

Reliability Planning Process Reforms: Manual Revisions

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Agenda

- **Objective**
- **Overview of Proposed Revisions to the RPP Manual**
- **Aging Generation Model**
- **Next Steps**

Previous Related Presentations

- **October 29, 2025 MC ([Presentation](#))**
 - 2025 CRP and Recommendations
- **November 20, 2025 ESPWG ([Presentation](#))**
 - Follow-up Discussion to 2025 CRP
- **January 20, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: Challenges and Considerations
- **February 03, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: Proposed Reforms
- **February 19, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: Proposed Reforms
- **February 26, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: STRP Process Proposal, RPP Tariff Revisions
- **March 03, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: Consideration of Stakeholder Feedback, RPP Tariff Revisions
- **March 20, 2026 ESPWG ([Presentation](#))**
 - Update: Reliability Planning Process Reform and Order 1920
- **March 26, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process Reforms: Updated Schedule
- **April 15, 2026 ESPWG ([Presentation](#))**
 - Reliability Planning Process: Manual Revisions

Objective

Objective

- **As a part of the NYISO's effort to enhance the Reliability Planning Process (RPP), the NYISO identified the opportunity to propose revisions to the Reliability Planning Process Manual (RPP Manual)**
- **NYISO proposes revisions to the RPP Manual as discussed on the following slides**
 - A redline version of the RPP Manual and a new Attachment H is provided with the meeting materials.
 - The NYISO intends to perform the 2026 RNA based on the updated RPP Manual

Proposed RPP Manual Revisions

RPP Manual Revisions

- **NYISO is proposing to revise the RPP Manual ahead of the 2026 RNA**
 - Further description of scenario development (support the identification of informational scenarios for the 2026 RNA)
 - Revisions to generator availability assumptions, including aging generation
 - Removal of mid-RNA pause point
 - Incorporation of Short-Term Reliability Process technical bulletin
 - Other updates—e.g., ROFR process points and references to new interconnection processes
- **Proposed revisions to the RPP Manual are based on NYISO's current tariff**

Revisions Since April 15 TPAS/ESPWG

- Aging generation methodology is detailed in a new Attachment H
- Minor clarifying edits based on stakeholder feedback are shown in highlighted text in the redline version:
 - Additional detail to what could affect thermal derates in outer years
 - Remove statement in Section 8 that indicated aging generation could be considered in Short-Term Assessments of Reliability
 - Minor edits to Figure 8

Base Case Assumptions

- **Proposed revisions to the reliability study inclusion rules (RPP Manual Section 3.2)**
 - Updates references in the inclusion rules to align with recent changes to the interconnection processes (e.g., establishment of the Cluster Study) and state siting laws
 - Adds a separate rule to consider the inclusion of load projects
 - Addresses the inclusion of interconnection-related upgrades and attachment facilities, as applicable, for planned projects
 - Adds criteria for the consideration of in-service dates and the interplay of proposed transmission expansion and upgrades in Local Transmission Owner Plans

Base Case Assumptions

- **Proposed revisions related to generation availability assumptions (RPP Manual Section 3.2.3)**
 - Modifies the assumed unavailability of thermal units in transmission security margin calculations and resource adequacy assessments
 - Includes aging generation assumptions and methodology
 - Adds details for the assumed availability of intermittent resources
 - Adds details for assumptions to account for natural gas unavailability in winter periods

Thermal Unit Unavailability

- In response to stakeholder feedback, NYISO proposes to modify the thermal unit unavailability assumptions used in transmission security margin calculations
- Current assumption: MW capability is considered available based on NERC five-year class averages for the type of units
- Proposed modification:
 - For years 1 through 3, units will be derated using thermal outage rates that are consistent with the effective outage rates used in market operations
 - For years 4 through 10, additional considerations may be applied to reflect anticipated trends in generator unavailability

Aging Generation Assumptions

- To account for the increased risks that generators may fail or retire as the generation fleet ages, the NYISO will consider the unavailability of certain units based on their age and technology type
- Based on an aging generation assumption model, the NYISO will apply a retirement probability assumption to units older than a threshold age in years 6 through 10 of the study period in the RNA for transmission security margin calculations and resource adequacy assessments
- Proposed new Attachment H includes details on the process by which the NYISO will create a statistical retirement risk model to identify the aging generation assumptions for each RNA

Scenarios Assumptions

- The RPP provides for the use of informational scenarios addressing the RNA study period
- Given the increasing need to consider variations from the RNA Base Case that inform potential reliability impacts from observable changes affecting the future of the transmission system, the NYISO proposes a structured process to develop scenarios for use in the RNA
- Proposed revisions to further describe RNA scenario development include:
 - Key RNA Base Case assumptions will be identified
 - A reasonable range for each assumption will be defined and presented
 - Feedback will be gathered on the assumptions and ranges
 - Scenarios will vary one or more assumptions from the RNA Base Case
 - Potential scenarios will be combinations of assumptions that align with system trends, such as operations, markets, policy
 - Potential scenario list will be presented and posted for feedback
 - Scenarios are intended to inform how potential future developments impact reliability risks; however, the NYISO proposes to maintain the ability to perform other informational scenarios that are less likely conditions
 - Such other information scenarios may include, for example, extreme weather, “copper sheet”, or loss of all imports

Short-Term Reliability Process

- **Proposed revisions to incorporate Technical Bulletin #250: Short-Term Reliability Process**
 - Adds a new Section 8 of the RPP Manual to incorporate the details of Technical Bulletin #250
 - Incorporates other revisions throughout the manual as it relates to processes that apply to the Short-Term Reliability Process
 - Details the specific considerations applied to Generator Deactivation Assessments, as discussed at the February 26, 2026, ESPWG/TPAS presentation on RPP reform
 - With the proposed revisions in the RPP Manual, Technical Bulletin #250 can be retired

RNA Process Updates

■ Removal of mid-RNA pause point

- Existing Process: Preliminary results were released in the July timeframe and the NYISO could consider updated LTPS from Transmission Owners and other system changes since the lockdown of the base case that may impact the preliminary Reliability Needs
- Proposed Process: No specific process point for LTP or system updates mid-RNA. System changes that occur after the NYISO determines the RNA assumptions will still be considered before finalizing the Reliability Needs if those changes meet the inclusion rules and those changes could materially impact the determination of Reliability Needs

Other Updates

- **Updates throughout the RPP Manual to incorporate tariff changes since the last manual update (July 2022), including, but not limited to:**
 - Implementation of a mechanism to effectuate the right of Transmission Owners to build, own, and recover the costs of upgrades to their existing transmission facilities
 - Creation of the Cluster Study Process to comply with Order No. 2023
- **General updates throughout the manual to add clarity and to remove redundancy, and ministerial grammar/formatting**
- **Clarifications and updates to the methodologies for technical analyses**

Aging Generation Model

Overview of Aging Generation Model

- **Statistical retirement risk model**

- Separate from forced outage rates
- Applied only to years 6 through 10 of the study period

- **Uses historical retirement data to predict future risk in three steps**

Step 1: Evaluation of historical retired capacity and establishment of threshold ages

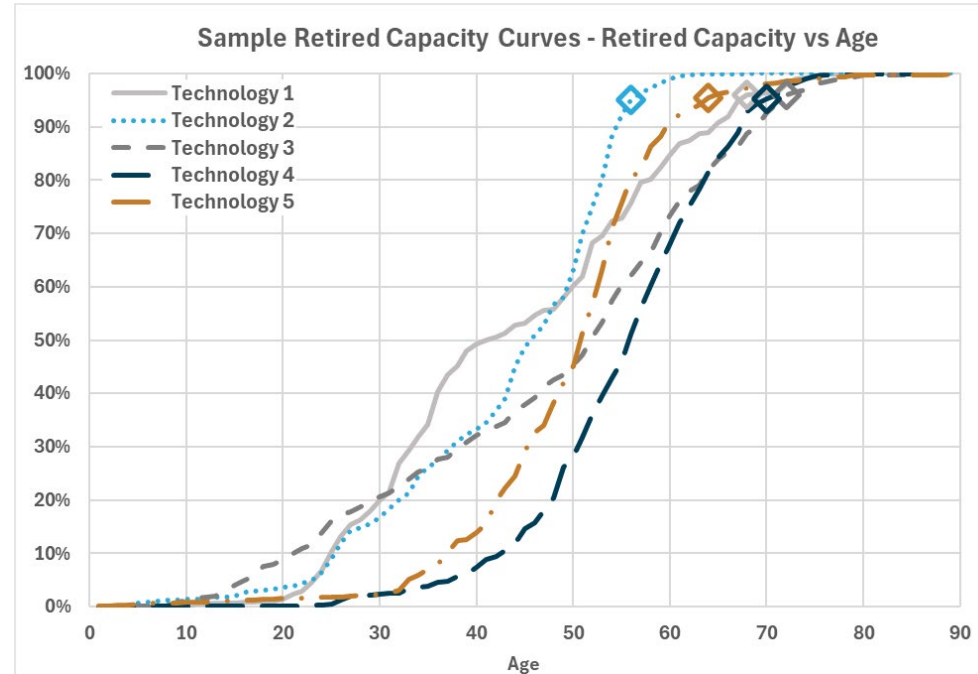
Step 2: Modeling of annual retirement risk versus age

Step 3: Computation of unavailable capacity in NYCA generation fleet using the threshold ages and annual retirement risk

- **See proposed Attachment H for further details**

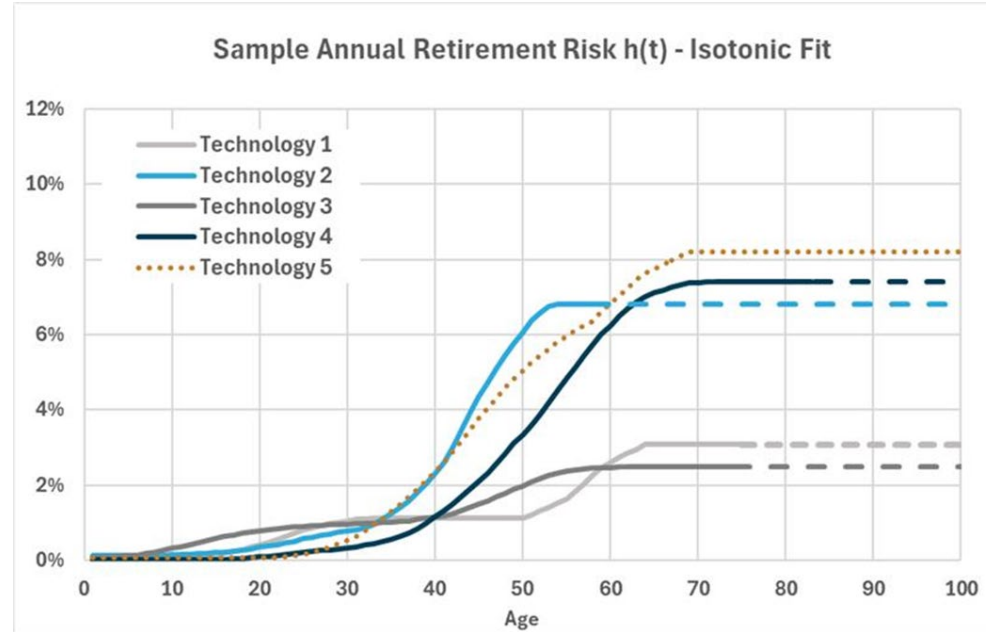
Step 1: Retired Capacity Curves

- **Plots of historical retirement data**
 - Shows what percentage of historical capacity has retired at or before reaching a certain age
- **Retired capacity curves used to sets threshold ages per applicable technology**
 - Only units that reach the threshold age will contribute to aging generation risk
 - Limits application of projected risk to only the oldest units that have out-lived a large percentage of peers
 - Determined in the assumptions for each study (e.g., P90, P95, P99)



Step 2: Annual Retirement Risk

- **Annual retirement risk is derived from historical retirement data**
 - Estimated by dividing the historical capacity retired at each age by the total historical capacity that survived to that age
 - NYISO applies a fitting methods to create smooth, increasing curves
- **Annual retirement risk predicts yearly retirement risk based on the age of capacity**
 - This is the percentage of surviving capacity expected to retire at this age
 - Separate calculation per technology type

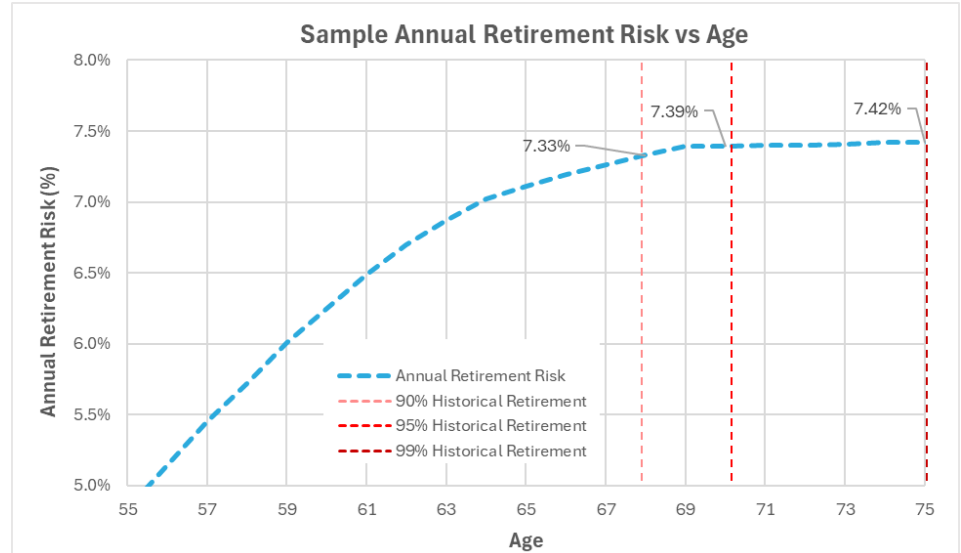


Step 3: Calculation of Capacity at Risk

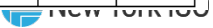
- **Threshold age is the age at which a generating unit is considered old enough for age-based retirement risk to be considered in the study**
 - For example, P95 represents the age by which 95% of units of a given technology type have retired.
 - The threshold age is the primary parameter used to control how conservative or optimistic the aging model assumptions are
- **For each study year:**
 - Tabulate the survival probability of each unit
 - All in-service units have a 100% survival probability today
 - Survival probability in each study year is based on the survival probability in the prior year and annual retirement risk in the study year
 - The retirement probability is 100% minus the survival probability
 - If the study year is 6 or later, and the unit is older than the threshold age, find the at-risk MW as the product of the unit's capacity (MW) and retirement probability (%)

Illustrative Calculation

- Example unit is a 64-year old thermal plant with a nameplate capacity of 100 MW
- Based on retirement capacity curves and using P95, threshold age is 70 years
- Tabulation of risk starts in year 1
 - Annual retirement risk decreases survival probability each year
 - Retirement probability (Cumulative Retirement Risk) increases each year
- Application of risk in MW takes effect in Year 7
 - No risk applied for any unit until Year 6
 - Unit reaches threshold age in Year 7



Example unit (100 MW)	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Age in Planning Year	64	65	66	67	68	69	70	71	72	73
Historical Retired Capacity (%)	81%	84%	86%	89%	93%	94%	95%	96%	98%	98%
Example Annual Ret. Risk (%)	7.0%	7.1%	7.2%	7.3%	7.3%	7.4%	7.4%	7.4%	7.4%	7.4%
Example Cumulative Ret. Risk (%)	7%	14%	20%	26%	31%	36%	41%	45%	49%	53%
Unavailable Capacity (MW)	N/A	N/A	N/A	N/A	N/A	0	41	45	49	53



Next Steps & Schedule

Preliminary Schedule

	2026 RNA	RPP Reform
April	Discuss RNA Base Case and scenario assumptions	Discuss RPP Manual revisions
May		RPP Manual approval
June		Discuss RPP Reform for needs and solution identification
July	Discuss informational scenarios	
August	Discuss Base Case and scenario results	
September		
October	2026 RNA review and approval	
November	Publish 2026 RNA	
December		Tariff and Manual Revisions
Q1 2027	Consider system updates; Kick off 2027-2036 CRP	

Next Steps

- NYISO will post the proposed revisions to RPP Manual on April 30, 2026 prior to the May 14, 2026 Operating Committee review and vote.
- NYISO will continue to consider stakeholder feedback on proposed process reforms and tariff revisions, which may include a discussion at the May 6, 2026 ESPWG/TPAS
- Please send suggestions to Kirk Dixon, kdixon@nyiso.com

Our Mission and Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation



Questions?