

# Hourly LOLE in the IRM Study

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**ICS Meeting #286**

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# Agenda

- **2023-2024 and 2024-2025 Comparison**
- **Hourly Loss of Load Expectation (LOLE) Distribution in the Installed Reserve Margin (IRM) Study**
  - Derating Factor in the IRM Study
  - Energy Limited Resource (ELR) Output Limitation

# 2023-2024 vs 2024-2025 Comparison

HB	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2023 LCR model	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	3%	5%	7%	13%	22%	24%	13%	8%	3%	1%	0%	0%

HB	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2024 LCR model	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	6%	5%	10%	18%	22%	13%	8%	10%	5%	0%	0%

# Hourly LOLE Distribution in the IRM Study

# Derating Factor in the IRM Study

- **Derating factors are used in the IRM study as inputs to the shifting methodology**
  - In MARS, units are modeled with transition matrix, hourly profiles or the ELR functionality, without the derating factors
- **Prior to 2024-2025 IRM study, the derating factors for Demand Side Management (DSM) units was based on the actual hourly production during the summer period 6-hr Peak Load Window (PLW)**
- **Starting with the 2024-2025 IRM study, the derating factors for DSM units was calculated using the actual production during the hourly LOLE distribution window based on the finalized base case of the NYISO's Minimum Locational Installed Capacity Requirement (LCR) Study**
  - This change was agreed to by ICS in 2022
  - More details are outlined in the ICAP Manual Attachment N<sup>1</sup>

1. Attachment N: <https://www.nyiso.com/documents/20142/34549258/ICAP%20Manual%20Attachment%20N.pdf>

# ELR Output Limitation

- In August 2023, ICS agreed to update the ELR output limitation annually based on the hourly LOLE distribution window<sup>2</sup>
  - Updates to the output limitation for ELR units based on the LOLE distribution window from the prior year's LCR model
  - Output limitations are lifted at the beginning of the 90% of LOLE risk window
- Based on the updated hourly LOLE distribution window, the ELR output limitation for the 2025-2026 IRM Study will remain unchanged from the 2024-2025 IRM Study

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2024 LCR model	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	6%	5%	10%	18%	22%	13%	8%	10%	5%	0%	0%

  *At least 90% LOLE window*

2. ELR Presentation: [https://www.nysrc.org/wp-content/uploads/2023/08/ELR\\_ICs\\_Presentation\\_Updated0801.pdf](https://www.nysrc.org/wp-content/uploads/2023/08/ELR_ICs_Presentation_Updated0801.pdf)

# Our Mission & 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