Regional Energy Shortfall Threshold (REST) Proposal Information Summary

This document summarizes where content related to the REST is captured in presentation material at the NEPOOL Reliability Committee. It also summarizes areas of additional interest raised by committee stakeholders on a given subject.

- For additional background on the origination of the Probabilistic Energy Adequacy Tool (PEAT), please see the December 2023 Final Report.

Last Update: August 18, 2025

Content	Summary	More Detailed Information	Additional Stakeholder Topics of Interest
Design Objectives	The REST will be an acceptable threshold of energy shortfall risk (*i.e.*, the region's risk tolerance) during low probability extreme weather events as identified through PEAT.	May 2024 RC • Slide 7 (stakeholder feedback on periodicity) • Slide 13 (stakeholder feedback on extreme event selection) • Slide 16 (stakeholder feedback on REST metrics) August 2024 RC • Slide 4 (scope of work) April 2025 PC • Slide 4 (annual work plan directives) August 2025 RC • Slides 3-7 (recap of REST proposal)	
PEAT Enhancements: Risk Mitigation Actions & Opportunity Costs	PEAT modeling was enhanced to incorporate a reasonable amount of preventative action and corrective action relief to allow for a robust quantitative estimate of the impacts of these actions on shortfall amounts. Preventative actions use opportunity cost mechanisms to value resources in future periods. Opportunity costs are accounted	August 2024 RC • Slides 7-16 (corrective and preventative actions) October 2024 RC • Slides 6-17 (corrective and preventative action implementation; opportunity cost modeling) November 2024 RC • Slides 5-9 (corrective and preventative action implementation, cont'd)	

	for in the multi-day economic dispatch to more efficiently model the use of stored fuel to help mitigate potential energy shortfall.		
Periodicity	The **when** of the REST (*e.g.*, annual, seasonal, etc.). Specifies the time horizon over which the PEAT is assessed against the REST. ISO Current Thinking and Cadence: • Use PEAT to perform Seasonal & Long-Term (5 and 10-year horizon) Probabilistic Energy Assessment	December 2023 RC • Slides 10-12 (initial assessment considerations) November 2024 RC • Slides 10-11 (seasonal time horizon) August 2025 RC • Slides 12-15 (assessment timing) • Slides 16-17 (sensitivity process)	
Extreme Event Selection	Part of the **what** of the REST. Key metrics and criteria that define the region's level of risk tolerance with respect to energy shortfall in extreme weather. See below for metrics.	August 2024 RC • Slides 17-20 (additional detail and illustration of extreme event selection process) November 2024 RC • Slides 14-15 (terminology review and event considerations in PEAT Steps)	
REST Metrics	**Magnitude of tail α%:** Conditional expectation of normalized unserved energy (NUE) over the worst 72-hour period within the tail α% of cases. Measures the *magnitude* of energy shortfall in normal unserved energy (NUE). **Duration of tail α%:** Conditional expectation of total energy shortfall hours over a 21-day period within the tail α% of cases. Measures the *duration* of energy shortfall in tail cases.	May 2024 RC • Slides 15-20 (background including stakeholder feedback on metrics) November 2024 RC • Slide 19 (current thinking on metrics) April 2025 RC • Slides 6-8 (magnitude and duration α% definitions)	

	Significance: Both metrics are considered essential to comprehensively evaluate energy adequacy risk under extreme conditions by capturing both the potential severity and length of energy shortfalls in low-probability events.		
Tail α%	Tail α% sets frequency or likelihood of energy shortfall considered. Lower α% = rarer, higher impact shortfalls and higher α% = more frequent, less severe shortfalls. The ISO currently considers that tail 0.25% is appropriate for the REST. A tail 0.25% means that the region can expect an energy shortfall of this severity ~once every 3-month window on average during a 21-day period.	April 2025 RC • Slides 10-27 (PEAT analysis to inform tail selection) • Slides 28-31 (current thinking on tail selection) August 2025 RC • Slide 6 (cumulative shortfall hours)	
REST Threshold	The ISO expects that appropriate thresholds will be established for each metric selected as part of the REST. The ISO currently proposes an acceptable shortfall magnitude within tail 0.25% of 3% and an acceptable shortfall duration within tail 0.25% of 18 hours. REST is only violated if both magnitude and duration exceed their thresholds.	April 2025 RC • Slide 31 (threshold parameters) • Slide 34 (next steps on thresholds) June 2025 RC • Slide 5 (initial threshold proposal) • Slides 8-10 (scenario blending approach) • Slides 21-28 (tail clustering approach) • Slide 30 (translation of REST magnitude to customer impact)	• After REST threshold determination, consider solution areas as needed after using PEAT to gauge system against the REST
Incorporate REST into OP-21	The ISO plans to revise OP-21 to incorporate REST processes for seasonal and long-term	July 2025 RC • Slides 6-8 (current thinking on timeline for assumptions and sensitivity	

	probabilistic energy assessments, including a definition of the REST with the specific values (*e.g.*, 0.25% tail, 3% shortfall magnitude, and 18 hour shortfall duration).	development and seasonal and long-term energy assessments) August 2025 RC • Slides 8-11 (recap of OP-21 changes) • OP-21 Revised Redlines	