

Appendix E: PAC Presentation Guidelines

VERSION 2

EFFECTIVE DATE: November 1, 2024

Document History

This document will be reviewed and updated (if necessary) on a periodic basis. Revisions to the document will be posted on Transmission Owner Asset Management section of the ISO-NE website.¹

Rev. 0: Draft – 8/16/23

Rev. 1: Updates based on stakeholder feedback – Effective: 1/1/24

Rev. 2: Updates based on periodic review, revision to Appendix to Asset Condition Guide – Effective: 11/1/24

¹ <https://www.iso-ne.com/system-planning/transmission-planning/transmission-owner-asset-management>

Presentation Sections

Asset Condition project presentations should include the following sections and information, though some information may be added, omitted or presented in a different order depending on the nature of the project:

I. Title Slide

- a. Title of Project
- b. Date of PAC meeting
- c. Name and affiliation of Presenter

II. Agenda

Agenda/outline of the presentation

III. Project Background

- a. All Projects
 - ~~i. Overview of presenting PTO, including relevant statistics (service area, total circuit miles of transmission, etc.)~~
 - i. Project location (state/geographic region)
 - ii. Age of asset and original In-Service/Commissioning Date, range of asset life expectancy
 - iii. Brief description of any prior major refurbishment/rebuild work and year of completion
 - iv. Links or references to other relevant presentations and documents, including any prior PAC presentations
 - v. Information on the geography/topology of the area, if relevant to the project scope (e.g., mountainous terrain, road crossings, urban area, etc.)
 - vi. Information on whether a particular facility was associated with need(s) identified in any recent ISO-NE studies, such as Longer-Term Transmission Studies, reliability studies, and interconnection studies
- b. Transmission Line Projects:²
 - i. Line number/identifier, operating voltage, length (miles), and terminating substations
 - ii. Total structure count by structure type (wood, steel, lattice, etc.)
 - iii. Existing conductor and shield wire types
- c. Substation Projects
 - i. Substation voltage levels
 - ii. Total number of transmission lines terminating at station and line identifiers

² If there are more than two lines and/or substations that are part of the project scope, include this information in table format.

- iii. Equipment-specific information if a specific asset within the station is being targeted for replacement (e.g., manufacturer)
- iv. Substation design (ring/breaker-and-a-half/straight bus)

IV. Maps/Diagrams

- a. Regional portion of ISO-NE or PTO-specific geographical transmission map with breakout of local area (with highlighted lines or substations where project work is being done) and a key for the highlighted portion of the geographical map
- b. One-line diagram, if necessary³ (e.g., if there are configuration changes or additions as part of the scope)
- c. Aerial views, if necessary (typically only for substation projects)
- d. Representative ROW cross sections, if necessary (typically only for line projects)

V. Project Needs

- a. How asset condition issues were discovered (e.g., visual inspection, drone inspection, periodic/regular testing, etc.)
- b. The asset(s) and asset condition issue(s) targeted as part of this project. Examples include but are not limited to age or material-related issues such as:
 - i. Physical deterioration
 - ii. Altered/diminished performance
 - iii. History of mis-operation
 - iv. Equipment that is susceptible to failure
 - v. Technological obsolescence, such as information on end of product support
- c. **Asset condition health grades, if applicable to the specific project and PTO**
 - i. **Asset condition grades can be summarized, if needed. For example, transmission line structure grades may be summarized in tabular format as shown in Appendix C to the Asset Condition Process Guide**
- d. Relevant industry/regional standards that the asset(s) do not currently meet, if applicable. **The PTO should describe the specific regulations, standards, etc. that have affected decision making.** Examples of relevant standards include:
 - i. Electric Power Research Institute (“EPRI”) Guidelines
 - ii. NPCC Directory 4
 - iii. National Electric Safety Code (“NESC”) standards

~~Additional asset condition work included as part of the project and why that work is included (e.g., optimize mobilization, capture siting and permitting efficiencies, minimize environmental impacts, maximize use of outages, etc.)~~

³ Inclusion of a detailed electrical one-line diagram may trigger the use of the CEII designation referred to in Section 2 of this document

- e. Descriptions of any PTO-specific standards, criteria, or guidelines that have affected decision-making for the project.
- f. Representative photos illustrating asset condition issues
 - i. Caption each photo (for structures, include the transmission line and structure number) with relevant details of asset condition concerns

VI. Solution Alternatives

~~For projects with substantial changes, discuss alternatives considered during project development. For each alternative, include:~~

- a. Base Alternative
 - i. Project scope
 - ii. Benefits and drawbacks/shortcomings
 - iii. PTF cost estimate, including major cost drivers
- b. Other alternative solutions. For each alternative, include:
 - i. Project scope
 - ii. Benefits and drawbacks/shortcomings
 - iii. PTF cost estimate, including major cost drivers.

~~Provide rationale for selecting preferred alternative~~

If there is no realistic/feasible alternative to the ~~preferred solution~~ base alternative, omit this section and instead provide an explanation of why no alternatives were considered.

VII. Assessment of solution alternatives

- a. Include evaluation factors relevant to the project to allow comparison of solution alternatives. These factors should be based on those shown in Table 4-1 of the Asset Condition Process Guide, adapted to the project as needed.
- b. Assess benefits/advantages of Base Alternative versus other alternatives, if included
- c. Include assessment of the extent to which the proposed asset condition project would address any need or concern associated with this asset in any recent ISO-NE Reliability Studies, Interconnection Studies, or Longer-Term Transmission Studies

VIII. Preferred Solution – PTF Scope of Work Details

- a. All Projects
 - ~~Benefits/advantages of Preferred Solution vs Solution Alternatives, if included~~
 - i. Order of magnitude or Conceptual PTF cost estimate (-50%/+200% or -25%/+50%, respectively)
 - ii. Target start of construction date (by quarter)
 - iii. Proposed in-service date (by quarter)
- b. Line Projects
 - i. Structures

1. Total number of structures to be replaced
2. Type of structures to be replaced
3. Type of structures to be added
4. Any permanent structure removals
- ii. Length of existing conductor. If replacing or modifying the conductor, include the length and type of existing and planned conductor
- iii. Length and type of existing and planned shield wire (if replacing or modifying)
- iv. If relevant, a table showing the current and preliminary post-project Normal, Long Time Emergency (LTE) and Short Time Emergency (STE) ratings of the line
- c. Substation Projects
 - i. Equipment replacements/modifications in yard or control house
 - ii. Additional work required such as:
 1. Cable/conduit
 2. Wiring modifications to connect the new equipment

IX. Preferred Solution – Right-Sizing

[Section reserved for future use if right-sizing process is developed]

X. Description of any Associated Non-PTF and Distribution Scope of Work

This section should include a brief description and a cost estimate associated with all non-PTF and/or distribution asset upgrade work to be performed within the scope of the project. This section may be omitted if no such work is included.

Summary

~~a. Scope of the preferred solution~~

~~i. Summarize the information included in the “Preferred Solution” section~~

~~ii. Order of magnitude or Conceptual PTF cost estimate (-50%/+200% or -25%/+50%, respectively)~~

~~b. Target start of construction date (by quarter)~~

~~c. Proposed in-service date (by quarter)~~

XI. Feedback and Next Steps

- a. Identify the PTO’s single point of contact (“POC”) and email address for the Project.
- b. Schedule table including:
 - i. Due date for feedback/questions where applicable (typically 15 calendar days from the presentation date)
 - ii. Dates of future PAC meetings related to the Project, if applicable.

XII. Additional Update Presentation Criteria

- a. If previous presentations have provided sufficient information to satisfy the rest of the guidelines listed in Section 3 of this document, those items may be omitted for brevity,

as long as that information is still correct and links to those previous presentations are provided. The following additional information should be included for all project update presentations:

- i. Summary of initial presentation including needs, scope, and cost estimate
- ii. Links to all previous project presentations and materials on the ISO-NE website
- iii. Discussion of drivers for update presentation
- iv. Revised scope
- v. Revised conceptual level (-25%/+50%) cost estimate

**Attachments to be added with standard templates for asset condition project presentations
(see separate file for proposed Attachment 1)**