



ISO New England Update

Consumer Liaison Group Meeting

Eric Johnson

DIRECTOR, EXTERNAL AFFAIRS





TODAY'S UPDATES

- Consumer Liaison Group News, Resources, and Items of Interest
- Impact of COVID-19 on ISO New England, Electricity Demand
- ISO New England's proposed budget for 2021
- Transmission Planning Update
- ISO New England's preparations for the fifteenth Forward Capacity Auction (FCA #15)
- Emissions Reporting
- Appendix: Wholesale Electricity Cost Information



CLG NEWS, RESOURCES, AND ITEMS OF INTEREST



Consumer Liaison Group News and Resources

Upcoming Events:

- [December 2 Consumer Liaison Group \(via WebEx\)](#)

CLG Information and Resources:

- March 11: [Joint Report of the Consumer Liaison Group Coordinating Committee and ISO New England](#)
- March 12: [ISO New England regional update](#)
- May 14: [ISO New England's annual assessments of air emissions from the region's electric generators](#)
- June 11: [ISO New England regional update and CLG meeting summary](#)
- [Monthly issues memo to the states](#)
Note: Posted the last day of each month
- [New England Power Grid 2019–2020 Profile](#)
- [New England Power Grid 2019-2020 State Profiles 2019–2020](#)



***Of Interest:* The ISO Will Discuss Carbon Pricing at Upcoming FERC Conference**



- **On September 30**, FERC will host a [technical conference](#) regarding **Carbon Pricing in Organized Wholesale Electricity Markets**
- Two speakers from ISO New England will participate
 - **Gordon van Welie, President and CEO**
 - **Dr. Matthew White, Chief Economist**
- For several years, ISO New England has voiced support for pricing carbon as an efficient means to meet carbon reduction goals while continuing to harness the benefits of competition through wholesale markets



Stakeholder Meetings in 2020 are Exploring Two Paths That are Contemplating a Reliable, Clean-Energy Future Grid



Operating under a future grid:

- Envision a future state of the grid and conduct a study to determine whether the ISO can operate the system reliably with status-quo tools and market mechanisms
 - The ISO is supporting *stakeholder-led* discussions on developing future-grid scenarios and preparing to assist with requested studies

Transitioning to a future grid:

- Consider future pathways for the region's wholesale electricity markets that could bring about the future grid envisioned by policymakers
 - In 2021, ISO resources are dedicated to assessing potential market-framework options
 - *This emerged as a formal request from the states in 2019 as part of the ISO's budget process and NEPGA and other stakeholders supported the states' request*



CORONAVIRUS (COVID-19) OUTBREAK

Update on ISO Operations and Impacts on Load

Note: The most up-to-date COVID-19 information will be regularly posted to the [ISO Newswire](#)

ISO New England Has Implemented a Series of Actions in Response to the Coronavirus (COVID-19) Outbreak

- About **80%** of the ISO workforce is working remotely
 - On-site staff must adhere to rigorous social-distancing and other health and safety protocols
 - The return of employees to the ISO's facilities will remain largely voluntary for the remainder of 2020
- We are continuing with a **cautious reentry** of the workforce
 - Monitoring state and regional COVID-19 trends
 - Stakeholder meetings will continue virtually for the rest of the year
- The ISO's plans can be adjusted in response to changing conditions and guidance from public health agencies



General Observations Regarding Electricity Demand During COVID-19



- In general, *summer* electricity demand has been equal to, or higher than, what would have been expected without the pandemic, owing partly to an extended period of warm weather
 - This marks a change from mid-March, when the ISO noticed an average decline in overall electricity use of about three to five percent
 - For more details, see the ISO Newswire [article online](#)
- A [preliminary review](#) of the ISO's long-term forecast performance suggests summer demand during the period June 1, 2020 and July 31, 2020 is consistent with the 2020 CELT forecast
 - The ISO will update this analysis using all summer data (i.e., including August) at the [September 25 meeting](#) of the Load Forecasting Committee
- ISO is **continuously evaluating** trends in the load curve, paying mind to the **expected differences** from historical data
- Changes in load do not pose a threat to system reliability as the system is **built and operated to handle** fluctuations on a daily and seasonal basis



TRANSMISSION PLANNING UPDATE



ISO New England Makes Selection in Competitive Solicitation for Transmission Solutions in Boston Area

- The selection was a result of the ISO's first-ever **request for proposals** (RFP) issued to address transmission system upgrades needed in the Boston area
 - Eight different developers submitted 36 proposals
 - Costs ranged from \$49 million to \$745 million
- The Greater Boston [Ready Path](#) solution, a joint venture of National Grid and Eversource, was selected due to its:
 - Ability to solve grid reliability needs at the lowest cost, and
 - Availability prior to the retirement of the Mystic Generating Station
- The ISO Newswire provides [an update](#) on the RFP and the June 17 meeting of the Planning Advisory Committee (PAC)



The ISO Cancelled Three Reliability Projects in Southern New England Because of Changes in Load

- At the August 27 meeting of the Planning Advisory Committee, the ISO [presented](#) the results of a recent review of the reliability need for projects previously identified for the Southeastern Mass/Rhode Island area (known as SEMA/RI)
- The ISO reviewed **fifteen** previously identified projects that have not yet begun construction. Of these:
 - **Eleven** projects' needs were confirmed and will be retained
 - **Three** projects' needs were resolved and should be cancelled
 - One project for which the need was resolved should continue given the age, likelihood of failure, and percentage of project cost already expended
- The ISO will post a revised SEMA/RI Needs Assessment Update Report in late September or early October
 - Any cancelled projects will have their status updated in the October 2020 transmission project list



FORWARD CAPACITY AUCTION #15

June 1, 2024 – May 31, 2025 Capacity Commitment Period



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
- Allows **new capacity resources** to compete in the market and set the price for capacity in the region
- Provides a long-term commitment (up to seven years) to new capacity resources to encourage **investment**

For more information, visit the ISO New England website: <https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/>

Planning for FCA #15 Began Soon After FCA #14 Ended

- Retirement de-list bids for FCA #15 were due in mid-March
- The ISO received:
 - An aggregate total of **42 MW of permanent de-list bids**
 - An aggregate of **199 MW of retirement de-list bids**
- In August, the ISO determined that none of the resources that submitted permanent or retirement de-list bids for FCA #15 triggered a transmission or fuel-security reliability need
 - Earlier this summer, the ISO [announced](#) that Mystic Units 8 & 9 are not needed for either transmission or fuel-security reliability needs
 - Mystic Units 8 & 9 will be “deemed retired” as of June 1, 2024



Note: Resource owners that submit retirement de-list bids seek to permanently remove their capacity resources from the region's wholesale electricity markets.

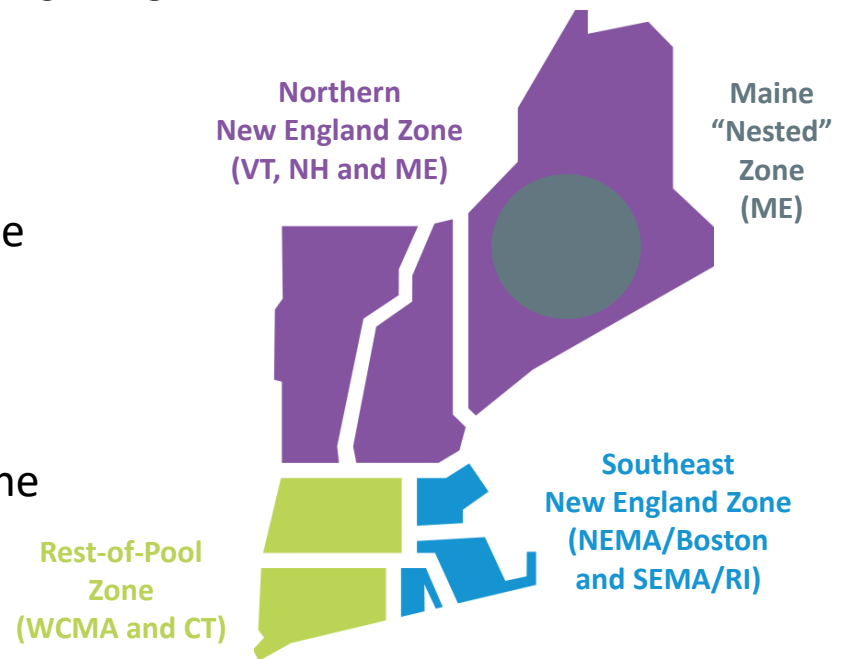
https://www.iso-ne.com/static-assets/documents/2018/03/fca_15_market_timeline.pdf



Four Capacity Zones Will Be Modeled in FCA #15

Maine will be modeled as a “nested” capacity zone within Northern New England

- ISO New England has a process for determining the appropriate **number** and **boundaries** of capacity zones over time as conditions change in the region
 - The ISO studied **constraints** on the transmission system to determine which capacity zones would be modeled in FCA #15
- The ISO will model **four** capacity zones in FCA #15*
 - Northern New England Capacity Zone
 - Export-Constrained
 - Maine “Nested” Capacity Zone
 - Export-Constrained
 - Southeast New England Capacity Zone
 - Import-Constrained
 - Rest-of-Pool Capacity Zone



* Subject to stakeholder vote and FERC filing in November

ISO New England's Auction-Related Determinations and Calculations Must Be Filed with FERC for Review

- In **September**, the NEPOOL Reliability Committee will vote on the ISO's zonal determinations and projected capacity need for the region, as well as other auction-related values
- In **October**, the NEPOOL Participants Committee will vote on the ISO's determinations and calculations
- In **November**, the ISO will submit a pre-FCA information filing with FERC for review
- FCA #15 is scheduled to take place in **February 2021** to procure the capacity resources needed during the 2024–2025 capacity commitment period (CCP)
 - Each CCP runs June 1 through May 31



ISO'S PROPOSED 2021 BUDGET



ISO New England Has Developed Its Proposed Operating and Capital Budgets for 2021



- The ISO is a private, **not-for-profit** corporation that collects revenue from wholesale electricity market participants to fund its operational expenses
- These revenues are collected under Section IV of the ISO Tariff, commonly known as the **Self-Funding Tariff**
- Each year, the ISO develops an operating budget and capital budget to fund the administrative services and capital projects it has planned for the **next calendar year**
- These administrative services include major ISO responsibilities, such as operating the bulk power system and administering the competitive wholesale electricity markets for the region



ISO New England Presented Its Proposed 2021 Budget to New England State Agencies in August

- The **proposed capital budget** for 2021 is projected to be \$28 million, the same as the 2020 capital budget
- The **proposed operating budget** for 2021, before depreciation and true up, is projected to be \$178.6 million, which is \$4.4 million or 2.5% higher than the 2020 operating budget
- After depreciation and true up, the **Revenue Requirement** for 2021 is projected to be \$205.1 million, which is \$6.3 million or 3.2% more than the 2020 Revenue Requirement
- If the ISO's projected Revenue Requirement for 2021 was fully passed through to end-use customers, their cost would average **\$1.04 per month** (based on average consumption)



ISO New England Plans to File Its Proposed 2021 Budget with FERC in October

- Under the formal budget review process, the New England states have the opportunity to submit **questions** and **comments** on the proposed budget following the August presentation
- In **September**, the ISO's Board of Directors will review the budget, along with stakeholder feedback and the states' comments
- In **October**, the ISO's Board of Directors will vote on the proposed budget
- The ISO plans to file the budget with **FERC** for review in mid-October, requesting approval by January 1, 2021



For more information, visit the ISO New England website: <https://www.iso-ne.com/about/corporate-governance/budget/>

EMISSIONS REPORTING



ISO New England Provides Regular Updates on Emissions through the Environmental Advisory Group

- Like the Planning Advisory Committee, New England's **Environmental Advisory Group (EAG)** is open to all interested stakeholders
- The EAG's core **functions** include:
 - Tracking and evaluating state, regional, and federal environmental regulations and legislation that could potentially affect the reliability and operation of New England's power system
 - Developing and updating environmental studies of the power system
- Each year, working with stakeholders through the EAG, ISO issues an **Electric Generator Air Emissions Report**
 - Comprehensive analysis of New England electric generator air emissions, including nitrogen oxides (NO_x), sulfur dioxide (SO_2), and carbon dioxide (CO_2)



Information on the Environmental Advisory Group is available at: <https://www.iso-ne.com/committees/planning/environmental-advisory/>

ISO New England Provides Regular Updates on Emissions through the Environmental Advisory Group

- ISO New England's **Electric Generator Air Emissions Report** provides information on aggregate emissions (kTons) and marginal emission rates (lb/MWh) for native generation inside New England
 - The ISO is working on creating a methodology to capture emissions from imports
- Marginal emission rates are based on the **Locational Marginal Unit**
 - One or more locational marginal units can collectively determine energy prices for the system during a pricing interval
 - When the system is **constrained**, not all of the marginal units contribute equally to meeting load and, consequently, to setting energy prices
 - A **load-weighted** marginal unit analysis identifies which marginal unit impacts system energy prices the most
- ISO New England provides quarterly updates on estimated aggregate emissions through the EAG



Highlights of the Latest Generator Emissions Report

- During the ten-year period from 2009 through 2018, total system emissions have decreased overall
 - **Nitrogen Oxide (NO_x) decreased by 43%**
 - NO_x adds to smog
 - **Sulfur Dioxide (SO₂) decreased by 94%**
 - Combined with NO_x, leads to acid rain
 - **Carbon Dioxide (CO₂) decreased by 31%**
 - CO₂ is a major driver of climate change
- The decline in emissions during this period reflects shifts in the regional generation mix, with increases in natural gas-fired generation as well as wind generation and decreases in coal- and oil-fired generation



Source: 2018 ISO New England [Electric Generator Air Emissions Report](#)

FOR MORE INFORMATION...



Subscribe to the *ISO Newswire*

[ISO Newswire](#) is your source for regular news about ISO New England and the wholesale electricity industry within the six-state region



Log on to ISO Express

[ISO Express](#) provides real-time data on New England's wholesale electricity markets and power system operations



Follow the ISO on Twitter

[@isonewengland](#)

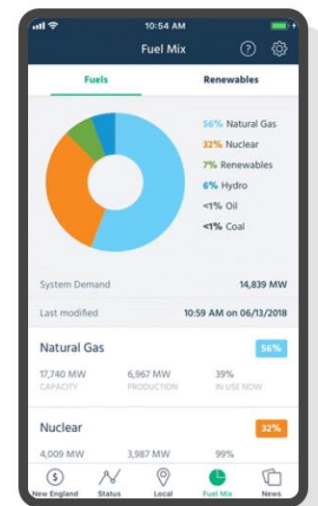
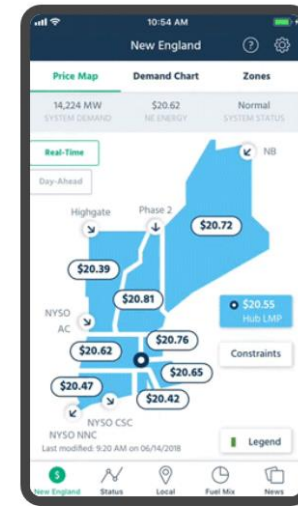


Follow the ISO on LinkedIn

[@iso-new-england](#)

Download the ISO to Go App

[ISO to Go](#) is a free mobile application that puts real-time wholesale electricity pricing and power grid information in the palm of your hand



Questions



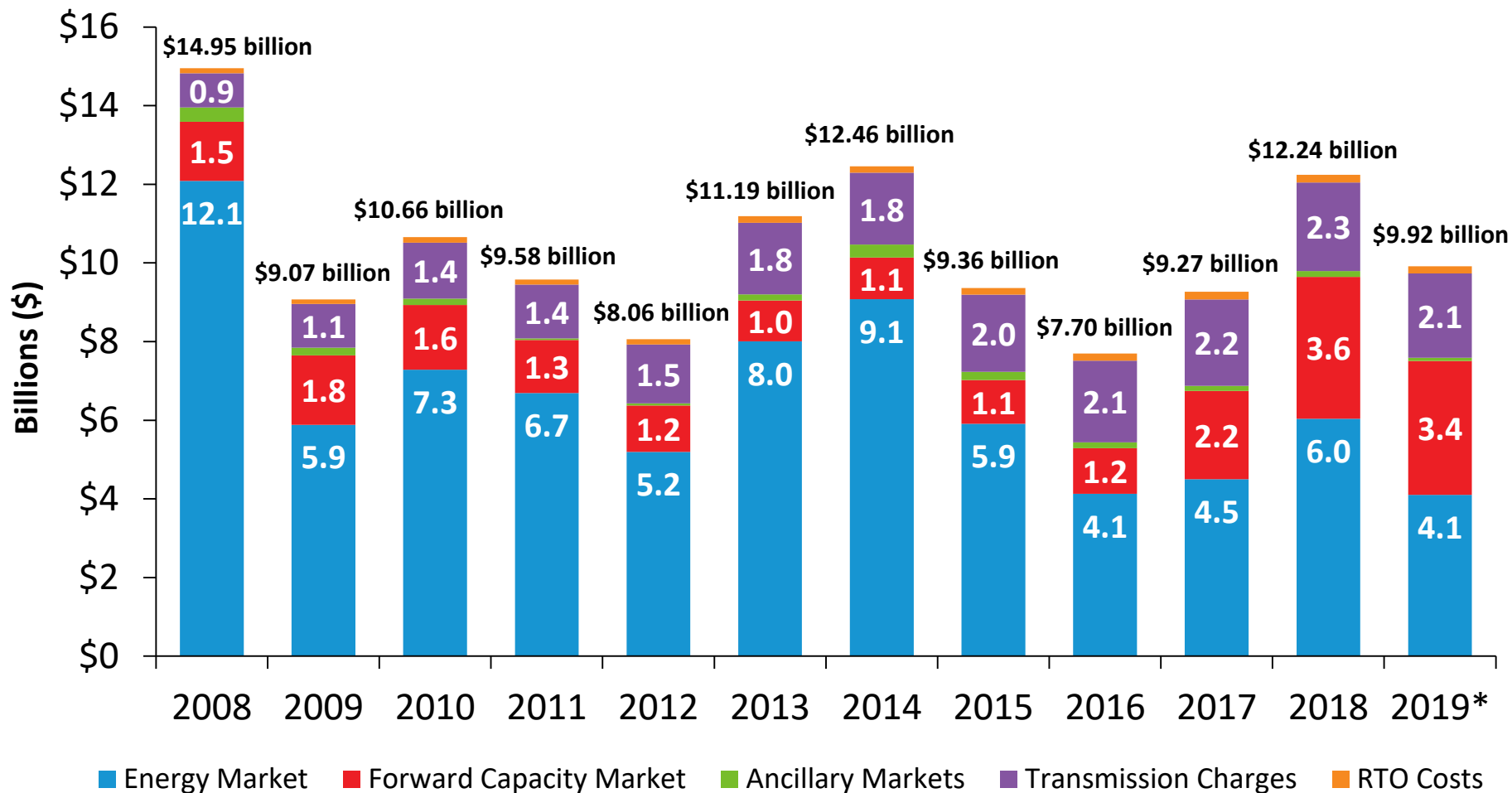
APPENDIX

New England Wholesale Electricity Costs



New England Wholesale Electricity Costs

Annual wholesale electricity costs have ranged from \$7.7 billion to \$15 billion



Source: [2019 Report of the Consumer Liaison Group](#); * 2019 data is preliminary and subject to resettlement

Note: Forward Capacity Market values shown are based on auctions held roughly three years prior to each calendar year.

New England Wholesale Electricity Costs^(a)

	2015		2016		2017		2018		2019*	
	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh
Wholesale Market Costs										
Energy (LMPs)^(b)	\$5,910	4.5	\$4,130	3.2	\$4,498	3.5	\$6,041	4.7	\$4,105	3.3
Ancillaries^(c)	\$210	0.2	\$146	0.1	\$132	0.1	\$147	0.1	\$81	0.1
Capacity^(d)	\$1,110	0.8	\$1,160	0.9	\$2,245	1.8	\$3,606	2.8	\$3,401	2.7
Subtotal	\$7,229	5.5	\$5,437	4.2	\$6,875	5.4	\$9,794	7.6	\$7,586	6.0
Transmission charges^(e)	\$1,964	1.5	\$2,081	1.6	\$2,199	1.7	\$2,250	1.7	\$2,146	1.7
RTO costs^(f)	\$165	0.1	\$180	0.1	\$193	0.2	\$196	0.2	\$184	0.1
Total	\$9,358	7.1	\$7,698	5.9	\$9,267	7.3	\$12,240	9.4	\$9,915	7.9

(a) Average annual costs are based on the 12 months beginning January 1 and ending December 31. Costs in millions = the dollar value of the costs to New England wholesale market load servers for ISO-administered services. Cents/kWh = the value derived by dividing the dollar value (indicated above) by the real-time load obligation. These values are presented for illustrative purposes only and do not reflect actual charge methodologies. *** The wholesale values for 2019 are preliminary and subject to resettlement.**

(b) Energy values are derived from wholesale market pricing and represent the results of the Day-Ahead Energy Market plus deviations from the Day-Ahead Energy Market reflected in the Real-Time Energy Market.

(c) Ancillaries include first- and second-contingency Net Commitment-Period Compensation (NCPC), forward reserves, real-time reserves, regulation service, and a reduction for the Marginal Loss Revenue Fund.

(d) Capacity charges are those associated with the Forward Capacity Market (FCM).

(e) Transmission charges reflect the collection of transmission owners' revenue requirements and tariff-based reliability services, including black-start capability, voltage support, and FCM reliability. In 2019, the cost of payments made to these generators for reliability services under the ISO's tariff was \$42.2 million. Transmission charge totals reflect the refund of Schedule 1 TOUT charges to regional network load.

(f) RTO costs are the costs to run and operate ISO New England and are based on actual collections, as determined under Section IV of the *ISO New England Inc. Transmission, Markets, and Services Tariff*.

