



ISO New England Overview and Regional Update

*Vermont System Planning Committee
January 2019 Quarterly Meeting*

Molly Connors

EXTERNAL AFFAIRS REPRESENTATIVE



ISO REPORTS AND UPCOMING ACTIVITIES



ISO-NE Reports and Activities

Recently Released:

[2017 Electric Generator Air Emissions Report](#)

- **Draft data** have been released and are now available on the ISO [webpage](#) of the Environmental Advisory Group (EAG)

Coming Soon:

[Planning Advisory Committee](#)

- **February 13, 9:30 a.m. to 4:30 p.m. in Westborough, MA**
 - **Agenda:** Discuss the scope of work for the 2019 Regional System Plan (RSP)

[Consumer Liaison Group](#)

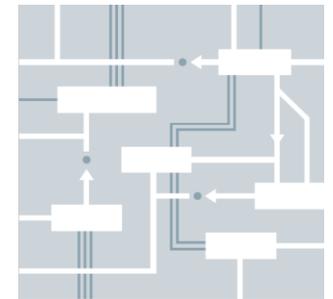
- **March 14, June 13, September 20, and December 5**
- Meeting agendas, presentations, and summaries will be posted on the [CLG webpage](#)

[Energy Efficiency Forecast Working Group](#)

- **Friday, February 8** from 10 a.m. to 11 a.m. (Webex)

[Distributed Generation Forecast Working Group](#)

- **Friday, February 15** from 9:30 to 12:30 (Webex)



ISO-NE Reports and Activities

Of Interest:



ISO-NE Analyzes Potential Impact of Additional Offshore Wind during Historic Cold Spell

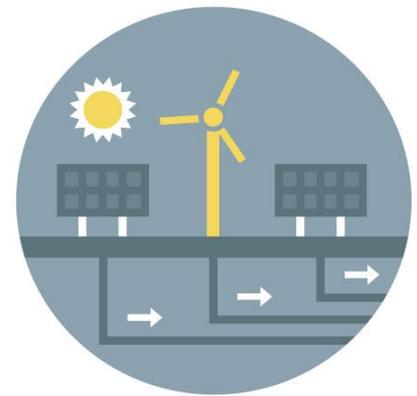
- Acting on a request from the **Massachusetts Clean Energy Center** (MassCEC), the ISO performed a high-level [assessment](#) of the **potential** impact of additional offshore wind on the region's power system during the [historic cold snap](#) in late 2017 and early 2018
- The analysis relied on wind energy production estimates provided by MassCEC and used **simplistic** assumptions for system operations that did not capture all the complexities of real-time operations
- Analysis found that if power from offshore wind projects had been available during the cold spell of 2017/2018, energy market prices and environmental emissions would have been lower

WINTER ENERGY SECURITY



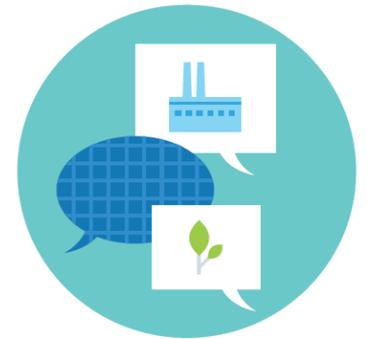
Winter Energy Security Is an Energy Supply Problem, Not a Capacity Shortfall Problem

- The ISO is meeting its regional resource adequacy requirement for **capacity** based on expected summer peak demand, but is increasingly concerned about the region's ability to overcome emerging **energy-security** problems during the winter
- The **challenge** is that during extended cold weather conditions, there may be **insufficient energy** available to the New England power system to satisfy electricity demand, given the system's evolving resource mix and fuel delivery infrastructure
- For the future hybrid grid—solving the region's energy security problem **year-round** will become increasingly important as the New England power system shifts toward resources that face constraints on **energy production**



ISO New England Is Pursuing Short- and Long-Term Solutions to Address Energy-Security Challenges

- **Short-term**: In December, the Federal Energy Regulatory Commission (FERC) accepted ISO New England's proposed tariff changes to **retain, on the basis of fuel security**, resources seeking retirement
 - Tariff changes provide for the filing of a short-term, **cost-of-service agreement** with FERC by resources retained for fuel-security reasons
 - Changes will be **in effect** for Forward Capacity Auctions #13, #14 and #15
 - In addition, the ISO is proposing an **interim** compensation mechanism for FCA #14 and #15 as a bridge to a long-term, market-based solution
- **Long-term**: Working with stakeholders, the ISO will develop a market-based mechanism to improve energy security
- **Details are available at the Markets Committee [website](#)**



ISO New England Identified Three Broad Objectives for Improving Energy Security Over the Long Term

1. Risk Reduction. Minimize the heightened risk of unserved electricity demand during New England's cold winter conditions.

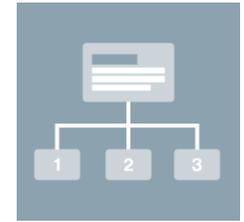


2. Cost Effectiveness. Efficiently use the region's existing assets and infrastructure to achieve this risk reduction in the most cost-effective way possible.

3. Innovation. Provide clear incentives for new resources and innovative technologies that can reduce this risk effectively over the long term.



Long-Term Solution Seeks to Optimize the Energy Inventory of the Region's Resources



The ISO's conceptual approach includes three elements:

1. Multi-Day-Ahead Energy Markets

Run the day-ahead energy market using a rolling, six-day-ahead horizon, optimizing all energy over that timeframe

2. New Ancillary Service Integrated into Multi-Day-Ahead Optimization

Provide a price signal to maintain an energy inventory that is available to be used on-demand over the six-day-ahead horizon (i.e., Energy Inventory Reserve Constraint)

3. New (Voluntary) Seasonal Auction Ahead of the Winter Period

Provide an incentive for resource owners to arrange energy inventory and replenishment for the coming winter



Next Steps: Further Stakeholder Discussions and Quantitative and Qualitative Analysis

- ISO New England will continue to discuss and gather feedback on its proposed approach with stakeholders
- In 2019, ISO New England plans to launch a formal quantitative and qualitative analysis on its proposal
 - This will include analysis on potential cost impacts
- The ISO plans to file a formal proposal with FERC for review in 2019
 - Original deadline: July 1
 - The ISO intends to ask for a later filing deadline of **November 15**
 - The ISO anticipates a **multi-year** implementation effort



FORWARD CAPACITY MARKET



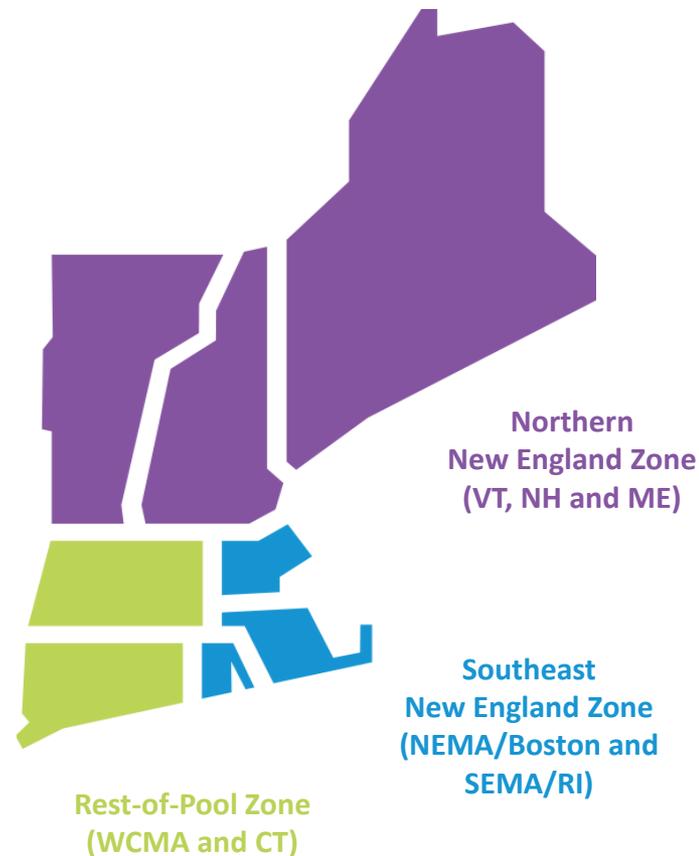
Forward Capacity Market Overview



- Procures resources to meet New England's forecasted **capacity** needs three years in the future
- Selects a portfolio of **supply** and **demand** resources through a competitive Forward Capacity Auction (FCA) process
 - Resources must be pre-qualified to participate in the auction
 - Resources must participate and clear in the auction to be paid for capacity during the capacity commitment period
- Provides a long-term (up to 7-year) commitment to new supply and demand resources to encourage **investment**

Forward Capacity Auction #13 Is Scheduled to Take Place in February 2019

- **FCA #13** will procure the resources needed to meet the demand for electricity, plus reserve requirements, during the **June 1, 2022 to May 31, 2023** capacity commitment period
- In **November**, the ISO submitted a pre-FCA **informational filing** with FERC for review, which included all FCA-related calculations and determinations
 - **Three Capacity Zones** Will Be Modeled in FCA #13
- Auction begins on **February 4, 2019**



FCA #13 Will Be the First To Hold a Substitution Auction

Goal: Accommodate State Policies in Wholesale Markets in the Near Term

- The ISO qualified a total of **34,925 MW** of existing capacity to participate FCA #13, including:
 - **31,432 MW** from existing **generating** resources
 - **3,413 MW** from existing **demand** resources
- FCA #13 will be the first to implement the Competitive Auctions with Sponsored Policy Resources (**CASPR**) framework
 - The ISO qualified **more than 2,600 MW** to participate*
 - **14 demand bids** totaling **2,160 MW**
 - **86 supply offers** totaling **544 MW**



*In this context, a “demand bid” is made by an existing resource seeking to **exit** the market, and a “supply offer” is made by a new resource seeking to **enter** it

DISTRIBUTED GENERATION FORECAST WORKING GROUP

Updates from the December 10, 2018 meeting

- Representatives from the New England states presented:
 - State renewable **policies**
 - Future **expectations** for solar PV growth
- ISO-NE reviewed the results of its **latest survey** of distribution companies (through August 31, 2018)

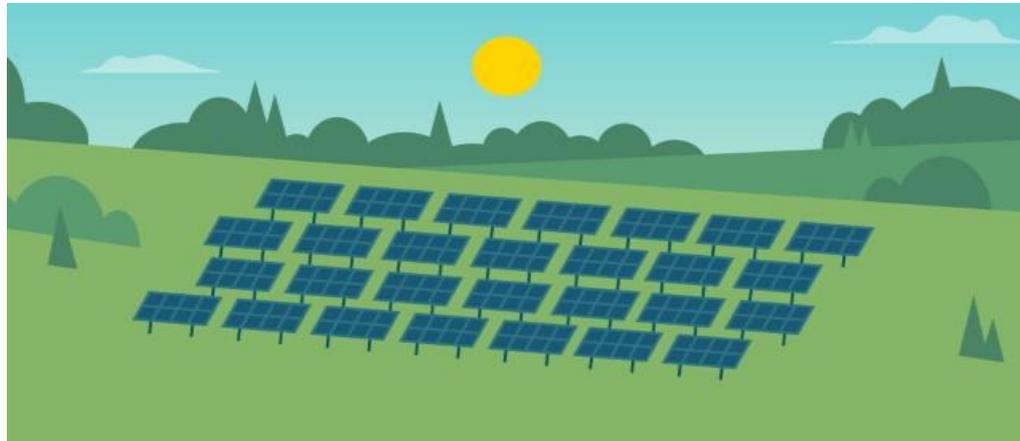
State	Installed Capacity (MW _{AC})	No. of Installations
Massachusetts*	1,762.37	86,837
Connecticut	420.97	33,517
Vermont*	280.70	11,102
New Hampshire	79.14	7,890
Rhode Island	77.25	5,307
Maine	38.73	4,074
New England	2,659.16	148,727

*Includes values based on MA SREC data and VT SPEED data

Source: <https://www.iso-ne.com/committees/planning/distributed-generation>

DGFWG Next Steps

- **February 15, 2019**
 - Agenda will include a discussion of the draft PV forecast
- **March 19, 2019**
 - Issue and discuss final draft PV forecast
- **May 1, 2019**
 - Post PV forecast as part of the annual Capacity, Energy, Load, and Transmission (CELT) report



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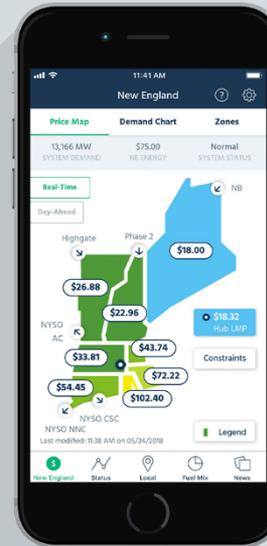


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Questions

