



# SERVICE AGREEMENTS

WITH CUSTOMERS OF THE  
NATIONAL GRID CORPORATION OF THE PHILIPPINES



# Presentation Roadmap

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- A. Statutory and Regulatory Basis
- B. Applicable Service Agreement
- C. Defining Service Agreement
- D. Service Agreement Flowchart
- E. Technical Requirements Prior Implementation
- F. Technical Requirements at the Connection Point
- G. Technical Requirements Prior to Energization



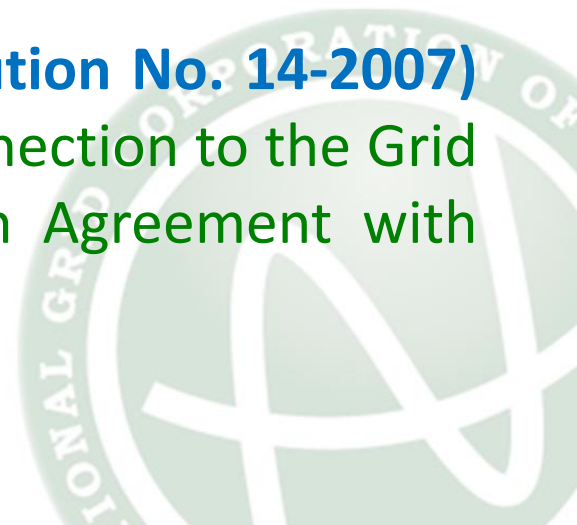
# STATUTORY AND REGULATORY BASIS



# Statutory and Regulatory Basis

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- ❑ **EPIRA** mandates the Transmission Provider to “provide all electric power industry participants open and non-discriminatory access to its transmission system”
- ❑ The **Open Access Transmission Service (OATS) Rules** mandates “all prospective Transmission Customers shall apply to enter into a Service Agreement ....”
- ❑ The **Philippine Grid Code (ERC Resolution No. 14-2007)** provides “Any User seeking a new connection to the Grid shall secure the required Connection Agreement with the Grid Owner....”



# Statutory and Regulatory Basis

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- ❑ **ERC Resolution No. 48-2006**, A Resolution Summarizing the Applicable Legal Principles and Policies of the ERC on End-User Connections
- ❑ **ERC Resolution No. 41-2006** (Amendment of Resolution No. 25-2006)
- ❑ **ERC Resolution No. 25-2006**, a Resolution Adopting the Definition and Boundaries of Connection Assets





# SUMMARY OF ERC POLICIES ON END-USER CONNECTION



# ERC Resolution No. 48-2006

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- ❑ The End-user to be served by the franchised DU's distribution system;
- ❑ The End-user to secure ERC's approval before it can connect directly to TRANSCO's existing subtransmission assets and bypass the DU system. In such cases, it shall pay applicable charges for the services availed from the DU and other non-by-passable charges authorized by law.
- ❑ The End-user, subject to ERC approval, may be allowed to connect to the grid through the construction of new subtransmission assets (by TransCo, by End-user or by DU).

# ERC Resolution No. 48-2006

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- ❑ If End-user puts up the assets and allow TRANSCO or the DU to operate, it shall pay the applicable charges for O&M expenses;
- ❑ If the DU construct the assets, the End-user shall pay the charge related to such assets and other applicable charges for services availed from the DU.





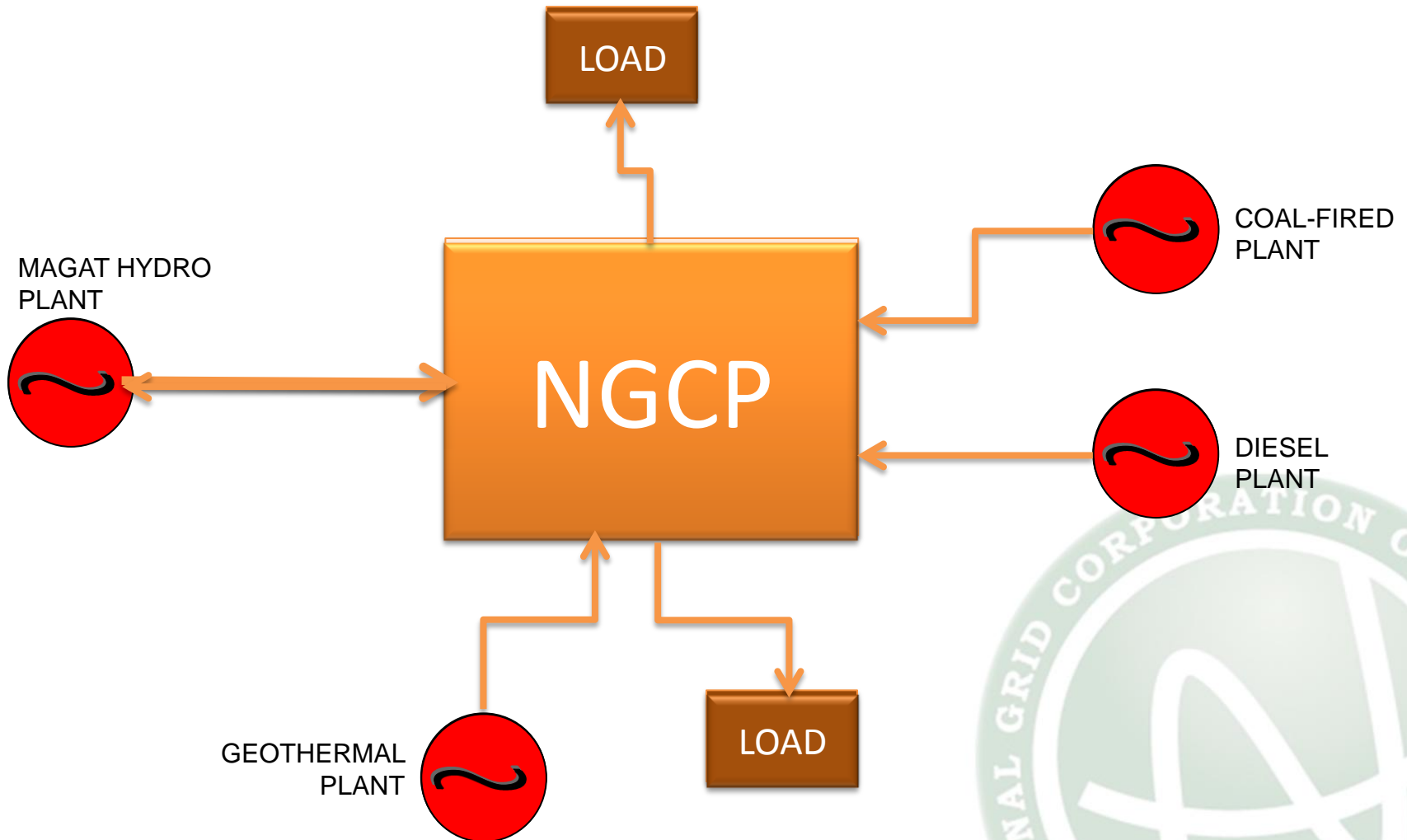
# APPLICABLE SERVICE AGREEMENT



# Applicable Service Agreement

| Type of Customer               | Connection Agreement    | Transmission Service Agreement | Metering Service Agreement |
|--------------------------------|-------------------------|--------------------------------|----------------------------|
| Load                           | Integrated into the TSA | ✓                              | ✓                          |
| Generators                     |                         |                                |                            |
| W/ feedback power requirement  | ✓                       | ✓                              | ✓                          |
| W/o feedback power requirement | ✓                       | ✓                              | ✓                          |
| Embedded                       | x                       | ✓                              | ✓                          |

# Generator can be a “load”





# DEFINING SERVICE AGREEMENT



# Connection Agreement

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- ❑ Establishes the asset boundary;
- ❑ Defines the responsibilities at the asset boundary;
- ❑ Contains the provision on applicable charges; and
- ❑ Allows the Transmission Customer to remain connected in order to continually avail of the services



# Transmission Service Agreement

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- ❑ Specifies the terms and conditions for the provision of transmission service by the Transmission Provider and the availment of such service by the Transmission Customer;
  
- ❑ Provides the conditions for:
  - Term and effectivity;
  - Technical requirements for connection in accordance with the OATS Rules and Philippine Grid Code;
  - Posting of credit support;
  - Dispute resolution



# Metering Service Agreement

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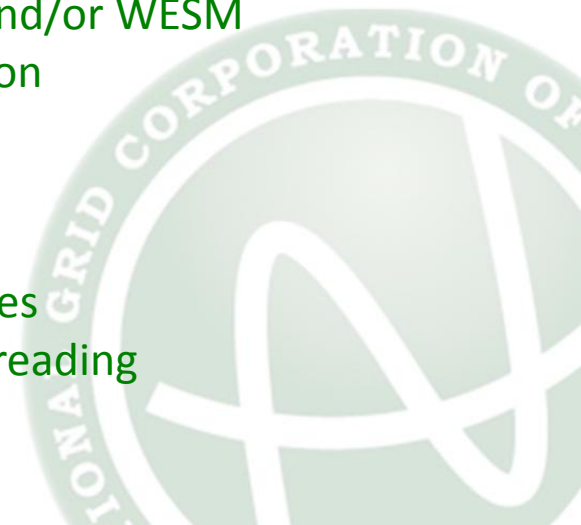
- Defines the responsibilities of the Metering Service Provider and the Metered Entity in relation to the provision of metering facilities, equipment and service as provided under the OATS Rules, Grid Code and WESM Rules.

## Metering Services Provider:

- Install, commission, provide metering equipment
- Perform meter readings
- Deliver meter data to Transmission Customer and/or WESM
- Perform periodic tests and technical investigation

## Metered Entity:

- Provide/Construct metering foundations
- Provide access to NGCP personnel at its premises
- Notify NGCP of any error/inaccuracy on meter reading
- Pay metering service charges



# Connection Agreement Salient Features

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General Terms



Obligations of the Parties



Billing and Payment



Dispute Resolutions



Termination and Suspension of  
Services



Notices



Miscellaneous Provisions

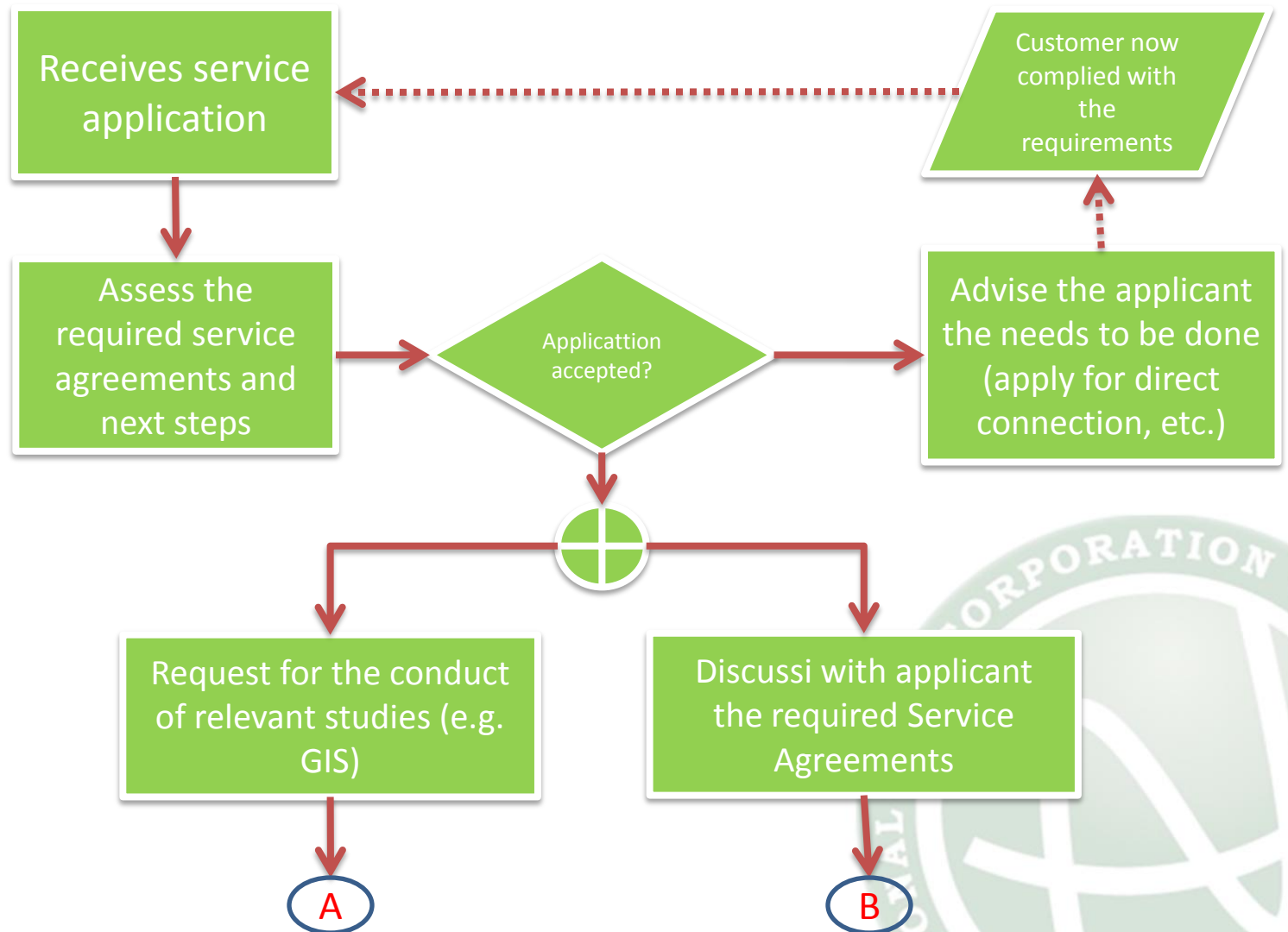




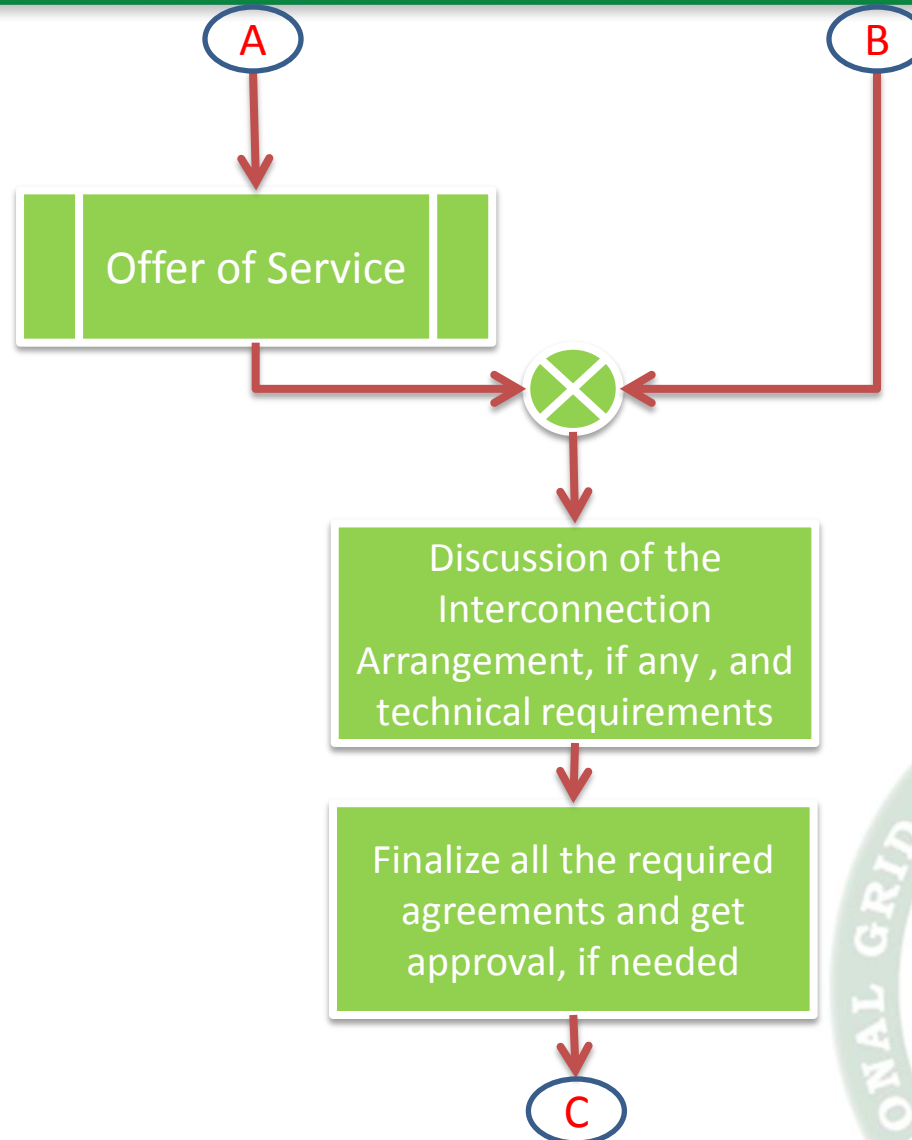
# SERVICE AGREEMENT FLOWCHART



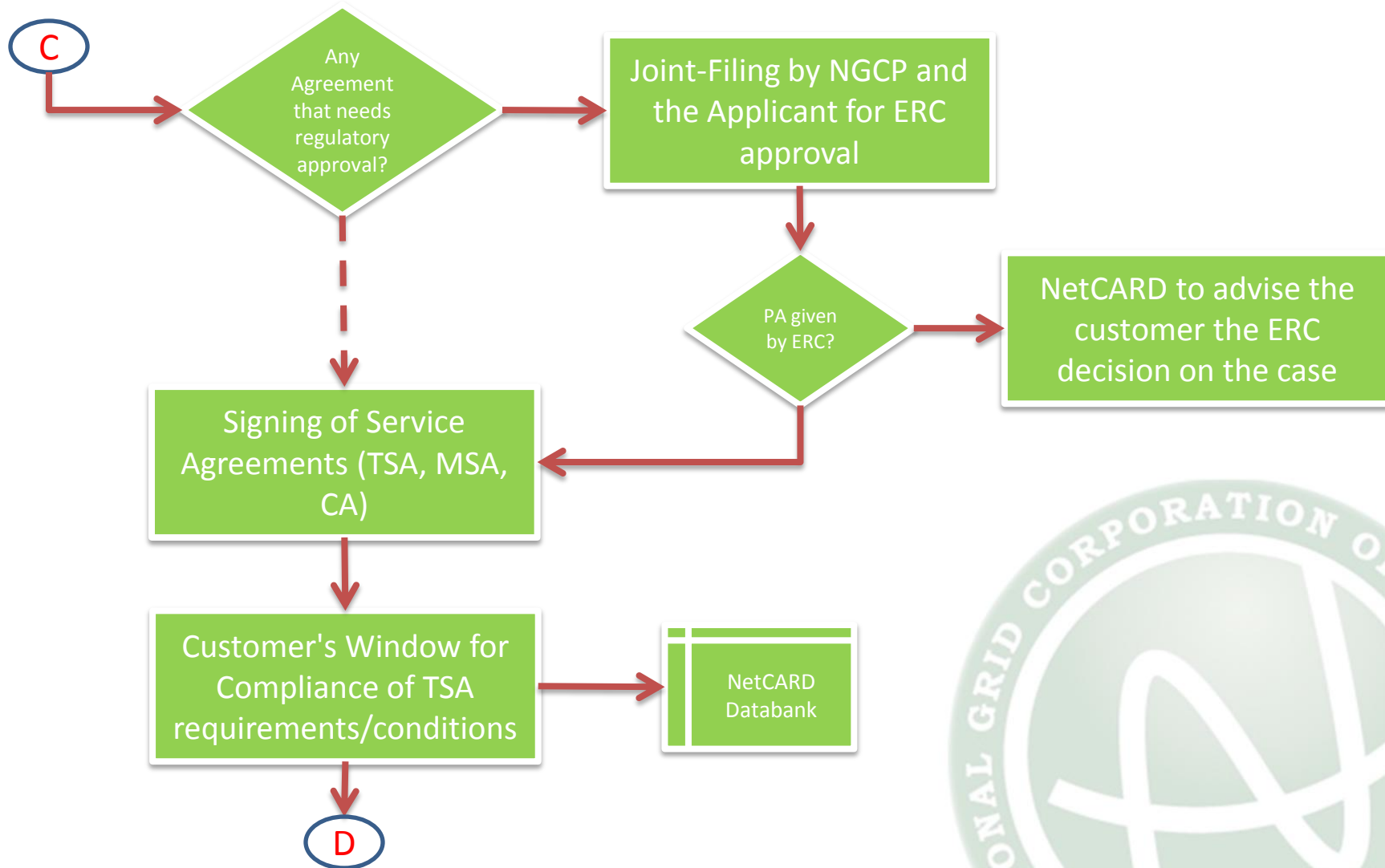
# Service Agreement Flowchart (1/4)



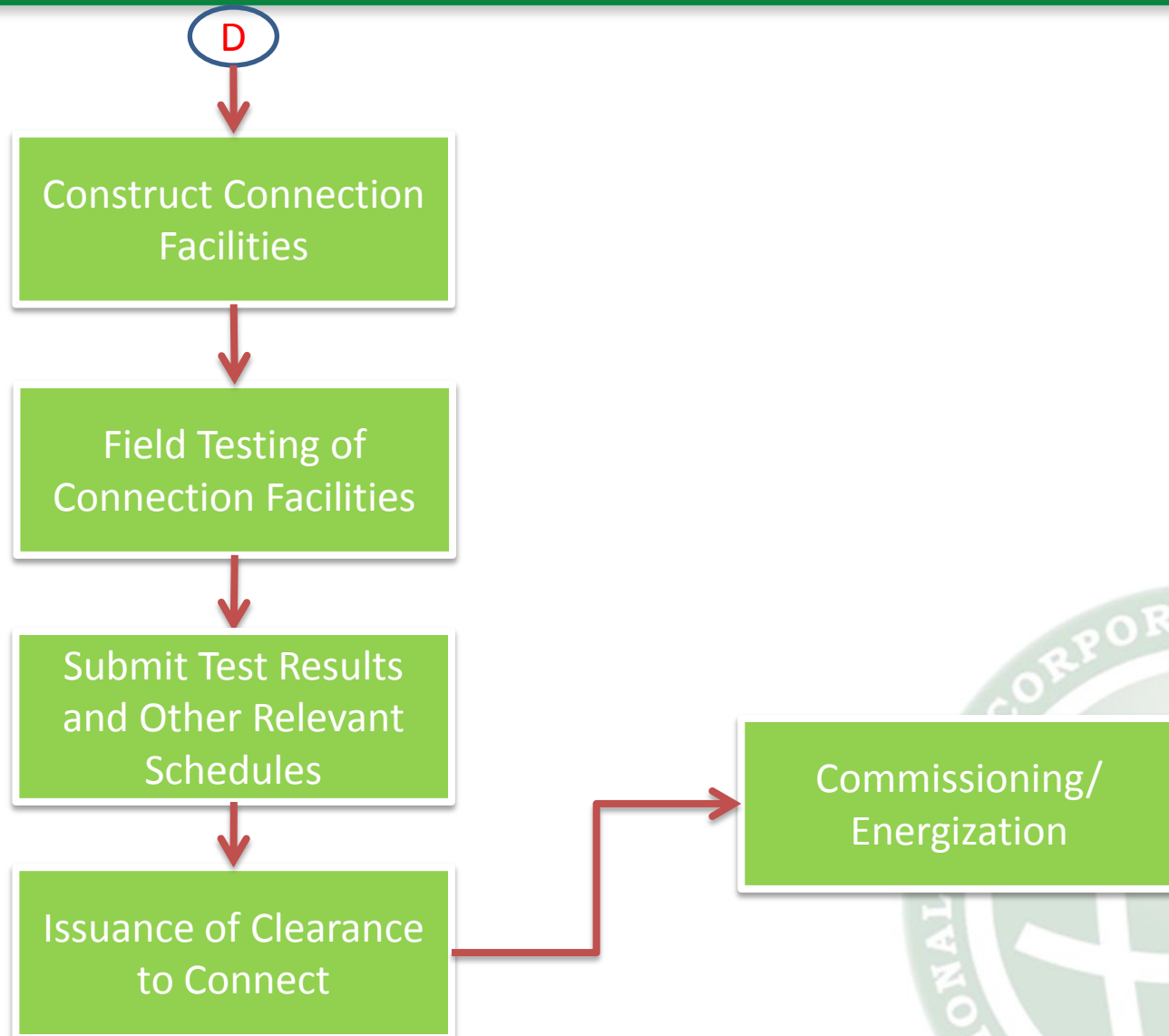
# Service Agreement Flowchart (2/4)



# Service Agreement Flowchart (3/4)



# Service Agreement Flowchart (4/4)





# TECHNICAL REQUIREMENTS PRIOR TO IMPLEMENTATION



# Technical Contents of Grid Impact Study

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## INTERCONNECTION PLAN

- Evaluate connection scheme of the Applicant choice by integrating the proposed development to the Grid.

## THERMAL ASSESSMENT

- Evaluate the adequacy of the existing transmission facilities and identify the additional facilities that may be required to serve the projected demand

## VOLTAGE ASSESSMENT

- Evaluate the reactive power requirements for the new connection in order to maintain the voltage in the area within acceptable limit

# Technical Contents of Grid Impact Study

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## FAULT CURRENT ASSESSMENT

- Assess the fault level at the connection point to determine the required duties and specifications of electrical equipment at the same time establish if there is a need to uprate/replace existing equipment.

## OPERATIONAL ASSESSMENT

- Assess the impact of the new connection to the operational flexibility and asset utilization of transmission equipment at/near the connection point.

## PROTECTION ASSESSMENT

- Determine the additional protection equipment needed to accommodate the new connection and its impact to the overall protection strategy.



# TECHNICAL REQUIREMENTS AT THE CONNECTION POINT



# Technical Requirement @ Connection Point

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## TRANSMISSION CONNECTION ASSET (INCLUSION)

- Power Circuit Breaker, Surge Arrester, Disconnect Switch including Protective Relays, Breaker Failure Relay and any other multifunction protective devices and equipment.

## TRANSMISSION CONNECTION ASSET (EXCLUSION)

- Communication equipment, SCADA and other equipment used by the System Operator
- Meters and Metering Equipment for the Supply and Metering Services
- Step-down transformer within the Grid
- Any transmission line
- Contributed Asset





# TECHNICAL REQUIREMENTS PRIOR TO ENERGIZATION



# Technical Requirement Prior To Energization

## OPTIONS FOR THE TRANSMISSION CUSTOMERS

- To undertake the Field Tests at its connection facility and advise NGCP;
- To engage 3<sup>rd</sup> party the Field Test at its connection facility and advise NGCP; or
- To commission NGCP to undertake the Field Test at the connection facility.

## SUBMISSION OF DOCUMENTS PRIOR TO FIELD TEST

- Factory Test Data of Power Circuit Breaker
- Specification of Metering Equipment and Factory Test Report
- Protection Scheme
- Factory Test Report for the Protection and Disturbance Recorder, Telecom Related Equipment
- Single Line Diagram showing its Protection and Metering
- Three Line Diagram
- Detailed Schematic and Wiring Diagram and Backwiring Diagram
- Power Transformer Tests
- Factory Test Data of Instrument Transformer
- Design Ground Resistance



# Technical Requirement Prior To Energization

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## FUNCTIONAL TEST

- To test the integrity of the protective relay logic through application of sufficient electrical, thermal, or mechanical forces to cause the operation of controller, relay, auxillary relay to assure breaker tripping and closing.

## CALIBRATION TEST

- To ensure the operation of the relay at the value of current, voltage, power, impedance, reactance or other specified quantities relating to the particular application.

## VERIFICATION TEST

- To test the reliable indication of the ability of the protective system to perform in accordance with its design criteria.

## INSPECTION

- To conduct physical inspection of the protective system and its environment for conditions that may be detrimental to its proper operation.

# Condition Precedents Prior to Connection

## Energization Request Form

- To conduct the required Field Test on installation, system and metering standards

## Statement of Readiness To Connect

- To be submitted when all the required arrangement are already fulfilled by the Customer at the Connection Facility

## Certification of Technical Requirement Compliance

- To be issued by NGCP's O&M certifying the compliance (or non-compliance) of the Customer's Connection Facility

## Approval To Connect

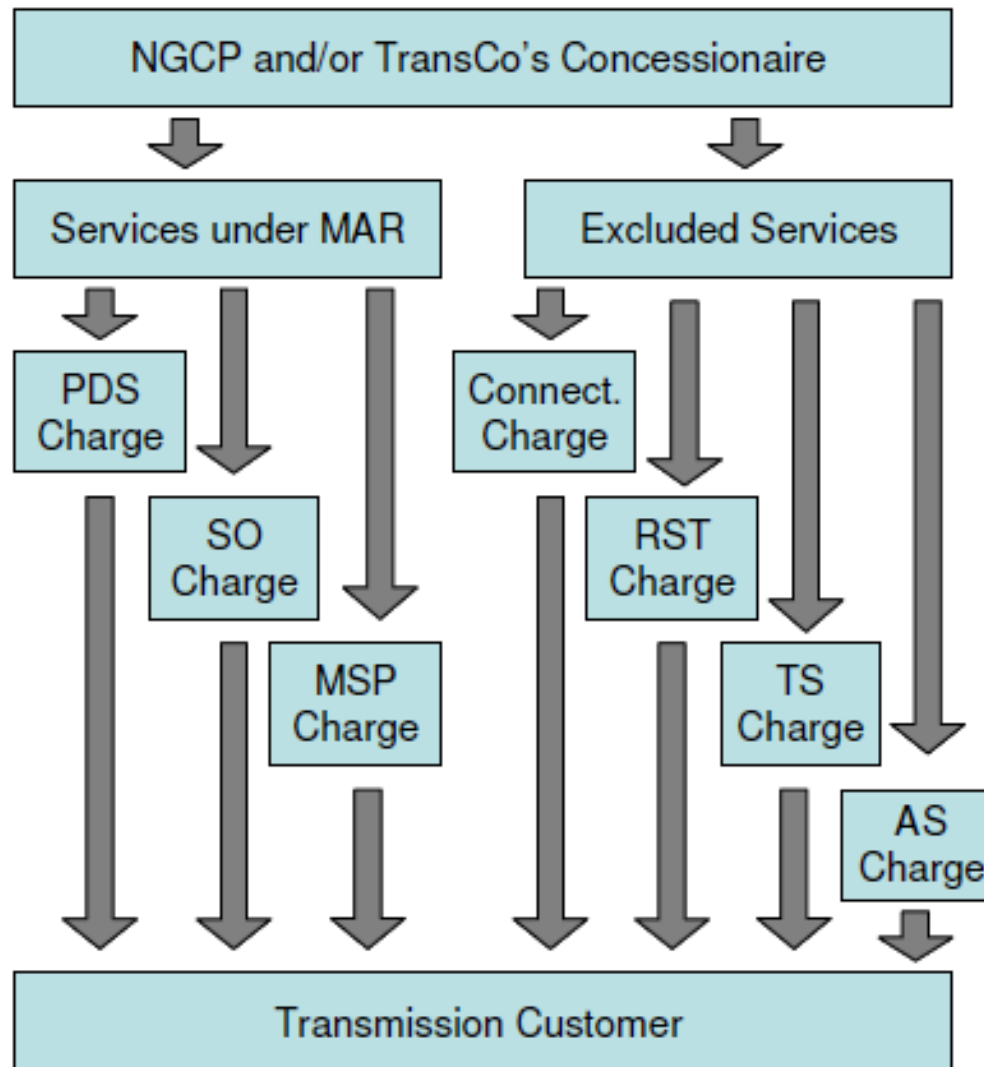
- NGCP certifies that the connection can now take place after satisfying NGCP's open access policy, OATS Rules and Philippine Grid Code



# APPLICABLE CHARGES



# Summary of NGCP Charges



# Applicable Charges for Generators

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## REGULAR CHARGE

- COMMON METERING CHARGE
- METER ONLY CHARGE OR FULL METERING CHARGE

## CHARGES AS “LOAD”

- POWER DELIVER CHARGES
- **SYSTEM OPERATION CHARGE**
- **METERING CHARGES**





# TRANSMISSION SERVICE AGREEMENT



# Heads of the TSA

- 1) Definition of Terms
- 2) Effectivity and Terms
- 3) Application of the OATS Rules and Philippine Grid Code
- 4) Reference to the ERC Issuances
- 5) Force Majeure, Emergency Situation, Liability and Indemnity
- 6) Obligation of the Parties
- 7) Compliance with Rules and Regulations
- 8) Execution of Related Agreement
- 9) Schedules
- 10) Billing and Payment
- 11) Mode of Payment
- 12) Check Payment
- 13) Application of Payment
- 14) Designated Commercial Banks
- 15) Credit Support
- 16) Dispute Resolution
- 17) Termination
- 18) Suspension of Service
- 19) No Liability for Termination or Suspension of Service
- 20) Co-terminus with Related Agreement
- 21) Notices
- 22) Good Faith Compliance**
- 23) Warranty of Corporate Existence**
- 24) Governing Laws**
- 25) Non-waiver of Rights**
- 26) Entire Agreement and Amendments**
- 27) Assignment**
- 28) Severability**
- 29) Actions**



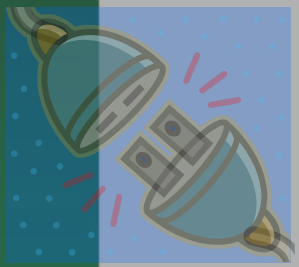
# Contents of the OATS Rules



**Module A:**  
**General Terms  
and Conditions**



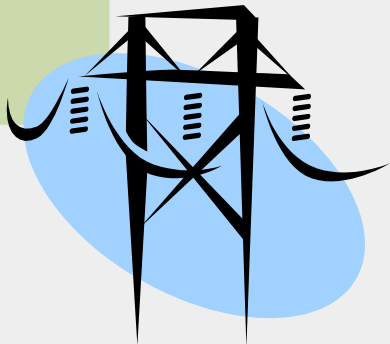
**Module D:**  
**System Operator  
Functions**



**Module B:**  
**Connections**



**Module E:**  
**Metering**



**Module C:**  
**Power Delivery  
Service**



**Module F:**  
**Rates,  
Methodology,  
Billing,  
Settlement**

# Transmission Service Agreement

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## 1) Definition of Terms

- Terminologies used shall have the same meaning as defined under the Philippine Grid Code and OATS Rules.

## 2) Effectivity and Terms

- Effectivity on the day of execution
- Term is 3 years for Load and 10 years for Generator

# Transmission Service Agreement

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## 3) Application of the OATS Rules and PGC

- Performance of the Parties with respect to their obligations shall be governed by the OATS Rules, PGC and other ERC issuances.

## 4) References to the ERC Issuances

- Related ERC issuances shall be understood to include all amendment and modifications

# Transmission Service Agreement

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## 5) Force Majeure, Emergency Situation; Liability and Indemnity

- Performance of the Parties with respect to their obligations shall be governed by the OATS Rules, PGC and other ERC issuances.

## 6) Obligations of the Parties

- Modules B (Connection), C (Power Delivery Services), D (System Operation) and E (Metering) summarize the obligations of each Parties.
- Module F (Rates, Methodology, Billing and Settlement) outlines the obligation of the Transmission Customer

# Transmission Service Agreement

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## 7) Compliance with Rules and Regulations

- Parties shall comply with relevant provisions of OATS Rules, PGC, AS-CRM and other relevant issuances

## 8) Execution of Related Agreement

- For Load, the TSA also serves as its CA. MSA to be executed
- For Generator, CA, TSA and MSA to be executed.

# Transmission Service Agreement

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## 9) Schedules

- Required Schedules (e.g. OATS Services, Standard Planning Data, etc.)

## 10) Billing and Payment

- Module F governs the billing and payment

# Transmission Service Agreement

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## 11) Mode of Payment

- Module F5.1 shall govern the payment and Credit and Collection Policies

## 12) Check Payment

- For dishonored check, applicable penalty under the OATS Rules shall accrue from the Due Date

# Transmission Service Agreement

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## 13) Application of Payment

- Based on Credit and Collection Policies where hierarchy of payment to be applied.

## 14) Designated Commercial Banks

- Per Module F5.2, Transmission Customer to pay the penalty interest based on highest non-prime lending rate of the designated bank

# Transmission Service Agreement

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## 17) Termination

- Termination shall be in accordance with Module A13.

## 18) Suspension of Service

- Module A9 of the OATS Rules will be applied.
- If amicable settlement fails within 30 days from referral, such dispute to be referred to ERC for resolution.

# Transmission Service Agreement

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## 15) Credit Support

- Transmission Customer, upon the request of NGCP, to provide prudential guarantee per Module A8

## 16) Dispute Resolution

- Module A9 of the OATS Rules will be applied.
- If amicable settlement fails within 30 days from referral, such dispute to be referred to ERC for resolution.

# Transmission Service Agreement

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## 17) Termination

- Agreement can be terminated in accordance with Module A13. Termination events are enumerated under Module A13.1

## 18) Suspension of Service

- If the Transmission Customer fails its obligation, NGCP may at its discretion and as an interim measure suspend the provision of services.

# Transmission Service Agreement

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## 19) No Liability for Termination or Suspension of Service

- NGCP shall not be liable for damages arising from its rights to suspend or terminate its services.

## 20) Co-Terminus with Related Agreement

- TSA is co-terminus with other Related Agreement provided that the termination of MSA shall not cause the termination of TSA in the event the Transmission Customer has obtained another MSP.



# SERVICE AGREEMENTS

WITH CUSTOMERS OF THE  
NATIONAL GRID CORPORATION OF THE PHILIPPINES



END OF PRESENTATION