Long-Term Regional Transmission Planning (LTRTP)

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Scenario Analysis & Special Studies

ISAC

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- LTRTP updates seek to clarify the details of long term planning analysis in order to maintain reliability through this energy transition

- PJM engaged stakeholders in 2022 to discuss LT planning via NOPR and A-NOPR responses

- PJM engaged stakeholders in 2023 to discuss a comprehensive LTRTP framework and discuss high level Manual revisions

- PJM discussed the framework in detail with OPSI, ISAC and etc.

- Detailed assumptions discussions with stakeholders to start in early 2024

- PJM has performed a review of existing manual language to propose revisions that are required update based on the LTRTP framework

- M14B – PJM Region Transmission Planning Process
  - Includes specifics on Assumptions, Analysis and Timelines
- M14F – Competitive Planning Process
  - Details specifics around proposal window process

- Timeline 2 Year process → 3 year process
- Long-Term (LT) vs Near-Term (NT) framework
- Development of additional LT powerflow cases for years 8 and 15
- Update LT analysis procedures
  - DFAX extrapolation to linear interpolation
  - Expansion of analysis to include limited N-1-1 and voltage studies
- Update language that defines qualifications for LT needs
- Additional content in establishing assumptions (e.g. capacity expansion, public policy, etc.)
- Outline process for collecting state policy data
- Acceleration of LT projects/Informing NT Projects

| Feedback	Consideration
Request to post legal position paper and OA references	1/9 PC postings
Request PJM conduct a page turn of LTRTP Manual revisions	1/23 and 1/26 meetings
Request to enhance the issue charge with scope	1/23 Posting
Discuss replacement generation and capacity expansion	M14b: 1.3.1
Consider modeling economic retirements in scenarios	M14b: 1.3.1
Discuss LTRTP scenario and assumption considerations	M14b: C.4.1 (w/ 2.1.2, 2.1.4), Exhibit X
Consider TEAC/ISAC participation in scenarios' definitions	M14b: 1.3.1
Consider public policy assumptions in NT RTEP	M14b: 1.3.1, 2.1.4, B.4
Incorporate how economic factors considered in evaluation	M14f: 8.1.2, 8.1.3
Consideration for states to request additional benefits	M14f: 8.3
Questions about base line upgrades and public policy projects	Useful Terminology Slide

- Included in M14B Redlines
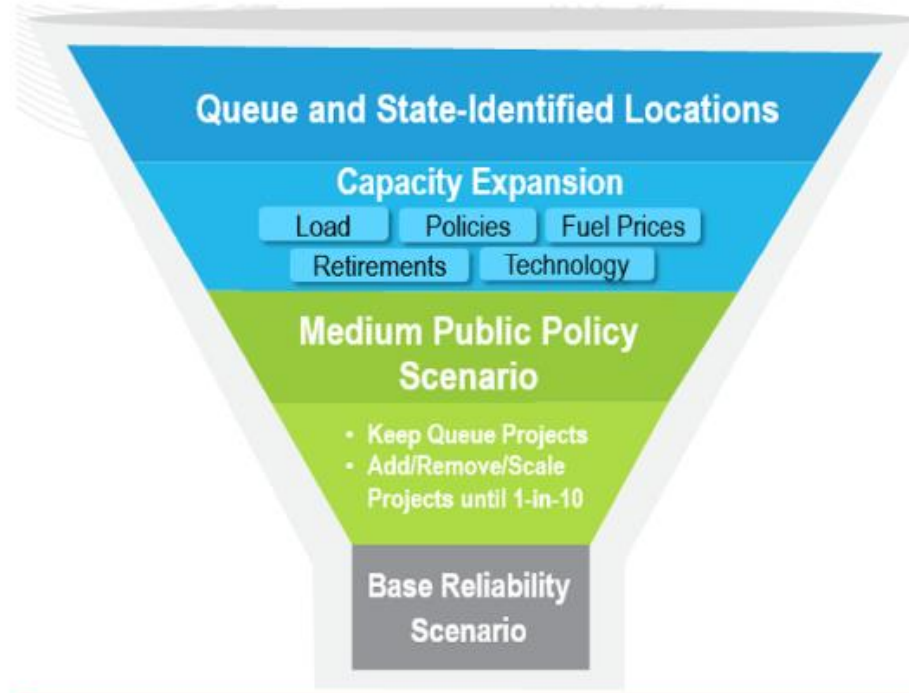
Exhibit X.   Illustration of Scenario Development Considerations & Assumptions

	Base Reliability Scenario Primary Inputs
Load	PJM's annual load forecast
Retirements	Announced, Federal Policy, and State Policy retirements
Resource Adequacy	Target 1-in-10 LOLE
Existing Generation	Existing, ISA, awarded SAA capability
Replacement Generation to meet 1-in-10	Queue*

Note: * *Additional replacement generation beyond the queue may be necessary to achieve resource adequacy - process described in revised Manual language (slide 5).*

- To support the long-term timeframe, PJM will construct a Base Reliability scenario and associated base cases consisting of a minimum set of inputs that must be modeled to ensure resource adequacy and identify future transmission needs and solutions required to maintain the reliability of the system. This scenario is called the Base Reliability scenario. The primary inputs into the Base Reliability scenario are the PJM Load Forecast Report, existing generation not associated with an announced deactivation or impacted by federal or state deactivation policies, and replacement generation from the PJM interconnection queue to ensure resource adequacy. Additional replacement generation, if needed, beyond the PJM interconnection queue will be selected as necessary to ensure resource adequacy. To determine the specific replacement generation from the queue and beyond the queue that may be necessary to ensure resource adequacy, PJM will use widely accepted capacity expansion modeling tools that will be reviewed with stakeholders upfront and refined periodically as necessary to improve the models' performance. ~~Examples of inputs modeled in the base reliability scenario are PJM's official load forecast, federal and state policy retirements, and the queue.~~

- Feb. 6 Planning Committee (PC) – review updated draft manual language

- After the Feb. 6 PC PJM will schedule an additional Special PC – LTRTP Manual Page Turn session with stakeholders

- March 5 – seek PC endorsement

  - Following PC endorsement, the draft language would be brought to the Markets and Reliability Committee (MRC) on March 20 for a first read, and PJM will seek endorsement sought at the April 25 MRC

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Appendix

- Economic review - PJM may consider economic factors, as discussed during the assumptions phase of the long-term planning cycle and as documented in the problem statement for any window opened to alleviate the reliability violations identified for that long-term reliability planning cycle, to examine the system response associated with the

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PJM Manual 14F: Competitive Planning Process
Section 8: Project Evaluation

proposals to determine if economic benefits may be realized for any proposal(s) under evaluation.

8.3 Public Policy Project Evaluation

PJM will consider all public policy driven proposals and evaluate them to ensure they do not trigger reliability criteria violations. PJM will evaluate a Public Policy proposal as described in Schedule 6 of the PJM Operating Agreement. PJM can consider calculating benefit metrics requested by one or more states to evaluate Public Policy proposals.