



# Updating Needs Assessments to Reflect Latest Assumptions

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# Purpose

- To provide an update on incorporating changing assumptions into the ongoing Needs Assessments and Solutions Studies
  - Today's presentation focuses on the most significant changes in assumptions across the region. Additional study specific changes may not be addressed herein



# Background – Forecast Changes

- The draft updates to the load, energy efficiency (EE), and photovoltaic (PV) forecasts were made available in February
  - Load forecast: [https://www.iso-ne.com/static-assets/documents/2019/02/lfc\\_02\\_11\\_19\\_final.pdf](https://www.iso-ne.com/static-assets/documents/2019/02/lfc_02_11_19_final.pdf)
  - EE forecast: [https://www.iso-ne.com/static-assets/documents/2019/02/eef2019\\_draftforecast\\_final.pdf](https://www.iso-ne.com/static-assets/documents/2019/02/eef2019_draftforecast_final.pdf)
  - PV forecast: [https://www.iso-ne.com/static-assets/documents/2019/02/draft\\_2019\\_forecast\\_final.021519.pdf](https://www.iso-ne.com/static-assets/documents/2019/02/draft_2019_forecast_final.021519.pdf)
- While draft, these forecasts show a significant reduction in the net load to be served
- Additional forecast information is being presented at today's PAC and will be captured in the 2019-2028 Forecast Report of Capacity, Energy, Loads, and Transmission (2019 CELT)



# Background – Forward Capacity Market

- Forward Capacity Auction 13 occurred in early February
- Notable changes in resources:
  - Killingly Energy Center (~632 MW, located in CT) received a Capacity Supply Obligation (CSO)
  - As a result of the Substitution Auction:
    - Pawtucket Power (~54 MW, located in RI) will be retiring
    - Vineyard Wind received an obligation for ~54 MW
  - Schiller 4 (~48 MW, located in NH) and Yarmouth 1 and 2 (~50 MW each, located in ME) de-listed for the second year in a row
    - As described in the Transmission Planning Technical Guide, if a resource has de-listed in the two most recent Forward Capacity Auctions, the ISO will consider the resource unavailable for dispatch when performing a Needs Assessment
      - If a resource does not operate for 3 calendar years in a row, the resource is deemed to be retired



# Background – Interconnection Queue

- Reliability studies such as Needs Assessments are in “free fall” until their related solutions receive PPA approval
- This concept allows resource additions and their associated transmission upgrades to proceed without considering solutions in development, allowing the resource to potentially eliminate a reliability concern identified in a Needs Assessment
- The Eastern CT Solutions Study may be impacted by a new entry into the Interconnection Queue



# Potential Impact of Changes

- Based on the updated information presented, the ISO needed to step back and rethink each of its ongoing Needs Assessments and Solutions Studies
- The Eastern CT preferred solution was to be discussed at the February Planning Advisory Committee (PAC) meeting
- Once the magnitude of change to the net load in New England was evident, the ISO ran a *very quick screen* for Eastern CT and found a *potential* change in identified needs which could allow the elimination of a portion of the solution
  - This change alone has the potential to save the region over \$20M
- Admittedly, any additional study work continues to delay much needed transmission upgrades to address any reliability concerns that would remain
  - As an example, the Eastern CT studies have been going on for the past 7 years
- The plans being presented today for the different study areas attempt to strike a balance between moving forward to address reliability concerns and yet ensure that ratepayers' money is not spent unnecessarily



# Individual Study Plans

- Boston
  - The 2028 Needs Assessment Scope of Work was presented to PAC on September 26, 2018
  - The 2028 draft Needs Assessment Scope of Work and intermediate study files were posted on December 12, 2018
  - The biggest impact on this study is the change in forecasts
  - Plan
    - Include changes into the ongoing Needs Assessment utilizing the 2019 draft forecasts to update the models\*
    - Update the intermediate study files and repost them
    - Include the updates in the final scope of work
    - The scope of work presentation will not be updated. Changes from the original scope will be described when the results of the Needs Assessment are presented. This is tentatively scheduled for April
- Western and Central MA
  - The 2028 Needs Assessment Scope of Work was presented to PAC on September 26, 2018
  - The draft 2028 Needs Assessment Scope of Work and intermediate study files have not been posted
  - This biggest impacts on this study are the change in forecasts and the change in resources, which will impact W-E flows
  - Plan
    - Include changes into the ongoing Needs Assessment
    - Utilize the 2019 draft forecasts\* to update the models
    - Include these updates in the draft intermediate study files that will be posted
    - Include the updates in the draft scope of work. This is tentatively scheduled for May
    - The scope of work presentation will not be updated

\* When the 2019 draft forecast is specified it means the 2019 draft forecast data is used and applied to the 2018 load distributions.

# Individual Study Plans, continued

- Eastern CT
  - The final Needs Assessment was posted on May 29, 2018
  - As discussed at the April 26, 2018 PAC meeting, the identified needs were not updated based on the 2018 CELT. Considering the change in load, EE, and solar PV from the 2017 CELT data to the 2019 draft forecast data, the net load in New England currently being used in the study is too high
  - The biggest impacts on this study are the change in forecasts and addition of the Killingly Energy Center
  - Plan
    - Utilize the 2019 draft forecasts to update the models\*
    - Provide a presentation describing the changes in scope compared to the May 29, 2018 Needs Assessment. This is tentatively scheduled for April
    - Update the Needs Assessment to reflect these changes. A scope of work will not be provided
    - Include these updates in the study files and post them
  - Note, recent additional entry into the interconnection queue in Eastern CT may impact the solutions development process
- Southwest CT
  - There is no anticipated change in needs as a result of these changes
  - Solutions development has been on hold awaiting information from Eversource related to the replacement of the Glenbrook STATCOM, discussed at the September 27, 2018 PAC meeting
    - SWCT voltage needs were driven by contingencies related to an outage of both portions of the Glenbrook STATCOM
    - Depending on actions taken by Eversource, there may be no need for solution development to the identified needs in SWCT

\* When the 2019 draft forecast is specified it means the 2019 draft forecast data is used and applied to the 2018 load distributions that are supplied by the TOs.





# Individual Study Plans, continued

- Southeastern MA/RI
  - The Needs Assessment scope of work was presented at the November 2018 PAC meeting
  - This study is impacted by numerous resources in the Interconnection Queue
    - This study needs information on the interconnection of a number of these resources before it can proceed
  - This biggest impacts on this study are the change in forecasts, the addition of Vineyard Wind and the retirement of Pawtucket Power
  - Plan
    - Include the changes in the new Needs Assessment once information concerning the interconnection projects is known
    - Utilize the 2019 final forecasts to update the models
    - Include the changes in the draft Needs Assessment scope of work
    - The scope of work presentation will not be updated
- Southeastern MA/RI Minimum Load
  - The Needs Assessment was posted in August 2017
  - The Solutions Study process is currently being used
  - This study is impacted by numerous resources in the Interconnection Queue
  - This study needs information on the interconnection of a number of these resources before it can proceed
  - This biggest impacts on this study is the addition of Vineyard Wind and the reduction of the minimum load to be studied
  - Plan
    - Include the changes in the Needs Assessment that is described above

# Individual Study Plans, continued

- New Hampshire
  - Final Needs Assessment and associated study files were posted on November 6, 2018
  - The biggest impacts on this study are the change in forecasts and the de-list of Schiller 4
  - Plan
    - Initiate a new Needs Assessment
    - Utilize the 2019 draft forecasts to update the models\*
    - Provide a presentation describing the changes in scope compared to the November 6, 2018 Needs Assessment. This is tentatively scheduled for May
    - Perform an updated Needs Assessment to reflect these changes. A Needs Assessment scope of work will not be provided
    - Include these updates in the study files and post them
- Maine
  - Final Needs Assessment scope of work and associated study files were posted on March 2, 2018
  - The biggest impacts on this study are the change in forecasts and the de-list of Yarmouth 1 and 2
  - Plan
    - Initiate a new Needs Assessment
    - Utilize the 2019 draft forecasts to update the models\*
    - Provide a presentation describing the changes in scope compared to the March 2, 2018 Needs Assessment Scope of Work. This is tentatively scheduled for June
    - Perform an updated Needs Assessment to reflect these changes. A Needs Assessment scope of work will not be provided
    - Include these updates in the study files and post them

\* When the 2019 draft forecast is specified it means the 2019 draft forecast data is used and applied to the 2018 load distributions that are supplied by the TOs.

# Questions

