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Independent System Operator

Updated Zone K Need & Short-Term Assessment of Reliability: 2025 Q4 Key Study Assumptions

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Agenda

- Updated Findings in Zone K & the Lower Hudson Valley
- Review of 2025 Q3 Short-Term Reliability Process Next Steps
- 2025 Q4 Key Study Assumptions

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Updated Findings in Zone K & the Lower Hudson Valley

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2025 Q3 STAR Process Information

- NYISO posted the 2025 Q3 STAR on October 13, 2025 (here) and discussed these findings with stakeholders at the October 20, 2025 ESPWG/TPAS (here).
- At a high-level the findings from the 2025 Q3 STAR in New York City (Zone J) and Long Island (Zone K) were:
  - Zone J Need:
    - Consistent with 2023 Q2 STAR, the 2025 Q3 STAR continued to find that New York City locality (Zone J) would be deficient in the summer through the entire five-year horizon without the completion and energization of future planned projects.
    - Until future planned projects in Zone J are completed and demonstrate their planned power capabilities to address the identified reliability needs, the previously identified BPTF and non-BPTF deficiencies would persist without the Gowanus and Narrows generators.
  - Zone K Needs:
    - The 2025 Q3 STAR found that the BPTF in the Long Island locality (Zone K) would be deficient beginning in summer 2027 and continuing through the remaining five-year horizon, primarily driven by the deactivation of Pinelawn and Far Rockaway GTs.
    - On the non-BPTF, LIPA identified non-BPTF system deficiencies on the 69 kV system through the entire five-year horizon, primarily driven by the deactivation of the Far Rockaway GTs.

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Updated Assumptions in Zone K

- **The changes to generation and demand assumptions in Zone K compared to prior STAR include the following:**
  - DEC Peaker Rule Compliance Plan Updates:
    - On October 6, 2025, National Grid Generation updated their compliance plans for the generation listed below to install water injection to meet the emissions requirements
      - Glenwood GT 3 (Zone K, 55 MW nameplate)
      - Shoreham 1 (Zone K, 52.9 MW nameplate)
    - The Glenwood GT 3 and Shoreham 1 units were treated as being available in the 2025 Q3 STAR through May 2027, as LIPA had previously submitted in September 2024 a notification to the DEC per part 227-3 of the Peaker Rule indicating that these units were needed for reliability
    - National Grid's updated compliance plans indicate the water injection will be installed before May 1, 2027
  - Load Forecast Updates: Certain load projects in Zone K, which were included in the expected weather Gold Book forecasts, based on status updates from LIPA, have been removed from the model. Additional details MW impact are provided in the Appendix to this presentation
- **These updates will be applied to the 2025 Q4 STAR and may also impact the nature of the need observed in Zone K in the 2025 Q3 STAR**
  - The impact to the need observed in Zone K will be assessed and updated prior to the issuance of the solution solicitation letter
- **There are no changes in Zone J**

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Impact to Zone K BPTF Transmission Security Margin

- The table below shows the impact of the generation and load changes discussed on the previous slide to the transmission security margins

Zone K					
BPTF Deficiencies (Status Quo):					
Summer Peak	**2026**	**2027**	**2028**	**2029**	**2030**
MW Deficiency	None	21	21	45	20-99
Duration (hours)	None	1	1-2	1-2	2-3
MWh	None	21	15-113	29-152	97-286
BPTF Deficiencies (As-Planned):					
Summer Peak	**2026**	**2027**	**2028**	**2029**	**2030**
MW Deficiency	None	21	None	None	None
Duration (hours)	None	1	None	None	None
MWh	None	21	None	None	None

Lower Hudson Valley					
BPTF Deficiencies (Status Quo):					
Summer Peak	**2026**	**2027**	**2028**	**2029**	**2030**
MW Deficiency	None	None	None	None	105
Duration (hours)	None	None	None	None	3
MWh	None	None	None	None	459
BPTF Deficiencies (As-Planned):					
Summer Peak	**2026**	**2027**	**2028**	**2029**	**2030**
MW Deficiency	None	None	None	None	None
Duration (hours)	None	None	None	None	None
MWh	None	None	None	None	None

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Review of 2025 Q3 Short-Term Reliability Process Next Steps

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Next Steps

- Within the next week: NYISO will issue one solicitation seeking solutions to the needs identified in the 2025 Q3 STAR and developers will have 60 days to prepare and submit solutions
- By Mid-January: proposed solutions due to NYISO
- January – March: evaluation of proposed solutions
- March: Issue Short-Term Reliability Process Report identifying the selected solutions

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2025 Q4 Key Study Assumptions

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2025 Q4 STAR Process Information

- **For the 2025 Q4 STAR:**
  - NYISO will assess the reliability of the Bulk Power Transmission Facilities (BPTF)
  - National Grid will assess the non-BPTF impacts for the IIFO of Dahowa Hydroelectric plant IIFO
- **NYISO plans to post the 2025 Q4 STAR by January 13, 2026**
- **The 2026 Q1 STAR will commence on January 15, 2026**

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Study Assumptions

- **The most recent base cases from the Reliability Planning Process are those used for the 2024 Reliability Needs Assessment (RNA)**
  - The 2024 RNA Base Case and the inclusion rules application (link here) presented at the April 18, 2024 ESPWG/TPAS
  - The 2024 RNA report and appendices are posted on the NYISO website (here)
- **Study Period**
  - October 15, 2025 (STAR Start Date) through October 15, 2030
- **The updated assumptions below for this STAR reflect known changes to the key assumptions in the Reliability Planning Process**

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Updated Study Assumptions for 2025 Q4 STAR

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Updated Generation Assumptions: Generator Deactivations

- **The changes to generation assumptions compared to prior STAR include the following:**
  - Generator deactivations:

Owner/ Operator	Plant Name	PTID	Zone	Nameplate (MW)	Status	Proposed Deactivation/IIFO Date
Relevate ReDev Borrower II LLC	Dahowa Hydroelectric	323763	F	12.3	IIFO	9/1/2025

  - DEC Peaker Rule compliance plan updates for Shoreham 1 and Glenwood GT 1 discussed earlier in this presentation will also be included in the 2025 Q4 STAR

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Updated Generation Assumptions: Large Generation Additions

- The changes to assumptions for large generation additions include those listed here.

Proposed Project Inclusion: Large Generation							
Queue	Project Name	MW	Type	Zone	Proposed in-service Date		Included in Prior STAR
					Prior STAR	Current STAR	
396	Baron Winds Phase II	117	W	C	Dec-25		Yes
571	Heritage Wind, LLC	200.1	W	B	Sep-26		Yes
596	Alle Catt II Wind	339.1	W	A	Dec-26		Yes
704	Bear Ridge Solar	100	S	A	Apr-27		Yes
720	Trelinia Solar Energy Center	80	S	C	Apr-28		Yes
721	Excelsior Energy Center	280	S	A	Nov-26		Yes
737	Empire Wind 1	816	W	J	Jul-27		Yes
811	Hecate Energy Cider Solar LLC	500	S	B	Dec-26	**Jan-27**	Yes
880	Brookside Solar	100	S	D	May-28	**Dec-27**	Yes
883	Garnet Energy Center, LLC	200	S	B	Apr-28		Yes
950	Hemlock Ridge Solar	200	S	B	May-27	**Apr-28**	Yes
1079	Somerset Solar	125	S	A	Mar-27	**Jun-28**	Yes
766/987	Sunrise Wind LLC	924	W	K	Jul-27		Yes

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Updated Generation Assumptions: Small Generation Additions

- The changes to assumptions for small generation additions include those listed here.

Proposed Project Inclusion: Small Generation							
Queue	Project Name	MW	Type	Zone	Proposed in-service Date		Included in Prior STAR
					Prior STAR	Current STAR	
545	Sky High Solar	20	S	C	Jun-25	**Dec-26**	Yes
564	Rock District Solar	20	S	F	Feb-27		Yes
572	Greene County 1	20	S	G	May-25	**Jun-27**	Yes
573	Greene County 2	10	S	G	May-25	**Jun-27**	Yes
581	Hills Solar	20	S	E	Dec-26		Yes
584	Dog Corners Solar	20	S	C	Apr-26		Yes
586	Watkins Rd Solar	20	S	E	Jul-26	**Feb-27**	Yes
590	Scipio Solar	18	S	C	Dec-26		Yes
591	Highview Solar	20	S	C	Feb-25	**Nov-26**	Yes
592	Niagara Solar	20	S	A	Dec-26		Yes
734	Ticonderoga Solar	20	S	F	Dec-26		Yes
804	KCE NY 10	20	ES	A	Oct-26		Yes
827	Arthur Kill Energy Storage 1	15	ES	J	Sep-25	**Dec-25**	Yes
828	Valley Solar	20	S	C	Nov-24	**Jan-27**	Yes
832	CS Hawthorn Solar	20	S	F	Dec-26		Yes
833	Dolan Solar	20	S	F	Dec-26		Yes
848	Fairway Solar	20	S	E	Mar-25	**May-28**	Yes
855	NY13 Solar	20	S	F	Jun-25	**Jun-27**	Yes
865	Flat Hill Solar	20	S	E	Dec-25		Yes
885	Grassy Knoll Solar	20	S	E	Dec-25	**May-28**	Yes
1003	Clear View Solar	20	S	C	Dec-25		Yes
1015	Somers Solar, LLC	20	S	F	Dec-26		Yes
1047	Millers Grove Solar	20	S	E	Dec-26		Yes

*All projects have CRIS.

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Updated Generation & Other Source Assumptions

- **The assumed available supply from other existing generation has also been adjusted to account for the following expected reductions of generator's Dependable Maximum Net Capability (DMNC) as included in the 2025 Q3 STAR:**
  - 110 MW in New York City (Zone J)
  - 200 MW in Long Island (Zone K)
  - The NYISO continues to evaluate additional changes in DMNC in Zones A through I
- **As included in the 2025 Q3 STAR, this STAR will continue to include:**
  - A 175 MW reduction in expected capacity sales from PJM into NYC
  - The assumed capacity purchases from ISO-NE into Zone K have been adjusted to account for a LIPA import of 288 MW from ISO-NE until April 2027, with a zero flow scheduled thereafter

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Transmission Assumptions

- **The changes to transmission assumptions compared to the prior STAR include:**
  - Existing transmission outages (shown on right)
  - Proposed transmission
    - No changes compared to the 2025 Q3 STAR

From	To	kV	ID	Out-of-Service Through	
				Prior STAR	Current STAR
Marion	Farragut	345	B3402	Long-Term	
Marion	Farragut	345	C3403	Long-Term	
Plattsburgh (1)	Plattsburgh	230/115	AT1	9/2026	
Stolle Rd	Stolle Rd	115	T11-52	12/2025	In-service
Station 23	Station 42	115	920	12/2025	In-service
E13th Street		345/69	BK17	-	6/2027

Notes

(1) A spare transformer is placed in-service during the outage

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Con Edison Series Reactor Assumptions

- The table below presents the Con Edison series reactor assumptions
- The changes to assumptions compared to the previous 2024 RNA is in blue below which is the same as used in the 2025 Q3 STAR

Terminals		ID	kV	Summer	Winter
Dunwoodie	Mott Haven	71	345	In-Service	By-Passed
Dunwoodie	Mott Haven	72	345	In-Service	By-Passed
Sprainbrook	W. 49th Street	M51	345	In-Service	By-Passed
Sprainbrook	W. 49th Street	M52	345	In-Service	By-Passed
Farragut	Gowanus	41	345	By-Passed	In-Service
Farragut	Gowanus	42	345	By-Passed	In-Service
Sprainbrook	East Garden City	Y49	345	By-Passed	By-Passed

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Demand Assumptions

- **This STAR utilizes the load demand forecasts as published in the 2025 Gold Book under expected weather.**
- **Large load assumptions**
  - This assessment assumes the flexibility of large loads as listed in table I-14 of the 2025 Gold Book. The “Flexible Load by Zone – MW” table represents the potential peak reductions from large load projects expected to be able to reduce or minimize their load during the system peak and other high load hours (e.g., crypto currency mining, electrolysis) for each zone.
  - The load forecast changes in Zone K discussed earlier in this presentation will also be included in the 2025 Q4 STAR. The impact of this update is provided in the appendix to this presentation.

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Questions?

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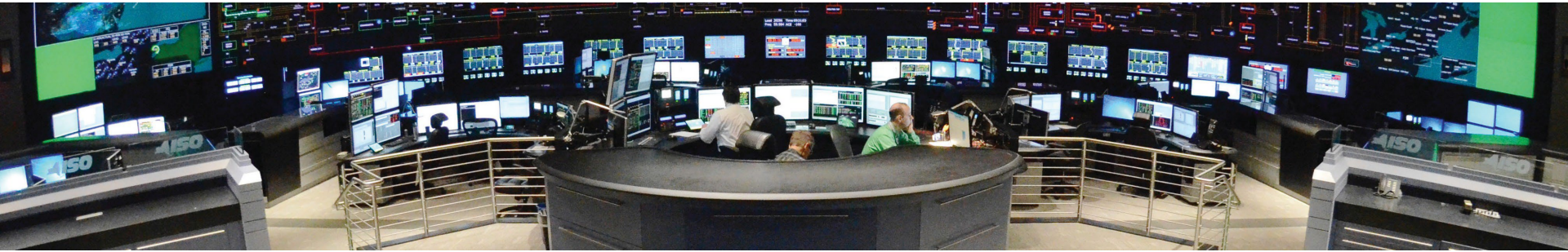
Our Mission and Vision

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



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Appendix

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Load Forecast Details - Summer

Summer Coincident Peak Demand Forecast (MW)													
Year		A	B	C	D	E	F	G	H	I	J	K	NYCA
2026	Low Demand	2,840	1,842	2,559	839	1,287	2,240	2,262	615	1,316	10,570	4,980	31,350
	Baseline	2,943	1,854	2,568	1,042	1,298	2,255	2,304	620	1,320	10,790	4,996	31,990
	High Demand	3,120	1,995	2,633	1,045	1,308	2,274	2,307	625	1,324	10,920	5,039	32,590
2027	Low Demand	2,820	1,837	2,613	934	1,271	2,243	2,261	613	1,317	10,470	4,961	31,340
	Baseline	2,936	1,846	2,639	1,171	1,293	2,275	2,331	625	1,327	10,820	5,012	32,275
	High Demand	3,214	2,124	2,831	1,287	1,305	2,299	2,339	627	1,333	11,040	5,046	33,445
2028	Low Demand	2,802	1,827	2,716	931	1,256	2,206	2,258	610	1,318	10,340	4,946	31,210
	Baseline	2,925	1,834	2,737	1,173	1,293	2,265	2,344	625	1,336	10,840	5,011	32,383
	High Demand	3,423	2,135	3,034	1,297	1,312	2,284	2,366	628	1,343	11,170	5,041	34,033
2029	Low Demand	2,785	1,816	2,846	928	1,246	2,195	2,254	606	1,319	10,230	4,911	31,136
	Baseline	2,920	1,826	2,876	1,179	1,296	2,264	2,346	627	1,343	10,860	5,034	32,571
	High Demand	3,567	2,137	3,256	1,297	1,316	2,305	2,372	631	1,352	11,330	5,058	34,621
2030	Low Demand	2,768	1,804	2,966	927	1,238	2,186	2,250	603	1,320	10,150	4,898	31,110
	Baseline	2,917	1,821	3,062	1,180	1,307	2,267	2,347	627	1,351	10,880	5,086	32,845
	High Demand	3,596	2,140	3,469	1,298	1,332	2,329	2,387	632	1,360	11,510	5,122	35,175

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Load Forecast Details - Winter

Winter Coincident Peak Demand Forecast (MW)													
Year		A	B	C	D	E	F	G	H	I	J	K	NYCA
2026-27	Low Demand	2,208	1,503	2,555	1,055	1,309	1,900	1,599	519	933	7,300	3,229	24,110
	Baseline	2,323	1,525	2,583	1,249	1,333	1,917	1,662	525	947	7,580	3,276	24,920
	High Demand	2,530	1,744	2,656	1,253	1,339	1,934	1,668	529	951	7,740	3,296	25,640
2027-28	Low Demand	2,202	1,499	2,655	1,094	1,300	1,900	1,612	519	937	7,250	3,262	24,230
	Baseline	2,329	1,531	2,688	1,316	1,343	1,939	1,701	528	956	7,650	3,335	25,316
	High Demand	2,668	1,827	2,898	1,469	1,347	1,965	1,719	530	963	7,880	3,350	26,616
2028-29	Low Demand	2,201	1,496	2,763	1,095	1,298	1,875	1,631	519	941	7,220	3,291	24,330
	Baseline	2,346	1,537	2,812	1,321	1,351	1,961	1,738	533	973	7,800	3,443	25,815
	High Demand	2,962	1,843	3,182	1,477	1,363	1,997	1,787	538	994	8,110	3,472	27,725
2029-30	Low Demand	2,200	1,494	2,911	1,094	1,296	1,884	1,638	515	944	7,180	3,352	24,508
	Baseline	2,361	1,540	2,966	1,322	1,374	1,988	1,771	539	989	7,930	3,585	26,365
	High Demand	3,085	1,864	3,406	1,479	1,409	2,069	1,811	550	1,009	8,320	3,673	28,675
2030-31	Low Demand	2,205	1,497	3,123	1,092	1,295	1,894	1,656	517	946	7,120	3,401	24,746
	Baseline	2,386	1,556	3,189	1,324	1,398	2,020	1,814	546	1,007	8,070	3,716	27,026
	High Demand	3,156	1,913	3,679	1,485	1,469	2,158	1,886	568	1,041	8,560	3,871	29,786

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Load Forecast Details - Large Loads and Non-Coincident Peak

Large Loads Summer Peak Forecasts (MW)

Zone	A	B	C	D	E	F	G	K	NYCA Total	Flexible Total
2025	250	5	0	166	13	0	32	0	466	416
2026	335	11	72	518	15	0	72	0	1,023	685
2027	335	11	168	647	30	40	93	0	1,324	685
2028	335	11	288	647	41	40	104	7	1,473	685
2029	335	11	442	651	54	40	107	29	1,669	685
2030	335	11	653	651	70	40	110	70	1,940	685

Large Loads Winter Peak Forecasts (MW)

Zone	A	B	C	D	E	F	G	K	NYCA Total	Flexible Total
2025-26	250	5	0	177	14	0	32	0	478	416
2026-27	335	11	72	582	23	0	72	0	1,095	685
2027-28	335	11	168	647	36	40	93	3	1,333	685
2028-29	335	11	288	651	48	40	104	55	1,532	685
2029-30	335	11	442	651	62	40	107	129	1,777	685
2030-31	335	11	653	651	70	40	110	182	2,052	685

Note: These projections are included in the baseline zonal forecasts, and should not be added as additional load.

Baseline Summer Non-Coincident Peak Demand Forecast (MW)

Zone	2026	2027	2028	2029	2030
G-J	15,280	15,349	15,392	15,423	15,452
J	11,030	11,060	11,080	11,100	11,120
K	5,072	5,089	5,088	5,112	5,165

Baseline Winter Non-Coincident Peak Demand Forecast (MW)

Zone	2026-27	2027-28	2028-29	2029-30	2030-31
G-J	10,748	10,870	11,080	11,266	11,474
J	7,630	7,700	7,850	7,990	8,130
K	3,289	3,348	3,457	3,600	3,731

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