constraints shall apply until these revenue recovery proportions are achieved. Any under or over recovery of the MAR shall be recovered or returned to Customers through the Kt factor as defined in the TWRG.

F(AI)4.2 The Customer Segment Power Delivery Revenue Requirement (PDR) is determined as follows:

$$\text{PDR} = \frac{\text{MAR}_t \text{ less } (\text{SOC} + \text{MSP} + \text{TSC})}{12}$$

Where:

MAR_t = The Maximum Annual Revenue cap for the current Regulatory Year as allocated by the Transmission Provider to that Customer Segment under F(AI)4.1

 SOC = The Aggregate Revenue the Transmission Provider Expects to receive in the current Regulatory Year from System Operator Charges from that Customer Segment, where this revenue has been included in the MAR_t

MSP = The Aggregate Revenue the Transmission Provider expects to receive in the current Regulatory Year from Metering Service Provider Charges from that Customer Segment, provided that Metering Services remain a Regulated Transmission Service under the TWRG and this revenue has been included in the MAR_t

TSC = The Aggregate Revenue the Transmission Provider expects to receive in the current Regulatory Year from technical service charges from that Customer Segment to the extent that such services remain a Regulated Transmission Service under the TWRG and revenue

from providing such services has been included in the MAR_t

F(AI)4.3 The Generator Power Delivery Service Revenue Requirement (GDR) for each Customer Segment is that proportion of the Customer Segment Power Delivery Revenue Requirement under F(AI)4.1 which is to be recovered from Generation Customers and is determined as follows:

$$GDR = G * PDR$$

Where

G = Percentage of the Power Delivery Service Revenue Requirement to be recovered from Generator Customers, as determined by ERC

PDR = Customer Segment Power Delivery Service Revenue Requirement as determined under F(AI)4.1

F(AI)4.4 The Load Power Delivery Service Revenue Requirement (LDR) for each Customer Segment is that proportion of the Customer Segment Power Delivery Revenue Requirement determined under F(AI)4.1 which is to be recovered from Load Customers and is determined as follows:

$$LDR = L * PDR$$

Where

L = Percentage of the Power Delivery Service Revenue Requirement to be recovered from Load Customers, as determined by ERC

PDR = Customer Segment Power Delivery Revenue Requirement as determined under F(AI)4.2

F(AI)5 Generator Power Delivery Service Rate

F(AI)5.1 The Generator Power Delivery Service Rate (GR) is determined as follows:

$$GR = \frac{GDR}{\sum GBD_i}$$

Where:

GDR = The Generator Power Delivery Service Revenue Requirement as determined under F(AI)4.3

$\sum \text{GBD}_i$ = The sum of Generator Billing Determinants for all Points of Receipt, as defined under F(AI)2.2, F(AI)2.3 & F(AI)2.4

F(AI)6 Load Power Delivery Service Rate

F(AI)6.1 The Load Power Delivery Service Rate (LR) is determined as follows:

$$\text{LR} = \frac{\text{LDR}}{\sum \text{LBD}_i}$$

Where:

LDR = The Load Power Delivery Service Revenue Requirement as determined under F(AI)4.4

$\sum \text{LBD}_i$ = The sum of Load Billing Determinants for all Points of Delivery, as defined under F(AI)3.2, F(AI)3.3 & F(AI)3.4

Annex II, Module F: System Operator Charges

F(AII)1 System Operator Charges

F(AII)1.1 The System Operator Charge (SOC) recovers that portion of the Transmission Provider's Maximum Annual Revenue Cap, and any other costs approved by ERC, that are associated with the cost of System Operation. This includes (1) the costs of providing generation dispatch and operation and control services to ensure safety, power quality, stability, reliability and security of the Grid, (2) the communication and SCADA cost, (3) the cost of managing Ancillary Services as specified in the Ancillary Services Procurement Plan, and (4) cost of operations of the Grid Management Committee and its subcommittees. The System Operator Charge is payable by Generation Customers, Load Customers and Embedded Generators

F(AII)1.2 The System Operator Charge payable by each Generator Customer or the Embedded Generator, and Load Customer each month (SOC) is determined as follows:

$$\text{SOC} = \text{SOR} \times \text{BD}$$

Where:

SOR = The System Operator Rate as determined under F(AII)1.3

BD_i = The Generator Billing Determinant as determined under F(AI)2.2, F(AI)2.3 & F(AI)2.4 or the Embedded Generator Billing Determinant as determined under F(AII)1.4, or the Load Customer Billing Determinant as determined under F(AI)3.2, F(AI)3.3 & F(AI)3.4 as the case may be.

F(AII)1.3 The System Operator Rate is determined as follows:

$$\text{SOR}_{\text{rate}} = \frac{\text{SORR}}{\sum \text{BD}_i}$$

Where:

SORR The System Operator Revenue Requirement is that amount of the

Transmission Providers' Annual Revenue Requirement (ARR) determined by the ERC under section 4.5.7 of the TWRG for the current Regulatory Year that is attributable to System Operation Services, and any other costs approved by the ERC that are associated with the cost of System Operation and the cost of operation of the GMC.

$\sum BD_i$

The sum of the Generation Customer and Embedded Generator, and Load Customer Billing Determinants for the previous Regulatory Year.

F(AII)1.4 The Embedded Generator Billing Determinant for each embedded generating facility shall be the average of the highest twelve (12) non-coincident peak injection in kW, measured in fifteen (15) minute intervals, of that embedded generating for the Billing Period.

Annex III, Module F: Metering Service Provider Charge

F(AIII)1 Metering Service Provider Charge

F(AIII)1.1 The Metering Service Provider Charge recovers that portion of the Transmission Provider's Maximum Annual Revenue Cap, and any other cost approved by the ERC, that are associated with the cost of metering services. A Metering Service Provider Charge will apply to all Connected Transmission Customers and will vary in accordance with the voltage level of the infrastructure provided by the Metering Service Provider for a Metering Installation.

F(AIII)1.2 If more than one Metering Installation exists for a Connection Point and each Metering Installation has to be serviced by the Metering Service Provider, a Metering Service Provider Charge will apply separately to each Metering Installation.

F(AIII)1.3 Metering Service Provider Charges determined in accordance with this Annex III, Module F: Metering Service Provider Charge, will come into effect on the same date as the new tariff rates resulting from the final determination by the ERC of the MAR for the Second Regulatory Period take effect. Prior to this date, metering charges will be determined as per ERC Order in Case No. 2001-901, dated June 26, 2002.

F(AIII)2 Metering Service Charge payable by Connected Transmission Customers

F(AIII)2.1 The monthly Metering Service Provider Charge payable by Connected Transmission Customers shall be determined as follows :

$$MSC = \frac{(ODRC_m * WACC) + D_m + L_m + O_m + T_m}{12}$$

Where:

ODRC_m = The Optimised Depreciated Replacement Cost of the metering installation assets as determined under F(AIII)3.1

WACC = The Weighted Average Cost of Capital as determined under F(AIII)3.3

D_m = The depreciation cost of the metering installation assets for the current year, as determined under F(AIII)3.1

- L_m = The annual lease cost charged to the Metering Service Provider for assets used at the Metering Installation and leased by Metering Service Provider
- O_m = The operation and maintenance cost attributable to the provision of metering services for the current year, as determined under F(AIII)3.4
- T_m = The corporate tax expense attributable to the metering installation assets for the current year, as determined under F(AIII)3.5

F(AIII)3 Components of Metering Service Provider Charge

F(AIII)3.1 The Metering Service Provider shall maintain a Metering Asset Register of its assets forming part of the Metering Installations installed at all Metering Points. The Metering Asset Register shall:

- a) Record the value of each metering asset for the current Regulatory Year, as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be.
- b) Record the Regulated Depreciation for the current Regulatory Year for each metering asset as determined under section 4.9 of the TWRG, or section 5.9 of the TWRG, as the case may be.
- c) Allocate the value, and the depreciation cost, of each metering asset recorded in the Metering Asset Register to one of the following categories:
 - (i) Common assets; where the asset is used to provide services to all Metering Installations.
 - (ii) 230kv assets
 - (iii) 138kv assets
 - (iv) 115 kv assets
 - (v) 69kv assets
 - (vi) 34kv assets
 - (vii) 13.8kv assets
 - (viii) below 13.8kv assets
- d) The asset values, and depreciation costs, allocated to the common category (category in section F(AIII)3.1) shall be divided by the total number of Metering Installations to determine the ODRC value and depreciation cost for assets common to all Metering Installations.

- e) The asset values, and depreciation costs, allocated to each voltage category (categories (ii) to (viii) in section F(AIII)3.1) shall be divided by the number of Metering Installations in each voltage category to determine the ODRC value and depreciation cost of the assets of a Metering Installation for each voltage category.

It is recognised that in certain cases some, or all, of the metering assets forming part of a Metering Installation may not be the property of the Metering Service Provider and that these assets should therefore not be recorded in the Metering Asset Register.

F(AIII)3.2 Metering assets could include, but are not limited to, the following items that make up the Metering Installation:

- a) Revenue Metering Instrument transformers;
- b) Revenue class meters;
- c) Integrating pulse recorder(s) and time source;
- d) Lightning or surge protection installation;
- e) Communication device(s) and/or any part of a larger communication installation dedicated solely to the Metering Installation to allow remote meter reading, meter operation or meter interrogation;
- f) Housing of the Metering Installation;
- g) All interconnection cables, wires and associated devices, i.e. test blocks, pulse repeaters, loading resistors, etc.

F(AIII)3.3 The Weighted Average Cost of Capital (WACC) shall be the WACC for the Regulatory Period as determined by the ERC under section 4.9 of the TWRG, or section 5.9 of the TWRG, as the case may be.

F(AIII)3.4 The amount of Transmission Provider's operational and maintenance costs (O_m) to be recovered in relation to each Metering Installation shall be determined as follows:

- a) That amount of the Transmission Providers' Annual Revenue Requirement (ARR) determined by the ERC under section 4.5.7 of the TWRG for the current Regulatory Year that is attributable to Metering Services, and any other costs approved by the ERC that are associated with the cost of Metering Services, divided by the total number of Metering Installations.
- b) The Metering Service provider may adjust the allocation of operation and maintenance expenditure determined under F(AIII)3.4(a), if warranted by the variation in cost of serving customers (WESM or

non-WESM participants). Such allocation must be on a non-discriminatory basis as required by the EPIRA. Customers in like situations shall be treated in a like manner.

F(AIII)3.5 The corporate tax cost (T_m) to be included in the Metering Service Charge for each Metering Installation shall be determined as:

- a) That portion of the corporate tax expense to be recovered through the Metering Service charges as determined under F(AII)3.5 (b), divided by the total number of Metering Installations;
- b) The portion of corporate tax cost (CTM) to be recovered through Metering Service Charges shall be determined by the following formula:

$$CTM = \frac{\sum ODRC_m}{RAB} \times TC$$

Where:

$\sum ODRC_m$ = Is the Optimised Depreciated Replacement Cost value of all Metering Installations as determined under F(AIII)3.1(b)

RAB = Regulated Asset Base for the current Regulatory Year as determined by the ERC under section as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be.

TC = Total corporate tax cost for the current Regulatory Year as determined by the ERC under section 4.12 of the TWRG, or section 5.12 of the TWRG, as the case may be.

F(AIII)4 Additional Metering Services

F(AIII)4.1 The Transmission Service Provider may charge the Transmission Customer for providing additional services. Such services would be considered Excluded Services under the TWRG and might for instance cover operation and maintenance of Customer meters used for non-OATS Rules purposes at a particular Metering Installation. Any such charges must be fair and reasonable and reflect the costs to the Transmission Service Provider.

F(AIII)5 Calculation of Loss Factors

F(AIII)5.1 From time-to-time the Transmission Provider is required for regulatory or reporting purposes to compute grossed-up billing determinants which factor in the average Loss Factors for each Grid or Customer Segment. The "Loss Factor" refers to transmission losses as percent of net generation determined to the nearest second decimal point.



F(AIII)5.2 The Transmission Provider shall compute the applicable Loss Factor based on system net generation, excluding plant station use, for all grid Generation Facilities and total Electricity delivered to all Point(s) of Delivery for a period of twelve (12) months, which period is considered to be sufficiently long to insure stability in the resulting Loss Factor.

F(AIII)5.3 The Loss Factor shall be recomputed by the Transmission Provider periodically (but not less frequently than once each year) based on the prior 12-month period. The Loss Factor so computed shall be used once it has been approved by the ERC until the Transmission Provider has updated such factors and received approval to use such updated numbers from the ERC.

F(AIII)5.4 The Loss Factor shall be determined separately for each grid or where necessary for each Customer Segment.

Annex IV, Module F: Connections Charges and Residual Sub-transmission Charges

F(AIV)1 Connection Charge

F(AIV)1.1 The Connection Charge recovers the reasonable costs, as defined in Section 1.6.3 of the TWRG, associated with connecting the Transmission Customers' Facilities to the Transmission Provider's facilities.

F(AIV)1.2 Connection Charges are payable by Generation Customers on new Connection Assets and payable by Load Customers on existing and new Connection Assets.

F(AIV)1.3 This Annex IV, Connection Charges and Residual Sub-transmission Charges, will come into effect on the same date as the new tariff rates resulting from the final determination by the ERC of the MAR for the Second Regulatory Period take effect. Prior to this date the PDS charges incorporate the recovery of costs associated with Connection Charges and Residual Sun-transmission Charges.

F(AIV)1.4 The sub-transmission assets are defined in the ERC Guidelines to the Sale and Transfer of the Transmission Provider's Sub-Transmission Assets and Franchising of Qualified Consortiums, under Sections 7 and 8 of the EPIRA and Rule 6 of its IRR. Subject to the ERC's decisions the Sub-Transmission Assets shall comprises two asset sub-categories. These are the Connection Assets defined in F(AIV)2.1 and the Residual Sub-transmission Assets defined in F(AIV)6.1. These components are defined to allow the Connection Charges and Residual Sub-transmission Charges to apply to recover costs of assets which are the Sub-transmission Assets which the EPIRA requires to be sold by the Transmission Provider. As the Sub-transmission Assets are sold off at any one Connection Point, the Connection Charges and Residual Sun-transmission Charges which are applied by the Transmission Provider at that Connection Point shall both fall to zero.

F(AIV)1.5 The Connection Charges and Residual Sun-transmission Charges will be updated annually during the rate verification and adjustment process under Article VI of the TWRG, and the charges to the end of the Application Year shall be based on the rolled forward asset value to the end of the Application Year, as described in F(AIV)4.1 and F(AIV)8.1.

F(AIV)2 Connection Asset

F(AIV)2.1 Connection Assets are the assets connecting that Customer's facilities to the Transmission Providers facilities, including land required for the Connection Assets, as determined by applying the definition of Connection Assets specified by the ERC in the document titled

“Definition and Boundaries of Connection Assets for Customers of the National Transmission Corporation” [refer to ERC Resolution 2006 – 41] and any amendment to that document by the ERC.

F(AIV)3 Calculating the Connection Charge

F(AIV)3.1 Where the Service Agreement or another contract between the Transmission Provider and the Connected Transmission Customer specifies the amount that the Connected Transmission Customer shall pay the Transmission Provider for the Transmission Connection Assets identified in that contract, the Transmission Connected Customer shall pay the charges specified in that contract.

F(AIV)3.2 Where there is no contract containing provisions relating to the allocation of the costs of Connection Assets, the Connected Transmission Customer shall pay a Connection Charge (CC) each month determined as follows:

$$CC = \frac{[ODRC_i \times WACC] + D_i + O_i + T_i + R_i}{12}$$

Where:

ODRC_i = Is the Optimised Depreciated Replacement Cost of the Connection Assets as determined under F(AIV)4.1, subject to Rule B 20 of the OATS Rules

WACC = Is the Weighted Average Cost of Capital as determined under F(AIV)4.2

D_i = Is the depreciation cost of the Connection Asset for the current year, as determined under F(AIV)4.1(c)

O_i = Is the operational and maintenance cost attributable to the Connection Asset for the current year, as determined under F(AIV)4.3

T_i = Is the corporate tax expense attributable to the Connection Asset for the current year, as determined under F(AIV)4.5

R_i = Is the short-fall, or surplus, in the Connection Charge collected for that Connection Asset in the previous year, increased by an amount to reflect the time value of money calculated using the Weighted Average Cost of Capital as

determined under F(AIV)4.2. If R_i is a surplus, it shall be expressed as a negative.

F(AIV)4 Components of Connection Charge

- F(AIV)4.1 The Transmission Provider shall maintain a register of the Connection Assets attributable to each Connected Transmission Customer. This register shall:
- a. Allocate to each Connected Transmission Customer the assets connecting that Customer's facilities to the Grid, including land required for the Connection Assets, as determined by applying the definition of Connection Assets determined by the ERC, and the asset valuation used by the ERC for the final determination relating to the current Regulatory Period;
 - b. Record the rolled-forward depreciated value of each Connection Asset for the current Regulatory Year, using the method specified under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be. The value recorded for each Connection Asset should be net of any capital contribution, prepayment or asset donated by the Connected Transmission Customer, and net of any asset owned by the Connected Transmission Customer. For the purposes of determining the Connection Charge, the rolled-forward depreciated value for the current Regulatory Year will be determined using actual capital expenditure (rather than forecast capital expenditure), including capital expenditure incurred upgrading or replacing (in part or in whole) donated assets. The rolled forward value will be updated at least annually during the rate verification and adjustment process in Article VI of the TWRG, and the charges to the end of the Application Year shall be based on the rolled forward value to the end of the Application Year.
 - c. Record the Regulated Depreciation for the current Regulatory Year for each Connection Asset using the regulatory life of that asset type as determined by the ERC at the last regulatory reset for the current Regulatory Period, under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be.
- F(AIV)4.2 The Weighted Average Cost of Capital (WACC) shall be the approved WACC for the Regulatory Period as determined by the ERC at the last regulatory reset for that Regulatory Period, under section 4.9 or section 5.9 of the TWRG, as the case may be.
- F(AIV)4.3 The amount of Transmission Provider's operational and maintenance costs to be recovered in relation to each Connection Asset shall be determined as follows:

- a) The operational and maintenance cost (O_i) to be included in the Connection Charge for each Connection Asset shall be determined as follows:

$$O_i = \frac{ODRC_i}{\sum ODRC_i} \times COC$$

Where:

$ODRC_i$ = Optimised Depreciated Replacement Cost of the Connection Asset as determined under F(AIV)4.1

$\sum ODRC_i$ = Optimised Depreciated Replacement Cost value of all Connection Assets as determined under F(AIV)4.1(b)

COC = The amount of operational and maintenance costs to be recovered through connection charges as determined under F(AIV)4.3(b)

- b) The amount of operation and maintenance costs (COC) to be recovered through Connection Charges shall be determined by the following formula:

$$COC = \frac{\sum ODRC_i}{RAB} \times OC$$

Where:

$\sum ODRC_i$ = Optimised Depreciated Replacement Cost value of all Connection Assets as determined under F(AIV)4.1(b)

RAB = Regulated Asset Base for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be

OC = Operational and maintenance overhead costs for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current

Regulatory Period, under section 4.11 of the TWRG, or section 5.11 of the TWRG, as the case may be

F(AIV)4.4 The amount of Transmission Provider's corporate tax expense to be recovered in relation to each Connection Asset shall be determined as follows:

a) The corporate tax expense (T_i) to be included in the Connection Charge for each Connection Asset shall be determined as follows:

$$T_i = \frac{ODRC_i}{\sum ODRC_i} \times CTC$$

Where:

$ODRC_i$ = Is the Optimised Depreciated Replacement Cost of the Connection Asset as determined under F(AIV)4.1

$\sum ODRC_i$ = Is the Optimised Depreciated Replacement Cost value of all Connection Assets as determined under F(AIV)4.1(b)

CTC = The amount of corporate tax cost to be recovered through connection charges as determined under F(AIV)4.4(b)

b) The corporate tax cost (CTC) to be recovered through Connection Charges shall be determined by the following formula:

$$CTC = \frac{\sum ODRC_i}{RAB} \times TC$$

Where:

$\sum ODRC_i$ = Is the Optimised Depreciated Replacement Cost value of all Connection Assets as determined under F(AIV)4.1(b)

RAB = Regulated Asset Base for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be

TC = The corporate tax cost for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, under section

4.12 of the TWRG, or section 5.12 of the TWRG, as the case may be.

F(AIV)5 Residual Sub-transmission Charge

F(AIV)5.1 The Residual Sub-transmission Charge recovers the reasonable costs, as defined in Section 1.6.3 of the TWRG, associated with sub-transmission assets that is not otherwise recovered through the Connection Charge.

F(AIV)5.2 The Residual Sub-transmission Charge is payable by Load Customers, or Generation Customers when they are accepting services from the Transmission Provider as if they were Load Customers.

F(AIV)6 Residual Sub-transmission Assets

F(AIV)6.1 Residual Sub-transmission Assets are the sub-transmission assets as identified in the ERC Guidelines to the Sale and Transfer of the Transco's Sub-Transmission Assets and Franchising of Qualified Consortiums, less any asset defined as a Connection Asset under section F(AIV)2.1 and less any asset no longer owned by the Transmission Provider.

F(AIV)7 Calculating the Residual Sub-transmission charge

F(AIV)7.1 Where the Service Agreement or another contract between the Transmission Provider and the Connected Transmission Customer specifies the amounts that the Connected Transmission Customer shall pay the Transmission Provider for the Sub-transmission Assets identified in that contract, the Connected Transmission Customer shall pay the charges specified in that contract.

F(AIV)7.2 Where there is no contract containing provisions relating to the allocation of the costs of Sub-transmission Assets, the Connected Transmission Customer shall pay a Residual Sub-transmission Charge (RSC) each month determined as follows:

$$RSC = \frac{[ODRC_s \times WACC] + D_s + O_s + T_s + R_s}{12}$$

Where:

ODRC_s = Is the Optimised Depreciated Replacement Cost of the Residual Sub-transmission Asset as determined under F(AIV)8.1, subject to Rule B 20 of the OATS Rules

WACC	=	Is the Weighted Average Cost of Capital as determined under F(AIV)8.2
D_s	=	Is the depreciation cost of the Sub-transmission Asset for the current year, as determined under F(AIV)8.1(c)
O_s	=	Is the operational and maintenance cost attributable to the Sub-transmission Asset for the current year, as determined under F(AIV)8.3
T_s	=	Is the corporate tax expense attributable to the Sub-transmission Asset for the current year, as determined under F(AIV)8.5
R_s	=	Is the short-fall, or surplus, in the Residual Sub-transmission Charge collected for that Sub-transmission Asset in the previous year, increased by an amount to reflect the time value of money calculated using the Weighted Average Cost of Capital as determined under F(AIV)8.2. If R_s is a surplus, it shall be expressed as a negative.

F(AIV)7.3 Where a Sub-transmission Asset is used by two or more Transmission Customers, the proportion of the Residual Sub-transmission Charge (PRSC) payable by each Transmission Customer is determined as follows:

$$PRSC = \frac{BD_i}{\sum BD_i}$$

Where:

BD_i = The Generator Billing Determinant as determined under F(AI)2.2, F(AI)2.3 & F(AI)2.4 or the Load Billing Determinant as determined under F(AI)3.2, F(AI)3.3 & F(AI)3.4 as the case may be, for the Transmission Customer at the relevant Connection Point

$\sum BD_i$ = The sum of the Billing Determinants of all Transmission Customers at the relevant Connection Point

F(AIV)8 Components of Residual Sub-transmission Charge

- F(AIV)8.1 The Transmission Provider shall maintain a register of the Residual Sub-transmission Assets attributable to each Connected Transmission Customer. This register shall:
- a. Allocate to each Connected Transmission Customer the Sub-transmission Assets connecting that Customer's facilities to the Grid, including land required for the Sub-transmission Assets, as determined by applying the definition of Residual Sub-transmission Assets under F(AIV)6.1;
 - b. Record the rolled-forward depreciated value of each Residual Sub-transmission Asset for the current Regulatory Year, using the method specified as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be. The value recorded for each Residual Sub-transmission Asset should be net of any capital contribution, or prepayment or asset donated made by the Connected Transmission Customer for that Sub-transmission Asset. For the purposes of determining the Residual Sub-transmission Charge, the rolled-forward depreciated value for the current Regulatory Year will be determined using actual capital expenditure (rather than forecast capital expenditure), including capital expenditure incurred upgrading or replacing (in part or in whole) donated assets. The rolled forward value will be updated annually during the rate verification and adjustment process in Article VI of the TWRG, and the charges to the end of the Application Year shall be based on the rolled forward value to the end of the Application Year;
 - c. Record the Regulated Depreciation for the current Regulatory Year for each Residual Sub-transmission Asset using the regulatory life of that asset type as determined by the ERC for the final determination relating to the current Regulatory Period under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be.
- F(AIV)8.2 The Weighted Average Cost of Capital (WACC) shall be the approved WACC for the Regulatory Period as determined by the ERC at the last regulatory reset for that Regulatory Period, under section 4.9 or section 5.9 of the TWRG, as the case may be.
- F(AIV)8.3 The amount of Transmission Provider's operational and maintenance costs approved by the ERC under section 4.11 or section 5.11 of the TWRG for the current Regulatory Year, to be recovered in relation to each Residual Sub-transmission Asset shall be determined as follows:
- a) The operational and maintenance cost (O_s) to be included in the Residual Sub-transmission Charge for each Residual Sub-transmission Asset shall be determined as follows:

$$O_s = \frac{\text{ODRC}_s}{\sum \text{ODRC}_s} \times \text{SOC}$$

Where:

ODRC_s = Optimised Depreciated Replacement Cost of the Residual Sub-transmission Asset as determined under F(AIV)8.1

$\sum \text{ODRC}_s$ = Optimised Depreciated Replacement Cost value of all Residual Sub-transmission Assets as determined under F(AIV)8.1(b)

SOC = The amount of operational and maintenance costs to be recovered through Residual Sub-transmission charges as determined under F(AIV)8.3(b)

b) The amount of operation and maintenance costs (SOC) to be recovered through Residual Sub-transmission Charges shall be determined by the following formula:

$$\text{SOC} = \frac{\sum \text{ODRC}_s}{\text{RAB}} \times \text{OC}$$

Where:

$\sum \text{ODRC}_s$ = Optimised Depreciated Replacement Cost value of all Residual Sub-transmission Assets as determined under F(AIV)8.1(b)

RAB = Regulated Asset Base for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, as determined under section 4.7 of the TWRG, or section 5.7 of the TWRG, as the case may be

OC = The operational and maintenance overhead costs for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, under section 4.11 of the TWRG, or section 5.11 of the TWRG, as the case may be



F(AIV)8.4 The amount of Transmission Provider's corporate tax expense to be recovered in relation to each Residual Sub-transmission Asset shall be determined as follows:

- a) The corporate tax expense (T_s) to be included in the Residual Sub-transmission Charge for each Residual Sub-transmission Asset shall be determined as follows:

$$T_s = \frac{\text{ODRC}_s}{\sum \text{ODRC}_s} \times \text{STC}$$

Where:

$\text{ODRC}_s =$ Is the Optimised Depreciated Replacement Cost of the Residual Sub-transmission Asset as determined under F(AIV)8.1

$\sum \text{ODRC}_s =$ Is the Optimised Depreciated Replacement Cost value of all Residual Sub-transmission Assets as determined under F(AIV)8.1(b)

$\text{STC} =$ The amount of corporate tax cost to be recovered through Residual Sub-transmission charges as determined under F(AIV)8.4(b)

- b) The amount of corporate tax cost (STC) to be recovered through Residual Sub-transmission Charges shall be determined by the following formula:

$$\text{STC} = \frac{\sum \text{ODRC}_s}{\text{RAB}} \times \text{TC}$$

Where:

$\sum \text{ODRC}_s =$ Is the Optimised Depreciated Replacement Cost value of all Residual Sub-transmission Assets as determined under F(AIV)8.1(b)

$\text{RAB} =$ Regulated Asset Base for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, under section 4.7 of the

TWRG, or section 5.7 of the TWRG, as the case may be

TC

=

The corporate tax cost for the current Regulatory Year as determined by the ERC at the last regulatory reset for the current Regulatory Period, under section 4.12 of the TWRG, or section 5.12 of the TWRG, as the case may be.

Annex V, Module F: Technical Services Charges

F(AV)1 Charges for System Impact Study and Facilities Study

F(AV)1.1 The Transmission Customer shall pay the costs of any System Impact Study (SIS) or Facilities Study arising from their Service Application. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing Grid Impact Studies (GIS) and any other relevant studies. The Transmission Customer shall not be assessed a charge for any existing studies. However, the Transmission Customer shall be responsible for charges associated with any modifications to existing studies that are reasonably necessary to evaluate the impact of the Transmission Customer's request for service on the Grid.



F(AV)1.2 If, in response to multiple Transmission Customers requesting service, a single SIS is sufficient for the Transmission Provider to accommodate the service requests, the costs of that study shall be pro-rated among the Transmission Customers.

F(AV)2 Special billing provisions for System Impact and Facilities

F(AV)2.1 Upon acceptance by the Transmission Customer of an Offer of Service for System Impact Study or Facilities Study from the Transmission Provider as described in Module B of these OATS Rules, the Transmission Customer shall pay a non-refundable deposit of thirty percent (30%) of the estimated total amount of the applicable study. Such deposit shall be made after the Offer of Service is agreed and before the studies are conducted. The remaining 70% shall be payable at the completion of the System Impact Study or Facilities Study.

Annex VI, Module F: Billing Adjustments

F(AVI)1 Interruption and Curtailment Billing Adjustment

F(AVI)1.1 The Interruption Billing Adjustment reduces the relevant transmission charges to the Connected Transmission Customer when an Interruption below the level agreed in the Service Agreement is due to Transmission Provider related faults. The Interruption Billing Adjustment is determined under F(AVI)1.3. For the avoidance of doubt, the Interruption Billing Adjustment does not apply when the Interruption arises from Generation or other non-Transmission Provider related causes.



F(AVI)1.2 The Curtailment Billing Adjustment reduces the relevant transmission charges to the Connected Transmission Customer when a Curtailment below the level agreed in the Service Agreement is due to Transmission Provider related faults. The Curtailment Billing Adjustment is determined under F(AVI)1.4 below. For the avoidance of doubt, the Curtailment Billing Adjustment does not apply when the Curtailment arises from Generation or other non-Transmission Provider related causes.

F(AVI)1.3 The Interruption Billing Adjustment shall be computed using the formula below :

$$IBA = \Sigma PDSRC \times \frac{\text{Interruption Hours}}{\text{Billing Hours}} \times \frac{M_i}{\Sigma M_i}$$

Where:

$\Sigma PDSRC$ = The sum of Power Delivery Service Charges for the Connected Transmission Customer

Interruption Hours = Total number of hours during the Billing Period that service was interrupted

Billing Hours = Hours of the month

M_i = Where the service was interrupted for:

(a) Generation Customers, the injection peak for the Billing Period at the point Point of Receipt where the service was interrupted

(b) Load Customers, the peak demand for the Billing Period at the Point of Delivery where

the service was interrupted

- ΣM_i = Where the service was interrupted for:
- (a) Generation Customers, the sum of the injection peaks for the Billing Period at all Points of Receipt for that Generation Customer
 - (b) Load Customers, the sum of the peak demand for the Billing Period at all Points of Delivery for that Load Customer

F(AVI)1.4 The Curtailment Billing Adjustment shall be computed using the formula below:

$$CBA = \Sigma PDSRC \times \frac{\text{Curtailment Hours}}{\text{Billing Hours}} \times \frac{M_i}{\Sigma M_i} \times \frac{CTC - ATC}{CTC}$$

Where:

CTC = Contracted Transmission Capacity agreed between the Transmission Provider and the Transmission Customer and recorded in the Transmission Customer's Service Agreement for the Connection Point under C4 of these OATS Rules

ATC = The maximum level of Actual Transmission Capacity during the Curtailment Hours

Curtailment Hours = Total number of hours during the Billing Period that service was Curtailed

All other components are the same as under F(AVI)1.3.

Annex VII, Module F: Other Adjustments and Charges

F(AVII)1 Universal Charge

F(AVII)1.1 Universal Charge, as defined in the Act and implementing rules, shall be collected and remitted pursuant to Section 34 of the Act.

F(AVII)1.2 The rate, which is expressed in P/kWh, for each component of the Universal Charge shall be as determined by ERC.

F(AVII)2 Other Adjustments

F(AVII)2.1 Laws, rules, regulations or management discretion may provide for other adjustments to the Billing Statement issued to the Transmission Customer. If ERC approval is required for an adjustment, the adjustment shall be submitted to the ERC for approval prior to inclusion in the Billing Statement.

F(AVII)3 Other Charges

F(AVII)3.1 Other Excluded Services which relate to the provision of Transmission Connection Services, including those mentioned in this Section, shall also be charged using a detailed approach which meets the requirements of Section 1.6 of the TWRG.

F(AVII)3.2 In addition to the basic annual Connection Charges, Customers may pay the Transmission Provider for certain other costs related to their connection. These will be set out in the SA where appropriate and include those described below:

- a) Irregular Works
 - i. To provide a connection, the Transmission Provider may need to carry out works on the transmission system, which although are directly attributable to the connection, may not give rise to additional Connection Assets. Where the Transmission Customer(s) are liable for the irregular works, they will pay a charge equal to the cost of the work involved, where charges are fair and reasonable as Excluded Services under Section 1.6 of the TWRG.
 - ii. Payment for the irregular works shall be paid on an agreed date, which is usually upon completion of the works. However, arrangements may be agreed between the Transmission Provider and the Transmission Customer(s) to pay the charge on a periodic basis over a longer period.
- b) Miscellaneous/Termination Charges

- i. Other contract specific changes, including contract termination charges, may be payable by the Transmission Customer(s), which shall be set out in the SA.

Annex A to these OATS Rules: Pro forma Service Application and Service Agreement

GUIDELINES FOR THE APPLICATION PROCESS

1. Terms

1.1 In this Application/Service Agreement, capitalised terms have the meaning given to them in the OATS Rules.

1.2 An “**Other**” customer is any person or entity purchasing services off the Transmission Provider/System operator other than a Generation Customer, Distribution Utility or an End-user..

2. All Applicants are to comply with the following instructions:

2.1 Your Application shall be dealt with in accordance with Modules A and B of the OATS Rules. In the event of any inconsistency with these instructions, the OATS Rules shall prevail.

2.2 The Transmission Provider/System Operator shall acknowledge receipt of your Application within 10 days of receipt.

2.3 Should your Application be incomplete or otherwise unsatisfactory, the Transmission Provider/System Operator shall advise you of this within 15 days of receipt and provide you with a further 15 days to provide such information. Should you not provide this information within this further 15 day period, your Application shall be deemed to have lapsed.

2.4 The Applicant shall include the information specified in the Grid Code (Section 6.4 and Section 6.5) in Schedules B and C to this Application.

2.5 The Transmission Provider/System Operator shall rely on its Grid Impact Studies to assess the effects of the proposed Application on the Grid.

2.6 Should your application require a System Impact Study (to assess the adequacy of the Grid for the proposed Transmission Services and the costs that may be incurred in any necessary expansion), the Transmission Provider/System Operator shall inform you of this, and offer its services for the SIS, within 30 days of the receipt of your Application. You must either accept this offer or provide an alternative Offer of Service to the Transmission Provider/System Operator within 15 days or your Application shall be deemed to have lapsed.

2.7 Once an Offer of Service is accepted by the party to whom it was offered, the party responsible for undertaking the System Impact Study shall endeavor to complete the Study within 60 days or as may be agreed by the Parties from its receipt of notice of acceptance. If the study demonstrates that no costs are likely to be incurred, you shall be advised of this immediately. The party

responsible for undertaking the Study shall provide the completed Study results to the other party within 10 days of completion of the Study.

- 2.8 Should your service request require new Grid Facilities, the Transmission Provider/System Operator shall advise you of this within 30 days of completion of the System Impact Study, and offer to perform the necessary Facilities Study, including a proposed timeframe for the completion of the Facilities Study. Again, this offer shall be accepted within 15 days, or you may undertake the Study yourself on an equivalent timeframe, or contract a third party to complete the Study.
- 2.9 If the results of all of the necessary studies are agreed upon by you and the Transmission Provider/System Operator, the Acceptance Form at the end of this Application shall be signed within 30 days of the provision of the results of the last relevant Study (i.e. either System Impact Study or Facilities Study) to the other party, or your Application shall be deemed to have lapsed. Upon such signing, the Application Form shall become your Service Agreement.
- 2.10 All relevant data (under Schedules C - K as applicable), shall be submitted within 30 days of the signing of the Acceptance Form unless otherwise provided in this form or agreed on by the parties, and before the Commissioning Date.

Generators and Distributors shall also comply with the following instructions:

- 2.11 Once the test and commissioning procedures have been carried out under this Service Agreement, you shall provide the Transmission Provider/System Operator with a statement of readiness to connect.
- 2.12 Within 15 days of receipt of this statement, the Transmission Provider/System Operator shall issue you with a Certificate of Approval to Connect, after which connection may occur. The date on this Certificate of Approval shall be the Commissioning Date.

3. The relevant Schedules

- 3.1 **All Applicants** seeking a new connection to the Grid shall fill in and submit the following Schedules:

Schedule A	OATS Services
Schedule B(2)	Forecast Data
Schedule B(4)	User System Data
Schedule C(2)	Detailed User System Data
Schedule D	Electrical Diagrams
Schedule E	Connection Point Drawings
Schedule F	Asset Boundary Information
Schedule G	Equipment
Schedule H	Protection Arrangements and Settings
Schedule I	Authorized Representatives
Schedule J	Proposed Maintenance Program

Schedule K	Test and Commissioning Procedures
Schedule L	Load Shedding and Curtailment Procedures
Schedule M	Contingency Actions
Schedule N	Critical Events List
Schedule O	Statement of Readiness to Connect
Schedule Q	Registered Equipment Data
Schedule R	Other Information

Existing Customers seeking a new connection shall also fill in and submit:


Schedule B(1)

3.2 **Generation Customers** seeking a new connection to the Grid shall also fill in and submit:

Schedule B(2)(b)	
Schedule B(3)	Generation Unit Data
Schedule C	Detailed Generation Unit Data

3.3 **Load Customers** seeking a new connection to the Grid and who have Embedded Generation Plants connected to their Distribution System, shall also fill in and submit:

Schedule B(2)(a)	
Schedule B(2)(b)	
Schedule B(3)	Generation Unit Data
Schedule C(1)	Detailed Generation Unit Data

	TRANSMISSION SERVICE APPLICATION FORM	TSD Form No. 001 <small>rev. June 2003</small>
CUSTOMER DATA		
1 ▶ Company Name:		
<input style="width:100%;" type="text"/>		
2 ▶ Address:		
<input style="width:100%;" type="text"/>		
3 ▶ <input style="width:25%;" type="text"/>	4 ▶ Fax Number:	5 ▶ E-mail Address:
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
6 ▶ Contact Person:	7 ▶ Designation:	8 ▶ Date of Application:
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
9 ▶ Contracted Capacity (kW):	10 ▶ Start of Service (mm/dd/yyyy):	11 ▶ End of Service (mm/dd/yyyy):
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
GENERATING PLANT DATA		
12 ▶ Generating Plant's Switchyard:		13 ▶ Power System/Region:
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
14 ▶ Connection: (Please attach single line diagram)		15 ▶ Voltage Level (kV):
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
16 ▶ Location: (Please attach the location map of the facilities.)		17 ▶ Plant Type:
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
<small>(NOTE: The single line diagram should indicate the approximate distance of the applicant's facilities to the nearest TransCo tapping point where the applicant intends to connect.)</small>		
18 ▶ Total Capacity (kW):	19 ▶ No. of Units:	20 ▶ Type of Main Fuel:
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
21 ▶ Type of Start-up Fuel:	22 ▶ Unit Capacity (kW):	23 ▶ Unit Power Factor:
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
24 ▶ Transfer Capacity (kW):	25 ▶ Min. Stable Load (MW):	
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	
26 ▶ Start-up Duration, Hot (min.):	27 ▶ Start-up Duration, Warm (min.):	28 ▶ Start-up Duration, Cold (min.):
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
29 ▶ Ramp-up Rate (MW/min):	30 ▶ Ramp-down Rate (MW/min):	31 ▶ Minimum Downtime (Hr.):
<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>	<input style="width:25%;" type="text"/>
LOAD DATA		
32 ▶ Load Customer's Substation:		33 ▶ Receiving Party:
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
34 ▶ Power System/Region:		35 ▶ Voltage Level (kV):
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
36 ▶ Connection: (Please attach single line diagram)		37 ▶ Location: (Please attach the location map of the facilities.)
<input style="width:50%;" type="text"/>		<input style="width:50%;" type="text"/>
<small>(NOTE: The single line diagram should indicate the approximate distance of the applicant's facilities to the nearest TransCo tapping point where the applicant intends to connect.)</small>		
38 ▶ Remarks:		
The applicant must also submit its 10-year load forecast. Please specify the sheet(s)/information attached to this form.		
<input style="width:100%; height: 100px;" type="text"/>		
39 ▶ I declare that the information given above and in the attached sheet(s) are true and correct:		40 ▶ Designation:
<input style="width:50%;" type="text"/>		<input style="width:25%;" type="text"/>
Signature over Printed Name		41 ▶ Date:
<input style="width:50%;" type="text"/>		<input style="width:25%;" type="text"/>

Application Instructions

Connection	Please indicate through a single-line diagram the proposed point(s) of connection relative to the existing or proposed TransCo transmission or substation facilities.
Contracted Capacity	Please indicate the amount of transmission system capacity reserved by TransCo for use by Transmission Customer.
End of Service	Please indicate the effective date on which the Agreement shall terminate or expire.
Minimum Downtime	Please indicate the total time a generating unit must be down before it can be restarted.
Minimum Stable Load	Please indicate the minimum generation that the generating unit can safely maintain for a continuous period.
No. of Units	Please indicate the number of generating units for each power plant.
Plant Type	Please indicate if the generating plant is hydroelectric, geothermal, oil thermal, coal thermal, gas turbine, diesel engine, combined-cycle, etc.
Load Customer's Substation	Please indicate the station or portion of the Transmission System where the capacity and energy will be made available to the Receiving Party.
Generating Plant's Switchyard	Please indicate the station or portion of the Transmission System where the capacity and energy will be made available by the supplying entity.
Power System/Region	Please indicate the grid (Luzon, Visayas or Mindanao) or Region (Northern Luzon, Southern Luzon, Metro Manila, Visayas or Mindanao) where the facilities will be connected.
Ramp-up/down Rate	Please indicate the sustained rate of change of generator output, in megawatts per minute.
Receiving Party	Please indicate the entity accepting the capacity and energy.
Start-up Duration	Please indicate the time duration of bringing a generating unit from shutdown to the time its is enable to be synchronize to the system.
Start of Service	Please indicate the effective date on which the Agreement shall begin.
Total Capacity	Please indicate the total capacity of the power plant in kW.
Transfer Capacity	Please indicate the total maximum coincident power between the points of connection (generator and load).
Unit Capacities	Please indicate maximum kW output level of individual generating units in the power plants.
Unit Power Factor	Please indicate the leading and lagging power factor ranges of individual generating units in the power plant.
Voltage Level	Please indicate voltage level of the point of connection.

For more clarification and information regarding application for transmission service, please contact:

TRANSMISSION SERVICE DIVISION
National Transmission Corporation
Power Center
Quezon Avenue cor. BIR Road
Diliman, Quezon City, Philippines

Tel. No. (632) 981-25-23 to 26
Fax No.: (632) 920-00-25
Email: tsd@transco.ph

December, 2006