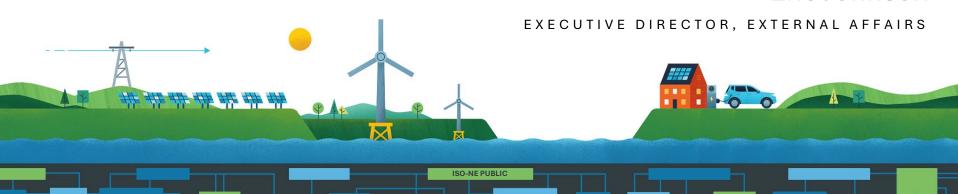


ISO New England Regional Update

Vermont System Planning Committee October 2025 Quarterly Meeting

Eric Johnson



Today's Updates

- News, Resources & Events
- Markets Update
 - Monthly Market Highlights
- 2026 Annual Work Plan
- Operations Update
 - 2024 ISO New England Electric Generator Air Emissions Report
- System Planning Update
 - 2024 Economic Study
 - Longer-Term Transmission Planning
 - FERC Order No. 2023/2023-A Update
 - Capacity Auction Reforms (CAR) Key Project Update

NEWS, RESOURCES & EVENTS

ISO-NE CEO Gordon van Welie Announces Retirement



- In June, ISO New England <u>announced</u> that President and CEO Gordon van Welie will retire from the company effective Jan. 1, 2026
- The ISO's Board of Directors has selected Dr. Vamsi Chadalavada, currently serving as the ISO's chief operating officer, as van Welie's successor
 - Vamsi joined the ISO in 2004 as vice president for market and system solutions and has served as executive vice president and chief operating officer since 2008

RSP25 Public Meeting & Open Meeting of the ISO Board of Directors Scheduled for November 5

- The ISO Board of Directors will hold an <u>open board meeting</u> on November 5 to give the public an opportunity to observe the Board's discussions firsthand
 - The meeting with take place virtually and in person in Boston, MA
 - Additional details will be available closer to the meeting date
- There will be an opportunity to address the Board directly,
 and submit written comments prior to and after the meeting
- The meeting will also serve as the ISO's 2025 Regional System Plan (RSP25) Public Meeting, with an opportunity to provide feedback

MARKETS UPDATE

Monthly Market Highlights

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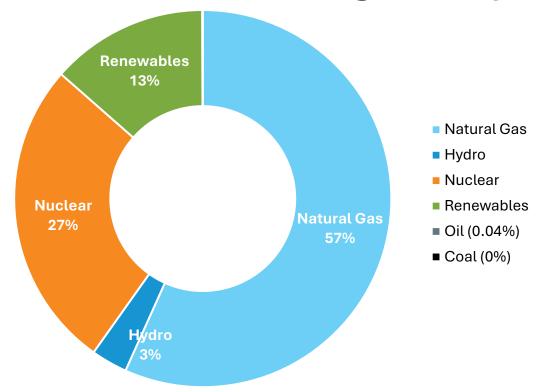
Monthly Wholesale Electricity Prices and Demand in New England, August 2025

Aug. 2025 and % Change from Aug. 2024 & July. 2025	Aug. 2025	Change from Aug. 2024	Change from Sept. 2025
Average Real-Time Electricity Price (\$/megawatt-hour)	\$41.06	6.5%	-31.9%
Average Natural Gas Price (\$/MMBtu)	\$2.53	56.2%	-40.2%
Peak Demand	23,069 MWs	56.2%	-40.2%
Total Electricity Use	10,322 GWh	-3.0%	-8.8%
Weather-Normalized Use*	10,947 GWh	1.5%	-3.4%

^{*}Weather-normalized demand indicates how much electricity would have been consumed if the weather had been the same as the average weather over the last 20 years.

Source: ISO Newswire Monthly wholesale electricity prices and demand in New England, August 2025

Sept. 2025 Generation in New England, by Source



Source: 2025 Net Energy and Peak Load by Source

2026 ANNUAL WORK PLAN

Annual Work Plan & Prioritization Process

- ISO New England has issued its <u>2026</u>
 Annual Work Plan
 - AWP is published each fall and updated each spring
 - The ISO adjusts its priorities as needed to best maintain reliable operations, robustly plan for a changing grid, and ensure competitive wholesale markets
 - Planned projects are impacted as scopes shift or new projects emerge



2026 AWP Objectives and Highlights

- Anchor Projects and Related Core Implementations are the highest priority initiatives across the ISO for securing and advancing a reliable, cost-effective electric power system through innovation and collaboration
 - Capacity Auction Reforms: Restructuring capacity auction timing and capacity market accreditation
 methodologies to ensure resource adequacy, reliability, and cost effectiveness in step with updated conditions
 facing the power system's resource mix
 - Asset Condition Reviewer: Supporting state/stakeholder request for the development of a robust process for additional, independent review of Transmission Owners' asset condition project proposals for refurbishing aging transmission facilities
 - Longer-Term Transmission Planning Implementations and Compliance: Completing the first LTTP competitive solicitation to facilitate state clean-energy requirements and continuing preparation for compliance with FERC Order No. 1920
 - Dynamic Operating Reserves: Assessing dynamically-determined quantities of reserves to address operational
 uncertainties resulting from continued growth in PV, intermittent resources, and variability in real-time net load
 - IT Implementation of Major Initiatives: Developing the software and systems needed to implement FERC Order No. 2222, Order No. 881, and the nGEM real-time market clearing engine that is foundational to supporting an exponentially complex system
- Notable Initiatives target modernization, advance efficiency, and help manage risks across markets, planning, operations, and software structures

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Planning Achor Projects: Advancing Asset Condition Reviewer Role

- Transmission Owners (TOs) have been proposing a growing number of asset condition projects (ACPs) to refurbish deteriorating transmission facilities
- Historically, the ISO has had limited involvement in the TOs' ACP proposals and is supportive of state and stakeholder requests for the development of a robust process for additional, independent review of ACP proposals
- The new role is envisioned to provide an independent review and opinion of asset condition projects submitted for review by the TOs
- In the near term, the ISO has retained a consultant, Electrical Consultants, Inc. (ECI), to help develop and implement an interim review cycle for a selected set of asset condition projects through 2026
- The ISO provided an <u>update</u> at the Planning Advisory Committee (PAC) meeting on October 23

Learn more about the

Asset Condition Reviewer

Key Project

OPERATIONS UPDATE

2024 ISO New England Electric Generator Air Emissions Report

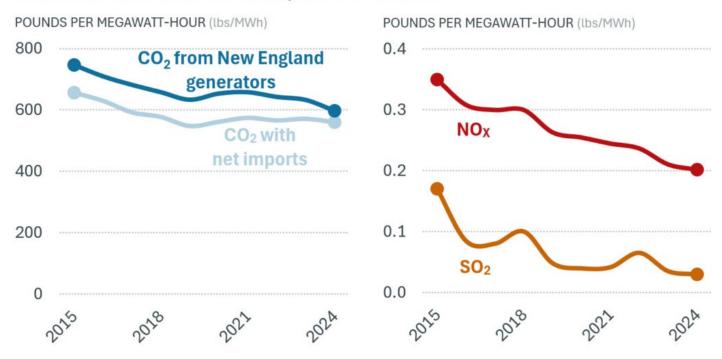
2024 ISO NEW ENGLAND ELECTRIC GENERATOR AIR EMISSIONS REPORT

Carbon Emissions from New England Power Generation Remained Steady

- The <u>2024 ISO New England Electric Generator Air Emissions Report</u> found **emission** *rates* for CO₂, SO₂, and No_x have seen double-digit declines over the past decade, dropping 20%, 82%, and 42% respectively
 - The region saw a 1% increase in CO₂ emissions and a 3% increase in NOx from electric generation versus 2023, SO₂ emissions were down 8%
 - Higher natural gas generation drove the increases in CO₂ and NOx emissions
- Other report takeaways include:
 - Similar seasonal patterns between 2023 and 2024 kept year-over-year changes in carbon emissions relatively small
 - Drought and extended nuclear outages in Canada contributed to a reduction in imports
 - Increase in renewables continues, with wind and solar accounting for 7% of total energy generated in 2024
- The ISO also publishes data on estimated CO₂ emissions from New England power plants in a monthly recap of the wholesale electricity markets, and real-time estimates are available on ISO Express

Major Emissions Reductions in Last Decade

Annual Emission Rate, 2015–2024



Source: ISO New England, New England Electric Generators Air Emissions Report

SYSTEM PLANNING UPDATE

2024 Economic Study

Longer-Term Transmission Planning

FERC Order No. 2023/2023-A Update

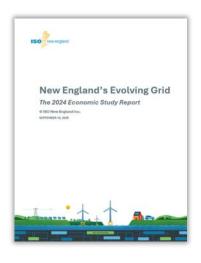
Capacity Auction Reforms (CAR) Key Project Update

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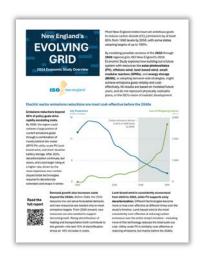
2024 ECONOMIC STUDY

September 2025 Final Report

2024 Economic Study Explores Possible Strategies to Reduce Emissions in New England's Evolving Grid



New England's Evolving Grid: The 2024 Economic Study



Fact Sheet



Public Webinar Recording

Study Finds Building a Variety of Technologies Key to Meeting State Emissions Goals Reliably and Cost-Effectively

Key Findings

- Emissions reductions beyond 85% of policy goals drive rapidly escalating costs.
- 2. Demand growth also increases costs beyond the 2040s.
- 3. Land-based wind is consistently economical from 2033 to 2050, while PV supports early decarbonization.

- 4. Shifting the hours of peak demand in winter reduces costs.
- 5. Deep decarbonization in the 2040s drives increased curtailment of renewables and reduces the economic viability of certain technologies.
- 6. Including more dispatchable technologies reduces needed system capacity by over 15%.

LONGER-TERM TRANSMISSION PLANNING

Longer-Term Transmission Planning (LTTP)

- 2020: New England States Committee on Electricity (NESCOE)'s <u>vision statement</u> recommended that the ISO work with stakeholders to conduct a **comprehensive** long-term regional transmission study
 - In response, the ISO began the study and received FERC approval to revise the ISO Tariff to establish a repeatable longer-term study process
- 2024: 2050 Transmission Study was the first longer-term transmission study
 - Informs stakeholders of the amount and type of transmission infrastructure necessary to provide reliable, cost-effective energy to the region through the clean energy transition, driven by state policy
- The region's aging transmission system has the potential to become a significant bottleneck to progress if it does not keep pace with changes to other elements of the power system



Longer-Term Transmission Planning RFP



ISO received 6 Longer-Term Proposals:

- 3 primarily AC transmission; 3 primarily HVDC transmission
- All designs claim support 1,200 MW of northern ME wind
- Cost estimates range from \$0.96B to \$4.04B**
- In service dates Q4 2032 to Q3 3025 (12/31/2025 target)

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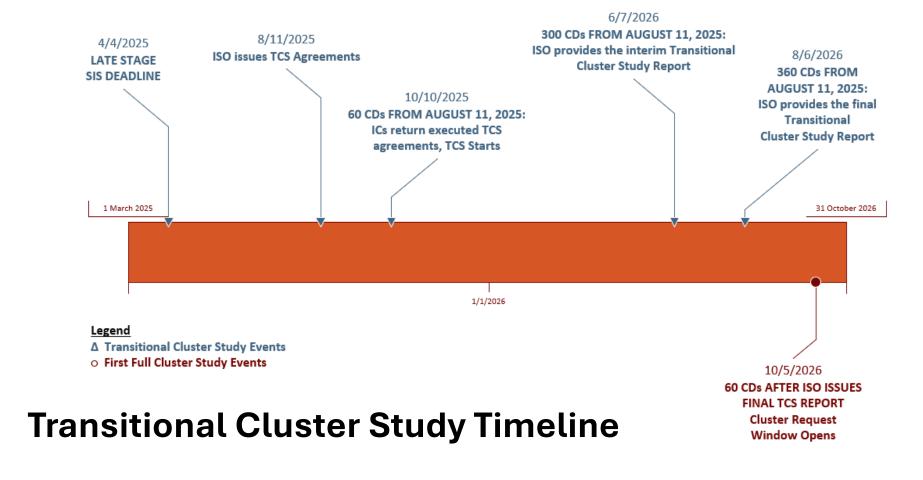
^{*} May be either the Preferred Longer-Term Transmission Solution or Preferred Longer-Term Transmission Proposal, depending on whether Attachment K Section 16.4(i) or 16.4(j) applies. Schedule subject to change; **Costs may include estimates for corollary/interconnection upgrades.

FERC ORDER NO. 2023/2023-A UPDATE

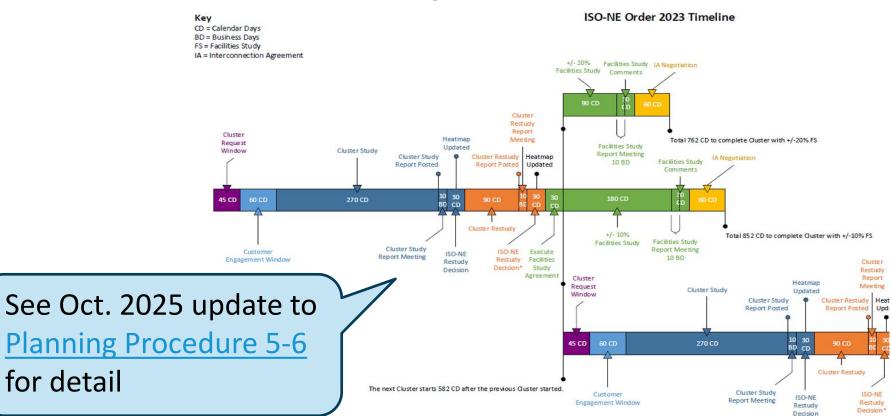
The ISO's Interconnection Process is Under Transition

- The ISO's Order No. 2023 compliant Interconnection Procedures include several major changes to its previous "first-come, first-served" serial study-based interconnection process
 - Adopts a "first ready, first-served" cluster study process
 - Increased financial/site control requirements for those entering the ISO's interconnection process
 - A penalty structure applied to the ISO and transmission owners for delays in study completion beyond established deadlines
- On October 11, 2025, the ISO started the Transitional Cluster Study (TCS), which must be completed by August 6, 2026
- State-jurisdiction interconnection studies will continue to closely coordinate with ISO Interconnection Studies

Learn more about the TCS



General Cluster Study Timeline



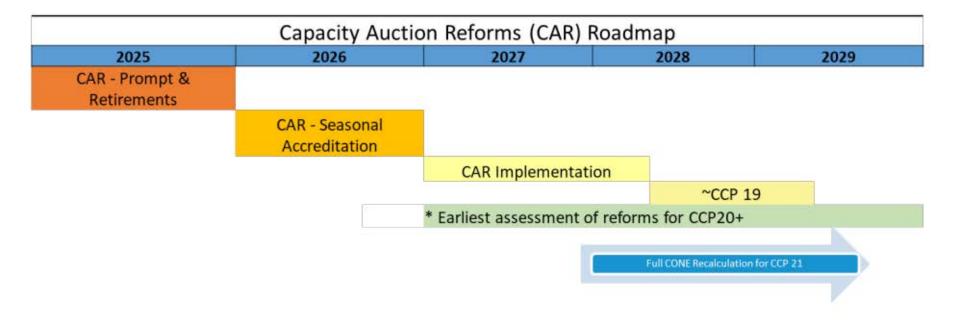
CAPACITY AUCTION REFORMS (CAR) KEY PROJECT UPDATE

Next Steps for the Capacity Market: 2025-2027

- To address system reliability and affordability as electricity demand and the resource mix change, the Capacity Auction Reform (CAR) Key Project:
 - Transitions the capacity market from a three-year forward auction to a prompt auction that runs shortly before the capacity commitment period (CCP)
 - Restructures the CCP from **annual to seasonal** commitment periods
 - Reshapes capacity market accreditation to more accurately reflect resource
 adequacy contributions from an evolving resource mix, from season to season
- The core reforms will be in place in 2028 for the ISO to run the new capacity auction for Capacity Commitment Period (CCP) 19
- After CAR completion, the ISO will assess the feasibility and potential benefits associated with various design additions



Potential Post-CAR Roadmap



Capacity Auction Reforms: Discussion of Project Scope, Schedule, and Introduction of Future Roadmap

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Questions





About the Presenter



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