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Final Draft 2026 Large Load Forecast

Load Forecast Committee

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Introduction

- ISO is incorporating a forecast of large loads into the CELT 2026 forecast
- An overview of the data considered in developing the large load forecast was presented at the February 20th, 2026 Load Forecast Committee (LFC) meeting
  - Current state of prospective large loads in New England
  - Summary of data elements considered in formulating a large load forecast
  - High level discussion of methodological components
  - Challenges with developing a large load forecast

Status of Large Loads in New England

- Prospective large loads in New England remain limited in number and scale
  - Recent data collected from Transmission Owners (TOs) suggest there are a couple hundred MW of large loads in the formal study phase
  - To date, New England has not witnessed the scale of data center proposals seen in other regions of the country
- The ISO has developed a quarterly survey that is issued to TOs to collect information on prospective large loads
  - Survey responses will help the ISO to proactively characterize and incorporate large loads into the long-term load forecast
  - Needed data sources and information are still being collected and researched
- ISO staff have been actively participating in internal discussions, dialog with other ISOs, and industry task forces/working groups to support ongoing data and knowledge acquisition

FORECAST METHODOLOGY

Large Load Forecast Process

1. **Gather Information on Prospective Large Loads**
   Use TO surveys and follow-up discussions to determine which projects are sufficiently mature for inclusion in the forecast

2. **Develop Effective Project Nameplate Values**
   Determine derate factors to each project's proposed nameplate using project maturity, type, and supplementary considerations

3. **Develop Nameplate Forecast**
   Develop a projection of project realization spanning the 20-year forecast horizon, for each project

4. **Develop Hourly Profiles**
   Develop profiles based on high-level usage patterns, reflecting daily demand and calendar effects

Hourly profiles are integrated into the comprehensive load forecast "waterfall" process, to determine final peak and energy impacts

1. Gather Information on Prospective Large Loads

- Project-specific information is collected through the TO survey, and is supplemented by independent research and by third-party data sources
  - Facility details and project status
  - Achieved and projected build out and load realization
  - Operational characteristics
  - See slides 4-6 of the February 20th LFC presentation for more details on what information is collected in the TO survey
- Available data sources and additional discussions with TOs will be used to assess which projects to include in the forecast
  - 20 MW or greater in total nameplate capacity
  - Have entered into a formal study agreement

2. Develop Effective Project Nameplate Values

- As demonstrated by the experience of other ISOs and utilities, project nameplate values reported in the early stages of a project often differ from actual facility build out and capacity utilization
- Developing an effective project nameplate estimate requires derating a project's proposed capacity to account for uncertainty in:
  - Realization of construction and energization
  - Achievement of the proposed capacity
  - Utilization of the requested capacity
- Elements considered when derating a project's proposed nameplate value include:
  - Project maturity
  - Project type
  - Project use case
  - Supplemental project information
- For medium-uncertainty projects, effective derates typically result in 40-80% of reported nameplate
  - Not all categories of derates apply to all project types
  - Derates are updated with each forecast cycle as projects progress, or potentially stall

2. Develop Effective Project Nameplate Values

Considerations for Derate Factors

Attribute	Description	Examples
Project Maturity	Milestones and sub-milestones (e.g. permitting) achieved inform the level of uncertainly to be applied to project realization	A project that has just entered into a study agreement will be derated more heavily than one that has a construction agreement in place
Project Type	Helps inform likelihood of project reaching commercial operation, as some types of projects tend to be more speculative than others	Data centers often will be derated more heavily than other projects, due to their more speculative nature
Project Use Case	More specific project use case details assist in determining capacity utilization	A data center that does not have a detailed use case reported is more likely to require a deeper derate than one that is being designed for a specific use case
Supplemental Information	Additional information listed in the TO survey or obtained through independent research assists in identifying hurdles or supports to project materialization	• How much have the reported project details, timeline, and nameplate fluctuated in recent TO survey submittals? • For a publicly supported project, has agency funding been approved and distributed to support the project? • Has significant financial investment been made? • Has investment in supporting, non-electrical infrastructure, been made? • Are upgrades required, and to what degree?

2. Develop Effective Project Nameplate Values

Application of Derate Factors

- General milestone derates factors (applied as multipliers to reported nameplate capacity)
  - Entered into Study Agreement – 60%
  - Interconnection Study Completed – 70%
  - Construction agreement – 80%
  - Achieved commercial operation – 90%

- However, details of a project can further impact the generalized milestone derates
  - Additional confounding factors can each result in a 10% adjustment to the derate factors listed above
  - For example, if a project's proposed nameplate has fluctuated significantly (greater than 50%) in its recent submittals, or requires significant upgrades, the derates above may be decreased by an additional 10-20%

- Capacity utilization derate factor
  - Currently, a capacity utilization derate is applied only to data centers
  - A 70% derate factor is applied to data centers based on current industry practices

Example: A proposed 500 MW data center has completed an interconnection study, where significant upgrades are required for interconnection, and its reported project nameplate has changed from 200 MW to 800 MW to 500 MW in recent data submittals

*Effective nameplate = 500 MW * 50% *70% =* ***175 MW***

3. Develop Nameplate Forecast

- Develop a projection of project realization spanning the 20-year forecast horizon
  - This is developed individually for each project
- Timeline to achieve the effective nameplate capacity (after all derate factors have been applied) considers the following:
  - Proposed project schedule
  - Proposed and achieved milestones
  - Potential need for upgrades
  - Independent research
- To align with supply-side considerations, the immediate upcoming winter and summer periods will be limited to only including projects that are currently under construction

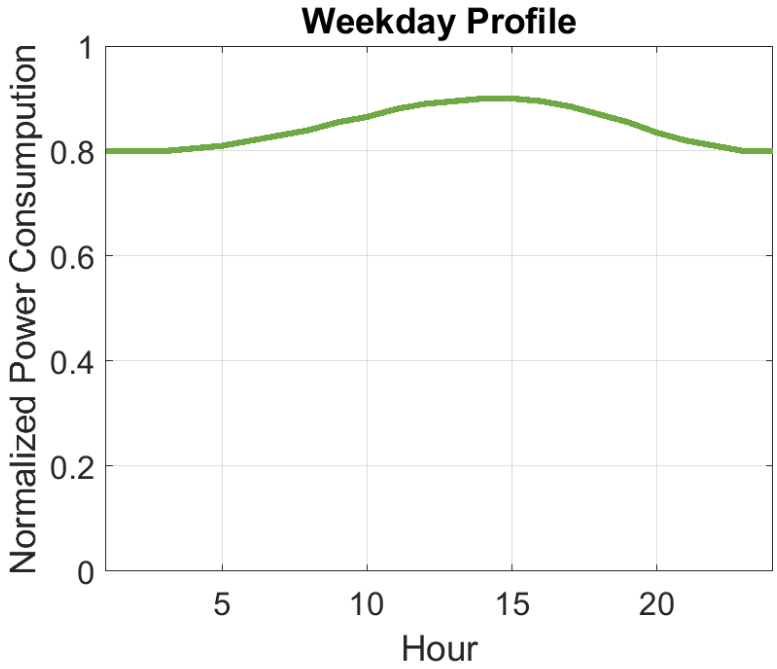
4. Develop Hourly Profiles

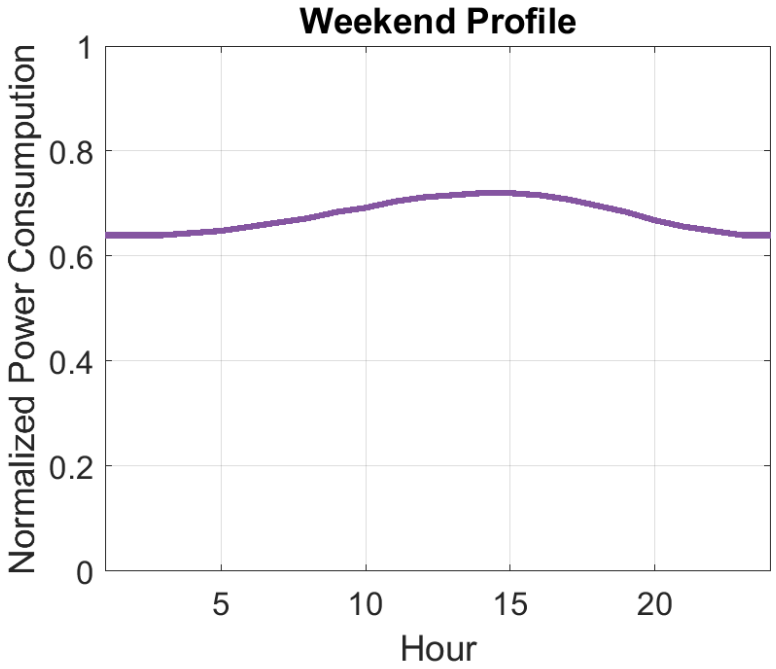
- Data on hourly profiles is limited
  - ISO is working to procure improved sources of profile information
  - Profiles for CELT 2026 are based on general usage patterns, reflecting daily demand and simple calendar (weekday/weekend) effects
  - Weather sensitivity currently is not reflected in profiles

Load Type	Profile Assumptions
Facility Electrification	• Use current facility demand patterns, considering typical hours of operation
EV Charging Depot	• Use existing or anticipated public transit schedules (timing and frequency during weekdays and weekends) • Existing fleet vehicle charging profiles from the EV forecast
Mixed-Use Data Center	• Peaks at 85% of nameplate in the middle of the day, maintaining 80% of nameplate for all other hours • Weekends will have a similar profile reduced by 10% • More specialized use cases may have more specific features

4. Develop Hourly Profiles

*Example: Mixed-Use Data Center**





** Profiles shown follow the general usage pattern observed by ERCOT for compute-based data centers: https://www.ercot.com/files/docs/2025/08/11/LLWG_DataCenterObs.pptx*

FORECAST RESULTS

Large Loads in the CELT 2026 Forecast

List of Included Projects

- Prospective large load projects included in the CELT 2026 forecast must meet the following requirements
  - Be larger than 20 MW in total expected nameplate
  - Have entered into a formal study agreement
- None of the listed projects are currently under construction, and will therefore be excluded from the immediate upcoming summer and winter periods (winter 2026/2027 and summer 2026 and 2027)

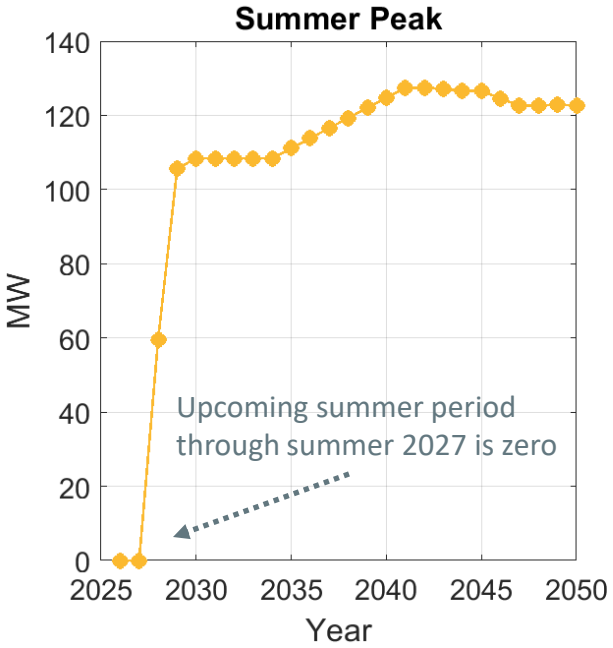
Load Zone	Project Type	Reported Nameplate*	Timeline
NEMA	Data Center	200 MW	thru 2027
CT	General Electrification	85 MW	thru 2040

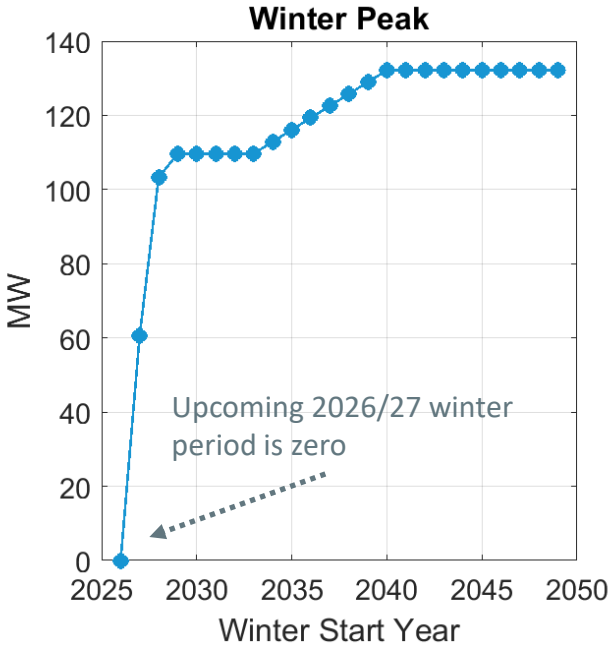
** Nameplate values listed here are PRIOR to derating*

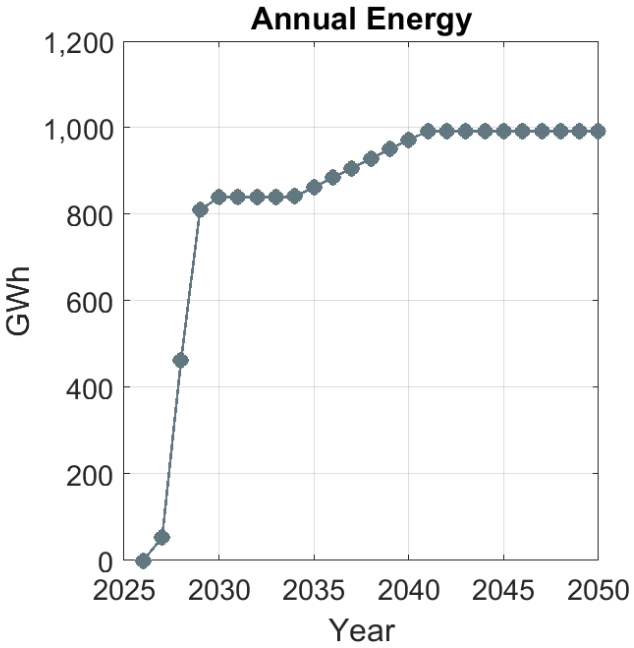
- Projects listed are translated through the four forecast steps outlined on slide 5 and combined into the load forecast "waterfall" process to determine energy and peak demand impacts
  - Proposed project nameplate capacities listed in the table on this slide will be derated based on project maturity, load type, and other considerations as outlined on slides 7-9 of this presentation

Peak Demand and Energy Forecast

50/50 Peak Demand and Annual Energy







Next Steps

- The forecast of large loads will be incorporated in the CELT 2026 load forecast
- ISO will continue working with the TOs to improve and expand upon reporting of large load projects
- ISO will also continue researching industry best practices, consulting with peer ISO/RTOs and utilities, exploring additional data sources, and participating relevant task forces/working groups to advance the large load forecast methodology and assumptions

Questions