LUMA

New Facility Interconnection

NEW FACILITY INTERCONNECTION

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1.0 Executive Summary

New Large Generation Facilities **shall** execute a Large Generator Interconnection Agreement with LUMA. The Transmission Operations Center **shall** participate during the development, construction, and asset management milestones of the New Interconnected Facilities.

2.0 Objective/Scope/Roles

2.1 Objective

The objective of this procedure is to define the interactions between Transmission Operations with LUMA stakeholders and the New Facilities during the projects' lifecycle.

2.2 Scope

The LUMA Large Generator Interconnection Agreement (Appendix C-DRAFT), when approved by all regulatory stakeholders **shall** be executed between LUMA and the Generation Facility. LUMA does not have a commercial role in the procurement of new generation resources for the Bulk Power System, but it does have a primary role in the interconnection process of new generation assets, and eventually their lifecycle from initial synchronization to eventual retirement. This procedure will be consistent with the Integrated Resource Plan and other applicable energy policy and laws including the transition from fossil generation to renewable and utility scale energy storage, while promoting the safe, reliable, and cost-effective operation of the Bulk Power System(BPS). This procedure will initially reflect interconnections for new generation facilities acquired through the PREB-mandated Renewable Procurement Plan of 6-tranches. Furthermore, this procedure does not cover the interconnection of new facilities adhering to the Net-Metering regulations.

As new regulations relating to interconnection of Large Generators are developed and approved by the PREB, this Procedure **shall** be amended to integrate such regulations.

2.3 Roles and Responsibilities

The roles for the New Facility Interconnection Procedure include departments outside of the Transmission Operations Center.

2.3.1 Director System Operations

Director Systems Operations **shall** be responsible for overseeing the implementation of the Procedure.

2.3.2 Manager, Supply Contracts Administration (Regulatory Department)

The Manager, Supply Contracts Administration is responsible for the administration, financial reconciliation, and direct contact with New Facility Owners and Operators.

2.3.3 Manager Energy Management

Together with the Manager Control Center Support (MCCS) and the Project Director (PD), **shall** participate to the development of studies through operational meetings, and asset management meetings as required to support the interconnection of New Generation in accordance with the Generator Interconnection Agreement and **shall** report to the Director Systems Operations on the status of all such connections as necessary.

2.3.4 Manager Control Center Support

Together with the Manager Energy Management (MEM) and the Project Director (PD), **shall** participate to the development of studies through operational meetings, and asset management meetings as required to support the interconnection of New Generation in accordance with the Generator Interconnection Agreement and **shall** report to the Director Systems Operations on the status of all such connections as necessary.

2.3.5 Project Director TOC

Together with the Manager Control Center Support (MCCS) and the Manager Energy Management (MEM), **shall** participate to the development of studies through operational meetings, and asset management meetings as required to support the interconnection of New Generation in accordance with the Generator Interconnection Agreement and **shall** report to the Director Systems Operations on the status of all such connections as necessary.

2.3.6 Planning Department

The LUMA Planning Department is responsible for producing the studies required for Interconnecting a New Generation Facility to the BPS. During the studies process, they will interface with System Operations for consultation and to inform the TOC of the status of new interconnections.

2.3.7 Utility Transformation Department

The Utility Transformation Department (UTD) is responsible for coordinating the interconnection process for new interconnection facilities beginning with the interconnection design approvals through the commissioning and testing of the facilities as per the renewable procurement documentation. The UTD will coordinate with and provide pricing to the interconnected facility owners for System Impact Studies, Facility Studies, and facility studies.

2.3.8 New Facility Requestor (NFR)

The New Facility Requestor(NFR) is the liaison between the new large facility interconnection facility owner/operator and LUMA. The NFR is responsible for providing appropriate LUMA departments with the necessary information so that LUMA may perform and/or approve of designs, construction works, testing protocols, commissioning, and operational requirements for the duration of the asset lifecycle.

3.0 Procedure

This procedure sets the steps to follow in the Interconnection Study Phase.

3.1 Interconnection Study Request

The New Facility Requestor **shall** make a formal request to the Utility Transformation Department to initiate the studies required for moving through the interconnection process. The request **shall** include the information as per the renewable program request for proposal.

Requests for large new facility interconnections are initiated solely by PREPA and in the context of:

- A PREPA or the Puerto Rico Energy Bureau (PREB) initiated Request for Proposal (RFP) process for acquisition of new generation.
- A PREPA-executed new generation project.
- The expansion or modification of an existing Large Generator with duly authorized Power Purchase Agreements.

3.2 Feasibility Study

Upon receipt of an Interconnection Study request and the Interconnection Study Data Requirements, the UTD **shall** request a firm cost and time estimate for such a study from the LUMA planning group. The LUMA planning group **shall** deliver the requested firm prices and estimated study timeline to Utility Transformation who will in turn communicate the price and delay considerations to the Requestor including a time validity of such offer. The UTD **shall** request advance payment from the NFR prior to the commencement of studies. If the NFR fails to make advance payment for the study within the offer validity period, the UTD **shall** reserve the right to invalidate the extended offer.

Upon receipt of payment from the NFR, the UTD **shall** coordinate with the PD and the TOC the commencement of the studies.

Study results **shall** be communicated to the NFR for consideration. The results will include:

- Transmission upgrades required for interconnection.
- An estimate of the cost of the upgrades.
- An estimate of the time required for the completion of the upgrades if executed.

3.3 System Impact Study

Upon receipt of a System Impact Study request and the corresponding System Impact Study Data Requirements, the UTD **shall** request a firm cost and time estimate for such a study from the LUMA planning group. The LUMA planning group **shall** deliver the requested firm prices and estimated study timeline to Utility Transformation who will in turn communicate the price and delay considerations to the Requestor including a time validity of such offer. The UTD **shall** request advance payment from the NFR prior to the commencement of studies. If the NFR fails to make advance payment for the study within the offer validity period, the UTD **shall** reserve the right invalidate the extended offer.

Upon receipt of payment from the NFR, the UTD **shall** coordinate with the PD and the TOC the commencement of the studies.

Study results **shall** be communicated to the NFR for consideration. The results will include:

- Cost Estimates.
- An estimate of the time required for the completion of the upgrades if executed.

3.4 Facility Study

Upon receipt of a Facility Study request and the corresponding Facility Study Data Requirements, the UTD **shall** request a firm cost and time estimate for such a study from the LUMA planning group. The LUMA planning group **shall** deliver the requested firm prices and estimated study timeline to the UTD who will in turn communicate the price and delay considerations to the Requestor including a time validity of such offer. The UTD **shall** request advance payment from the NFR prior to the commencement of studies. If the NFR fails to make advance payment for the study within the offer validity period, the utility transformation department **shall** reserve the right invalidate the extended offer.

Upon receipt of payment from the NFR, the UTD **shall** coordinate with the PD and the TOC the commencement of the studies.

Study results **shall** be communicated to the NFR for consideration. The results will include:

- Conceptual Design.
- Portions of Detailed Design for:
    - Attachment Facilities.
    - Network Upgrades in accordance with System Impact Study.
    - Cost Estimates.
    - Engineering and Construction Schedule.

Appendix A: Glossary

Term	Definition
Integrated Resource Plan (IRP)	Shall mean a plan that considers all reasonable resources to satisfy the demand for electric power services during a specific period of time, including those related to energy supply, wether existing, traditional, and/or new resources, and those related to energy demand, such as energy conservation and efficiency, demand response, and distributed generation by industrial, commercial or residential customers. Every integrated resource plan (IRP) shall be subject to the provision of (Act 17-2019) and the rules established by the Bureau which shall approve the same. Every plan shall be devised with broad participation from citizens and all interested groups.
New Facility Requestor (NFR)	In the context of the PREB's 6-Tranche Renewable Energy Procurement Program, the NFR is a project developer and owner seeking to provide energy services through the BPS.
System Impact Study	An engineering study that evaluates the impact of the proposed interconnection on the safety and reliability of the transmission system.
Interconnection Agreement	Provides the procedural framework for moving from a submitted Interconnection Request to a completed interconnection for generators larger than 20 MW
Large Generator	A Large Generator is a generator, or an aggregation of generators, whose single or combined generating capacity is greater than 20 MW.
Network Upgrades	The additions, modifications, and upgrades to the Bulk Power System required to accommodate the interconnection of the Large Generating Facility to the BPS and that enhance either the capacity or the reliability of the integrated system.
Point of Interconnection	The point, as set forth in the Interconnection Agreement, where the Interconnection Facilities connect to TVA's Transmission System.

Appendix B: Procedure Cross-Reference Matrix

Procedure Reference Matrix, Part 1 of 2	Short Term Load Forecasting	New Facility Interconnection	Resource Adequacy Planning	Interconnected Facility Retirements	Legacy T&G Demarcation	Interconnected Facilities Capabilities	Black Start	Telemetry	Cybersecurity	Root Cause Analysis & Corrective Actions	Public Reporting	Performance Reporting	Stakeholder Management	Policy on Reserves
Short Term Load Forecasting														
New Facility Interconnection														
Resource Adequacy Planning														
Interconnected Facility Retirements														
Legacy T&G Demarcation														
Interconnected Facilities Capabilities														
Black Start														
Telemetry														
Cybersecurity														
Root Cause Analysis and Corrective Actions														
Public Reporting														
Performance Reporting														
Stakeholder Management														
Policy on Reserves														
Reducing Risk Exposure to Contingencies														
Critical Loads														
Load Shedding														
Contingency and System Operating Limits Response														
Energy Dispatch, Scheduling and Merit Order														
Transmission Operations														
Plant Level Communications														
Balancing Frequency and Voltage														
Demand-Side Resources (Non-Wire Alternatives)														
System Operator Training														
Scheduling Planned T&G Outages														
Forced Outage														
Outage Execution and Closeout														
Emergency Response Execution														
Emergency Response Drills														

NEW FACILITY INTERCONNECTION

Procedure Reference Matrix, Part 2 of 2	Reducing Risk Exposure to Contingencies	Critical Loads	Load Shedding	Contingency & System Operating Limits Response	Energy Dispatch, Shedding & Merit Order	Transmission Operations	Plant Level Communications	Balancing Frequency & Voltage	Demand Side Resources (NWA)	System Operator Training	Scheduling Planned T&G Outages	Forced Outage	Outage Execution & Closeout	Emergency Response Execution	Emergency Response Drills
Short Term Load Forecasting															
New Facility Interconnection															
Resource Adequacy Planning															
Interconnected Facility Retirements															
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Interconnected Facilities Capabilities															
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Performance Reporting															
Stakeholder Management															
Policy on Reserves															
Reducing Risk Exposure to Contingencies															
Critical Loads															
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Plant Level Communications															
Balancing Frequency and Voltage															
Demand-Side Resources (Non-Wire Alternatives)															
System Operator Training															
Scheduling Planned T&G Outages															
Forced Outage															
Outage Execution and Closeout															
Emergency Response Execution															
Emergency Response Drills															

Appendix C: Standard Large Generator Interconnection Facility Agreement

STANDARD LARGE GENERATOR

INTERCONNECTION AGREEMENT (LGIA)

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