



# End-of-Life Transmission Planning

PJM Members Committee

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- The PJM Board has been closely involved with the issues surrounding Supplemental Projects since 2016
- The PJM Board supports the proper exercise of PJM's authority, appropriate transparency, commitment to a non-discriminatory independent process, and consideration of competitive solutions where appropriate.
- PJM Board recognizes PJM's role as the independent regional planner, maintaining compliance with its governing agreements and ensuring system reliability into the future.
- PJM does have the authority to require Transmission Owners to commit EOL criteria to writing and review annually, but does not have a role in creating EOL Criteria.
- PJM does not have the authority or information to make determinations regarding asset condition
- Transmission Owners need flexibility to both expedite replacement projects to avoid run-to-failure scenarios and to delay replacement projects when condition assessments indicate that the continued operation of the facilities can be done without jeopardizing reliability.
- Creating a new category of projects to be placed under PJM's planning authority, and amending the definition of Supplemental Projects, is beyond the scope of authority transferred to PJM under the CTOA.
- It is not apparent that any changes are needed or appropriate for Form 715 projects.
- PJM, as the regional planner, should pursue the more efficient and cost-effective solution where there is an intersection of a EOL candidate with a regional need.

# Summary of Joint Stakeholder Package Concerns

- Stakeholder proposal does not honor existing agreements, governing documents and FERC precedent.
- Stakeholder proposal introduces a dichotomy by requiring a final EOL determination six-years in advance while also verifying asset management determinations, when stakeholder training and RTO/ISO outreach confirmed actual final EOL determinations typically occur at the one- to three-year time frame.
- Forcing final binding six-year EOL determinations may result in premature retirement of transmission facilities.
- Proposed OA language is unclear, incorrect, missing design components, and in some cases outside of the scope of the issue charge.
- Proposed OA language places PJM in the unacceptable position of making an asset management determination introducing liability concerns.
  - PJM is asked to delay final binding EOL determinations.
  - PJM is asked to make EOL determinations between the six to ten year timeframe.
- Elimination of low-voltage exemptions detract PJM resources from other planning activities, including the interconnection study queue.

Board Response Summary

Joint Stakeholder Package Concerns

Operating Agreement Language Concerns

The PJM Board has been aware of, and engaged on, the issues surrounding Supplemental Projects since 2016, including end-of-life (EOL) condition assessments and replacement projects:

- The PJM Board views the execution of its responsibilities in regional planning as requiring the proper exercise of its authority, appropriate transparency, and a commitment to a non-discriminatory independent process, including the consideration of competitive solutions where appropriate.
- Under certain circumstances, PJM is in the best position to identify a regional solution to replace an EOL facility.
- PJM's EOL package presented to the MRC appropriately applies PJM's authority to identify the intersection of a potential EOL need and regional planning needs, cost effectively and efficiently, utilizing a competitive window process, where appropriate. The PJM EOL package reflects guidance provided in FERC orders, respects authorities defined in governing documents and enhances the existing RTEP process.

## PJM's role as the regional planner and its core functions:

- Ensuring safe and reliable operation of the transmission grid
- Reliably serving native load and other firm transmission service obligations
- Expanding the grid in an efficient, reliable and non-discriminatory manner
- Ensuring needs of municipalities, cooperatives and other transmission-dependent utilities are considered on a level playing field with the needs of larger investor-owned utilities
- Processing generator and merchant transmission interconnection service requests
- Enabling market-driven expansions to relieve congestion
- Accommodating state-agreement projects
- Planning interregional facilities
- PJM did not assume all of the transmission owner (TO) asset management or local planning responsibilities

## PJM's planning authority:

- PJM's regional planning role is defined in FERC's regulations for RTOs, in the Operating Agreement (OA) and in the Consolidated Transmission Owners Agreement (CTOA).
- PJM's role has limitations and is bounded by numerous regulatory constraints and contractual obligations that define the limits of its authority over the planning process.

## Determining asset condition:

- PJM does not have the authority or information to make assessments or determinations regarding asset conditions.
- TOs explicitly reserved the right to determine when facilities have reached the end of useful life.

## Criteria used to assess EOL conditions:

- A significant amount of transparency is provided via the recently adopted Attachment M-3 process for Supplemental Projects.
- PJM supports additional transparency regarding EOL determinations and replacement projects.
- PJM supports the requirement that each TO commit EOL criteria to writing and review annually, which is a legitimate expansion of PJM's authority under the CTOA and OA.

## Advance notice of EOL candidate facilities:

- Requiring TOs to provide advance notice five-years forward aligns with PJM's annual RTEP cycle.
- Notice 10-years forward offers little value due to the uncertainty of any EOL determination that far into the future.
- Five-year notice must provide TOs flexibility to react to changes in condition assessments, unforeseen conditions, changes in circumstances or other developments.
- TOs need flexibility to both expedite replacement projects to avoid run-to-failure scenarios and to delay replacement projects when condition assessments indicate continued operation of the facilities is feasible without jeopardizing safety or reliability.

## FERC Form 715 EOL replacement projects:

- Projects arising from FERC Form 715 criteria are considered baseline and may be subject to competitive planning (unless certain exemptions apply) and regional cost allocation.
- It is not apparent that any changes are needed or appropriate for such Form 715 projects.

## Supplemental Projects as EOL replacement:

- FERC reaffirmed Supplemental Projects are directed by TOs.
- Creating a new category of projects to be placed under PJM's planning authority, and amending the definition of Supplemental Projects, is beyond the scope of authority transferred to PJM under the CTOA.

## Asset management per FERC California orders:

- Asset management activities are not “planning” so long as any capacity increase is only incidental to the replacement.

## Intersection of Supplemental Projects and regional needs:

- Where there is an intersection between an EOL candidate and a regional need, it is appropriate for PJM, as regional planner, to pursue the more efficient and cost-effective solution to solve a regional need, which may include an end-of-life replacement project.
- The ultimate solution may be different than the TO-identified replacement project and, accordingly, would be a PJM baseline regional solution.

## Dichotomy Introduced by Final Binding Six-Year EOL Determination:

- Mandates a six-year final EOL determination for all facilities when there is no technical basis for such time frame, forcing replacement of facilities not at their end-of-life.
  - Ignores 2016 Transmission Owner EOL program, a detailed stakeholder training which explained the analysis that leads to EOL determination at the one- to three-year time frame.
  - Requires verification of mandatory six-year “binding” asset management EOL determinations when final EOL determinations across the industry occur at the one- to three-year time frame.
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- Suggests that a “binding” EOL determination made by the TOs could then be altered by PJM and places PJM in the untenable position of making asset management determination.
  - Asserts that the mandatory final binding six-year EOL Notification and associated EOL replacement projects/EOL retirements can easily be delayed by PJM without considering potential NERC compliance implications (modeling) and potential impacts to generators (Interconnection Queue, Deliverability/Performance Assessment).

## Replicate the results of individual EOL notifications

- Section 1.5.4 (b) states “the EOL Look-ahead Program and EOL Criteria shall include sufficient detail such that **PJM** and stakeholders may understand and, to the extent possible, **replicate results of individual EOL Notifications.**”
- This use of the term “replicate” is beyond what FERC required in the Attachment M-3 orders, which required the ability to replicate the results of planning studies.
- Even though some parties argued for more detail (in particular TO-specific models beyond network models), FERC found that the Attachment M-3 process provided sufficient transparency to stakeholders regarding *basic* criteria, assumptions and data that underlie transmission system plans and did not require the detail requested by the load group. See September 26, 2018 Attachment M-3 Order at PP 29 and 30.
- The Joint Stakeholder Package is inconsistent with what was agreed to during the negotiation of Manual 14B revisions, which includes the ability to replicate the results of planning studies such as power flow, short circuit and stability studies.
- PJM cannot replicate the results of EOL determinations, as not all factors used by a TO (including the use of a TO’s proprietary models) to render such determinations are known to PJM or stakeholders.

## Elimination of low-voltage exemption

- Ignores the basis for FERC past ruling which states, “While we recognize that there may be advantages to identifying solutions to some transmission needs arising from reliability violations on transmission facilities operating below 200 kV through a competitive proposal window process, PJM’s data demonstrates that the number of such cases is de minimis as compared to the total number of reliability violations on transmission facilities operating below 200 kV.”
- Creates unnecessary administrative burden without added value by:
  - 1) Taking the focus of PJM’s and transmission developers’ resources away from projects more suited to the competitive proposal window process; and
  - 2) Distracting PJM resources from other planning activities, including the interconnection study queue.

## Best practice has been:

- To develop OA language after a stakeholder package has been approved by the MRC.
- For PJM Legal, PJM business and stakeholders to collaboratively develop OA language.
- For the owners of the package to work with PJM to walk through proposed package – highlighting changes to existing processes – so stakeholder’s questions can be identified, and everyone can collaboratively benefit from a comparison between required process changes and proposed OA language.

March	April		May	
<p><b>March 24 MRC Special Session work plan included:</b></p> <ul style="list-style-type: none"> <li>• May 28 MRC vote</li> <li>• Placeholders on multiple dates to review/develop OA language between MRC approval and MC vote</li> </ul>	<p><b>April 17 MRC Special Session work plan included:</b></p> <ul style="list-style-type: none"> <li>• OA language review</li> <li>• June 5 OA language review</li> <li>• July 23 MC package vote</li> </ul>	<p><b>April 30 MRC joint stakeholder presentation:</b></p> <p>Seek vote on both EOL package and OA language at May 28 MRC and June 18 MC</p>	<p><b>May 15 MRC Special Session work plan included:</b></p> <ul style="list-style-type: none"> <li>• May 28 MRC EOL package vote</li> <li>• June 5 &amp; 12 OA language review</li> <li>• June 18 MC package and OA vote</li> </ul>	<p><b>May 28 MRC:</b></p> <p>The joint stakeholder package vote failed</p>

**OA revisions posted 4/30, 5/15 (page turn) and 5/28.**

**PJM conference call/Webex with joint stakeholders** to discuss OA feedback on 5/20, 5/25, 5/27, and 6/10.

- OA language must be clear and concise in order to ensure desired outcome is actionable, provide clear guidance to enable the development of concise manual language, and avoid potential litigation.
- OA language changes should be limited to concepts contained within the approved Solution Package.
  - Joint stakeholders made changes to the OA that were beyond the scope of EOL initiative.
  - Joint stakeholders solution option details are missing from proposed OA.

## Joint stakeholder Operating Agreement language is not clear or concise:

- Creates terms/definitions that are unnecessary and confusing
- Use of new term “End-of Operational Life” vs. accepted term “End-of Useful Life”
- Consider the proposed EOL project definition
  - Is EOL a driver or a new project category (reliability, market efficiency or public policy, and now EOL)?
  - Is a new cost allocation required to be developed in Schedule 12 of the OATT for the new EOL project category?

## Joint stakeholder Operating Agreement language is not concise:

- Modifying regional and subregional RTEP project definitions to include EOL Notification as a new PJM criteria similar to system reliability, operational performance, or economic criteria is incorrect. Is EOL Notification now a new PJM criteria? If so, the EOL Notification definition is inaccurate.
- What is meant by projected EOL Condition”?
- As currently drafted, the terms EOL Condition and EOL Notification seem to be used interchangeably adding unnecessary confusion.
  - EOL Notification is actionable
  - EOL Condition is not actionable without notification
  - EOL Condition appears in 18 separate locations

## EOL Project without EOL Notification

- Proposed changes to Section 1.5.6(f) of the OA requires PJM to evaluate “including EOL Conditions as the Office of Interconnection in its judgment determines merit an EOL Project notwithstanding that an EOL Notification has not yet been received.”
  - The joint stakeholder package does not identify what to do with facilities on the 10-year notification list without an EOL Notification. In fact, only design component 3a states, “This notification (i.e., EOL Notification) is the trigger point for the PJM regional planning process and all EOL Notifications to be included in PJM models used in Proposal Windows.”
  - Is Section 1.5.6(f) proposing that PJM should make EOL determinations between years 6–10 potentially using “minimum guidelines based on industry averages, manufacturers recommendations and good utility practice” when all training and industry practices make EOL determination one to three-year time frame?
- By requiring that PJM determine that an EOL Condition should be treated as an EOL Notification would require PJM to make asset condition determinations which is outside of PJM’s authority, conflicts with Board correspondence and therefore not implementable.

## EOL Notification Definition: “end-of-life (EOL) Notification shall mean the *binding* notification”

- The term “binding” was added after the 5/15 MRC Special Session and first introduced at the 5/28 MRC/MC vote.
- Binding does not permit the flexibility contemplated within the OA where PJM and the TO can review and consider updated information about the asset, specifically:
  - **Section 1.5.8(c) Project Proposal Window:** The Office of Interconnection may shorten or lengthen a proposal window that is not yet opened based on one or more of the following criteria . . . . (ii) availability of new or changed information regarding the nature of the violations and the facilities involved . . .
 

*This provision presumes that PJM or the TO who owns the asset may submit new or changed information regarding transmission facilities.*
  - **Section 1.5.8(d) Posting and Review of Projects:** Based on review and comment by the TEAC, PJM may, if necessary, conduct further study and evaluation.
 

*This provision presumes that PJM may seek further information regarding proposals, the facilities involved or the system before making its selection, which could include information from the TO regarding changes to the EOL facility.*
- Binding was not countenanced by Order No. 1000. FERC has always recognized the need for flexibility in decisions made by both TOs and RTOs.
- Binding does not allow for consideration of new technology which could extend asset life.
- The term “binding” places PJM in the position of making asset management decisions.