

Emergency Operating Procedures – Voluntary Curtailments and Public Appeals

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Agenda

- Background
- Limitation Options – Test Results
- Monthly and Annual Calls – Unlimited Voluntary Curtailments
- Observations and Considerations

Background

- The New York State Reliability Council (NYSRC) incorporates Emergency Operating Procedures (EOPs) into its Installed Reserve Margin (IRM) study as a set of actions/resources to support reliability under stress conditions.
- The EOPs represent actions that can be taken during system emergencies to maintain reliability and avoid loss of load.
 - Procedures include demand response (Special Case Resources), voltage reduction, voluntary industrial curtailments, public appeals, emergency energy purchases from neighboring control areas, and activation of 30-minute and 10-minute operating reserves (i.e., conversion of operating reserves to energy)
- The order and expected implementation of these actions from the 2026-2027 IRM Preliminary Base Case (PBC) are listed on the right.

Step	EOP	Expected Implementation (Days/Year)
1	Require SCRs (Load and Generator)	7.5
2	5% manual voltage reduction	6.3
3	30-minutes reserve to zero	6.1
4	Voluntary load curtailment	4.4
5	Public appeals	4.2
6	5% remote controlled voltage reduction	4.1
7	Emergency purchases	3.4
8	10-minutes reserve to 400 MW	0.2
9	Customer disconnections	0.1

Note: The expected implementation days per year reported in each Emergency Operating Procedure (EOP) step are the expected number of days that MARS calls for that EOP step. If an EOP step has a limitation on the number of days that it can provide relief, such as the 3 calls per year for Voluntary Curtailment and Public Appeals, it will provide no load relief after the 3rd call. Special Case Resources (SCRs) are modeled utilizing a duration limitation with hourly response rates and a 1 call per day limitation.

SCR Calls Per Month	
Month	Days/Month
JAN	1.7
FEB	0.1
MAR	0.0
APR	0.0
MAY	0.0
JUN	0.1
JUL	2.2
AUG	1.9
SEP	0.9
OCT	0.0
NOV	0.0
DEC	0.5

Note: Calls refers to how many days the EOP step was activated in the specified period

Background (cont.)

- **Voluntary Curtailments and Public Appeals were limited to be no more than 3 calls/year as part of the 2025-2026 IRM study cycle.**
- **Voluntary curtailments and public appeals represents approximately 335 MW of load relief measures across NYCA.**
- **NYSRC expressed interest in exploring whether the 3 calls/year limitations that are currently implemented in the IRM study should be retained or potentially revised in light of the introduction of winter risk observed for the 2026-2027 IRM PBC**
 - The GE Multi-Area Reliability Simulation software program (GE MARS) simulates a calendar year (January-December) as opposed to a capability year (May-April) for the IRM study.
 - Therefore, the entirety of the 3 calls could be utilized in January and no relief would be available from these actions in the summer period (May – October), which currently has significantly more loss-of-load events as compared to the winter period (November – April).

Step	Procedure	2026-2027 IRM MW Value
1	Special Case Resources – Load, Gen	1,486.7 MW Enrolled (preliminary) / 1,269.7 MW Modeled
2	5% manual voltage Reduction	63.38 MW
3	Thirty-minute reserve to zero	655 MW
4	Voluntary Industrial curtailment	260.74 MW Limited to 3 calls per year
5	General Public Appeals	74 MW Limited to 3 calls per year
6	5% remote voltage reduction	406.49 MW
7	Emergency Purchases	Varies
8	Ten-minute reserves to zero	910 MW (400 MW maintained at load shedding)
9	Customer disconnections	As needed
10	Adjustment used if IRM is lower than technical study margin	As needed

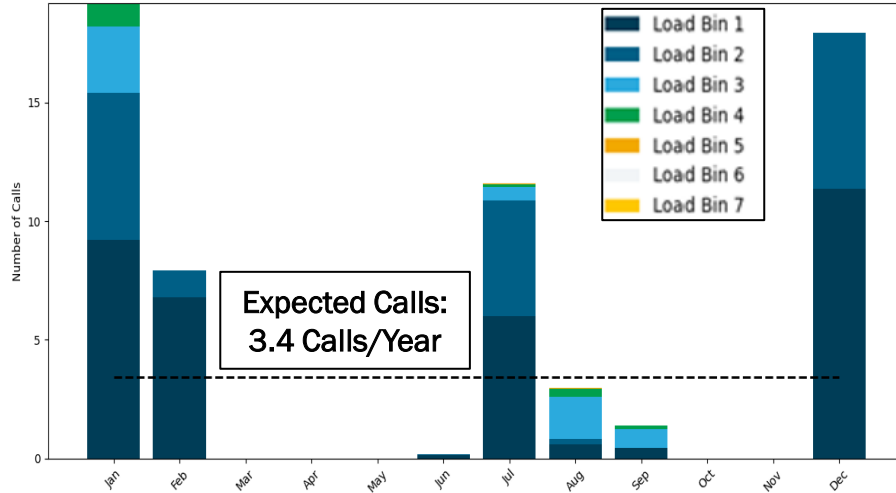
Limitation Options - Test Results

- The NYISO tested various potential limitation options for Voluntary Curtailments and Public Appeals to assess the expected level of IRM impacts and expected usage of these EOP actions using the 2026-2027 IRM PBC (results shown in the table to the right)
- The GE MARS program allows for updates to EOP MW and limitations on the number of calls on an annual and/or a monthly basis
- Allowing an unlimited quantity of calls provided the greatest reliability benefit and lowest resulting IRM.

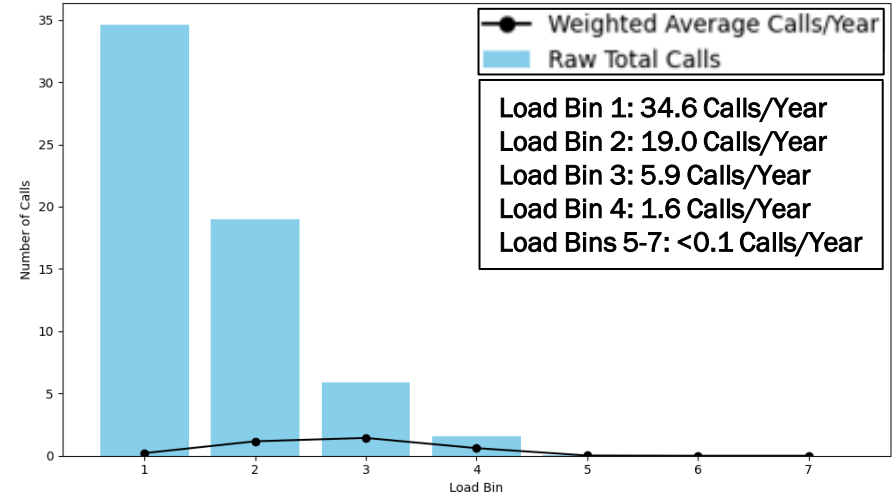
Voluntary Curtailments	Public Appeals	IRM	IRM Delta from 2026-2027 IRM PBC
2026-2027 IRM PBC (Limit 3 calls per year)		27.30%	-
Unlimited		26.04%	-1.26%
Unlimited	3/Year	26.40%	-0.90%
3/Month		26.86%	-0.44%

Monthly and Annual Calls (Unlimited Voluntary Curtailments)

Voluntary Curtailments Calls per Year - Raw and Expected Value



Voluntary Curtailments Calls per Year - Raw and Expected Value



- The NYISO's testing identified that for the 2026-2027 IRM PBC, voluntary curtailments are utilized more frequently in winter months
- January and December had the greatest quantity of calls
- The expected number of Voluntary Curtailments (probability weighted) was 3.4 calls/year

Observations and Considerations

- **When the Voluntary Curtailments and Public Appeals are unlimited, the expected number of Voluntary Curtailments calls for the 2026-2027 IRM PBC was 3.4 calls/year.**
 - Calls/year in load bins 1 & 2 are highest, however these represent greater than 90/10 weather conditions and have a relatively low probability of occurrence.
 - Seasonal patterns are also observed as the calls are concentrated in peak summer and winter months
- **Without a seasonal EOP call limit in GE MARS, loosening the restrictions to unlimited or 3 calls/month brings the model closer to the desired seasonal structure to better align with the grid operation experience and modeled reliability risks.**
 - Implementing unlimited or 3 calls/month for EOP calls leads to downward pressure on the IRM
 - Tighter restrictions than 3 calls/month are unlikely to yield material changes to the resulting outcomes.

Questions?

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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

