New York ISO
Independent System Operator

Large Load Facility Discussion: Data Submission Requirements and Forecasting Method

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Agenda

- Background and Current Reporting Requirements
- Large Load Facility Reporting and Forecasting Update (Proposal)
- Load Forecasting Manual Updates
- Questions / Discussion

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Background

- Changes in the timing of the construction and ramp-up period of Large Load Facilities that are Interconnecting on the system have the potential to significantly alter the load forecast within a Transmission District
- Significant planned expansion or contraction of existing Large Load Facilities can also impact the load forecast within a Transmission District
- The NYISO's current Load interconnection procedures[1] apply to load interconnections that are either:

  a) Greater than 10 MW connecting at a voltage level of 115 kV or above, or
  b) 80 MW or more connecting at a voltage level below 115 kV

- In August 2021, NYISO issued Technical Bulletin 253[2] (TB-253) which documents the process and reporting requirements to be used by Transmission Owners (TO) for communicating the status and expected load forecast impacts of Large Load Facilities

1 – Source: Transmission Expansion and Interconnection Manual
2 – Source: TB-253: Load Forecast Reporting for Large Load Interconnections

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Current Reporting Process

The process per TB-253 is as follows:

- Upon completion of the System Impact Study (SIS) for a new Large Load Facility, expansion of an existing Large Load Facility, or as otherwise determined by the NYISO, the Connecting and Affected TOs shall submit a Large Load Facility forecast report[1]. Information requested includes seasonal peak load forecasts, facility load factor, annual energy, and project status information
- Reports are requested quarterly (due ten days prior to the first day of each calendar quarter) or coincident with any load forecast changes that have occurred to the Large Load Facility since the completion of the SIS. If there are no changes in status or the load forecast for the Large Load Facility since the prior quarterly report, a new status report is not required.
- Reports are requested until the submission of the as-built data from the Large Load Facility is complete

Note: The Connecting TO and Affected TO shall only provide information regarding the portions of the project that are under their control and responsibility as described in the final study reports for the technical studies performed for the Large Load Facility under Section 3.9 of the NYISO OATT or the interconnection agreement for the new Large Load Facility, as applicable. The NYISO is not a party to interconnection agreements for Load Interconnections. *See* OATT §§ 3.9.4 and 4.5.8.3; NYISO TIE Manual § 3.5.

1 – Large Load Facility Forecast Report

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ICAP/IRM Peak Load Forecast: Large Load Facilities

ICAP/IRM Load Forecast with Large Load Facilities Procedure (Proposed):

- TOs shall submit up to date reports including the interconnection status and expected load impacts of Large Load facilities
- The due dates for the delivery of the reports and data will be established per the published ICAP forecast schedule (the schedule is posted by the NYISO by September 1st each year)
- The impact of the Large Load Facilities on the time of the forecasted NYCA peak will be reviewed with the TOs and the LFTF. The Large Load Facility forecast shall reflect projected load growth (or contraction) as provided in the Transmission Owner forecast(s)
- The sum of the forecasted large loads will be computed for each Transmission District and added to its ICAP Market Forecast
- The Transmission District Regional Load Growth Factor (RLGF) will not be applied to load changes from the Large Load Facilities

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ICAP/IRM Peak Load Forecast: Large Load Facilities

Example Transmission District ICAP Forecasts for 2023:

Example ICAP Market Peak Load Forecast (MW)								
Transmission District	2022 Weather Normalized MW Load + Losses MW (1)	(1 + Regional Load Growth Factor) (2)	2023 Load At Time of NYCA Peak (3) = (1) * (2)	2023 Large Load Adjustments (4)	2023 ICAP Market Forecast (5) = (3) + (4)	2023 Locality Forecasts		
						J Locality	K Locality	G-J Locality
Example Transmission District #1	3,200.0	1.00500	3,216.0	0.0	3,216.0	0.0		405.0
Example Transmission District #2	5,100.0	0.99000	5,049.0	50.0	5,099.0		5,132.0	
Total Loads	8,300.0	0.99578	8,265.0	50.0	8,315.0	0.0	5,132.0	405.0

Notes:

- Large Load Facility load growth (or contraction) impacts will also be included in the ICAP Peak Load Forecast for the Localities (if applicable)
- While the Load associated with Behind-the-Meter Net Generator (BTM:NG) resources are not included in the forecast example above, it is required to be explicitly included in the IRM Peak Load Forecast and is necessary for administering the resources participation in the ICAP Market

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ICAP Load Forecast: Large Load Facilities

Discussion - Large Load Facility Definition:

- **TB-253 defines Large Load Facilities consistent with the NYISO interconnection process and procedures. Large Load Facilities are defined as interconnecting loads that are:**

  a) Greater than 10 MW connecting at a voltage level of 115 kV or above, or
  b) 80 MW or more connecting at a voltage level below 115 kV

- **Proposal: For the purposes of the ICAP Peak Load Forecasting process, the definition of Large Load Facilities would be updated to include the following (additions/updates in blue):**

  a) Greater than 10 MW connecting at a voltage level of 115 kV or above, or
  b) 40 MW or more connecting at a voltage level below 115 kV within a Large Transmission District, or
  c) 20 MW or more connecting at a voltage level below 115 kV within a Small Transmission District

Where,

Large Transmission District = Transmission District with a Weather Normalized Peak >= 4000MW

Small Transmission District = Transmission District with a Weather Normalized Peak < 4000MW

The proposed changes for Large Load Facility definition above will not apply to NYISO's interconnection procedures

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Load Forecasting Manual Updates - Next Steps

- The language from TB-253 will be incorporated into next update of the Load Forecasting Manual
- Large Load Facility considerations for the ICAP Peak Load forecast process will be included in the manual updates: ICAP Peak Load forecasting schedule, data submission requirements, and forecasting method
- The impact of Large Loads on the NYISO Peak Load and Energy forecasts will continue to be discussed with the LFTF and TOs

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Questions?

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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

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Reference: Load Forecast Update Report (TB-253)

Report Contents:

Connecting Transmission Owner:	EXAMPLE
Affected Transmission Owner:	EXAMPLE
NYISO Load Zone:	G
Maximum Load (MW):	350
Project Status:	Facility Study Complete
Project Scope Changed:	No
Date of Scope Change:	N/A
Description of Scope Change:	N/A
Changes in Ownership/Risks:	None

Project Status
Facility Study In-Progress
Facility Study Complete
Engineering/Permitting Complete
Construction In-Progress
Construction Complete
Permission to Operate Complete

Load Forecast

Annual Energy

Year	GWh
2022	
2023	
2024	
2025	
2026	
2027	
2028	
2029	
2030	
2031	

Load Factor

Year	%
2022	
2023	
2024	
2025	
2026	
2027	
2028	
2029	
2030	
2031	

Summer Peak

Year	MW
2022	
2023	
2024	
2025	
2026	
2027	
2028	
2029	
2030	
2031	

Winter Peak

Year	MW
2022-2023	
2023-2024	
2024-2025	
2025-2026	
2026-2027	
2027-2028	
2028-2029	
2029-2030	
2030-2031	
2031-2032	

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