

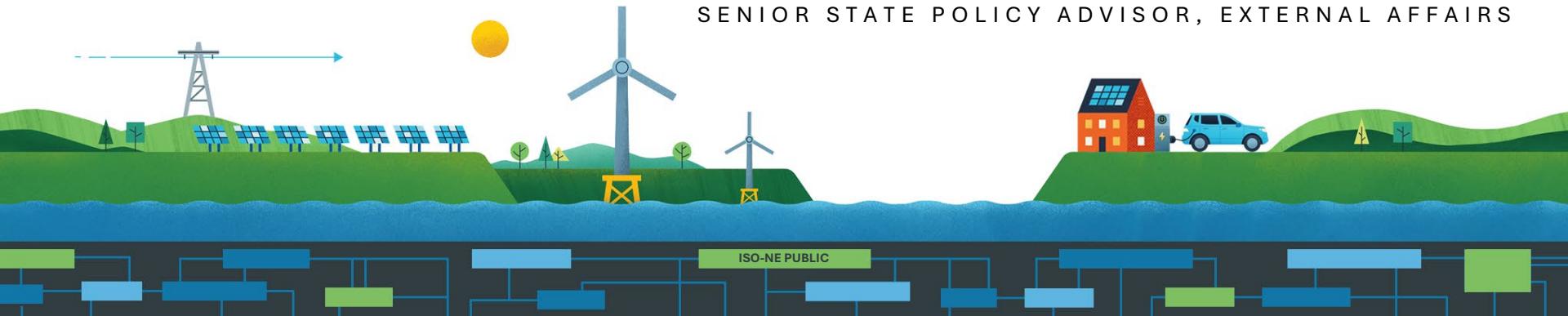


ISO New England Update

*Presentation to the Vermont House
Committee on Energy & Digital Infrastructure*

Sarah Adams

SENIOR STATE POLICY ADVISOR, EXTERNAL AFFAIRS



Overview of Presentation

About ISO New England

Organizational Updates

Markets Update

System Planning Update

Transmission Planning Overview

ISO New England Publications and
Opportunities to Engage



ISO New England Has Nearly Three Decades of Experience Overseeing the Region's Restructured Electric Power System

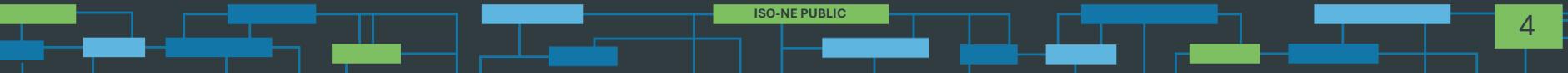
- **Regulated** by the Federal Energy Regulatory Commission
- **Reliability Coordinator** for New England under the North American Electric Reliability Corporation
- **Independent** of companies in the marketplace and **neutral** on technology



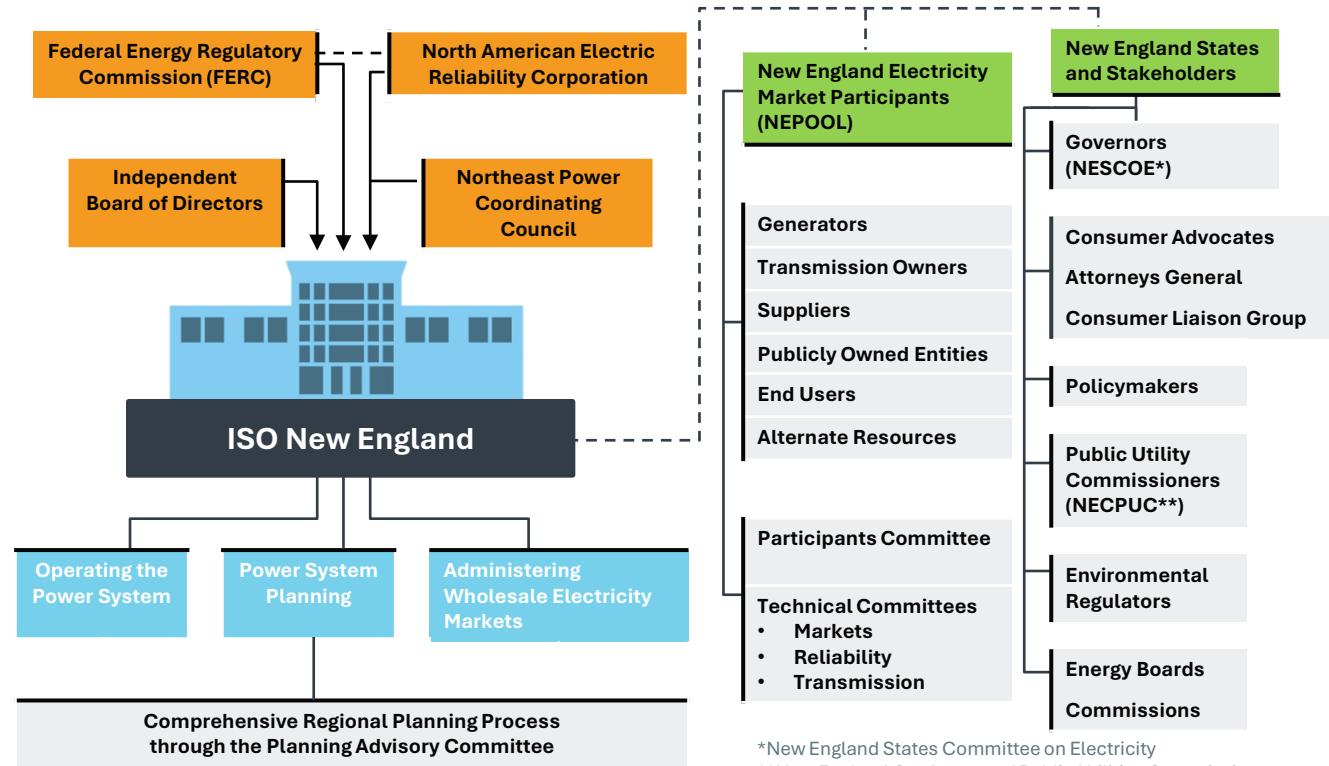


A Mission That Matters

**Through collaboration and innovation,
ISO New England plans the transmission
system, administers the region's
wholesale markets, and operates the
power system to ensure reliable and
competitively priced wholesale electricity**

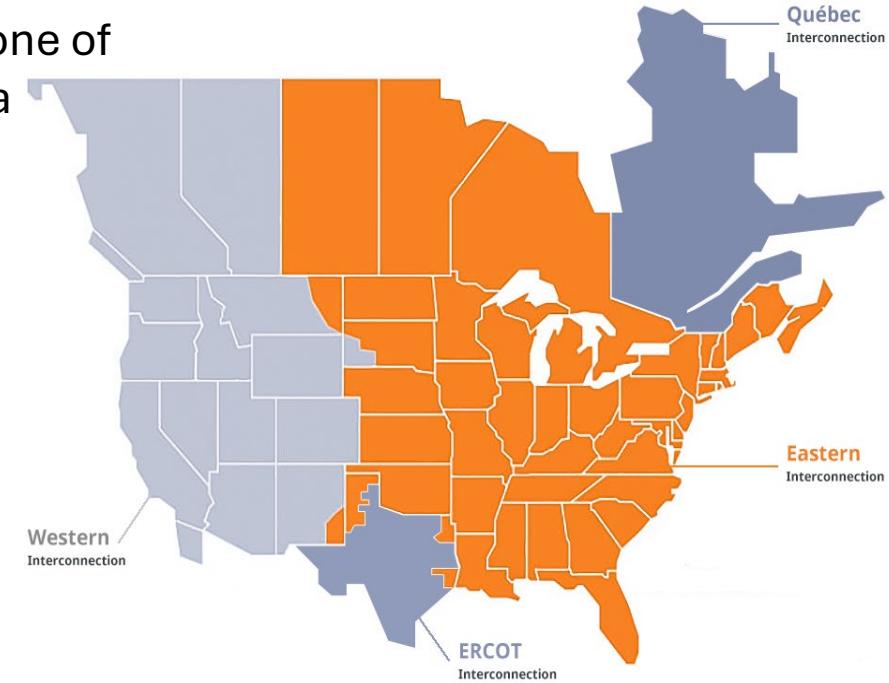


Numerous Entities Including an Independent Board Provide Oversight of and Input on ISO's Responsibilities



New England's Power Grid Is Part of a Larger Electric Power System

- Part of the **Eastern Interconnection**, one of four large power grids in North America
 - Interconnected through primarily alternating current (AC) transmission
- Tied to **Québec** only through direct current (DC) transmission
- 2003 blackout ushered in wide-area monitoring and **mandatory** reliability standards
- Subject to reliability standards set by **NERC** and **NPCC***



* North American Electric Reliability Corporation (NERC) and Northeast Power Coordinating Council (NPCC)

ORGANIZATIONAL UPDATES



Leadership Transition – Dr. Vamsi Chadalavada

- Dr. Vamsi Chadalavada became ISO's president and CEO effective Jan. 1, 2026, succeeding Gordon van Welie
- Chadalavada joined the ISO in 2004 as vice president for market and system solutions and was promoted to executive vice president and chief operating officer in 2008. As COO, he supervised power system and market operations, market development, system planning, information and cybersecurity services, participant relations and services, advanced technology solutions, and program management.



Read the full story on the
[ISO Newswire](#)

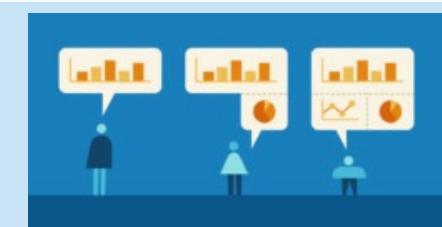


MARKETS UPDATE



Next Steps for the Capacity Market: Through 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



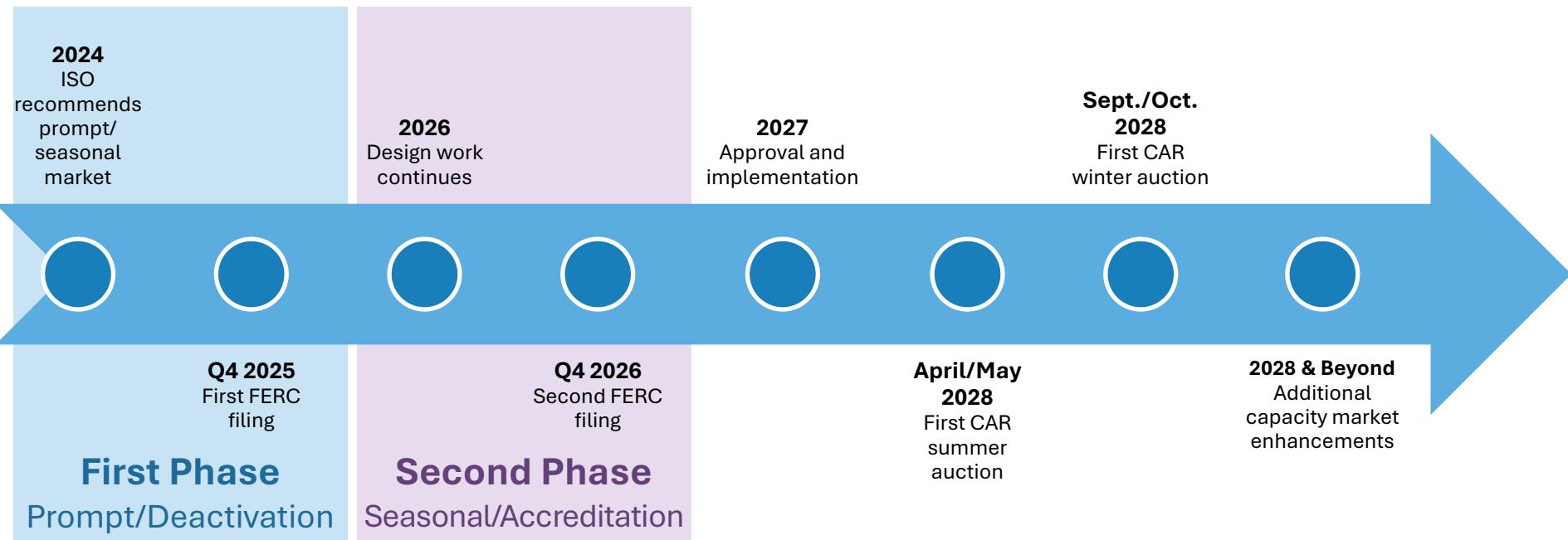
Learn more about the
[**CAR Key Project**](#)



ISO Files 1st Phase of CAR with FERC

- In December, ISO-NE [requested](#) that FERC accept its first batch of proposed reforms to the capacity market
- The first phase involves moving capacity auctions to a “prompt” timeline, as well as updating the process for resources exiting the capacity market
 - Benefits of a prompt auction include **better forecasts, no “phantom” entry, and simplicity**
 - Under the proposal, the advanced notice required for resources to exit the market will shorten from four years to one
- The filing asks FERC to issue an order by March 31, 2026, so the core reforms will be in place in 2028 (Capacity Commitment Period 19)
- Reforms that will be addressed in the next phase include moving from annual → seasonal commitment periods and accreditation changes

CAR Timeline and Next Steps



SYSTEM PLANNING UPDATE



The ISO's Interconnection Process is in 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 Oct. 11, 2025, the ISO started the **Transitional Cluster Study (TCS)**, which must be completed by Aug. 6, 2026
- State-jurisdictional interconnection studies will continue to closely coordinate with ISO Interconnection Studies



Learn more about the [TCS](#) and associated [timeline](#)



Interconnection Process – Basic Flow

Interconnection Request

Basic information: size, location, fuel type

Cluster Study

Identifies upgrades required for interconnection

Construction

Generator begins commercial operation once construction is complete

Interconnection Agreement

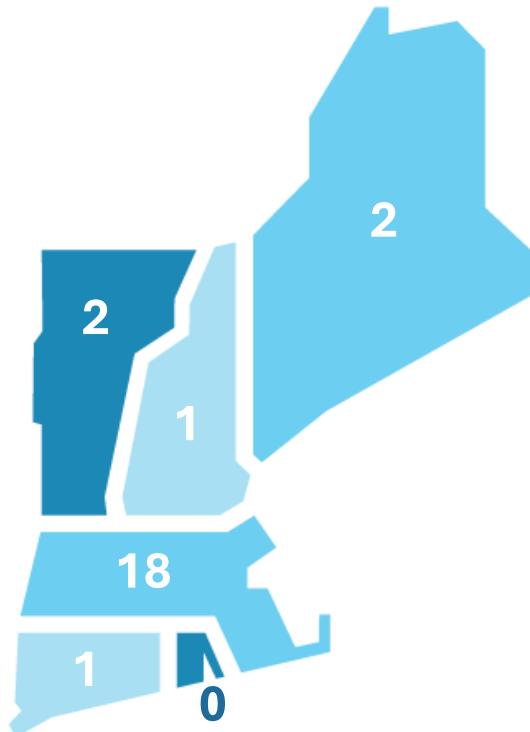
Three-party agreement between generator, ISO, and transmission owner



For more information about this process, visit [Participate > Applications and Status Changes > New or Modified Interconnections](#)



What's in the Transitional Cluster Study?



24

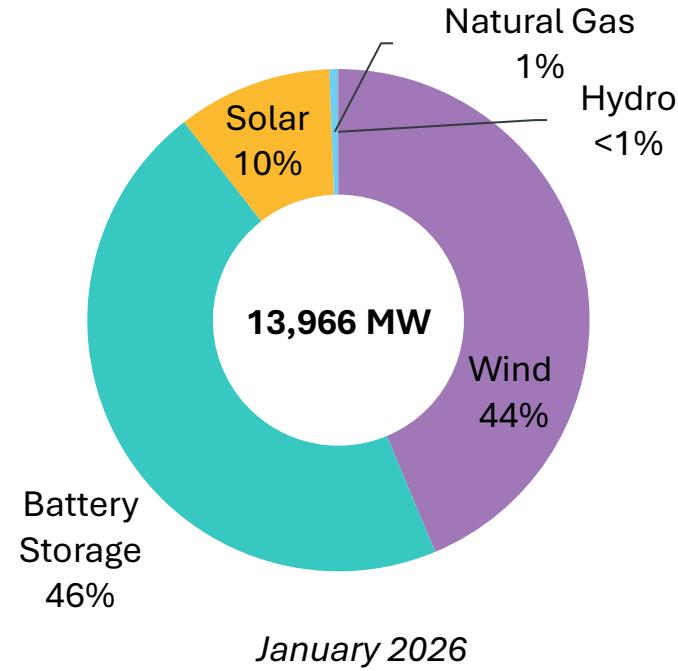
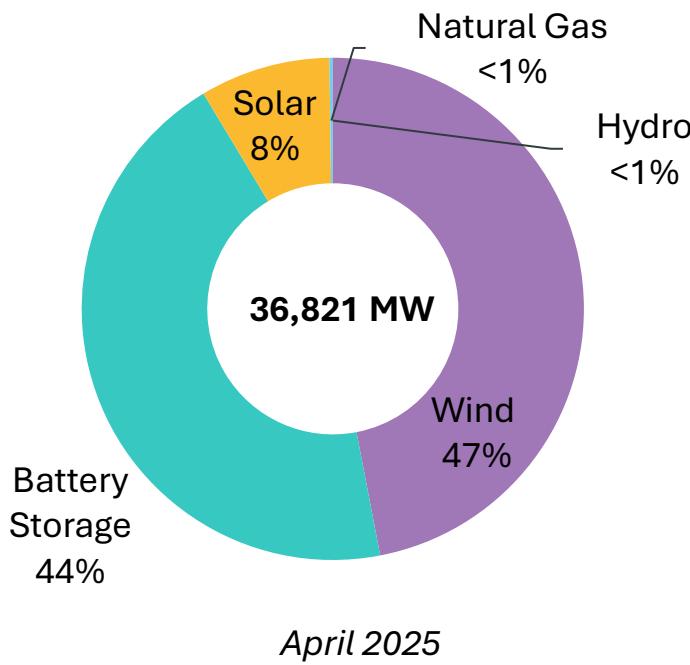
Interconnection Requests
5,707 MW*



*MW total only includes Interconnection Requests that did not complete a system impact study prior to April 4, 2025, and so will need to be studied according to the Network Capability Interconnection Standard. Totals for each fuel type represents all Interconnection Requests Participating in the Transitional Cluster Study (including those being only studied according to the Capacity Capability Interconnection Standard). January 2026



Today's Queue Reflects the Changing Interconnection Process



Source: ISO Generator Interconnection Queue, FERC Jurisdictional Proposals; Nameplate Capacity Ratings.

ISO-NE Statements on Generation Projects

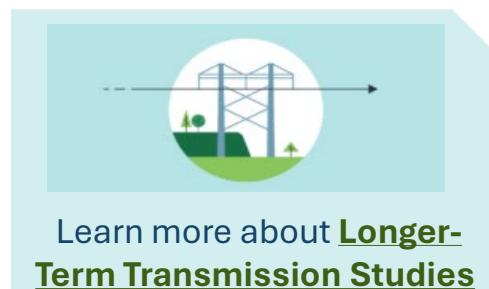
- The Department of the Interior's Bureau of Ocean Energy Management (BOEM) issued a **stop work order** for Revolution Wind on Aug. 22, 2025
 - The ISO released a statement on the Newswire, saying in part: “Delaying the project will increase risks to reliability”
- The Department of the Interior announced a **pause** in offshore wind leases on Dec. 22, 2025, including two projects in New England: Revolution Wind and Vineyard Wind 1
 - The ISO issued a statement on the Newswire, reiterating that “Both projects are included in our near-term and future modeling and analyses to ensure adequate electricity for New England” and “...delays of new generating resources also will adversely affect New England’s economy and industrial growth, including potential future data centers.”

Read the full statement on the [ISO Newswire](#)



Longer-Term Transmission Planning (LTTP)

- 2020: New England States Committee on Electricity (NESCOE)'s [vision statement](#) 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 **existing 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 to support 1,200 MW of northern ME wind
 - Cost estimates range from \$0.96B to \$4.04B**
 - In service dates Q4 2032 to Q3 2035 (12/31/2035 target)
- [Bid summaries](#) are available on the [ISO website](#)

* May be either 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 upgrades that may change with final PTO provided cost estimates.

ISO is Developing a New Function to Provide Oversight of Asset Condition Projects

- In response to state and stakeholder requests, with certain boundary conditions established, the ISO has committed to take on a **new advisory role** as Asset Condition Reviewer (AC Reviewer)
- Development of a framework to establish this role is a novel undertaking in the industry that will require time, resources and stakeholder engagement
 - The ISO has **prioritized** this as a key project for 2026
- The new role is envisioned to provide an **independent review and opinion** of asset condition projects submitted for review by the Transmission Owners (TOs)
 - Generally, asset condition projects are upgrades to the power grid that replace deteriorating transmission facilities
- ISO expects to finalize the framework for the role by **January 2027**

Asset Condition Reviewer Update

Efforts are underway to develop a framework for a permanent role & begin interim reviews

- ISO-NE provided an [update](#) on the AC Reviewer key project, at the October Planning Advisory Committee (PAC) meeting and requested feedback
- In response to requests to begin asset condition project reviews as soon as possible, the ISO will be conducting **interim reviews** on selected projects through 2026
 - ISO will utilize consultants to provide the necessary expertise to perform the interim reviews
- The PAC presentation included a proposed **draft list of asset condition projects** for the interim reviews
- Discussions to develop a framework for the permanent AC Reviewer role begin [Jan. 21](#)



Learn more about the
**Asset Condition Reviewer
Key Project**

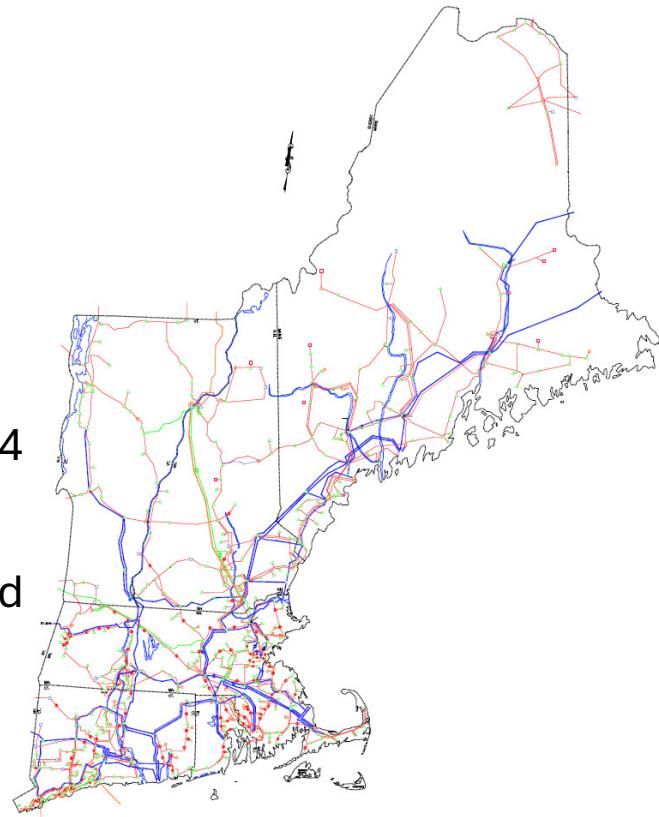
Learn more about the AC Reviewer key project on the [ISO Newswire](#)

OVERVIEW OF TRANSMISSION PLANNING



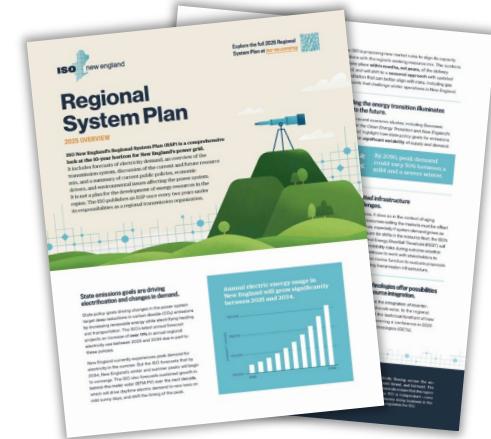
New England's Transmission Grid Is the Interstate Highway System for Electricity

- **9,000 miles** of high-voltage transmission lines (primarily 115 kV and 345 kV)
- **13 transmission interconnections** to power systems in New York and Eastern Canada
- **9%** of region's energy needs met by imports in 2024
- **\$13 billion** invested to strengthen transmission system reliability since 2002; **\$381 million** planned
- Developers have proposed multiple transmission projects to access **non-carbon-emitting resources** inside and outside the region



Overview of Transmission Planning

- As the **Regional Transmission Organization**, the ISO is required to identify transmission infrastructure solutions that are essential for maintaining power system reliability in New England
- Through an **open stakeholder process**, ISO-NE is responsible for developing long-range plans to address future system needs over a ten-year planning horizon
 - Summarized in a **Regional System Plan (RSP)**
- The transmission planning process is governed by a **FERC-approved tariff**
- ISO-NE continuously revises the transmission planning process to comply with applicable FERC orders



[2025 Regional System Plan](#)
and [Plan Summary](#)



System Planning Activities

Ensuring Reliable Operations in the Future

Resource Adequacy

- Forecasting regional electric energy use
 - Including energy efficiency and solar photovoltaic
- Determine annual resource needs by:
 - Monitoring resource mix and fuel security, including renewable resource integration
 - Analyzing retirements for reliability impact
- Administering ISO Interconnection Queue
- Administering New England's capacity market
- Conducting Economic Studies

Transmission Planning

- Performing transmission reliability analysis
- Developing solutions or issuing a request for competitive solutions
- Reviewing transmission costs
- Planning for public policy
- Performing Longer-Term Transmission Studies

• Conducting interregional planning activities



ISO New England Planning Supports Interregional Efforts

- Inter-regional planning ensures that one area's changes do not negatively impact the reliability of the transmission systems in other areas
- Seeks solutions that could cost-effectively address needs in multiple areas
- Addresses ongoing trends and changes affecting the entire industry
- New England is well situated for interregional coordination, given the seasonal diversity of demand in neighboring regions, especially the winter-peaking Canadian provinces

As the New England power system becomes dual-peaking in the mid-2030s, diversity of demand will diminish, and a well-coordinated interregional system will become even more crucial



Reliability standards
for bulk electric
system in North
America

Basic criteria for design
and operation of bulk
power system in New
York, New England,
Ontario, Quebec, New
Brunswick, and Nova
Scotia

Reliability Standards Guide Regional Planning



Reliability standards for
New England area pool
transmission facilities



Northeast ISO/RTOs Planning Coordination Protocol

- ISO-NE, NYISO, and PJM follow the [Amended and Restated Northeastern ISO/RTO Planning Coordination Protocol](#) to enhance the coordination of their planning activities and address interregional planning issues
- The Joint ISO Planning Committee (JIPC) addresses interregional transmission planning issues, including system needs and proposed system improvements that reflect resource diversity, environmental compliance obligations, and resource retirements, in addition to the integration of distributed and variable energy resources
- The JIPC ensures that the interregional planning process actively engages stakeholders through the Interregional Planning Stakeholder Advisory Committee (IPSAC)
- With input from IPSAC, the JIPC develops the *Northeastern Coordinated System Plan* (NCSP) biannually

JIPC

Coordinates interregional planning activities

Facilitates resolution of issues related to the interregional planning process

Undertakes Sections 6* and 7** of the Planning Protocol

IPSAC

Allows for stakeholder review and input to coordinated interregional system planning activities

Provides input to JIPC activities under Sections 6 and 7 of the Planning Protocol

Allows for stakeholder review & modification to interregional coordination procedures reflected in Planning Protocol

*Periodic interregional assessment and system expansion planning studies

**Evaluating potential interregional transmission projects pursuant to FERC Order 1000

Identification & Evaluation of Potential Interregional Transmission Projects

Review of needs, solutions; identification of interregional projects by JIPC with input from IPSAC

Exchange of data and information

Identification of interregional project

Cost allocation upon approval from affected parties



Cost Allocation

- Cost allocation for interregional projects is determined according to joint operating agreements between each pair of Protocol Parties (e.g. ISO-NE and NYISO), consistent with the principles of cost allocation described in **FERC Order 1000***
- The rules to allocate the costs of interregional projects in a region do not have to be the same as the regional cost allocation rules
- The rules used to allocate the costs for interregional projects within each region can differ by region

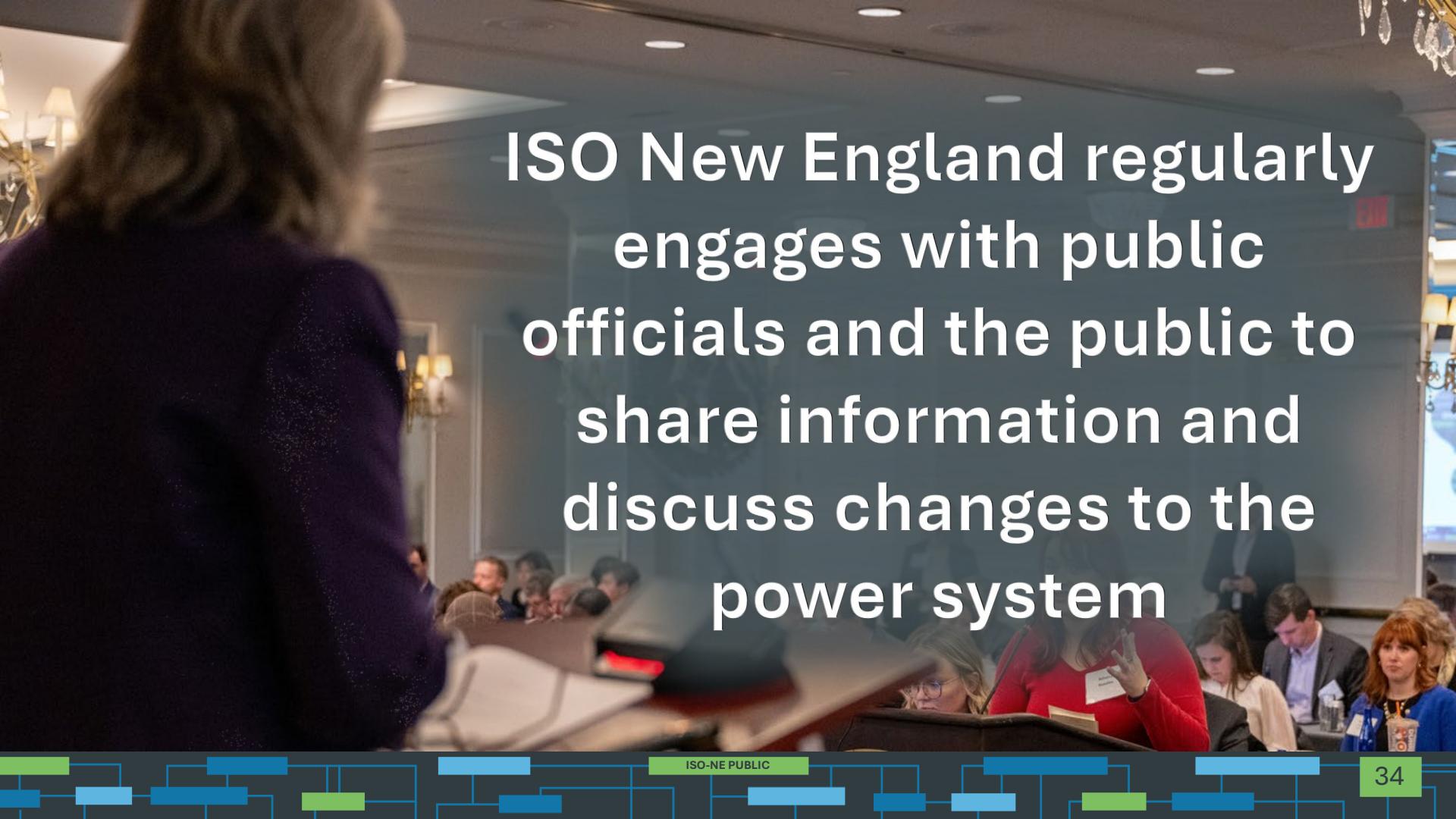


*[FERC Order 1000](#) established guidelines for intra- and interregional transmission planning and cost- allocation practices to: add a process where developers submit project proposals rather than the ISO leading the development of transmission solutions; add a transmission planning process to meet public policy objectives; and update existing interregional planning and transmission development protocols with neighboring power systems

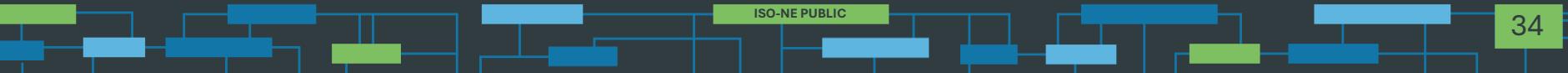


PUBLICATIONS & OPPORTUNITIES TO ENGAGE





**ISO New England regularly
engages with public
officials and the public to
share information and
discuss changes to the
power system**



An Ongoing Dialogue: ISO's External Affairs Team



Eric Johnson
Executive Director, External Affairs
New England



Carrick Heilferty
Policy Advisor
Federal Affairs



Ruben Flores-Marzan
Policy Advisor
Environmental & Community Affairs



Kerry Schlichting
Supervisor, State Policy
Connecticut and Rhode Island



Sarah Adams
Senior State Policy Advisor
Vermont



Melissa Winne
Senior State Policy Advisor
Maine



Marissa Ribeiro Dahan
State Policy Advisor
Massachusetts



Brendan Flaherty
State Policy Advisor
New Hampshire

Contact information: <https://www.iso-ne.com/about/contact/government-industry-affairs>



Opportunities to Engage and Learn More

Public Webinars

- ISO External Affairs periodically hosts informational **webinars** that are free and open to the public on topics such as recent ISO studies, including:
 - [Pathways Study](#)
 - [Future Grid Reliability Study](#)
 - [Overview of System Planning](#)
 - [FERC Order 2023](#)
 - [2050 Transmission Study](#)
 - [Economic Planning for the Clean Energy Transition](#)
 - [Annual Electric Generator Air Emissions Report](#)



Consumer Liaison Group Provides a Forum for Consumers to Learn about Regional Electricity Issues

- A forum for sharing information between the ISO and electricity consumers in New England
- The CLG Coordinating Committee consists of 14 members who are elected every two years
- Quarterly meetings are free and open to the public, with in-person and virtual options to participate

2026 CLG Meeting Dates and Tentative Locations:

- [Wednesday, March 25](#) – Vermont
- [Tuesday, June 2](#) – Western Massachusetts
- [Thursday, September 24](#) – Maine
- [Wednesday, December 2](#) – Boston, MA



[2024 CLG Annual Report](#)

More information on the CLG is available at: <https://www.iso-ne.com/committees/industry-collaborations/consumer-liaison/>



ISO Publications

Accessible webpages & fact sheets on key *initiatives*



Future Grid Reliability Study

2024 Regional Electricity Outlook

Introduction

The clean energy transition is accelerating, but there are challenges. The four pillars provide a framework for talking about what we need to get to a reliable clean energy future.

PILLAR ONE Clean Energy

PILLAR TWO Balancing Resources

PILLAR THREE Energy Adequacy

PILLAR FOUR Robust Transmission

The New England States have set ambitious decarbonization goals to combat climate change over the next several decades. The rapid electrification of heating and transportation will drive unprecedented demand for electricity, and the ongoing shift to variable, renewable resources will further transform the electric grid of the future.

ISO New England's Future Grid Reliability Study explores the region's decarbonization strategy. The study analyzes 32 scenarios, each a particular version of the 2040 grid. Innovative study analysis results for each scenario varied, reflecting the complex interactions between energy resources and the grid. The report also includes a detailed analysis of the results for each scenario, the expected outcomes, and the implications for the region's energy future.

The specific order of events during this transition will impact reliability. Existing oil and high-emission heating systems are likely to be electrified before natural gas. As natural gas prices rise, the region's fleet of electric vehicles rapidly expands. This transition will drive natural gas-fired resource use and continue the grid's reliance on natural gas and battery resources as a pathway toward a carbon-neutral future.

New England's electric power grid is undergoing a tremendous transformation. Public policy aimed at fighting climate change by



2025 New England Power Grid Regional Profile

A Major Energy Transformation Is Underway

The region's wholesale electricity marketplace is securing reliable electricity at competitive prices and helping usher in a cleaner, greener grid.

2000 Energy Resources

Resource	Share (%)
Hydro	37%
Oil	33%
Natural Gas	29%

2024 Energy Resources

Resource	Share (%)
Hydro	31%
Natural Gas	29%
Coal	19%
Biomass	11%
Wind	7%
Solar	2%

Charts show the amount of electricity produced by generators in New England and imported from other regions to satisfy on-reserve, commercial, and retail customer demand in New England. This is **Net Energy for Load Use**.

Looking to the Future

Battery storage technologies remain new resource proposals in the 2025 study.

Wind power new resource proposals continue to account for nearly half of the queue, more than double the 2024 queue.

Solar power is growing rapidly. ISO-NE forecast additional wind and solar new transmission proposals would provide significant amounts of clean or renewable energy in New England or Eastern Canada.

Timeline of Scenarios and Key Results

2019-2023 Peak demand occurs in the summer and varies 10% between a cold and warm summer.

Mid-2020s Peak electricity demand shifts to winter. Under existing power purchase agreement structures, a renewable resource portfolio of 100% by 2026 may be unviable within five years.

2040 An additional 100 GW of wind, solar, or battery storage will be needed for just 10% of the year.

2045 An additional 100 GW of wind, solar, or battery storage will be needed for just 10% of the year.

2050 Peak demand could vary 100% between a cold and warm winter.

Some resources required to meet peak demand may be for less than 1% of the year.

The region will need a power system that is around four times larger than it is today.

Reliability will be maintained through increased electrification, most state emissions goals, and maintain reliability.



Overview

The Economic Planning for the Clean Energy Transition (EPCET) study explores the operational, financial, and economic challenges the region would need to address to support the New England states' commitment to reduce carbon emissions over the next several decades. Most of the study's scenarios cut emissions by 80% from 2005 levels by the year 2050 through a shift to renewable energy and electrification of heating and transportation.

EPCET Identifies Trends in the Region

These trends include: a shift to more renewable energy, progress toward state decarbonization goals, and informed decision-making about spending and investment.

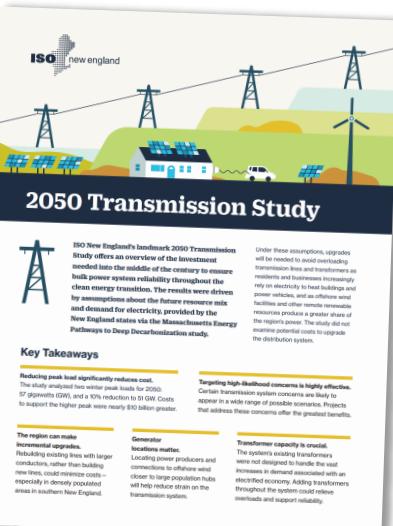
Key Takeaways

Reducing peak load significantly reduces costs. The study analyzed two winter peak loads for 2020: 57 gigawatts (GW), and a 5% reduction to 52 GW. Costs to support the higher peak were nearly \$10 billion greater.

Transformer load-balancing concerns are highly effective. Transformer load-balancing systems are likely to appear in a wide variety of distribution scenarios. Projects that address these concerns offer the greatest benefits.

Transformer capacity is needed. The system's existing transformers were not designed to handle the vast increases in load that will come as the electricity system grows. Adding transformers throughout the system could relieve overload and support reliability.

2024 EPCET Report Factsheet



2050 Transmission Study

ISO New England's landmark 2050 Transmission Study

ISO New England's landmark 2050 Transmission Study offers an overview of the investment needs into the middle of the century to ensure both power reliability and the clean energy transition. The results are informed by assumptions about the future resource mix and demand for electricity, provided by the New England states via the Massachusetts Energy Pathways to Deep Decarbonization study.

Key Takeaways

Under these assumptions, upgrades will be needed to avoid overloading transmission lines and transformers as renewable energy and electric vehicle usage rely on electricity to heat buildings and power transportation, and as efficiency and storage technologies allow more renewable resources produce a greater share of the region's power. The study did not include the costs to upgrade the distribution system.

2050 Transmission Study Factsheet

For More Information



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[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



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www.iso-ne.com/social

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



GET IT ON
Google Play

Download on the
App Store



Questions



About the Presenter



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