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|  | © ISO New England, Inc. 2024 | Master/LCC Procedure No. 11 - Maintenance and Verification of New England System Restoration Plan |
| | | Revision Number: 19.1 Revision Date: February 21, 2024 |
| Owner: System Restoration Working Group (SRWG) Chair | | Approved by: M/LCC Heads |
| | | Review Due Date: February 21, 2025 |


Master/Local Control Center Procedure No. 11

(M/LCC 11)

Maintenance and Verification of New England System Restoration Plan


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1. References

1. NERC Reliability Standard EOP-005, System Restoration from Blackstart Resources
2. NERC Reliability Standard EOP-006, System Restoration Coordination
3. NPCC Power System Restoration Reference Document
4. NPCC Regional Reliability Reference Directory # 8, System Restoration
5. NPCC Glossary of Terms
6. ISO New England Inc. Transmission, Markets, and Services Tariff Section II – Open Access Transmission Tariff (OATT) Schedule 16 – Blackstart Service
7. ISO New England Operating Procedure No. 1 – Central Dispatch Operating Responsibilities and Authority, Appendix A – Assignment of Responsibilities (OP-1A)
8. ISO New England Operating Procedure No. 11 – Blackstart Resource Administration (OP-11)
9. ISO New England Operating Procedure No. 11 – Blackstart Resource Administration, Appendix D - Application for Prospective Designated Blackstart Resources (OP-11D)
10. ISO New England Operating Procedure No. 14 – Technical Requirements for Generators, Demand Response Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14)
11. Master/Local Control Center Procedure No. 7 – Processing Outage Applications (M/LCC 7)
12. Master/Local Control Center Procedure No. 7 – Processing Outage Applications, Attachment H – Temporary Restoration Path (M/LCC 7H)
13. Master/Local Control Center Procedure No.13 – ISO and LCC Communication Practices (M/LCC 13)
14. Master/Local Control Center Procedure No.17 – ISO and Local Control Center Training (M/LCC 17)
15. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan (M/LCC 18)
16. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment A – System Restoration Flowchart (M/LCC 18A) (Confidential)
17. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment C – Charging of 345 kV Circuits in New England (M/LCC 18C)

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18. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment D – Inter - Local Control Center Ties Operating at 115 kV and Above (M/LCC 18D)
19. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment E - Inter-Reliability Coordinator Area /Balancing Authority Area Ties (M/LCC 18E) (Confidential)
20. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment G – System Restoration Strategies (M/LCC 18G)
21. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment H – Millstone Alternate Path (M/LCC 18H)
22. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment K – Seabrook Alternate Path (M/LCC 18K)
23. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment L – RCA/BAA Interconnection/Synchronization Alternate Path (M/LCC 18L) (Confidential)
24. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment M – Paths to Alternative Cranked Generators (M/LCC 18M) (Confidential)
25. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment N – Interconnection/Synchronization Checklist (M/LCC 18N)
26. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment O - Designated Blackstart Resources (M/LCC 18O) (Confidential)
27. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment P – System Restoration Voltage Limits (M/LCC 18P) (Confidential)
28. Master/Local Control Center Procedure No. 18 – New England System Restoration Plan, Attachment Q – System Restoration Checklist (M/LCC 18Q) (Confidential)
29. ISO New England SOP-RTMKTS.0180.0080 – Process Designated Blackstart Resource Testing
30. CROP.50001 Reporting Procedure
31. Department of Energy (DOE) Defense Critical Electrical Infrastructure (DCEI) letters to Transmission Owners

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2. Purpose

This procedure defines the processes and responsibilities for maintaining and verifying the adequacy of the New England System Restoration Plan (the Plan) to reestablish the New England Bulk Electric System (BES) in a stable and orderly manner following a partial or total shutdown of the New England BES. The New England BES generally consists of facilities operated at 100 kV or higher. The Plan is described in Master/Local Control Center Procedure No. 18 – New England System Restoration Plan (M/LCC 18) and the related M/LCC 18 Attachments. ISO exercises its authority and responsibility to coordinate and promote the reliability of the Plan in accordance with this procedure and with applicable North American Electric Reliability Corporation (NERC) Reliability Standard Requirements and Northeast Power Coordinating Council Inc. (NPCC) criteria. The Plan is the single New England regional system restoration plan that serves as both:


- the Transmission Operator (TOP) restoration plan (as pertains to EOP-005) and
- the Reliability Coordinator (RC) restoration plan (as pertains to EOP-006).

NOTE

These same M/LCC 18 documents also serve as the TOP restoration plan for each Local Control Center (LCC).

The Plan is maintained in accordance with the Transmission Operating Agreement (TOA) between ISO and New England Transmission Owners (TOs) and in consultation with the TOPs that serve as LCCs. The Master/Local Control Center (M/LCC) Heads have created the System Restoration Working Group (SRWG) and assigned to it responsibility for certain tasks with respect to maintaining, verifying and coordinating the Plan. The SRWG membership is comprised of TOs, including representatives from each LCC and ISO (with an ISO staff member serving as SRWG Chair). ISO and LCC responsibilities for maintaining and verifying the adequacy of the Plan are generally met by the SRWG, which reports to the M/LCC Heads. Section 4 documents the responsibilities of SRWG members. Attachment F contains the System Restoration Working Group Charter.

The Plan is evaluated by the SRWG through a combination of computer model simulations and system restoration exercises that verify that the Plan accomplishes its intended function of restoring the New England BES following a partial or total shutdown of the electric system. The SRWG also provides input to the Joint Trainers Task Force (JTTF) regarding formal annual System Restoration Plan Training exercises and the M/LCC Training Simulator Model used. In accordance with Master/Local Control Center Procedure No.17 - ISO and Local Control Center Training (M/LCC 17), ISO and the LCCs jointly develop Training for ISO and LCC operations training organizations. Depending on the scope of Training, ISO may request that one or more TOPs, Generator Operators (GOPs) or other entities owning facilities identified in the Plan participate in the simulation exercises that may be a part of the Training.

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3. Background

3.1 The Purpose and Characteristics of the Plan


The Plan is designed to restore the New England BES in the event of a partial or total shutdown of the New England BES. The Plan is comprised of Primary and Alternate Paths to nuclear power stations and also includes restoration strategies designed to achieve the objectives of regional restoration when other system restoration paths are unavailable. From the RC perspective, the Plan ends when the following objectives are achieved:

- 1) Provide off-site ac power to the New England nuclear power stations
- 2) Interconnect all New England TOPs (i.e., the LCCs)
- 3) Establish interconnections/synchronizations with contiguous Reliability Coordinator Areas (RCAs) that are normally synchronously connected to the New England RCA, advancing system restoration of the Eastern Interconnection

When these three objectives have been achieved and, in accordance with EOP-005, the choice of the next load to be restored is not driven by the need to control frequency or voltage, implementation of the Plan shall be considered to have been completed. ISO recognizes that, upon completion of the Plan, LCC local recovery actions may still be ongoing for the energization of remaining New England load. The local area recovery actions of each LCC are documented in their respective Local Area Recovery Instructions (LARIs), which are **not** part of the Plan. As necessary, ISO will continue to coordinate with each LCC when restoring load to remaining areas of New England, while each LCC implements its respective LARIs.¹

The Plan is designed to establish procedures and provide the facilities and personnel necessary to enable system restoration from certain Designated Blackstart Resources (DBRs) that are part of the Plan and to maintain reliability and resiliency during system restoration. DBRs are blackstart Generators that receive compensation for providing Blackstart Service under Schedule 16 - Blackstart Service (Schedule 16) of the ISO New England Inc. Transmission, Markets, and Services Tariff Section II - Open Access Transmission Tariff (OATT). DBRs are listed in M/LCC 18, Attachment O - Designated Blackstart Resources (M/LCC 18O) (Confidential). M/LCC 18, Attachment A - System Restoration Flowchart (M/LCC 18A) (Confidential) documents each facility and element comprising each cranking path from each DBR to the Generator(s) to be started. M/LCC 18A also includes a listing of each group of elements meeting the initial transmission line-switching operations requirements from an operating DBR up to and including the first interconnection/synchronization point of the starting station service of the next generation

¹ Energizations of Defense Critical Electric Infrastructure (DCEI) facilities is a top priority for Transmission Owners (TOs) and the TO should align recovery of these facilities with the restoration of load to support the Plan objectives. Restoration of DCEI facilities should not conflict with the Plan objectives. When possible, DCEI facilities should be excluded from under-frequency load shed plans. If unable to be excluded, DCEI facilities should be assigned the lowest priority for load shed.

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unit(s) to be started (typically on the low side of the Generator Step-up Transformer (GSU). Recognizing that the technical aspects of system restoration (e.g., Resource startups, load pickups, switching surges, voltages, frequency, synchronization of islands, etc.) are crucial, the Plan has been developed in a coordinated fashion with the LCCs and neighboring RCs.

In accordance with NERC Reliability Standards, ISO requires that LCC system restoration strategies and associated actions, as described in the Plan, are coordinated and consistent with the ISO high-level strategy for restoring the New England BES. ISO incorporates into the Plan any modification developed or recommended by an LCC to any Plan document, subject to the provisions in Sections 4.2, 4.3 and 4.4.


ISO New England Operating Procedure No. 1 - Central Dispatch Operating Responsibilities and Authority, Appendix A - Assignment of Responsibilities (OP-1A) also includes responsibilities of ISO, the LCCs, other TOs and Market Participants (MPs), including GOPs, during system restoration.

3.2 Components of the Plan

The Plan is comprised of general restoration strategies as per Attachment A, as well as a collection of specifically defined interconnected contiguous system restoration paths (Primary and Alternate Paths to nuclear power stations) from the generation substations associated with the first Generators to be cranked by the DBRs and on to other substations along the Paths, ultimately connecting to New England nuclear power stations, inter-LCC ties or interconnections/synchronizations with neighboring RCAs, including, but not limited to, M/LCC 18, Attachment M – Paths to Alternative Cranked Generators (M/LCC 18M) (Confidential)

1. Basic Minimum Power System and Key Facilities

As part of the development of the Plan, ISO has classified certain facilities within the Plan in accordance with categories of system restoration plan facilities established in NPCC Regional Reliability Reference Directory #8, System Restoration (NPCC Directory #8). The Plan includes facilities that form electrical islands that are part of the core of the Plan. Each of these islands constitutes a basic minimum power system (BMPS), as defined in NPCC Directory #8. Each of these BMPS islands consists of a DBR and may also include other facilities such as a generation substation associated with the first Generator to be cranked by the DBR, as well as transmission lines and associated other transmission substations connected to load that are necessary to stabilize the system and establish a stable island for the purpose of initiating the Plan. Establishment of these BMPS islands facilitates the capability to synchronize electrical islands and implement the Plan to meet Plan objectives. ISO considered the configuration of the New England BES and the design of the Plan in its identification of BMPS island facilities. In the event of a system blackout, the initial goal of the Plan is to establish each BMPS island. From these BMPS islands, station service power to nuclear power stations can be re-established and interconnections/synchronizations between LCCs and between ISO

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and neighboring RCAs can be restored, while also allowing for the continued recovery of the New England RCA. These BMPS islands include certain facilities (e.g., DBRs and generation/transmission substations) designated as key facilities (KFs), as defined by NPCC Glossary of Terms.

KFs include BMPS island facilities that ISO considers essential to the initiation of the Plan and necessary to the establishment of a BMPS island following a system blackout. BMPS island KFs include generating stations containing DBRs and may also include other facilities determined to be essential to the establishment of a BMPS stable island, such as substations required to provide those DBRs with stabilizing load, or generation substations associated with the first Generators to be cranked along the paths of the Plan. KFs may also include additional facilities that are **not** part of a BMPS island, but that are considered essential to the establishment of a BMPS island. These additional **non**-BMPS KFs include:

- Control centers and telecommunication facilities which are necessary to support protection and control facilities
- Voice and data circuits between and within control centers
- Voice and data circuits between control centers and BMPS island KF generating / transmission substations


2. Facilities Connecting the BMPS Island to Facilities Considered Plan Objectives

A facility in the Plan that is part of a path from a BMPS island facility to a facility that is a Plan objective (either an interconnection/synchronization point or a nuclear power station) is referred to as an RFIN (restoration facility to interconnection/synchronization point or a nuclear power station). An RFIN includes all other **non**-BMPS facilities in the Plan that are **not** KFs. An RFIN includes:

- Primary Path facilities that connect BMPS island KFs along contiguous paths to nuclear power stations in New England or to interconnection/synchronization points with LCCs and/or neighboring RCAs, as well as other selected facilities interconnected to a BMPS island.
- Alternate Path facilities and other Plan facilities used as part of the system restoration strategies of the Plan to restore the transmission system that can support the achievement of Plan objectives if one or more BMPS island KFs are unavailable
- Voice and data circuits between RFIN generating / transmission substations

3. List of Plan Facilities

ISO maintains a list of Plan facilities, M/LCC 11, Attachment D – New England System Restoration Plan Resources List (NESRPR List) (M/LCC 11D). The NESRPR List includes and specifically designates facilities that are DBRs as well as facilities that are part of a BMPS island and those that are KFs and RFINs. The NESRPR List also

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identifies each Initial Cranking Path Facility (ICPF), which is a facility in the Plan along the transmission path from a DBR up to and including the initial cranked Generator to be started. The NESRPR List, which identifies the facilities along the paths to the Plan objectives, is updated by ISO once a year (or more often as necessary). ISO informs entities about how their facilities have been designated in the Plan in accordance with Section 4.6.4.

3.3 Maintenance, Testing and Reporting Requirements for Plan Facilities

1. Maintenance, Testing and Reporting Requirements for Critical Components of Key Facilities

Any entity that owns a KF is responsible for identifying each KF critical component (KFCC) within that KF, in accordance with NPCC Directory #8. KFCCs may include but are **not** limited to equipment such as a blackstart generating unit or substation backup power supply (battery, backup generator, etc.) that is required for continued and proper operation of a KF in the event of a total loss of grid supply. Owners of KFCCs are required to maintain a current list of KFCCs, perform required maintenance and testing of KFCCs and report failures of KFCCs or test failures of KFCCs to ISO in accordance with NPCC Directory #8 and ISO OP-1A. For a newly identified or proposed KF, ISO allows the initial test(s) of the KFCC(s) of that KF that are required by NPCC Directory #8 to be completed within one year of the implementation date that the facility becomes a KF in the Plan. NPCC Directory #8 also requires KF owners to provide a summary of the maintenance and testing records for KFCC equipment to ISO, upon request.

Unplanned outages of KFCC facilities are communicated between the ISO and LCCs in accordance with Master/Local Control Center Procedure No. 13 - ISO and LCC Communication Practices (M/LCC 13) and ISO CROP.50001 Reporting Procedure. Records of these equipment outages are maintained in the ISO Outage Scheduling Software. The SRWG reviews such KFCC failures or test failures (in accordance with Section 4.1), evaluates the implications of such failures on the Plan (in accordance with Section 4.2) and takes whatever action is necessary and appropriate to modify the Plan or the implementation of the Plan (in accordance with Section 4.3).

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4. Procedure


4.1 Monitor Power System Network Changes and Other Factors that Could Impact the Plan

1. The SRWG shall monitor changes to the power system network that could change the design or implementation of the Plan, as follows:
 - A. The SRWG shall monitor planned and unplanned permanent changes to the New England BES that may have implications for the Plan and discuss these changes at SRWG meetings. Sources of information regarding system changes include:
 - i. Information on planned changes to the power system network, which shall be obtained from NEPOOL Reliability Committee minutes and consent agendas (items pertaining to approved system changes).
 - ii. Information on unplanned permanent changes to the power system network, which shall be obtained from the ISO Outage Scheduling software.
 - iii. Information on outages and BES changes obtained by each SRWG member from its respective planning and outage scheduling departments.
 - B. SRWG minutes shall document that the SRWG reviewed power system network changes.
 - C. The ISO and LCC members of the SRWG shall maintain an awareness of system contingency events, system disturbances and facility outages that may have implications for the Plan, based on information obtained from ISO Outage Scheduling software and other sources, as applicable. Such information shall be discussed at SRWG meetings.

NOTE


Outages due to KFCC failures or KFCC test failures are submitted by LCCs in Outage Applications in accordance with M/LCC 13.

- D. At each SRWG meeting, the SRWG Chair (or designee) shall provide an update to the SRWG on KFCC failures or KFCC test failures that have been documented as Outage Applications in the ISO Outage Scheduling software.
- E. On a regular basis throughout the calendar year, the SRWG Chair (or designee) shall report to the SRWG on the status of DBRs in ISO OATT Schedule 16 Blackstart Service, including the results of DBR testing performed in accordance with ISO New England Operating Procedure No. 11 – Blackstart Resource Administration (OP-11) and SOP-RTMKTS.0180.0080 - Process Designated Blackstart Resource Testing.
- F. The SRWG Chair (or designee with membership in the NPCC CO-11 System Restoration Working Group) shall review the system restoration plans of neighboring RCs. Upon receipt of a revised system restoration plan from a neighboring RC, the

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SRWG Chair (or designee) shall:

- i. Review the plan document(s) (with SRWG and/or CO-11 member assistance, as necessary) within 60 calendar days of receipt of the plan to determine whether the new or modified document introduces any conflicts with the Plan, particularly with regard to provisions pertaining to criteria and conditions for interconnection/synchronization with the neighboring RC, including:
 - Interconnection/synchronization points [locations (nomenclature and devices) and sequence]
 - Inter-RC synchronization
 - Rules of Thumb for Restoration [as contained in M/LCC 18, Attachment G – System Restoration Strategies (M/LCC 18G)]
 - ii. Send an email to the neighboring RC within 60 calendar days of receipt of the plan to acknowledge that the plan has been received and reviewed, and to indicate whether or **not** a conflict between the Plan and the neighboring RC's plan has been identified. If the SRWG Chair (or designee) indicates that a conflict exists between the Plan and the system restoration plan of the neighboring RC, the reply shall also express the SRWG Chair's (or designee's) intent to work with the neighboring RC to resolve the conflict as soon as possible and within a period of **no** longer than 30 calendar days.
 - iii. Retain documentation of emails sent to neighboring RCs regarding the SRWG Chair's (or designee's) reviews of their restoration plans
 - iv. Update the New England System Restoration Plan Tracker posted to the SRWG shared drive for Section 4.1 F, G and H activity.
- G. If a conflict between the Plan and the system restoration plan of the neighboring RC has been identified by the SRWG Chair (or designee) or by a neighboring RC, the SRWG Chair shall work with the applicable RC to resolve the conflict within 30 days of the date that notification of the existence of the conflict was sent. Resolution of the conflict shall be documented (such as in emails and/or CO-11 Working Group meeting minutes and/or SRWG meeting minutes) noting the date that the notification of the conflict was sent and the date it was resolved.
- H. If a conflict between the Plan and the system restoration plan of the neighboring RC has been identified by the SRWG Chair (or designee) or by a neighboring RC, within 30 days of the date that notification of the existence of the conflict was sent, the SRWG Chair shall notify the Restoration Coordinator of how the conflict was resolved and document the resolution for use by ISO System Operators.
2. Prior to the end of the second (2nd) quarter of the calendar year, the SRWG Chair (or designee) shall compile each completed M/LCC 11 Attachment C – Restoration Exercise Checklist (M/LCC 11C) (described in Section 4.2) for that year and post them to the SRWG shared drive on the ISO internal satellite website.

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3. An assigned ISO Reliability & Operations Compliance (ROC) Analyst shall keep the SRWG informed regarding changes to NERC and NPCC requirements pertaining to system restoration (notably, NERC Reliability Standard EOP-005, System Restoration from Blackstart Resources and NERC Reliability Standard EOP-006, System Restoration Coordination and NPCC Directory #8).

4.2 Review and Evaluate the Plan

1. The SRWG members shall coordinate and promote the reliability of the Plan.
2. The SRWG shall review and evaluate the Plan on an ongoing basis, by performing the following:
 - A. At each SRWG meeting (which are typically held monthly), consider changes to the power system network and changes to NERC/NPCC Requirements (if any) and evaluate whether such changes will require modifications to the implementation of the Plan.
 - i. The SRWG shall determine if such change(s) to the power system network would change the implementation of the Plan and, if so, determine whether such change would require that the existing Plan be modified or would be considered an enhancement to the Plan. The SRWG shall make such determination(s) with consideration of the guidelines in Table 1:


| Table 1: Guidelines for Assessing Impact on Plan | | |
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| Type of Power System Network Change | Would this type of power system network change typically change implementation of Plan? ("Yes" or "No") | If so, would such change <u>require</u> that the <u>existing Plan</u> be modified ("M") or would it be considered an enhancement ("E") to the Plan? |
| Deletion of DBR or any other Plan facility | Yes | M |
| Addition of DBR or any other Plan facility | Yes | E |
| Cut in or removal of additional elements at Plan facilities | No (because substations are completely isolated prior to path energizations) | N.A. |

- ii. If such changes are determined to impact the implementation of the Plan, the following actions shall be taken:
 - a. For any planned change that is determined to impact the implementation of either the existing Plan or be considered a potential enhancement to the

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Plan using that planned system change, the SRWG Chair (or designee) shall inform ISO System Planning, Transmission Planning (transmission projects) and/or Transmission Services & Resource Qualification (generation projects) that the Plan is impacted by the change to the power system network and that one or more studies pertaining to the integration of such change into the Plan are required to be initiated as soon as possible and completed **no** later than two months prior to the expected implementation date of the planned system change.

- b. For any unplanned permanent change to the New England BES that is determined to impact the implementation of either the existing Plan or be considered a potential enhancement to the Plan using that unplanned system change, the SRWG Chair (or designee) shall inform ISO Operations Support Services, Real-Time Studies group that the Plan is impacted by the change(s) to the power system network and that one or more studies pertaining to the integration of such change into the Plan are required to be initiated as soon as possible and **no** later than seven (7) calendar days of being informed.
 - c. The SRWG shall establish a timeline for the completion of necessary work, with milestones for revising, reviewing and approving the necessary changes to the Plan, with Plan revision dates. For changes to the power system network that have been determined to change the implementation of the Plan and that are also determined to require that the existing Plan be modified, the completion dates for the various aspects of the necessary document revisions and approvals shall all be prior to the implementation date for a planned modification of a New England BES facility or within 90 calendar days of the identification of an unplanned modification of a New England BES facility.
- iii. SRWG minutes shall reflect the following:
- a. Document that the SRWG evaluated power system network changes
 - b. Include a list of changes to the power system network that were determined by the SRWG to require (or potentially require) a revision to one or more Plan documents
 - c. Indicate the following for each of the changes listed under 4.2.2.A.i, above:
 - Specify whether the change was determined by the SRWG to impact the implementation of the existing Plan (requiring modification(s) to one or more Plan documents) or whether it represents a potential enhancement to the Plan (that, if adopted, would require modification(s) to one or more Plan documents)
 - Indicate whether or **not** the change was determined by the SRWG to change the role(s) or specific task(s) of one or more entities identified in


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the current Plan (or in a future revision to the Plan) and, if so, a brief description of such change(s)


- d. Include details regarding the timeline for the completion of:
 - System studies (if any are determined to be needed by the SRWG)
 - Necessary changes to Plan documents
 - Review and approval of revised Plan documents
 - Notifications, as applicable, to entities identified in the Plan whose tasks or roles in the Plan are new or have changed
- B. The SRWG shall review and evaluate applications from Generators to be included in ISO OATT Schedule 16 Blackstart Service (if any). The SRWG will develop recommendations to the ISO regarding the inclusion of such Generators into the Plan. Such evaluation shall consider information from OP-11, Appendix D - Application for Prospective Designated Blackstart Resources (OP-11D) and the current list in M/LCC 18O.
- C. The SRWG shall review and evaluate any potential modification to the Plan, including any modification proposed by an SRWG member. Such review and evaluation shall include consideration of whether or **not** the potential modification:
 - i. Is consistent with New England priorities and objectives for the Plan, including:
 - Provide off-site ac power to the New England nuclear power stations
 - Interconnect all New England TOPs (i.e., the LCCs)
 - Establish interconnections/synchronizations with contiguous RCAs that are normally synchronously connected to the New England RCA, advancing system restoration of the Eastern Interconnection
 - ii. Changes a role or specific task to be performed by any entity identified in the Plan
- D. The SRWG shall determine if a **non**-permanent system contingency event, system disturbance or facility outage that is expected to reduce the availability of one or more Plan facilities warrants the development of a Temporary Restoration Path to facilitate the achievement of Plan objectives for the period during which availability of Plan facilities is limited.
 - i. The SRWG shall determine that it is necessary to develop a Temporary Restoration Path if the **non**-permanent system contingency event, system disturbance or facility outage, as applicable, meets any of the following conditions:
 - The facility outage has a recall period of greater than twenty-four (24) hours

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- The event, system disturbance or facility outage is expected to reduce the availability of one or more Plan facilities
 - A Plan facility is **not** available due to an event, system disturbance or facility outage that has **not** been addressed in an Alternate Path document
 - ii. If the SRWG determines that a Temporary Restoration Path needs to be developed, they shall develop one in accordance with Section 4.3.9.
3. Each year, preferably during the second (2nd) quarter of the year, the SRWG shall review and evaluate the Plan, addressing the following:
- A. Evaluate the DBRs in the Plan, including the following:
- i. The SRWG will use the methods found in M/LCC 11 Attachment G - Designated Blackstart Resource Evaluation Method (M/LCC 11G) to assist in evaluating whether the number, size, location and diversity of DBRs are sufficient to meet the needs of the Plan. The SRWG will also use those methods to assist in determining whether a prospective DBR would be advantageous to the existing Plan
 - ii. Review the results of DBR testing and verify that the DBRs in the Plan can perform their intended function including an evaluation of whether the reported minimum amount of on-site fuel allows for appropriate run time to energize the cranking path
 - iii. Provide recommendations to the SRWG Chair regarding the removal or withdrawal of DBRs from ISO OATT Schedule 16 Blackstart Service and/or the addition of DBRs to ISO OATT Schedule 16 Blackstart Service.
 - iv. As needed, the SRWG Chair (or designee), with input from the SRWG, shall seek additional DBRs to replace or augment the existing DBRs in the Plan.
- B. Verify that the cranking path between each system restoration path (Primary and Alternate Paths to nuclear power stations) DBR and the Generator to be cranked is documented, including initial switching requirements.
- C. Verify that minimum load requirements for stability and station service are documented for each DBR and for each Generator to be cranked by a DBR. Specifically, verify that the following information has been documented for each DBR and each generation substation associated with the first Generator(s) to be cranked by that DBR:
- i. Minimum Manual Load Point (MW) at which the Generator can operate, as defined in ISO New England Operating Procedure No. 14 - Technical Requirements for Generators, Demand Response Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14)
 - ii. Station service load of the Generator (MW)

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- D. Evaluate the Plan to identify areas where inter-LCC assistance and interaction is appropriate during system restoration.
- E. Verify that one or more objectives of the Plan can be achieved through annual simulation exercises conducted as part of Plan Training using the M/LCC Training Simulator Model and during any other Plan Training exercise. During any simulation or exercise involving the Plan, the following shall be performed:
 - i. Each year, the SRWG Chair (or designee) and an SRWG member (or designee) from each LCC shall complete the M/LCC 11C for Plan Training exercises conducted in that year and provide a copy to the SRWG Chair (or designee) within one month of when the simulation exercise is conducted (or **no** later than within one month of the last exercise conducted as part of Plan Training).
 - ii. The SRWG shall review each completed and compiled M/LCC 11C from the Plan Training simulation exercises conducted in that year and consider its content in the evaluation of the Plan and document the results of such evaluation in SRWG minutes.
4. At least once every five years, ISO, with assistance of each LCC SRWG member (or designee) as applicable to the study being conducted, shall verify through some combination of analysis of actual events or technical study simulations that the Plan (including each DBR in the Plan) accomplishes its intended function.
 - A. Such analysis shall verify:
 - i. The capability of each DBR to meet the real and reactive power requirements of its associated cranking paths and the dynamic capability to supply initial loads
 - ii. The location and magnitude of loads required to control voltages and frequency within acceptable operating limits
 - iii. The capability of generating Resources required to control voltages and frequency within acceptable operating limits
 - B. Such verification shall be accomplished by evaluating:
 - i. The steady-state capability of DBRs and cranked Generators to meet the real and reactive power requirements of the transmission cranking paths supplying assigned Plan objectives including, but not limited to, initial Generator station and substation constant power loads
 - ii. The dynamic capability of DBRs and cranked Generators to meet the dynamic power requirements of the transmission cranking paths supplying assigned Plan objectives including, but not limited to, initial Generator station and substation constant power loads including voltage and frequency control normally attained through induction motor starting
 - iii. The magnitude of transmission transient over-voltages that result from


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energizing transmission lines, cables and transformers.

- C. As necessary, the SRWG Chair (or designee) shall request that the M/LCC Heads provide technical support when a system restoration-related transmission transient analysis study is required.
- D. The SRWG Chair (or designee) shall develop a report documenting the results of studies conducted to verify how the Plan accomplishes its function, specifically detailing how the studies verify each item in Section 4.2.4.A for each of the system restoration paths in the Plan. This report shall also detail the step-by-step switching of each path studied in the simulation(s) and include all technical study data and list equipment models, assumptions and relevant time domain plots of voltages, currents, and frequency. This report shall be completed and dated **no** later than five years from the date of the last such report(s) verifying such Plan capabilities.

4.3 Update the Plan and Associated Documents

1. SRWG members shall oversee updates to the Plan
2. SRWG members shall modify M/LCC 18 documents, as necessary, including modifications to the Plan evaluated and recommended in accordance with Section 4.2.
3. Revisions to Plan documents shall always maintain consistency with the New England System Restoration Plan strategies and high-level objectives for the Plan.
4. Whenever there is a proposed change to a Plan document that is driven by a power system network change that the SRWG has determined will require a change to the implementation of the Plan (in accordance with Section 4.1.A), the associated revised Plan document(s) must be revised in a timely manner such that they can be submitted to the SRWG for review and to the M/LCC Heads for review and approval sufficiently in advance to allow for approval of the Plan documents to occur prior to the implementation of a planned modification of a New England BES facility or within 90 calendar days after the SRWG identifies an unplanned permanent modification to a New England BES facility, that requires a change to the implementation of the Plan.
5. Whenever there is a proposed change to a Plan document that the SRWG determines would change a role or specific task of an entity identified in the Plan (in accordance with Section 4.1.A), the effective date of the revised Plan document must always be after the date by which notifications to the entities whose role or task has changed have been made by ISO or the applicable LCC (in accordance with Section 4.6.2).
6. At least on an annual basis, based on the SRWG review and evaluation of the Plan, including correction of any deficiencies found during restoration simulations, the SRWG Chair (or designee) shall revise each applicable M/LCC 18 document, each applicable M/LCC 11 document and other information pertaining to system restoration, as necessary:
 - A. **No** later than during the third (3rd) quarter of each year, considering input provided by the SRWG and any other change to other Plan document(s) since the last update to

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the NESRPR List, the SRWG Chair (or designee) shall develop a draft update of the NESRPR List.

B. **No** later than during the fourth (4th) quarter of each year, each LCC SRWG member shall:

- i. Review the Primary Path and Alternate Path flags (exclusive to nuclear power stations) in the ISO Outage Scheduling software that associate transmission equipment in the database with facilities on the NESRPR List, verify that the flag designations are accurate and, as necessary, add the appropriate flag designations for the equipment associated with any Plan facility for which flags have **not** been set.
- ii. Review and verify the DBRs flagged in the ISO Outage Scheduling software correspond with the currently effective version of M/LCC 18O.

7. Each LCC SRWG member shall verify that its LCC documents related to the Plan remain consistent with the latest versions of Plan documents.

8. All revisions to all Plan documents shall always include the following statements (tailored, as applicable) in the Revision History of the document:

- A. This revision (is / is **not**) the result of any permanent planned or unplanned BES modification.
- B. This revision necessitates changes, through roles or specific tasks, of one or more entities identified in the Plan, for the ability to implement the approved Plan.

OR

This revision does **not** change the ability, through roles or specific tasks, of one or more entities identified in the Plan, to implement the approved Plan.

- C. This revision necessitates changes to provide for the ability of ISO-NE to monitor and direct system restoration efforts.


OR

This revision does **not** impact the ability of ISO-NE to monitor and direct system restoration efforts.

NOTE

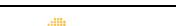
If the Revision History includes a statement indicating that the revision is the result of a permanent BES modification [i.e., the statement pertaining to 4.3.8.A uses “is” (instead of “is **not**”), then the following sentence must be included in the Revision History (otherwise, it is **not** needed).

- D. The BES modification(s) (was / were) (planned / unplanned) and (was / were) as follows: [briefly describe BES change(s) and date(s) the change(s) occurred].

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9. Creating and Documenting Temporary Restoration Paths

- A. When a **non**-permanent system contingency event, system disturbance or concurrent transmission or generation outage (with recall time greater than twenty-four (>24) hours):
 - i. results in an overlap between Primary and Alternate Restoration Path elements to a nuclear power station and
 - ii. the SRWG Chair (or designee) and applicable LCC SRWG representative(s) (or designee(s)) determine, in accordance with Section 4.2.2.D and Master/Local Control Center Procedure No. 7 - Processing Transmission Applications (M/LCC 7) that a Temporary Restoration Path plan must be developed,
 - iii. the SRWG Chair (or designee) shall determine which SRWG representative(s) shall be responsible for conducting the analyses and performing the other functions described in Section 4.3.9.B associated with the development of the Temporary Restoration Path.
- B. LCC SRWG representative(s) (or designee(s)) shall perform the following, as assigned by ISO as per Section 4.3.9.A:
 - i. Perform a system restoration analysis to validate that the proposed Temporary Restoration Path can satisfy the intended Plan objective and meet the criteria specified in NERC Reliability Standard EOP-005 Requirement R6
 - ii. Provide the system restoration analysis to the applicable LCC Outage Coordinator, with instructions for the analysis to be attached to the pertinent transmission outage application
 - iii. Document the Temporary Restoration Path by completing M/LCC 7 Attachment H - Temporary Restoration Path (M/LCC 7H) prior to the submittal of the associated planned outage
 - iv. Coordinate with applicable TO and TOP personnel to develop a switching plan that satisfies the Plan objective that is compromised by the transmission element outage(s)
- C. The applicable LCC SRWG representative (or designee) may request assistance from the SRWG Chair (or designee) in the development of the Temporary Restoration Path documents and analyses.
- D. The SRWG Chair (or designee) is responsible to review and evaluate the system restoration analysis results to confirm that the Temporary Restoration Path is valid and capable of achieving the intended Plan objective.

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4.4 Submit, Review and Approve the Plan

1. As soon as possible following the development of a new or revised Plan document:
 - A. The SRWG shall review the new or revised Plan document.
 - B. The SRWG Chair (or designee), with input from other SRWG members, shall verify the Plan document meets the Plan objectives. For a Plan document to be acceptable, it must, at a minimum:
 - i. Align with New England System Restoration Plan priorities, including:
 - a. Provide off-site ac power to the New England nuclear power stations
 - b. Interconnect all New England TOPs (i.e., the LCCs)
 - c. Establish interconnections/synchronizations with contiguous RCAs that are normally synchronously connected to the New England RCA, advancing system restoration of the Eastern Interconnection
 - ii. Include elements that call for coordination between the LCC and ISO and between the LCC and other LCCs as applicable
2. If ISO, with the concurrence of SRWG members, determines that a new or revised Plan document is acceptable, the SRWG Chair (or designee), on behalf of the SRWG, shall submit the revised Plan document to the M/LCC Heads and recommend that the M/LCC Heads approve the submitted Plan document.
3. The M/LCC Heads shall approve or reject the Plan document submitted to them for approval within 30 calendar days of receiving the Plan document.
 - A. Rejection shall always be supported by stated reasons documented in M/LCC Heads meeting minutes.

NOTE

Copies of Plan documents made available to System Operators prior to the effective date of such documents may include either hard copies or electronic copies.


- B. ISO and each LCC shall make available a copy of the latest approved revision of each Plan document within their respective primary and backup control rooms so that the documents are available to their System Operators prior to the effective date of the documents.
 - The latest approved revision of M/LCC 18 and Attachments will be stored on the Master / Local Control Center website in the “Future Effective M/LCC 18 Restoration Plan Documents Heads Approved” folder prior to the document’s effective date.
- C. The effective date for a revised Plan document shall be specified such that:

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- i. The Plan document can be made available to System Operators on or prior to the revision date of the document
- ii. ISO and the LCCs have sufficient time to provide the entities identified in the Plan with a description of any changes to their roles and specific tasks prior to the effective date of the Plan document, as necessary (as described in Section 4.6.4)
- iii. Any applicable LCC document(s) related to the Plan document can be updated to conform to the revised Plan document, if necessary

4.5 Provide Input on the Plan Procedures, Models and Training

1. The SRWG Chair (or designee), and each LCC SRWG member shall serve as a point-of-contact to annually provide information and support to the JTTF regarding the following:
 - A. Annual Plan Training content, strategies and materials.
 - i. In the third (3rd) quarter of each year, the ISO and LCC SRWG members shall discuss annual Plan Training content, strategies and materials and provide suggestions for changes or additions to annual Plan Training, as needed, to the SRWG Chair (or designee).
 - ii. If the SRWG develops suggestions for changes or additions to annual Plan Training content, strategies and materials, the SRWG Chair (or designee) shall submit these suggestions to the JTTF Chair during the third (3rd) quarter of each year for the suggestions to be considered for annual Plan Training to be conducted in the following year. These suggestions shall be submitted via an official training request.
 - B. Plan simulation exercise scenarios.
 - i. In the third (3rd) quarter of each year, the ISO and LCC SRWG members shall discuss and develop suggestions for simulation exercise scenarios. Such scenarios could include pre-existing outages, abnormal operations and Real-Time events that may be incorporated into annual Plan Training exercises.
 - ii. The SRWG Chair (or designee) shall provide the scenario suggestions to the JTTF Chair in the third (3rd) quarter of a year for the suggestions to be considered for the annual Plan Training exercises or other scheduled training pertaining to the Plan to be conducted in the following year. These suggestions shall be submitted via an official training request.


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C. M/LCC Training Simulator Model data and configuration.

NOTE

The fidelity of the M/LCC Training Simulator Model is essential to performing a representative test of the Plan. DBRs, KFs, and other facilities in the Plan must be accurately modeled in the M/LCC Training Simulator Model.


- i. In the third (3rd) quarter of each year, the SRWG Chair (or designee) and LCC SRWG members shall provide support/information to the ISO staff member that maintains the M/LCC Training Simulator Model, as requested by that ISO staff member, regarding the review of the Model and data.
 - a. Support/information may include, but **not** be limited to recommendations for Model updates, provision of Model data and support for Model validation.
 - b. The support/information shall be provided in time to allow the Model to be ready for the annual Plan Training to be conducted in the following year.
2. Each year, **no** later than October 1st, the SRWG Chair (or designee) shall provide information and direction to the ISO Operations Training and Procedures (OTP) business unit regarding the requests for participation in annual Plan Training exercises that will be sent to TOPs and GOPs identified in the Plan as follows:
 - A. If an update to the NESRPR List is expected to be approved before the end of the year, send a copy of the draft list to OTP.
 - B. Provide direction to OTP to request each TOP and each GOP of a facility identified in the Plan, of needed participation in Plan Training exercises per NERC Standard EOP-006 System Restoration Coordination; Requirement 8.
 - C. Provide direction to OTP regarding specifics (such as what type(s) of individuals and how many individuals from each entity) that the SRWG would like to see included in the text of the ISO requests that are sent to TOPs and GOPs identified in the Plan, for participation in Plan Training exercises .
 - D. Request that OTP perform the following tasks with regard to Plan Training exercises for the following year:
 - i. Develop a list of TOPs or GOPs that are to receive requests for participation in Plan Training exercises for the following year, based on the latest NESRPR List (posted version or draft revision of Master/Local Control Center Procedure No. 11, Attachment D – New England System Restoration Plan Resources List (Confidential) (M/LCC 11D) sent to OTP by SRWG Chair (or designee))
 - ii. Include in each email request sent to a TOP or GOP for participation in Plan Training exercises, a request for the recipient to reply via email to confirm that the request has been received

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- iii. Copy NPCC as a “cc” on each email request for participation in Plan Training exercises (sending them to email address: NPCCCI@npcc.org)
- iv. Keep records of the emails sent to each TOP and each GOP requesting participation in Plan Training exercises and records of the email replies confirming that the requests were received
- v. Provide the records compiled for Section 4.5.2.D.iv to the SRWG and to the assigned ROC Analyst promptly after the records are compiled.

4.6 Communicate Information Regarding the Plan

1. Each LCC SRWG member (or designee) with a nuclear power station within its operational footprint shall verify and document the time it took to restore auxiliary power to the nuclear power station during any Plan Training exercise that included that element as a part of the Plan Training exercise by recording the nuclear power station restoration time for each nuclear power station on M/LCC 11C and submitting it to the SRWG Chair (or designee).
2. The SRWG Chair (or designee) shall actively monitor the publication dates of certain M/LCC 18 documents that pertain to neighboring RCs and that include the provisions required by EOP-006. These RC-related plan documents include:
 - M/LCC 18 – New England System Restoration Plan
 - M/LCC 18 - Attachment A –System Restoration Flowchart (Confidential)
 - M/LCC 18 - Attachment E - Inter-Reliability Coordinator Area / Balancing Authority Area Ties (Confidential)
 - M/LCC 18 - Attachment L - RCA/BAA Interconnection/Synchronization Alternate Path
 - M/LCC 18 - Attachment N – Interconnection/Synchronization Checklist
3. The SRWG Chair (or designee) shall distribute any substantive new or revised version (not minor revision) of any RC-related M/LCC 18 Plan document (as identified in 4.6.2) changing the New England System Restoration Plan, within 30 calendar days of creation or revision and shall retain documentation of such postings or transmittals as follows:
 - A. Verify that any new or revised RC-related Plan document has been distributed to each LCC through normal posting of M/LCC documents
 - B. Send an email to each neighboring RC (NYISO, NBP-SO and HQTÉ) regarding any new or revised RC-related M/LCC 18 Plan document. Each email shall include the following:
 - i. Notification that changes to the Plan have been made, with a brief summary of the changes

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- ii. Statement noting that ISO has reviewed the changes to the Plan, with an indication as to whether or **not** ISO identified any conflict between the revised Plan and the restoration plan most recently provided to ISO by the neighboring RC
- iii. Request that the neighboring RC review the new or revised Plan document and respond to the SRWG Chair to indicate whether or **not** they have identified any conflict(s) between the revised Plan and their restoration plan, so that any identified conflicts can be resolved within 30 days.
- iv. Record the Section 4.6.3.B activity in the New England System Restoration Plan Tracker posted to the SRWG shared drive.

NOTE

Notifications to LCC TOPs identified in the Plan regarding changes to their roles or tasks in the Plan are accomplished through normal review and approval of M/LCC 18 Plan document changes by the M/LCC Heads.

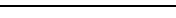
4. Whenever the SRWG becomes aware of one or more of the following changes pertaining to a Plan facility of a Lead MP, TO or Distribution Provider (DP), the SRWG Chair (or designee) shall send an email notification to the current and/or new Lead MP, TO or DP of such facility, as applicable, in accordance with Sections 4.6.4.A and 4.6.4.B, below:
 - An approved change to the Plan results in a deletion or addition to a facility in the Plan
 - An approved change to the Plan results in a change to a role or specific task of a Lead MP, TO or DP of a facility identified in the Plan (or soon to be identified in the Plan)
 - A change to a Lead MP, TO or DP of a facility identified in the approved Plan

A. Timing of notifications

- i. As applicable, notifications shall be made as follows,:
 - a. Prior to the effective date of the associated change to the Plan document(s) that prompted or described the new or revised tasks
 - b. As soon as practicable after the SRWG becomes aware of a change to a Lead MP, TO or DP of a facility identified in the Plan.

B. Content of Notifications (as applicable)

- i. Indicate that one or more of their facilities has been eliminated from the Plan and the expected date of the elimination(s) from the Plan
- ii. Indicate that one of more of their facilities is (are) included in the Plan,

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specifying the expected date of the addition(s) to the Plan and including the following information:

- a. A description of the roles or specific tasks they will be required to perform for the Plan, as applicable, during a system restoration event (with such descriptions being developed with input from the LCC SRWG members)
 - b. Indicate how the Plan facility has been classified (or will be classified), as specified (or as will be specified) in the NESRPR List (e.g., KF, RFIN, etc.) with a brief description of the implications of these classifications, as applicable
5. Whenever the NESRPR List is updated and published, the SRWG Chair (or designee) shall provide a copy of the NESRPR List to NPCC via email to NPCCCI@npcc.org.
 6. The SRWG Chair (or designee) and the SRWG member from each LCC (or designee) shall verify that the latest approved copy of the Plan documents are posted and available in the appropriate Operations Document Management System (ODMS) library.
 7. LCCs are responsible for coordinating with applicable TO and TOP personnel to develop support documents that satisfy the Plan objectives.

4.7 SRWG Chair Administrative Responsibilities

The SRWG Chair (or designee) shall:

1. In January of each year, coordinate with the assigned ROC Analyst and determine the NPCC Criteria Reporting Schedule for that year which pertains to the requirements of NPCC Directory #8 that are applicable to ISO and the LCCs. The SRWG Chair (or designee) shall also assist ROC in any required self-certifications of compliance with NPCC Directory #8 requirements throughout the year.
2. Be responsible for the planning and scheduling of SRWG meetings, establishing meeting agendas, maintaining the roster and assigning meeting minutes responsibility.
3. Report on any actual event in which the Plan was implemented, as requested or required.


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5. List of Plan Acronyms

| Acronym | Description | Section and Page Number(s) of This Document Where Term is Defined/Described |
|-------------|--|---|
| BMPS | <u>B</u> asic <u>M</u> inimum <u>P</u> ower <u>S</u> ystem | Section 3.2, Page 6 |
| KF | <u>K</u> ey <u>F</u> acility | Section 3.2, Page 7 |
| DBR | <u>D</u> esignated <u>B</u> lackstart <u>R</u> esource | Section 3.1, Page 5 |
| ICPF | <u>I</u> nitial <u>C</u> ranking <u>P</u> ath <u>F</u> acility | Section 3.2, Page 7 |
| LARIs | <u>L</u> ocal <u>A</u> rea <u>R</u> ecovery <u>I</u> nstructions | Section 3.1, Page 5 |
| KFCC | <u>K</u> ey <u>F</u> acility <u>C</u> ritical <u>C</u> omponent | Section 3.3, Page 8 |
| RFIN | <u>R</u> estoration Plan <u>F</u> acilities connecting BMPS to <u>I</u> nterconnection/Synchronization points and <u>N</u> uclear power stations | Section 3.2, Page 7 |
| NESRPR List | <u>N</u> ew <u>E</u> ngland <u>S</u> ystem <u>R</u> estoration <u>P</u> lan <u>R</u> esources List | Section 3.2, Page 7 |

6. Revision History

| Rev. No. | Date | Reason |
|----------|----------|---|
| - - | 03/31/17 | For previous revision history, refer to Rev 10 available through Ask ISO: |
| 11 | 04/24/15 | Biennial review completed by procedure owner; Clarified NOTE in Section 3.2 regarding which categories of Plan facilities are considered critical to the system restoration plan; Section 4.4.3.C.ii, corrected section reference; Section 4.6.4 add clarifying language to address EOP-005-2 R2 that requires ISO SRWG Chair to “provide the entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan” |
| 12 | 09/02/15 | Removed the note Box of Section 3.2.1. Clarified language section 3 .2.3 regarding RPR list to include Initial Cranking Path Facilities (ICPF). Expanded language of section 4.5.2.D regarding requests made to OPTI group pertaining to annual notifications. Added section 4.6.6 language. Defined term ICPF in list of acronyms in Section 6. Added language in section 4.2.3.A.i pertaining to the DBR Evaluation Methodology found in M/LCC 11 Attachment G. |
| 13 | 03/31/17 | Biennial review completed by procedure owner; added document classification per ISO policy; Modified Sections 3.3.3; 4.3.6; 4.6.4 to reflect current practice; Deleted Sections 4.6.7 and 4.7.4 to reflect current practice and renumbered remaining subsection; Section 4.6.2. - added two documents to the list of “RC-related Plan documents” that must be sent to neighboring RCs (A & M/LCC 18L); Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6; |

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|--|------------------------------|--|
|  | © ISO New England, Inc. 2024 | Master/LCC Procedure No. 11 - Maintenance and Verification of New England System Restoration Plan |
| | | Revision Number: 19.1 Revision Date: February 21, 2024 |
| Owner: System Restoration Working Group (SRWG) Chair | | Approved by: M/LCC Heads |
| | | Review Due Date: February 21, 2025 |

| Rev. No. | Date | Reason |
|----------|----------|--|
| 14 | 04/05/18 | Biennial review completed by procedure owner; Incorporated the changes discussed and agreed to by the SRWG during their September 2017 meeting and the M/LCC Heads in various meetings; |
| 15 | 10/30/18 | Biennial review completed by procedure owner; References Section, Section 3.1, Section 4.2.2.B and Section 4.3.6.B.ii, clarified instances of "M/LCC 18O" by allowing the use of "M/LCC 18 Att.O" as requested by the M/LCC Heads; Section 4.1.F, clarified and provided more detail; Section 4.3.8, modified sub-steps and NOTE content as related to Revision History; Section 4.3.9, added of 24-hour recall limit when considering transmission and generation outages; New NOTE prior to Section 4.6.4, added to provide information related to notification of changes to LCC TOPs; Section 4.6.4, modified to include notifications of tasks when restoration resources change ownership; |
| 16 | 05/01/20 | Periodic review completed by procedure owner; Updated procedure owner; Review period changed from biennial to annual Globally edited definition, application and evaluation of Primary, Alternate and system restoration paths IAW M/CC18 r7; |
| 17 | 01/15/21 | Modified 4.4.3.B. and associated Note to comply with EOP-005-3 R5 and EOP-006-3 R6. |
| 17.1 | 03/19/21 | Periodic review completed by procedure owner with no changes required. |
| 18 | 03/03/22 | Annual review by procedure owner; Changed document owner. Changed document name. Consistency edits between M/LCC18 suite and M/LCC11 suite. Added additional reference documents. |
| 19 | 03/01/23 | Annual review by procedure owner. Some minor non-intent changes. Consistency and clarification edits Section 4.6.3.B: added step to record the activity in the New England System Restoration Plan Tracker posted to the SRWG shared drive; |
| 19.1 | 02/21/24 | Annual review performed by procedure owner requiring no intent changes; Minor formatting changes; Made administrative changes required to publish a Minor Revision. |
| | | |

7. Attachments

Attachment A - Retired (05/02/2013)

Attachment B - Retired (09/02/2015)

Attachment C - Restoration Exercise Checklist

Attachment D – New England System Restoration Plan Resources List (Confidential)

Attachment E - Example of New England System Restoration Plan Evaluation Timeline

Attachment F - System Restoration Working Group Charter

Attachment G - Designated Blackstart Resource Evaluation Method

Attachment H – Designated Blackstart Resource Test Energization Element