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		Revision Number: 4 Revision Date: February 28, 2024
Owner: System Restoration Working Group (SRWG) Chair		Approved by: M/LCC Heads
		Review Due Date: February 28, 2025

Attachment N - Interconnection/Synchronization Checklist

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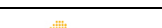
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I. Interconnection/Synchronization Checklist User Guide

The purpose of this checklist is to provide the user a means to evaluate conditions between two islands prior to interconnecting/synchronizing - either inside New England herein to be referred to as an LCC-to-LCC synchronization, or between New England and another Reliability Coordinator Area referred to as an RCA-to-RCA synchronization. The worksheet is intended to complement the System Operator Rules of Thumb outlined in M/LCC 18 Attachment G - System Restoration Strategies. This allows the System Operators in both islands to document conditions on a common worksheet and to give a basic overview of each island for assessment before interconnecting/synchronizing.

- **Row A:** Identify whether you are pursuing an LCC-to-LCC or an RCA-to-RCA synchronization
- **Row B:** List the names of the islands under consideration for interconnection/synchronization. If the island does not have a predetermined name, establish and agree to a name based on island geographic and/or LCC location
- **Row C:** List the approximate load for each island to be interconnected/synchronized
- **Row D:** Perform a synchronous reserve assessment. List the generation on-line within each island and assess the capacity, energy, largest generation contingency and synchronous reserve within each island where:
 - Capacity = rated MW output
 - Energy = actual MW output
 - Largest contingency = largest single source of energy
 - Synchronous reserve = Amount of generation increase available within 10 minutes
Compare results of both islands and determine if sufficient synchronous reserve exists
- **Row E:** Estimate the frequency excursions for both islands over the previous 30 minutes, which provide a condition of the relative stability of the island. If the frequency has been deemed unstable, System Operators may wish to hold off from interconnecting/synchronizing until island conditions stabilize
- **Row F:** Perform a synchronization assessment with regard to the criteria stated in M/LCC18G
- **Row G:** Identify the interconnection/synchronization location for the two islands
- **Row H:** Determine which island resource(s) will control frequency
- **Row I:** Determine which entity will control tie-line flow
- **Row J:** Determine which entity will coordinate the actual island interconnection/synchronization - typically the entity that has control of the

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synchronization breaker

- **Row K:** List any specific notes of interest such as agreed-upon tie-line flow schedule, thermal ratings of the interconnecting tie-line, and conditions that would be required to open the tie-line
- **Row L:** ISO-NE Approval Name, Date and Time

II. Information to be Exchanged between Two Entities/Areas Prior to Interconnecting/Synchronizing

Date:


Time:

A. Are you requesting an LCC-to-LCC tie or an RCA-to-RCA tie?		
B. Island Names	Island A name	Island B name
C. Island Loads	Island A Load MW _____	Island B Load MW _____
D. Island Generation On-Line	Island A Capacity MW _____ Island A Energy MW _____ Largest Contingency Island A MW _____ Synchronous Reserve Island A MW _____	Island B Capacity MW _____ Island B Energy MW _____ Largest Contingency Island B MW _____ Synchronous Reserve Island B MW _____

E. Island A and Island B frequency excursions assessment (mark when complete) ☐

F. Island A and Island B synchronization assessment (mark when complete) ☐

G. Interconnecting/Synchronizing Location

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H. Which Resource(s) Will Control Frequency?

I. Which Entity Will Control Tie-Line Flow?


J. Which Entity Will Coordinate Interconnection/Synchronization Of Tie-Line Closure?

K. Notes: _____

L. Approval by ISO-NE
Name

Date

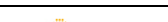
Time__

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M/LCC 18 Attachment N Revision History

Document History

Rev. No.	Date	Reason
Rev 0	03/01/13	Initial version
Rev 1	02/06/14	Procedure review completed, no changes required at this time;
Rev 1.1	01/16/15	Annual review by procedure owner, no changes at this time; This revision is not a result of a BES change that necessitates a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan.
Rev 2	09/02/15	Revised to simplify instructions based on Training and Operator feedback. Developed a User's Guide. This revision is not a result of a BES change that necessitates a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan.
Rev 2.1	10/23/15	Annual review by procedure owner requiring no changes: Made administrative changes required to publish a new Minor Revision This revision is not a result of a BES change that necessitates a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan.
Rev 2.2	09/26/16	Annual review by procedure owner requiring no changes; Made administrative changes required to publish a new Minor Revision including added required corporate document identity to all page footers; This revision is not a result of a BES change that necessitates a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan.
Rev 2.3	08/14/17	Annual review by procedure owner requiring no changes: Made administrative changes required to publish a new Minor Revision This revision is not a result of a BES change that necessitates a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan.
Rev 2.4	07/24/18	Annual review by procedure owner requiring no changes; Made administrative changes required to publish the Minor Revision (including updating the Procedure Owner); This Revision is not the result of a BES change and does not necessitate a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan;
Rev 2.5	05/29/19	Annual review by procedure owner requiring no changes; Made administrative changes required to publish the Minor Revision (including updating the Procedure Owner); This Revision is not the result of a BES change and does not necessitate a change to the implementation of the Restoration Plan and does not result in changes to roles or tasks performed by identified entities in the Plan;
Rev 2.6	04/24/20	Annual review by procedure owner requiring no changes; Made administrative changes required to publish the Minor Revision; This revision is not the result of any permanent planned or unplanned BES modification; 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; This revision does not impact the ability of ISO-NE to monitor and direct restoration efforts

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Rev 2.7	03/25/21	Annual review by procedure owner requiring no intent changes; Made administrative changes required to publish the Minor Revision; This revision is not the result of any permanent planned or unplanned BES modification; 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; This revision does not impact the ability of ISO-NE to monitor and direct restoration efforts
Rev 3	03/03/22	Annual review by procedure owner; Section II, Row E: replaced evaluated unit of measure from “Voltage” to “Frequency” to coordinate with instructions in text Added Row F to Sections I and II for voltage magnitude and angle at the boundary busses Added Row L to Section I. Re-titled main document and this document; changed document owner. Edits for conforming nomenclature. Global edits to reflect interconnection/synchronization where needed. This revision is not the result of any permanent planned or unplanned BES modification. 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. This revision does not impact the ability of ISO-NE to monitor and direct system restoration efforts.
Rev 3.1	03/01/23	Annual review by procedure owner requiring no intent changes; This revision is not the result of any permanent planned or unplanned BES modification. 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. This revision does not impact the ability of ISO-NE to monitor and direct system restoration efforts.
Rev 4	02/28/24	Annual review by procedure owner; Section I, Row D: Added synchronous reserve assessment; Section I, Row F: Added synchronization assessment; Section 1, Row H: Added resource(s) language; Section 1, Rows I & J: Added entity language; Section II, Row E: Added checkbox indicating synchronous reserve assessment performed; Section II, Row F: Added checkbox indicating synchronization assessment performed; Section II, Row H: Added resource(s) language. Removed island language; Section II, Row I: Added entity language; This revision is not the result of any permanent planned or unplanned BES modification; 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; This revision does not impact the ability of ISO-NE to monitor and direct system restoration efforts.