

OP-16 and Appendices A, B, C, D, E, G, H, & I – Transmission System Data



FERC Order No. 881/881-A conforming changes

Joshua Ledee
ENGINEER



OP-16 Redline Overview

Proposed Effective Date: 10/21/2026

- The purpose of OP-16 is to define the responsibilities of Transmission Owners (TOs) and Market Participants, *i.e.*, Market Participants who own the equipment or Lead Market Participants (LMPs) for Generator Assets (collectively MPs) to determine and submit the required data for new, reconducted, and reconfigured facilities for all their transmission equipment
- Changes are needed to comply with FERC Order No. 881/881-A Managing Transmission Line Ratings
 - Address changes to requirements in redesigned NX-9 Application
 - Address requirements for ratings in Limit Exchange Portal (LEP) Application
- There have been no changes to the ISO's proposal since the April RC meeting

Rationale for Change

- Historically, the NX Application has hosted data representing the physical characteristics, ratings and operational data of transmission and generation equipment needed to develop accurate system models
- To address requirements of FERC Order 881, all rating data is hosted in the Limit Exchange Portal (LEP)
- NX Application is redesigned to host certain characteristic information needed to prepare LEP and ISO EMS applications to receive ratings
- All other NX functionality remains the same

Proposal

- The following changes to OP-16 are proposed:
 - Revisions to References
 - Add references to FERC Order 881, OP-18, and OATT Attachment Q
 - Revisions to Section I – Overview and Purpose
 - Introduce Limit Exchange Portal (LEP) as new ratings host for New England Transmission System equipment
 - Revise language on ratings requirements in NX app
 - Describe new fields for ratings characteristics on NX forms
 - Add footnote to Overview section to define term “nominal ratings”
 - Globally change the term "Submission" to "Submittal"
 - Revisions to Section II – NX-9 Data Submittal Schedule
 - Change submittal dates for new facilities associated with model releases from the 15th to the 1st of March, July, and November
 - Remove submittal schedule for planned modifications to existing facilities with OP-3 exception
 - Add the timeframe participants have to notify ISO of LMP transfers and to submit LMP transfer revisions
 - Add timeframe for submittal of NX forms when adding, removing or modifying rating related fields that require EMS changes
 - Addition of Section IV – LEP Data Submittal Requirements
 - Add new section for LEP Ratings submittal requirements and schedule
 - Revisions to Section V – NX One-line Submittal Schedule Changes
 - Change submittal dates for new facility one-line diagrams associated with model releases from the 15th to the 1st of March, July, and November

Proposal, Continued

- The following changes to OP-16 Appendices are proposed:
 - Revisions to Appendices A, B, C, G, H, & I Only
 - Revise language on ratings requirements in NX App, describe new fields for ratings characteristics on NX forms
 - Revisions to Appendices A, B, C, D, G, H, & I only
 - Replaced example NX form images with redesigned NX forms
 - Revisions to Appendix A only
 - Added new example NX forms showing submittal for conditional ratings due to breaker statuses and companion cable statuses
 - Revisions to Appendix E only
 - Added language to include ratings data provided via the Limit Exchange Portal under the FERC 881 ruling are included in the annual certification of data that defines and represents the physical characteristics, ratings, and operational limits of all New England Transmission System equipment

Conclusion

- The proposed changes to OP-16:
 - Revised References
 - Section I – Overview and Purpose
 - Section II – NX-9 Data Submittal Schedule
 - Section IV – LEP Data Submittal Requirements
 - Section V – NX One-line Submittal Schedule
 - Section VII – Annual NX-9 Data Certification
 - Appendices A,B,C,D,E,G,H, & I
 - Minor Revisions throughout
- Proposed effective date is 10/21/2026 to coincide with go-live date for redesigned NX Application

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Reliability Committee April 22, 2026	Review Changes and Answer Questions
Reliability Committee May 21, 2026	Answer Questions and Vote
Participants Committee June 16-18, 2026	Vote

Questions



About the Presenter

Joshua Ledee

Engineer, Power System Modeling and Support

ISO New England

Office: (413) 540-4772

jledee@iso-ne.com

APPENDIX

*OP-16 and Appendices A, B, C, D, E, G, H, & I Redlines
Presented at April RC*

Reference Changes

Section	Procedure Change	Reason for Change
References		Add references to FERC Order 881, OP-18, and OATT Attachment Q
	<u>ISO New England Operating Procedure No. 18 - Metering and Telemetry Criteria (OP-18)</u>	
	<u>ISO New England Inc. Transmission, Markets, and Services Tariff, Attachment Q</u> <u>FERC Order No. 881/881-A Managing Transmission Line Ratings</u>	

Section I – Overview and Purpose Changes

Section	Procedure Change	Reason for Change
<p>Section I – Overview and Purpose</p>	<p><u>ISO will maintain the NX Application and the Limit Exchange Portal (LEP) applications</u></p> <p><u>The NX application hosts the physical characteristics and operational data for all existing transmission equipment, as provided by the MPs and TOs on the appropriate NX-9 form (see Section V). ISO is responsible for acquiring the data for that portion of any transmission facility that is beyond the ISO border.</u></p> <p><u>All ratings, except initial nominal provided via NX9 form and real time ratings provided via ICCP, shall be submitted via the LEP. The LEP applications host equipment seasonal ratings, nominal ratings², reasonability limits, Ambient Adjusted Ratings (AARs) or AAR exemption status and historical ratings data.</u> <u>ISO will maintain an application housing NX-9 data for all existing transmission equipment, as provided by the MPs and TOs on the appropriate NX-9 form (see Section V). ISO is also responsible for acquiring the data for that portion of any transmission facility that is beyond the ISO border.</u></p> <p>of the New England bulk power generation and transmission system.¹ The timely <u>submission</u><u>submittal</u> of accurate and complete data is critical to the creation of the models used in Real-Time reliability operations, market operations, operations planning and to the applications that operate on those models.</p> <p>¹ New England Transmission System is defined in the ISO Transmission, Markets, and Services Tariff, Section I.2.2.</p> <p>² <u>Nominal Rating definition: The lowest of the real-time, forecast or seasonal ratings for a network segment that provides for reliable operation of the New England Transmission System.</u></p>	<p>Introduce Limit Exchange Portal (LEP) as new ratings host for New England Transmission System Equipment</p> <p>Revise language on ratings requirements in NX app</p> <p>Globally changed “submission” to “submittal”</p> <p>Add footnote to Overview section to define term “Nominal Ratings”</p>

Section II – NX-9 Data Submittal Schedule Changes

Section	Procedure Change	Reason for Change
Section II – NX-9 Data Submittal Schedule	<p>MPs and TOs shall submit required advanced notice NX-9 data to ISO for new facilities, including planned transformer replacements. <u>Equipment must have an approved NX-9 form to be included in the ISO EMS model. Submittals must be completed</u> at the earliest of at least one hundred twenty (120) calendar days in advance of the new facility's expected In-Service Date or in accordance with the dates below.</p> <ul style="list-style-type: none">• By March 1st 5th for inclusion in the May EMS model release.• By July 1st 5th for inclusion in the September EMS model release.• By November 1st 5th for inclusion in the February EMS model release.	<p>Changed dates from 15th to 1st</p> <p>Submittals needed earlier to assess modeling requirements to allow LEP to host all applicable ratings for equipment.</p>

Section II – NX-9 Data Submittal Schedule Changes, Continued

Section	Procedure Change	Reason for Change	
Section II – NX-9 Data Submittal Schedule		Remove submittal schedule for planned modifications for existing facilities OP-3 exception	
	<u>Planned modifications to existing facilities with OP-3 exception</u>	<u>As soon as possible and no later than five (5) Business Days after the change</u>	Add timeframe for submittal of NX forms when adding, removing or modifying rating related fields that require EMS changes.
	<u>Planned modifications to existing facilities for the addition or removal of conditional rating sets, a change to the bi-directional flag, or the addition of telemetry provided ratings</u>	<u>By the earlier of the NX-9 data requirement date associated with the EMS model release that will include the change or one hundred twenty (120) calendar days in advance of the expected effective date</u>	
	<u>Modification to transfer Lead Market Participant</u>	<u>Notification to ISO-NE at least fifteen (15) Business Days prior to the effective date of transfer</u> <u>NX-9 submittal at least five (5) Business Days prior to the effective date of transfer</u>	Add the timeframe participants have to notify ISO of LMP transfers and to submit LMP transfer revisions as this requires EMS/LEP changes.

Section IV – LEP Data Submittal Requirements Addition

Section	Procedure Change	Reason for Change
<p>Section IV – LEP Data Submittal Requirements</p>	<p><u>IV. LEP DATA SUBMITTAL REQUIREMENTS</u></p> <p><u>For the purposes of OP-16, the term “network segment” refers to individual pieces of equipment whose ratings are required to determine the ratings of the parent facility.</u></p> <p><u>ISO is responsible for modeling all equipment that is represented on an NX-9 form in LEP. ISO will provide notification to MPs and TOs of LEP changes prior to implementing them in LEP.</u></p> <p><u>Network segment ratings entered in LEP shall be provided in MVA and determined in accordance with PP7 and Attachment Q of the OATT.</u></p> <p><u>Submittal Schedule:</u></p> <p><u>MPs and TOs shall initially submit, and thereafter maintain, seasonal ratings for new equipment in LEP within five (5) Business Days of equipment becoming available in LEP. New equipment becomes available in LEP with ISO New England’s EMS model releases that occur in the months of February, May, and September. Additionally, MPs and TOs shall submit forecasted hourly AARs at least 72 hours in advance of energization.</u></p> <p><u>MPs and TOs shall enter, and thereafter maintain the following data, for all network segments into LEP.</u></p> <p><u>Reasonability Limits:</u></p> <p><u>MPs and TOs shall provide low and high reasonability limit values for all network segments in LEP. Reasonability limits are used to validate all other rating data provided in LEP.</u></p> <p><u>Low reasonability limit must be entered for each network segment before ratings can be entered.</u></p>	<p>Add new section for LEP Ratings submittal requirements</p>

Section IV – LEP Data Submittal Requirements Addition, Continued

Section	Procedure Change	Reason for Change																																							
<p>Section IV – LEP Data Submittal Requirements</p>	<ul style="list-style-type: none"> • <u>Must be greater than zero (0) and less than the High Reasonability Limit.</u> • <u>Represents the lowest rating value that LEP will accept for the network segment.</u> <p><u>High reasonability limit: must be entered for a network segment before ratings can be entered.</u></p> <ul style="list-style-type: none"> • <u>Must be greater than the low reasonability limit.</u> • <u>Represents the highest rating value that LEP will accept for the network segment.</u> <p><u>Rating Nesting Requirements:</u></p> <p><u>All real-time, forecasted, seasonal, scenario, temporary and nominal ratings must fall between low and high reasonability limits and must also meet the nesting requirements of: Normal <= LTE <= STE <= DAL.</u></p> <p><u>Seasonal Ratings:</u></p> <p><u>MPs and TOs shall determine seasonal ratings for all segments in accordance with PP7, Appendix A and the seasonal information below.</u></p> <p><u>If the equipment has conditional rating sets due to element in/out condition(s), seasonal ratings must be provided for each altering condition.</u></p> <table border="1" data-bbox="674 671 971 951"> <thead> <tr> <th>Season Name</th> <th>Start Date (mm-dd)</th> <th>Start Time</th> </tr> </thead> <tbody> <tr><td>JAN</td><td>01-01</td><td>00:00:00</td></tr> <tr><td>FEB</td><td>02-01</td><td>00:00:00</td></tr> <tr><td>MAR</td><td>03-01</td><td>00:00:00</td></tr> <tr><td>APR</td><td>04-01</td><td>00:00:00</td></tr> <tr><td>MAY</td><td>05-01</td><td>00:00:00</td></tr> <tr><td>JUN</td><td>06-01</td><td>00:00:00</td></tr> <tr><td>JUL</td><td>07-01</td><td>00:00:00</td></tr> <tr><td>AUG</td><td>08-01</td><td>00:00:00</td></tr> <tr><td>SEP</td><td>09-01</td><td>00:00:00</td></tr> <tr><td>OCT</td><td>10-01</td><td>00:00:00</td></tr> <tr><td>NOV</td><td>11-01</td><td>00:00:00</td></tr> <tr><td>DEC</td><td>12-01</td><td>00:00:00</td></tr> </tbody> </table>	Season Name	Start Date (mm-dd)	Start Time	JAN	01-01	00:00:00	FEB	02-01	00:00:00	MAR	03-01	00:00:00	APR	04-01	00:00:00	MAY	05-01	00:00:00	JUN	06-01	00:00:00	JUL	07-01	00:00:00	AUG	08-01	00:00:00	SEP	09-01	00:00:00	OCT	10-01	00:00:00	NOV	11-01	00:00:00	DEC	12-01	00:00:00	<p>Add new section for LEP Ratings submittal requirements</p>
Season Name	Start Date (mm-dd)	Start Time																																							
JAN	01-01	00:00:00																																							
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Section IV – LEP Data Submittal Requirements Addition, Continued

Section	Procedure Change	Reason for Change
<p>Section IV – LEP Data Submittal Requirements</p>	<p><u>Scenario Ratings:</u></p> <p>MPs and TOs shall determine scenario ratings in accordance with PP7, Appendix A and are used by ISO-NE Transmission Planning and ISO-NE Operations Support Services.</p> <ul style="list-style-type: none"> • If the equipment has conditional rating sets due to element in/out condition(s), scenario ratings must be provided for each altering condition. <p><u>Temporary ratings:</u></p> <p>MPs and TOs shall provide temporary ratings in LEP when a condition arises that requires the use of ratings other than the real-time, forecast or seasonal ratings for a network segment.</p> <p>Examples of conditions warranting entry of temporary ratings include:</p> <ul style="list-style-type: none"> • Equipment de-rate due to an operational issue • Cable heat exchanger in service • Change in gallons per minute flow rate for a cable • an outage impacting topology that impacts ratings such as a companion cable or terminal breaker opened <p><u>Planned outage conditions</u></p> <ul style="list-style-type: none"> • MPs and TOs shall provide temporary ratings in LEP at least 72 hours prior to the start of the Outage. <p><u>Unplanned outage conditions</u></p> <ul style="list-style-type: none"> • MPs and TOs shall provide temporary ratings in LEP as soon as possible. • Temporary ratings due to unplanned outages must be communicated to the LCCs and ISO-NE Control Room as soon as reasonably possible. • MPs and TOs shall enter the following for each temporary rating: <ul style="list-style-type: none"> ◦ Start date and time ◦ End date and time <ul style="list-style-type: none"> ▪ If the end date and time is known based on a planned outage, enter the expected end date and time. ▪ If the end date and time is not known, enter a projected end date and time. This can be updated. • Reason for the temporary rating 	<p>Add new section for LEP Ratings submittal requirements</p>

Section IV – LEP Data Submittal Requirements Addition, Continued

Section	Procedure Change	Reason for Change
<p>Section IV – LEP Data Submittal Requirements</p>	<p><u>Nominal Ratings:</u> Nominal ratings shall be the lowest of the real-time, forecast or seasonal ratings for a network segment that provides for reliable operation of the New England Transmission System. MPs and TOs shall update nominal ratings in LEP for any rating change that impacts the nominal ratings for the network segment including any physical equipment or rating methodology changes.</p> <p><u>AAR Exemption status:</u> MPs and TOs shall determine if each segment is exempt from the AAR requirements of FERC Order 881, and if so, shall toggle the default status of non-exempt to exempt in LEP and provide a reason for exemption. See Section IV.D, Exceptions and Alternate Ratings within the FERC Order for more information. If a network segment is marked as exempt, the MPs and TOs shall re-evaluate the AAR exempt status at least every five (5) years. The segment's re-evaluation date is automatically generated upon being set as exempt or re-approved.</p> <p><u>Forecast Ratings:</u> Entered and required only for network segments that are not marked as exempt from providing AARs. MPs and TOs shall provide forecasted AAR data for network segments whose AAR exemption setting is "non-exempt". Forecast AAR data is not entered for network segments whose AAR exemption setting is "exempt". Based on ISO's filing, forecasted data shall cover a 72-hour-ahead period, including when a temporary rating is in effect. The ratings provided for each hour shall be based on the expected ambient temperature and expected system conditions (e.g., equipment status based on approved outages).</p> <p><u>Real-Time Ratings:</u> Entered and required only for network segments that are not marked as exempt from providing AARs. The ratings provide for the current hour that are based on the ambient temperature and actual system conditions, at a minimum. When submitted the rating will be used for one (1) hour in the ISO-NE software. Expected to be submitted if current conditions cause the previously submitted forecast rating to be invalid.</p>	<p>Add new section for LEP Ratings submittal requirements</p>

Section V – NX One-line Submittal Schedule Changes

Section	Procedure Change	Reason for Change
Section V – NX One-line Submittal Schedule	<p>MPs and TOs shall submit preliminary individual substation one-lines <u>with final nomenclature</u> to ISO for new facilities or changes to existing facilities. <u>Equipment must have an approved NX one-line form to be included in the ISO EMS model. Submittals must be completed</u> at the earliest of at least one hundred eighty (180) calendar days in advance of the expected In-Service Date or in accordance with the following schedule:</p> <ul style="list-style-type: none">• By March 1st5th for inclusion in the May EMS model release.• By July 1st5th for inclusion in the September EMS model release.• By November 1st5th for inclusion in the February EMS model release.	<p>Changed dates from 15th to 1st</p> <p>Submittals needed earlier to assess modeling requirements to allow LEP to host all applicable ratings for equipment.</p>

Appendices A, B, C, G, H, and I Changes Only

Section	Procedure Change	Reason for Change
<p>Appendices A, B, C, G, H, and I Only</p>	<p>III. RATING DATA INSTRUCTIONS</p> <p><u>All ratings for equipment shall be provided via the Limit Exchange Portal (LEP). Requirements for ratings data provided in LEP are in the ISO New England Operating Procedure No.16, Transmission System Data document section IV, LEP Data Submittal Requirements.</u></p> <p><u>Certain characteristics of equipment ratings must be indicated on the NX-9 form to allow for accurate equipment modeling in LEP. Required characteristic data includes:</u></p> <ul style="list-style-type: none"> • <u>Nominal Ratings</u> <ul style="list-style-type: none"> ○ <u>For new equipment, the initial nominal ratings shall be provided on the NX-9 form. Any future revisions to these nominal ratings shall be provided only in LEP.</u> ○ <u>Nominal ratings shall be the lowest of the real-time, forecast or seasonal ratings for a network segment that provides for reliable operation of the New England Transmission System.</u> ○ <u>Initial nominal ratings data shall be provided in MVA (rounded down to the nearest whole number) and must meet nesting requirements: Normal <= LTE <= STE <= DAL</u> ○ <u>Nominal ratings are only enterable on the NX-9 form until the form is effective and approved.</u> • <u>Bi-directional checkbox</u> <ul style="list-style-type: none"> ○ <u>Selected to indicate ratings are dependent on flow direction.</u> • <u>Conditional checkbox</u> <ul style="list-style-type: none"> ○ <u>Selected to indicate conditional rating sets will be provided for breaker(s) in/out or companion cable(s) in/out.</u> • <u>Conditional Rating Set</u> <ul style="list-style-type: none"> ○ <u>Add a conditional rating set record with text that identifies the condition the rating applies to.</u> ○ <u>For breaker in/out – each conditional rating set represents a switching device that directly affects the status of the line.</u> <ul style="list-style-type: none"> ▪ <u>Example:</u> <ul style="list-style-type: none"> • STATION1 Line Disconnect A 	<p>Revise the Rating Data Instructions across all affected appendices to provide requirements for all new fields.</p>

Appendices A, B, C, G, H, and I Changes Only, Continued

Section	Procedure Change	Reason for Change
<p>Appendices A, B, C, G, H, and I Only</p>	<ul style="list-style-type: none"> • STATION1 Line Terminal Breaker B • STATION1 Line Terminal Breaker C • STATION2 Line Disconnect D • STATION2 Line Terminal Breaker E • STATION2 Line Terminal Breaker F <ul style="list-style-type: none"> ○ A completed sample NX-9A form showing conditional rating sets for breaker in/out conditions is shown in Example 2 of this document. ○ For cable in/out – each condition rating set represents the cable or the combination of cables that are in or out of service <ul style="list-style-type: none"> ▪ Example: <ul style="list-style-type: none"> • LINE1 with LINE2 In AND LINE3 In • LINE1 with LINE2 In AND LINE3 Out • LINE1 with LINE2 Out AND LINE3 In • LINE1 with LINE2 Out AND LINE3 Out ○ A completed sample NX-9A form showing conditional ratings sets for cable(s) in/out conditions is shown in Example 3 of ISO New England Operating Procedure No.16, Appendix A. • Ratings provided via telemetry checkbox <ul style="list-style-type: none"> ○ Select for equipment with ratings being determined more frequently than an hourly basis that will be provided via SCADA telemetry as defined by ISO New England Operating Procedure No.18. <p>Facility rating data shall be provided in MVA (rounded down to the nearest whole number) and determined in accordance with Planning Procedure 7, "Procedures for Determining and Implementing Transmission Facility Ratings in New England" (PP7). The definition of Thermal Ratings is described in PP7 Section 2.0 Collaborative Development of Rating Procedures. A facility rating shall equal the rating of the most limiting individual equipment, shall reflect relay loadability limits¹, and shall account for auxiliary support equipment such as wave traps and any other equipment that Good Utility Practice suggests is necessary. This requirement does not remove the TO's obligation to adhere to PRC-023.4, and it successor standards, nor does it suggest a TO be allowed to change a relay setting to create a more limiting thermal rating for a facility.</p> <p>The NX 9A form provides for entry of both summer (April 1 through October 31) and winter (November 1 through March 31) thermal ratings. The ambient temperature (reported in Fahrenheit) and wind speed (reported in foot per second) used to establish the normal ratings shall be entered for each rating set. If ratings for special conditions or configurations are added to the NX 9A form, comments that describe the associated circumstances for use of the special ratings are required. The MP or TO is also responsible for providing a statement as to the authority of ISO and the Local Control Center (LCC) for use and distribution of these special ratings.</p>	<p>Revise the Rating Data Instructions across all affected appendices to provide requirements for all new fields.</p>

Appendices A, B, C, D, G, H, and I Changes Only

Section	Procedure Change	Reason for Change
<p>Appendices A, B, C, D, G, H, and I Only</p>	<p style="text-align: center;">ISO New England Equipment Rating, Characteristic, and Operational Data Implementation Form Transmission Line (NX-9A)</p> <p>Reference: 12345 Participant: LINE1 Participant: Test Company ISO ID: LINE1 Form State: Approved CM: 1 Equipment Ref: 12345</p> <p>Conductor Type: 795 MCM 36/1 ACSR and 1113 ACSR 45/7 Blue Ivy ISO EM ID: LINE1 Terminal A: STATION1 115KV Bus #: 111222 EMS: STATION1 Terminal B: STATION2 115KV Bus #: 222333 EMS: STATION2 Cable Type: Overhead Nominal System Voltage: 115 Conductor Length: 12.26</p> <p style="text-align: center;">Impedance Data (% (100 MVA Base))</p> <p>R: 0.8507 X: 5.4413 B: 0.758</p> <p>Ratings Provided via telemetry: <input type="checkbox"/> Conditional Rating Sets LEP Only Equipment: <input type="checkbox"/> LEP Implementation Date: <input type="checkbox"/> Bi-Directional Ratings: <input type="checkbox"/> Conditional Ratings: <input type="checkbox"/></p> <p>Initial Nominal Ratings (MVA) Normal: 208 LTR: 244 STE: 261 DAU: 328</p> <p>Rating Comments: Optional text field for Participants to provide any comments related to ratings, particularly if equipment is subject to Bi-directional, Conditional, or Telemetered ratings.</p> <p>Revision Comments: Required text field for Participants to provide the reason for revising or creating this NX-9 form. Example: Correction to impedance</p> <p>Equipment Notes: Optional text field available for Participants to supply explanations regarding the data provided or to provide any pertinent information about the equipment or the manner in which it is operated.</p> <p>Data Revision Number: 0 Date Created: mm/dd/yyyy Prepared By: Participant Username Requested Effective Date: mm/dd/yyyy Date: mm/dd/yyyy Approved By: ISO NER Administrator Username Actual Effective Date: mm/dd/yyyy ISO EMS Implementation Date: mm/dd/yyyy</p> <p style="font-size: small;">Contains Critical Energy Infrastructure Information (CEII) Hard Copy is Uncontrolled TUESDAY, AUGUST 27, 2025 09:40 AM Page 1</p>	<p>Replaced example NX form images with redesigned NX forms</p>

Appendix A Changes Only, Continued

Section	Procedure Change	Reason for Change
<p>Appendix A Only</p> <p>Example 3, NX-9A Transmission Line, Companion Cable In/Out Conditional Ratings</p>	<p style="text-align: center;">ISO New England Equipment Rating, Characteristic, and Operational Data Implementation Form Transmission Line (NX-9A)</p> <p>Reference: 12345 Participant: LINE1 Participant: Test Company ISO ID: LINE1 Form State: Approved Ck: 1 Equipment Ref: 12345</p> <p>Conductor Type: 795 MCM 36/1 ACSB and 1113 ACSB 45/7 Blue Jay ISO EMS ID: LINE1 Terminal A: STATION1 115kV Bus # 111222 EMS: STATION1 Terminal B: STATION2 115kV Bus # 222333 EMS: STATION2 Cable Type: Overhead Nominal System Voltage: 115 Conductor Length: 12.26</p> <p style="text-align: center;">Impedance Data (%) (100 MVA Base)</p> <p>R: 0.8507 X: 5.4413 B: 0.758</p> <p>Ratings Provided via Telemetry: False Conditional Rating Sets: LEP Only Equipment: False - LINE1 with LINE1 In AND LINE1 In LEP Implementation Date: - LINE1 with LINE1 In AND LINE1 Out BI Directional Ratings: False - LINE1 with LINE2 Out AND LINE1 In Conditional Ratings: True - LINE1 with LINE2 Out AND LINE1 Out</p> <p>Initial Nominal Ratings (MVA): Normal: 208 LTE: 244 STE: 261 DAL: 328</p> <p>Rating Comments: Optional text field for Participants to provide any comments related to ratings, particularly if equipment is subject to Bi-directional, Conditional, or Telemetered ratings. Example: Ratings are conditional based on status of LINE2 and LINE3.</p> <p>Revision Comments: Required text field for Participants to provide the reason for revising or creating this NI-9 form. Example: New equipment with conditional ratings. Data is preliminary.</p> <p>Equipment Notes: Optional text field available for Participants to supply explanations regarding the data provided or to provide any pertinent information about the equipment or the manner in which it is operated.</p> <p>Data Revision Number: 0 Date Created: mm/dd/yyyy Prepared By: Participant Username Requested Effective: mm/dd/yyyy Date: mm/dd/yyyy Approved By: ISO NIS Administrator Username Actual Effective Date: mm/dd/yyyy ISO EMS Implementation Date: mm/dd/yyyy</p> <p style="font-size: small;">Contains Critical Energy Infrastructure Information (CEI) Hard Copy Is Uncontrolled WEH262047, JANUARY 28, 2020 02:10 PM Page 1</p>	<p>Added additional example NX form showing conditional rating sets due to companion cable statuses</p>

Appendix E Changes Only

Section	Procedure Change	Reason for Change
Appendix E Only	<p>I. OVERVIEW AND PURPOSE</p> <p>Each year ISO shall initiate an NX-9 certification process <u>in the NX application for Transmission Owners (TOs) and Market Participants, i.e. Market Participants who own the equipment or Load Market Participants for Generator Assets (collectively MPs)</u>. This process requires that the MP or TO certify that all transmission facilities described in ISO New England Operating Procedure No. 16 - Transmission System Data (OP-16) and its appendices are accurately represented in the ISO NX <u>and Limit Exchange Portal (LEP) Applications</u>. The certification will be issued in January of each year unless otherwise communicated to the MP's NX-9 administrators and compliance contacts identified in the ISO Customer and Asset Management System (CAMS).</p> <p>Accurate and complete data is critical to the creation of the database models used in real-time reliability operations, market operations, operations planning and to the computer applications that operate on those models.</p> <p>This certification process shall serve to ensure that the NX-9 data on file at ISO meets the requirements of OP-16 and its appendices, <u>and that the rating data in the LEP applications complies with OP-16, its appendices, and Attachment Q to the ISO New England Open Access Transmission Tariff.</u></p> <p>II. GENERAL INSTRUCTIONS</p> <p>ISO shall initiate the NX-9 <u>and LEP</u> certification process by sending a request for self-certification to the MP or TO NX-9 administrators and compliance contacts identified in ISO CAMS that includes the date by which the MP or TO shall respond.</p> <p>The MP or TO shall ensure that the NX-9 data contained in the NX Application <u>and the ratings data contained in the LEP applications are</u> accurate, complete and reflects the actual physical characteristics, ratings, and operational limits of all New England Transmission System¹ equipment defined in OP-16 and its appendices and in service on or before the certification initiation date.</p> <p>Upon ensuring that no changes to the NX-9 <u>or LEP</u> data are necessary to comply with OP-16 and its appendices, or when all data changes necessary to comply with OP-16 and its appendices have been submitted, the MP or TO shall notify the ISO by selecting the Notify ISO-NE Data is Complete checkbox on the Annual Certification display of the NX Application. Such notification shall be completed by a date specified by ISO that is at least thirty (30) calendar days from the certification initiation date. Data corrections discovered after the MP or TO has notified ISO that their data is complete for certification shall be submitted in accordance with the normal submission schedule and shall not be considered part of the current certification.</p> <p>ISO shall review any NX-9 submitted data. Upon approval of all NX-9 data submitted for certification compliance, ISO shall provide the Certification of ISO New England</p>	Modify certification requirements to include data provided in LEP