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Summary of Facility Connection Requirements for Generation, Transmission and End Users Connecting to UI Transmission Facilities

Revision 4.0

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1. Introduction

The United Illuminating Company (UI) currently owns Bulk Electric System (BES) facilities at 115 kV or higher and operated as an interconnected electrical system. UI is a Participating Transmission Owner (PTO) in Independent System Operator New England (ISO-NE), the regional transmission organization (RTO), serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. ISO-NE's mission is to meets the electricity demands of the region's economy and people by fulfilling three primary responsibilities: (i) minute-to-minute reliable operation of New England's bulk electric power system providing centrally dispatched direction for the generation and flow of electricity across the region's interstate high-voltage transmission lines and thereby ensuring the constant availability of electricity for New England's residents and businesses; (ii) development, oversight and fair administration of New England's wholesale electricity marketplace; and (iii) management of comprehensive bulk electric power system and wholesale markets' planning processes that address New England's electricity needs well into the future.

2. Purpose

This document has been prepared to summarize UI's method to achieve the required system performance when interconnecting generation, transmission facilities of entities other than UI, and end users to the UI transmission facilities designated as BES. It applies to new connections or materially modified existing generating units or transmission interconnections on the transmission system. This document is written to comply with North American Electric Reliability Corporation (NERC) Standard, FAC-001 Facility Connection Requirements. The NERC Standards are posted on the NERC web site (www.nerc.com).

This document provides a general overview of the functional objectives and requirements to be met in the design of facility connections. These requirements are written to establish a basis for maintaining reliability, power quality, and a safe environment for the general public, power consumers, maintenance personnel and the equipment through the planning horizon. This Facility Connection Requirements document is revised from time to time to reflect changes or clarifications in planning, operating, or interconnection policies.

3. Reference Documents

All facilities that are part of the bulk power system and part of the interconnected New England power system shall be designed in accordance with the latest versions of the NERC Reliability Standards, Northeast Power Coordinating Council (NPCC)

Directories, ISO-New England (ISO-NE) Reliability and Planning Standards, and UI design criteria.

Nothing in this document is intended to supersede the ISO-NE OATT and if there is a conflict, the FERC approved OATT will be the document addressing the conflict.

Facility owners seeking to interconnect with the UI transmission system should reference the following documents as well:

a. NERC Standards.
b. NPCC Directories, particularly Directory #1 Design and Operation of the Bulk Power System.
c. ISO-NE Planning Procedures, especially Planning Procedures No. 3., No. 5, and No.7.
d. ISO-NE Operating Procedures, especially No. 3, No. 5, No. 14, No. 16, No. 17, and No. 18.
e. ISO-NE Open Access Transmission Tariff (OATT)

Other applicable references and guides are:

a. National Electric Code (NEC).
b. National Electric Safety Code (NESC).
c. Institute of Electrical and Electronics Engineers (IEEE).
d. National Electrical Manufacturer's Association (NEMA).
e. American National Standards Institute (ANSI).
f. Occupational Safety & Health Administration (OSHA).

4. Definition of Material Modification

As a participating transmission owner in ISO-NE UI is obligated to comply with the ISO-NE OATT. The ISO, as the Reliability Coordinator, Planning Coordinator and Transmission Planner for the New England Pool Transmission Facilities (PTF), screens all applications for new and modified facilities of the to determine if the proposed changes are material to the reliability of the PTF.

5. Requirements

This section provides the summary of UI's approach to achieve the required system performance that complies with NERC Reliability Standards, NPCC Criteria, ISO-NE procedures and UI criteria and facility connection requirements throughout the planning horizon.

5.1. Procedures for Coordinated Studies

Covers Generator, Transmission, and End-User Facilities

ISO-NE coordinates with UI studies of new facilities interconnecting to the transmission system. UI actively participates in this process. The process is described in the ISO-NE OATT.

Generators seeking to interconnect to UI whose interconnections fall under FERC's jurisdiction must submit their application to ISO-NE in accordance with the procedures in the ISO-NE Transmission, Markets and Services Tariff (ISO-NE Tariff), Schedule 22 (for Generating facilities larger than 20 MW) or Schedule 23 (for Generating Facilities up to and including 20 MW). ISO-NE will administer the interconnection process.

Transmission and end-user facilities seeking to interconnect or materially modify the existing facilities connected to the UI transmission system are required to do so in accordance with the ISO-NE Tariff. The ISO-NE Open Access Transmission Tariff (OATT), Section II - Attachment K: Regional System Planning Process describes the process for studying new interconnections as part of the Regional System Study Process. The ISO-NE OATT Section II.19 Study Procedures for Regional Network Service Requests describes the process for studying the impact of requests for Regional Network Service.

When a customer requests point-to-point local service Schedule 21 of the ISO-NE tariff is applicable. After receiving a request for Firm Local Point-To-Point Service, a determination shall be made on a non-discriminatory basis as to whether a System Impact Study is needed. ISO-NE shall review the request to determine whether the provision of the requested service would have an impact on facilities other than Non-PTF, and if so, whether a System Impact Study is necessary to accommodate the requested service. If so, ISO-NE shall so inform the customer considering a facility interconnection to UI's transmission system as soon as practicable and will (in consultation with UI) perform a System Impact Study, as necessary, with respect to the request.

A description of the ISO-NE's methodology for completing a System Impact Study is provided in ISO-NE OATT Attachment D.

Customer Participation in Facility Interconnection Study

The study will be performed using appropriate and suitable analysis tools and modeling data consistent with the nature and duration of the interconnection. It is expected that the customer will provide the information as may be reasonably required and associated with the requested interconnection and necessary for its study. It is also recognized that it may be determined that additional or specialized analysis tools or computer software are necessary for the study. The responsibility for the provision of these items will be assigned to the customer.

Additional Generation Requirements

All generators interconnecting to the UI transmission system will be interconnected at a new or existing substation in a manner which allows independent switching of the generator(s) and transmission lines.

If two transmission lines connect the generator's interconnecting substation to the rest of the system, a ring bus will be used as the required minimum design arrangement.

If three or more transmission lines connect the generator's interconnecting substation to the rest of the system, a breaker and one-half design arrangement will be used.

If required stability studies indicate that there is stability considerations associated with the interconnection of the generator to the UI transmission system, then additional circuit breakers may be required.

5.2. Procedures for Notification

Covers Generator, Transmission, and End-User Facilities

The ISO-NE tariff section I.3.9 describes the ISO-NE's responsibility to maintain a website with a list of applications that are currently under review and the status of each such application. Utilizing the ISO website and committee processes all affected reliability entities receive notification.

5.3. Voltage Level and MW and MVAr Capacity or Demand

Covers Generator, Transmission, and End-User Facilities

As part of the application for an interconnection and as part of the regional study process the applicant must supply the voltage level, MW and MVAr capability at the point of interconnection to UI and ISO-NE.

The impact of the proposed facilities is determined via the study process described in the section Procedures for Joint Studies (Section 4.1 above).

5.4. Breaker Duty—Surge Protection

Covers Generator, Transmission, and End-User Facilities

All facilities and equipment must equal or exceed the fault duty capability necessary to meet system short-circuit requirements as determined through short-circuit analyses and should fully comply with the latest American National Standards Institute (ANSI)/Institute for Electrical and Electronics Engineers (IEEE) C37 collection of standards for circuit breakers, switch gear, substations, and fuses.

All facilities and equipment must be protected by surge protective devices to protect against system transient overvoltages that may cause flashovers and serious damage to equipment. These surge protective devices should fully comply with the lasts National Standards Institute (ANSI)/ IEEE C62 collection of standards for surge protective devices.

In order to maintain transmission reliability, each fault-interrupting device must be rated for full fault-interrupting capability to satisfy available short-circuit levels and all equipment must be protected from transient overvoltages at the point of interconnection. Full fault-interrupting capability is per the latest IEEE C37 and C62 collections of standards. As a general rule, neither party should depend on the other for the protection of their respective equipment.

5.5. System Protection and Coordination

Covers Generator, Transmission, and End-User Facilities

Protective relaying systems and associated communications systems for all facility interconnections shall be planned, designed, constructed, and maintained in accordance with applicable NERC standards and NPCC criteria. Utility grade protective relays and fault clearing systems are to be provided on the interconnected power system. All protective relays shall meet or exceed ANSI/IEEE Standard C37.90. Adjoining power systems may share a common zone of protection between two parties. The design must provide coordination of speed and sensitivity in order to maintain power system security, stability, and reliability.

The protection system (relay, control, and communications equipment) arrangement selected by the customer must be compatible with the protection system used by UI to protect the transmission grid. The facility owner is required to submit a relay one line diagram depicting the protection strategy of both the facility equipment as well as any associated interconnection equipment. The relay one line diagram shall utilize IEEE relay designation numbers and must be stamped by a Professional Engineer familiar with utility protective relaying. Compatible relaying equipment must be used for a given zone of protection. Compatibility includes protection application, redundancy, operating speed, communication type, and communication medium. The interconnecting customer and UI will review protection system designs to ensure proper coordination.

A power source for tripping and control must be provided for the protection system by a DC storage battery. The battery is to be sized with enough capacity to operate all tripping devices, both steady state as well as instantaneous, after eight hours without a charger, per IEEE standards. An undervoltage alarm must be provided for remote monitoring by the facilities owners, who shall take immediate action to restore power to the protective equipment.

Mechanical and electrical logic and interlocking mechanisms are required between interconnected facilities to ensure safe and reliable operation. These include, but are not

limited to, breaker and switch auxiliary contacts, synch-check relays, and physical locking devices.

The facility owner (generator, transmission, and end-user) is responsible for providing a protection system that will protect its equipment against disturbances on UI's system and minimize the effects of disturbances from its facilities on UI's equipment. Entities connecting to the UI transmission system shall investigate and keep a log of all protective relay actions and misoperations, as required by NERC and NPCC. In addition, the interconnecting entities must have a maintenance program for their protection systems in accordance with NPCC. Documentation of the protection maintenance program shall be supplied to UI, NPCC, and NERC upon request. As outlined in the maintenance program, test reports are to be made available for review by UI. At intervals described in the documented maintenance program and following any apparent malfunction of the protection equipment, the entity shall perform both calibration and functional trip tests of its protection equipment as outlined by NPCC.

The facility owner will cooperate with UI to complete the functional testing of any special protection systems installed as a result of the facility's interconnection. The facility owner is also responsible to comply with UI remote monitoring and control requirements (i.e., Supervisory Control and Data Acquisition - SCADA) as dictated by ISO-NE.

Generator Protection Requirements

Generators connecting to the UI transmission system are responsible for protecting those facilities from electrical faults and other hazardous conditions. Generator interconnections must be equipped with circuit breakers or other appropriate interrupting devices to protect those facilities.

Synchronous or wind turbine generators connected to the UI transmission system shall be able to withstand electrical excursions without tripping. A system impact study will determine if additional requirements are necessary. Maintaining the generation is required to support the grid and avoid cascading events. Generation protection and control shall be set in accordance with all applicable NERC and NPCC requirements to coordinate with excitation limiters.

It is recognized that certain circumstances may exist that necessitate the imposition of performance criteria that are considered more stringent than the default criteria specified above. Such circumstances shall be identified during the conduct of the System Impact Study or operational study for each particular generator.

Transmission Protection Requirements

All transmission protection systems shall have both primary and secondary protective relaying schemes which independently protect equipment and personnel.

Communications-aided protection through the use of a dedicated communications channel may be required based on system stability determination. Communications redundancy may be required depending on critical clearing time and/or the necessity for remote tripping of circuit breakers.

Protection systems shall provide additional coverage for breaker and relay failure outside the primary zone. Specific breaker failure protection schemes shall be applied as required to meet NERC requirements, and, where local/remote backup does not provide adequate sensitivity or speed, specific relay failure backup shall also be provided. Backup systems shall operate for failures on either side of an interconnection point. Time and sensitivity coordination must be maintained to prevent misoperations.

A transfer trip channel may be required for backup protection, transformer protection and/or islanding schemes. Fiber optics is the preferred means of relay communications; however, power line carrier is also used. Audio tone over phone line is the least preferred method because it may not meet requirements for speed and reliability.

Transmission Reclosing

It is UI practice to automatically and manually test its transmission lines following breaker operations for system faults. This is required to minimize customer outage time and maintain system stability. Manual reclosing and sectionalizing may also occur. Interconnected facilities must not interfere with UI's ability to quickly restore transmission lines following temporary or permanent system faults.

Any entity wishing to interconnect with UI must consider the implications of automatic reclosing in their design.

Automatic reclosing on interconnected transmission lines between UI and Northeast Utilities (NU) is handled on a case-by-case basis. Transmission interconnections between UI and NU transmission facilities may be restored from either direction depending upon the reclosing practice agreed upon by UI and NU.

5.6. Metering and Telecommunications

Covers Generator, Transmission, and End-User Facilities

Parties seeking to interconnect with UI transmission system shall conform to ISO-NE Operating Procedure No. 18 Metering and Telemetering Criteria. Those facilities that are not required to provide metering, telemetry or communication to the Connecticut Valley Electric Exchange (CONVEX) or ISO-NE shall be required to provide data to UI.

Generation Requirements

Generators seeking to interconnect shall comply with the ISO-New England Open Access Transmission Tariff Schedule 22 – Large Generator Interconnection Procedures, Large Generation Interconnect Agreement Articles 7 and 8.

5.7. Grounding and Safety Issues

Grounding

Covers Generator, Transmission, and End-User Facilities

A safe grounding design must accomplish two basic functions:
1. Ensure that a person in the vicinity of grounded structures and facilities is not exposed to critical levels of step or touch potential, and
2. Provide a path for electric currents into the earth under normal and fault conditions without exceeding any operating and equipment limits or adversely affecting the continuity of service.

Accordingly, each electrical facility must have a grounding system or grid that solidly grounds all metallic structures and equipment in accordance with the standards outlined in the latest version of IEEE Standard 80, IEEE Guide for Safety in AC Substation Grounding, ANSI/IEEE C2, and National Electrical Safety Code (NESC). Testing must be performed to ensure safe step and touch potential parameters have been met in accordance with IEEE Standard 80.

Safety

Covers Generator, Transmission, and End-User Facilities

Safety is of utmost importance. Strict adherence to established switching, tagging, and grounding procedures is required at all times for the safety of personnel. Any work carried out within a facility shall be performed in accordance with all applicable laws, rules, and regulations and in compliance with Occupational Safety and Health Administration (OSHA), NESC, and good utility practice. Automatic and manual disconnect devices are to be provided as a means of removing all sources of current to any particular element of the power system. Only trained operators are to perform switching functions within a facility under the direction of the responsible dispatcher or designated person.

Additional Generation Requirements

The generator shall provide an isolating means to disconnect all ungrounded conductors of their electric power production sources from the UI electric system. This disconnecting means must be accessible to UI employees at all times. It must have the following characteristics:
• Voltage, Current, and Fault Duty Ratings in conformance with the systems involved.
• Adhere to CONVEX TD 800 Switching and Tagging and UI switching and tagging procedures and operating requirements.
• Be accessible to UI employees at all times.
• Provide a visible break between all sources and the UI electric system.
• Be capable of being locked open and tagged by UI personnel.
• Any generator owned ground switch (es) must have a UI lock which will permit operation by UI personnel only.
• Generator owned remotely controlled switches must be capable of being tagged and locked by UI employees.

5.8. Insulation and Insulation Coordination

Covers Generator, Transmission, and End-User Facilities
Insulation coordination is the selection of insulation strength. Insulation coordination must be done properly to ensure electrical system reliability and personnel safety. Basic switching surge levels (BSL), surge arrester, conductor spacing and gap application, substation and transmission line insulation strength, protection, and shielding shall be documented and submitted for evaluation as part of the interconnection plan.

Interconnection facilities to be constructed in areas where salt spray contamination or other contaminations are present shall be properly designed to meet or exceed the performance of facilities not in a contamination area with regard to contamination-caused outages.

Equipment basic impulse surge levels (BIL) shielding and surge protection shall be designed to meet the latest IEEE C62 standards, along with UI standards.

The interconnecting entity should also refer to the following documents:
ISO-NE PP7: Procedures for Determining and Implementing Transmission Facility Ratings in New England.

IEEE Standard 1313.1 "IEEE standard for insulation coordination".

IEEE Standard 1313.2 "IEEE guide for application of insulation coordination".

5.9. Voltage, Reactive Power, and Power Factor Control

Generation Facilities
ISO-NE Large Generator Interconnection Agreement Article 9 Operations describes the requirements of a Generator to maintain proper voltages and reactive power while in operation.

The following ISO-NE Operating Procedures provide further requirements for Generators:

ISO-NE OP-17: Load Power Factor Correction.
ISO-NE OP-14: Technical Requirements for Generation, Demand Resources and Asset Related Demands, Appendix B (Generator Reactive Limits).
ISO-NE OP-5: Generator and Dispatchable Asset Related Demand Maintenance and Outage Scheduling.

UI requires all generators 50 MVA or greater to install a power system stabilizer (PSS) in the automatic voltage regulator. The generation System Impact Study will determine the need for the PSS to be in service at initial startup. A PSS may be required to be placed in

service or reset at any time in the future. The PSS settings will be reviewed and approved by UI and ISO-NE.

The generator will be assigned a voltage value at the interconnecting transmission bus at the time of the interconnection scoping meeting. In operations, the generator is required to adjust the automatic voltage regulator to maintain the voltage within +/- 1 kV. Additionally, in operations, the transmission operator may require the generator to adjust its voltage for conditions on the bulk power system.

The generator is required to operate with the automatic voltage regulator in service and regulating voltage. The automatic voltage regulator may not be operated in a mode which seeks to maintain a constant power factor or constant reactive (MVAr) output.

Transmission Facilities and End-user Facilities

Transmission facilities and end-user facilities are expected to control the voltage, reactive power and power factor per the ISO-NE Open Access Transmission Tariff Schedule 21 (common) section 12 Metering and Power Factor Correction at Receipt and Delivery Points(s) (c) Power Factor.

The power factor requirements are specified in the interconnect agreement where applicable.

5.10. Power Quality Impacts

Interconnection Requirement for Harmonic Levels

Generation Facilities

Generator facilities shall not cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE-519, *Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*, or any applicable superseding electric industry standard.

Transmission Facilities

Transmission facilities shall not have harmonic current distortions levels exceeding the levels recommended in the most recent revision of IEEE-519.

End-User Facilities

End-user facilities shall not have harmonic current distortion levels exceeding the levels recommended in the most recent revision of IEEE-519. End-user facilities must meet the stated current limits specified in the Current Distortion Limits tables for the applicable voltage levels.

Interconnection Requirement for Flicker

Transmission Facilities and End-User Facilities

Transmission facilities and end-user facilities are required to limit voltage fluctuations to the limits specified in the most recent revision of IEEE-1453.

5.11. Equipment Ratings

Covers Generator, Transmission, and End-User Facilities
All circuit breakers and other fault-interrupting devices shall be capable of safely interrupting fault currents for any fault they may be required to interrupt. Application of circuit breakers shall be in accordance with the latest ANSI/IEEE C37 collection of standards.

All current-carrying equipment and devices shall be designed to carry the maximum loads that are predicted and used in load flow analysis. Loads exceeding nameplate or normal design capacities are acceptable only when allowed by manufacturers' design documentation or standard industry practices.

Equipment BIL, shielding, and surge protective device application must meet requirements as determined by the latest IEEE C62 standards.

Equipment ratings for transmission equipment will be developed in accordance with the ISO-NE Planning Procedure No. 7, Procedures for Determining and Implementing Transmission Facility Ratings in New England.

Additional Generation Requirements
Generator step-up transformers (GSUs) shall have a positive and zero sequence impedance within a range of 12% to 15% based on its self-cooled rating. The X/R ratio of the GSU impedance shall not exceed 50.

All generating plants must be able to maintain a composite power delivery at continuous rated power output at UI's point of interconnection at a power factor within the range of 0.95 leading to 0.95 lagging

The GSU transformer shall have a total of five de-energized taps including neutral, +/- 2.5% and +/-5%. This usually results in the transmission voltage tap equal to the system voltage and the generator side winding 5% below the voltage rating of the generator. Other taps that produce the same ratio are acceptable. ISO-NE and UI, working with the generator owner, will determine the in service tap that must be used based on the tap maximizing reactive power generation capability over a wide range of system conditions.

5.12. Synchronizing of Facilities

Covers Generator, Transmission, and End-User Facilities
Synchronizing facilities consisting of potential transformers and associated protective relaying and controls are required at the point of interconnection on transmission facilities where energy can be sourced on both sides of an interconnection circuit breaker. These facilities verify that the voltages on both sides of a circuit breaker fall within

certain tolerances of both magnitude and phase angle as established by system conditions, supervise the closing and automatic reclosing of the circuit breaker, and prevent the closing of the circuit breaker when the two systems are out of synchronism.

Voltage magnitudes, phase angles, and frequency constraints shall be determined on a case by-case basis depending on system characteristics, conditions, interconnection location, etc.

Generation Facilities - Additional
Live line, dead bus (LLDB) control is used in the interconnection circuit breaker closing scheme when generation facilities are connected to transmission facilities. In summary, the circuit breaker cannot be closed unless the generation side has essentially zero voltage.

The transmission facility interconnection circuit breaker shall not be used to synchronize a generator to the transmission system. Instead, the generation facilities shall have their own synchronizing facilities to synchronize to the system.

Exceptions to this requirement will be considered on a case-by-case basis.

5.13. Maintenance Coordination

Generation Facilities
Generation facilities will coordinate the outage schedule per ISO-NE OP 5 Generator and Dispatchable Asset Related Demand Maintenance and Outage Scheduling. The protective equipment (switches or breakers and associated relays) which are associated with the interconnection of the generator to UI's transmission system must be maintained by the generator owner following Good Utility Practice.

Transmission Facilities
Transmission facilities shall schedule maintenance per ISO-NE OP No. 3 Transmission Outage Scheduling.

End-User Facilities
End-user facilities will coordinate maintenance with UI.

5.14. Operational Issues (Abnormal Frequency and Voltages)

Covers Generator, Transmission, and End-User Facilities
Any interconnecting facility will require operating procedures for their facility. The interconnecting party shall be required to coordinate operation with UI, CONVEX, and ISO-NE. The interconnecting party shall designate operating representatives to address the following:

- Lines of communications.
- Maintenance coordination.
- Actions to be taken after de-energization of interconnected facilities.
- Other required operating policies.

All parties are to be provided with current station operating diagrams. Common, agreed-upon nomenclature is to be used for naming stations, lines, and switches. Updated diagrams are to be provided when changes occur to interconnected facilities.
The operator of facilities interconnecting to the UI transmission system will not perform any switching that energizes or de-energizes portions of the UI transmission system or that may adversely affect the UI transmission system without prior notice to UI or its designated operating representative. Operators of facilities interconnecting to the UI transmission system will notify UI, or its designated operating representative, before performing any switching that would significantly affect voltages, power flows, or reliability in the UI transmission system.

During emergency conditions, the facility operator shall raise or lower real (MW) and reactive (MVAr) power, switch facilities in or out, and/or reduce end-user load as directed by CONVEX, ISO-NE or UI.

Additional Generation Requirements
A 5% voltage reduction during times of electric system capacity emergency or during designated test periods as directed by the dispatch authority, ISO-NE or CONVEX may occur. Generators are required to be designed to withstand a 5% voltage reduction with no adverse effect on its equipment.

5.15. Inspection Requirements for Existing or New Facilities

Covers Generator, Transmission, and End-User Facilities
Each party to the interconnection agreement shall perform routine inspection and testing of its facilities and equipment in accordance with good utility practice and regulatory requirements to ensure the continued interconnection of the facilities with UI's transmission system.

Each party shall, at its own expense, have the right to observe the testing of any of the other party's facilities and equipment whose performance may reasonably be expected to affect the reliability of the observing parties' facilities and equipment. Each party shall notify the other party in advance of facility and equipment testing, and the other party may have a representative attend and be present during such testing. If a party observes any deficiencies or defects on or becomes aware of a lack of scheduled maintenance and testing with respect to the other party's facilities and equipment that might reasonably be expected to adversely affect the observing party's facilities and equipment, the observing party shall provide notice to the other party that is prompt under the circumstance, and the other party shall make any corrections required in accordance with good utility practices and as required by regulatory agencies.

Prior to energizing any new facilities UI reserves the right to inspect the facilities to verify that energization can occur in a safe reliable manner.

5.16. Communications and Procedures during Normal and Emergency Operating Conditions

Covers Generator, Transmission, and End-User Facilities

Complete, precise, and timely communication is an essential element for maintaining reliability and security of a power system. Under normal operating conditions, the major link of communication with various interconnects shall be by telephone lines.

The interconnecting party shall maintain communications with UI, CONVEX and ISO-NE that shall include, but not be limited to:

- System paralleling or separation.
- Scheduled or unscheduled shutdowns.
- Equipment clearances.
- Periodic load reports.
- Maintenance schedules.
- Tagging of interconnection interrupting devices.
- Meter tests.
- Relay tests.
- Other routine communication.

In case of emergency or abnormal operating conditions, various communication channels may be used. Emergency telephone numbers should be agreed upon by both parties prior to the actual interconnection date.

6. Maintenance and Updating of This Document

This document will be updated and maintained as needed. Changes will be summarized in the revision history section. Additionally, the document will be reviewed once every three calendar years. The review will be recorded in the revision history section of this document, along with a summary of any modifications and edits made to the document.

7. Availability of This Document

This document is posted to the Company's public internet site.

8. Revision History

Revision	Description	Approved By	Date Approved
0	Initial Creation of Summary Document for Posting	J. Appelbaum, Director, NERC Compliance	11/5/2010
1	Revised Format Added Header	J. Appelbaum, Director, NERC Compliance	11/18/2010
2	Revised Sec R2.1.4 added requirement for transient overvoltage protection; changed IEEE C57 to C62. R2.1.7, R2.1.8, R2.1.11 editorial changes	J. Appelbaum, Director, NERC Compliance	8/15/2011
2.1	Review – No Changes	J. Appelbaum, Director, NERC Compliance	8/1/2012
3	• Replaced R2 with R3 because FERC approved FAC-001-1 which changed the numbering. • In R3.1.1 added additional generator requirements for independent switching of Generators and transmission lines and also substation design. • In R3.1.7 added additional generator requirement concerning visible disconnects. • In R3.1.9 added requirements for power system stabilizer and target voltage. • In R3.1.11 added additional generator requirements for GSU and power factor capability of generator. • In R3.1.13 added additional generator requirement that equipment will be maintained in accordance with Good Utility Practice. • In R3.1.14 added additional generator requirement concerning 5% voltage reduction.	J. Appelbaum, Director, NERC Compliance	10/01/2013

	• Minor edits		
3	Reviewed. No changes	J. Appelbaum, Director, NERC Compliance	9/29/2014
4	• Reviewed for FAC-001-2 • Section 3 References was revised to refer to the ISO-NE OATT instead of separate schedules and attachments. • Added section 4 definitions to define Material Modification. • Renumbered section 5 and subrequirements. • Added section 7- Availability of This document.	J. Appelbaum, Director, NERC	12/7/2015