

Preliminary Draft

PJM Interconnection principles for TRPSTF design matrix and other PJM planning meetings

January 24, 2018

PJM citations and principles associated with its proposed TRPSTF design components. These principles are also applicable to RTEP, SRRTEP, Planning Committee (PC) and TEAC processes.

1. PJM is the Regional Transmission Planner and Transmission Operator. PJM's roles, authorities and requirements are documented in the NERC-Accepted Transmission Owner/Transmission Operator (TO/TOP) Matrix, the Amended and Restated Operating Agreement (OA), the Open Access Transmission Tariff (OATT), the Reliability Assurance Agreement (RAA) and the Consolidated Transmission Owners Agreement (CTOA). We reference the most current OA, OATT, RAA, and CTOA on file with FERC.
2. PJM Manual 34: PJM Stakeholder Process Manual is the documented methodology set forth to ensure requirements are met to obtain FERC approval of any proposed revision(s) to the PJM governing documents (OA, OATT, and RAA) or PJM's stakeholder process. Section 10 of the Consensus Based Issue Resolution Process does not provide for review, revision or amendment of the Consolidated Transmission Owner Agreement (CTOA). PJM does not propose any changes to the CTOA.
3. PJM's proposed clarifications, enhancements and new processes to the TRPSTF design matrix, when accepted by the PC/MRC, will be codified in the PJM Manuals. As with any other PJM planning process – future changes will be reviewed and voted upon by the stakeholders within the PC and MRC.
4. As the Transmission Provider and Regional Transmission Planner, PJM core responsibilities relate to the administration, execution and oversight of planning the bulk electric system to include: developing the regional transmission expansion plan (RTEP), assessing the impacts to the reliability of the transmission system plan, the facilitation of sub-regional planning process, assessing the impacts, if any, of transmission owner Supplemental Projects and, finally, administering and selecting competitive transmission projects in accordance with FERC Order No. 1000.
5. PJM's core responsibilities associated with the planning processes are based upon adherence with the Governing Agreements listed in #1 above and further documented in the PJM manuals. These processes are bounded by criteria, reliability-driven practices and sound engineering judgment. For PJM-planned projects, these processes require criteria that result in the selection of the more efficient or cost-effective solution when considering multiple proposals. PJM shall continue to uphold its engineering and reliability methodology with the understanding that the prudence of a project or projects is the sole jurisdiction of others (e.g. FERC, and or State public utility commissions). PJM, as the independent regional planner, is responsible for the development of the RTEP that will enable the transmission needs to satisfy the reliability, adequacy, operational performance, market efficiency, multi-driver, public policy requirements and competitive transmission development and operation. While PJM processes require Transmission Owners to provide timely status updates including cost updates from concept to energization, PJM does not assert or see a role in which it is responsible for determination and evaluation of the prudence of a project before, during or after construction and energization of facilities.

With this as a context, PJM SMEs have developed the following positions and design component elements:

#	Design Components ¹	Priority	Status Quo	A	B	C	D
*	Implementation						Proposals by PJM SMEs
1	Coordination of End of Life Projects in the Local Planning and RTEP processes		<p>- assumptions meeting annually at the beginning of cycle</p> <p>- meetings as needed for the rest of year</p> <p>- sub regional meetings focusing on EOL Baseline Projects as well as EOL Supplemental Projects for each TO in the region</p> <p>-pc, TEAC, sub regional rtep postings via PJM.com</p> <p>WebEx, special pc</p>	regularly scheduled meetings		<ul style="list-style-type: none"> • PJM-facilitated Sub-regional Meetings on EOL Planning plus individual TO meetings. • Process must include/allow for meaningful input by Stakeholders. • Nothing precludes any TO from having additional stakeholder meetings or communications regarding a Local Plan that affects such stakeholders in addition to the Planning Meetings. <p><u>Assumptions Meeting:</u></p> <ul style="list-style-type: none"> - TOs provide (and PJM posts) assumptions 30 days before meeting. - Stakeholder comments 15 days after meeting. - 30 days after assumptions meeting, PJM provides assumptions to be used in performing the evaluation and analysis of the potential projects as well as any concerns with TO-provided assumptions. <p><u>Planning Meeting(s):</u> [To include a review of system needs and drivers of needs based on application of TO methodology and assumptions used to plan EOL projects and alternatives considered.]</p> <ul style="list-style-type: none"> - 20 days prior to planning meetings, TOs provide and PJM posts all PJM or TO criteria violations; potential solutions; and, alternatives. - Stakeholders provide written comments w/in 20 days for TO consideration. - TOs provide written responses prior to Local Plan finalization. <p><u>Criteria</u> should be quantifiable and include details about associated criteria thresholds driving capital costs. Each TO proposing EOL driven projects should have an established, company-approved, public set of quantifiable criteria established that can be replicated by external entities.</p> <p><u>Criteria assessments</u> should include asset scoring data inputs, analysis, cost/benefit ratios and final results. Criteria assessments should also assess EOL priority ranking relative to entire system under study. All TO facilities need to continue to be part of the overall system level average.</p> <p><u>Drivers</u> contributing to EOL determination (including performance, condition and risk) should be included. TOs should provide quantifiable values pertaining to what is driving the selection of the facility. Details should be comparable to system level averages.</p> <p>TOs should coordinate TO EOL process with their yearly local reliability planning to better demonstrate why a more expensive solution might be brought forward.</p>	<p>PJM design component proposals shall be reflected within PJM Manuals. Per PJM process, stakeholders at the PC shall vote whether to modify and or implement process changes.</p> <p>Note: Italicized text within PJM's proposal incorporates major portions of the TO proposed Attachment M-3.</p> <ul style="list-style-type: none"> • PJM proposes facilitated Sub-regional RTEP Meetings to include EOL Planning. (note: individual TO meetings at TO discretion) • Process must include/allow for meaningful input by stakeholders. • Nothing precludes any TO from agreeing to have additional stakeholder meetings or communications. <p><u>Annual Assumptions Meeting(s):</u></p> <ul style="list-style-type: none"> - Follow TEAC process and timing for baseline projects - TO's provide annual forecast of supplemental projects - Step 1 - TO's provide overview of material condition and asset management program - Step 2 - TOs provide (and PJM posts) assumptions seven (7) calendar days in advance of scheduled SRRTEP meeting. <p><i>1. Annual Review of Assumptions and Methodology. Prior to the initial assumptions meeting scheduled in accordance with sections 1.3(d) and 1.5.6(b) of Schedule 6 of the Operating Agreement, each Transmission Owner will provide to Transmission Provider for posting the assumptions and methodology, including any criteria and models, it uses to plan Supplemental Projects. The Transmission Provider will post such assumptions and methodology in accordance with the schedule for postings it establishes under sections 1.3(d) and 1.5.6(b). The Transmission Owner will review those assumptions and methodology annually at the initial assumptions meeting. Stakeholders may provide comments on the assumptions and methodology to the Transmission Owner for consideration either prior to or following the initial assumptions meeting.</i></p> <p><u>SRRTEP Meeting(s):</u></p> <p>PJM shall schedule and facilitate all SRRTEP meetings.</p> <p>Based on assumptions, methodology, criteria, and system models (as appropriate) identified above, TO representatives shall present identified system needs and drivers, and potential solutions being considered to meet those needs and drivers. Transmission owners shall identify to stakeholders the most likely solution.</p> <p>Drivers contributing to EOL-based need determination (such as age, performance, condition and risk) should be included.</p> <p>To the extent possible, a uniform template shall be used by all TOs to convey the information above.</p> <p>At the SRRTEP meeting(s), stakeholders and customers should have</p>

access to basic transmission planning information necessary for them to consider future resource options (paragraph 476 of FERC Order No. 890) and impacts upon customer needs. Stakeholders may request information relevant to the TO's need determination and identification of potential solution and PJM shall provide, or, in the instance that PJM does not possess such information, PJM shall submit the request for the relevant information to the zonal TO.

Stakeholders and customers may provide meaningful input and alternatives for TO consideration. Whether such input or alternatives are included in the determination of the final solution is and remains the sole discretion of the TO.

PJM shall facilitate the SRRTEP in a timely fashion to support the progress of the planning process.

TOs should coordinate their EOL processes with their yearly local reliability planning to help clarify why a more expensive solution might be brought forward.

- Step 2 – the TOs should synchronize Step 2 below to provide input into PJM annual system forecast needs. (Note: for each TO, it must be recognized that its needs forecast can and will change throughout the year.)

2. Review of System Needs and Potential Solutions. *Each Transmission Owner will provide a review of system needs and the drivers of those needs, based on the application of its methodology and assumptions used to plan Supplemental Projects, and potential solutions being considered to meet those needs and drivers, at meetings of the Sub-regional RTEP Committee established under the Operating Agreement scheduled in accordance with section 1.3 of Schedule 6 of the Operating Agreement. The Transmission Owner will provide a description of the system needs and drivers and potential solutions to Transmission Provider for posting at least five (5) business days in advance of the meeting at which they will be reviewed. Stakeholders may provide comments on the identified system needs, drivers, and potential solutions to the Transmission Owner for consideration within thirty (30) calendar days after the meeting.*

At the conclusion of the process, the TO will identify the recommended solution that will be included in the PJM Local Plan. Project selection is determined solely by TO.

3. Submission of Supplemental Projects. *Each Transmission Owner will finalize for submittal to the Transmission Provider Supplemental Projects for inclusion in the Local Plan in accordance with section 1.3 of Schedule 6 of the Operating Agreement and the schedule established by the Transmission Provider. Stakeholders may provide comments on the Supplemental Projects in accordance with that section before the Local Plan is integrated into the Regional Transmission Expansion Plan.*

2	Openness/Transparency			EOL decision making process incorporated into protocols	review and PJM approval of criteria and guidelines	<p>For Stakeholders who have completed PJM's CEII Request form and have executed the PJM CEII NDA in accordance with the PJM and FERC processes for CEII as defined at 18 CFR §388.113 (c), PJM shall make available the decision-making process and all assumptions to be used in performing the evaluation, including, but not limited to: i) all assumptions and methodology, including any criteria, guidelines and models that PJM and each TO uses to identify issues, develop alternatives and recommend solutions; ii) the impacts of regulatory actions, projected changes in load growth, demand response resources, energy efficiency programs, price responsive demand, generating additions and retirements, market efficiency and other trends in the industry; and (iii) alternative sensitivity studies, modeling assumptions and scenario analyses.</p> <ul style="list-style-type: none"> - PJM reviews and validates the TO criteria, assumptions, guidelines and models. PJM provides feedback and any concerns with TO-provided criteria, assumptions, guidelines and models. - TOs should also identify the specific company that owns the asset being assessed and if the asset is currently a transmission or distribution asset, as well as what entity will be owning, operating and maintaining the replacement facilities. - When EOL transmission projects are replacing distribution assets, the TO also provides drivers to support a transmission improvement over a distribution improvement. - TOs will communicate any concerns that proposed changes or alternatives may negatively impact TO risk profile and how. 	<p>PJM emphasizes that CEII access is granted to an individual solely for the use in examining a specific need or proposed solution. The information is not to be disseminated further than to similarly authorized individuals and may not be utilized for any other purpose.</p> <p>TOs will review assumptions and methodology, including any criteria and system models, as described in Step 1 in the Attachment M-3 material, relevant to their asset management programs.</p> <p>PJM is not in a position to validate TO asset management program(s).</p> <p>Note: It is unclear to PJM why ownership is an issue. To date, ownership information has been provided. The transmission zone location is relevant to cost allocation; therefore, PJM proposes that the zone will be provided.</p> <p>Consistent with discussion of system needs in Step 2 in Attachment M-3 material, each TO will provide drivers for need.</p>
3	Communications			identify any facilities that TO thinks that are 5 years within EOL (asset or project list)			
4	Reference Materials		<ul style="list-style-type: none"> - Formula rates, FERC filings posted to PJM.com - Tabular data, construction status, cost allocation and associated filings, post TO criteria, form 715, posted TEAC whitepapers, deactivation/retirement notices, secure posting of models, special webcasts, all queue information 			<p>Subject to CEII requirements, PJM from the TOs, provides the system needs and drivers of those needs, based on the application of its methodology and assumptions used to plan EOL projects, and potential alternatives and solutions being considered to meet those needs (including whether any non-transmission alternatives considered) and drivers in sufficient detail to allow others to use the criteria when performing their own planning or screening studies and to reasonably anticipate the outcome of TOs' EOL assessments</p>	<p>PJM shall provide, or request from the zonal TO, planning information relevant to the specific identified EOL need.</p> <p>PJM shall obtain from the TO's and share with the stakeholders the system needs and drivers of those needs, based on the application of the respective TOs methodology and assumptions used to plan EOL projects, and any potential alternatives and other solutions the TO considered to meet those needs. For the purposes of information exchange, this data is taken within the context of each TO's methodology. TOs shall provide a description of the condition of the identified facility. PJM does not have a role in asset management determination for the identified facility.</p> <p>4. Information Relating to Supplemental Projects. Information relating to Transmission Owners' Supplemental Projects will be provided in accordance with, and subject to the limitations set forth in, section 1.5.4 of Schedule 6 of the Operating Agreement.</p>
5	Comparability			PJM and TO's agree upon guidelines how identify end of life assets		TOs treat non-TO load comparably to TO load	

6	Dispute Resolution		-PJM standard ADR processes in OATT and OA (process assertion for violating OATT and OA) -participate in discussion by TEAC, letters TO the board, siting proceedings by state			Regional and sub-regional RTEP Committee meetings. Should there be disagreement between the TO and the stakeholder regarding a Local Plan project, the committee participant will document its disagreement in writing. If the disagreement cannot be resolved informally, either stakeholder may utilize the standard OA ADR process.	Note: PJM suggests that there is opportunity for Alternative Dispute Resolution (ADR) regarding the RTEP or SRRTEP processes, however, no ADR process is identified for project selection. Project selection is determined solely by TO.
7	Replicability		some ability to replicate stability, short circuit, power flow - PJM working on tools to improve - ability to review but not replicate aging infrastructure analysis			Sufficient detail describing assessment practices (in addition to modeling assumptions) that TOs use in applying criteria at a level equivalent to the Form 715 requirements to allow replication of EOL analysis.	Not applicable or required for end of life. Replicability does not apply to end of life or asset management.
8	Consistency		individual TO approach to aging infrastructure based on historic practice	- consistency of application by TO - some degree of consistency across TOs	list of potential guidelines	PJM shall develop manual language to establish minimum requirements.	PJM shall develop manual language to establish minimum requirements related to transparency and availability of information with respect to asset management programs.
9	Interaction with Market Efficiency Process			potential integrate market efficiency analysis into decision making related to supplemental and aging infrastructure			Hold for market efficiency problem statement. Rolled into future market efficiency analysis by separate PJM task force.
10	project reporting standards		- qtr. reports for RTEP projects - approx. qtr. updates to construction status	PJM created periodic report to clarify transmission costs (TCIC)	enhance RTEP project reporting to include initial and final cost and schedule	See AMP and ODEC template example.	Information necessary for end of life projects: - information related to configuration and power flow(s) is required - information related to asset condition decision is not required
11	PJM analytically determine need (new design component 1/24/2018)						TO provides the need, condition, and performance. PJM is not in a position to assess needs that cannot be validated through power system analysis.