



Commonwealth of Massachusetts

Executive Office of
Energy and Environmental Affairs

Advancing the Commonwealth's Affordability, Reliability, and Clean Energy Priorities through Interstate Coordination and Regional Collaboration

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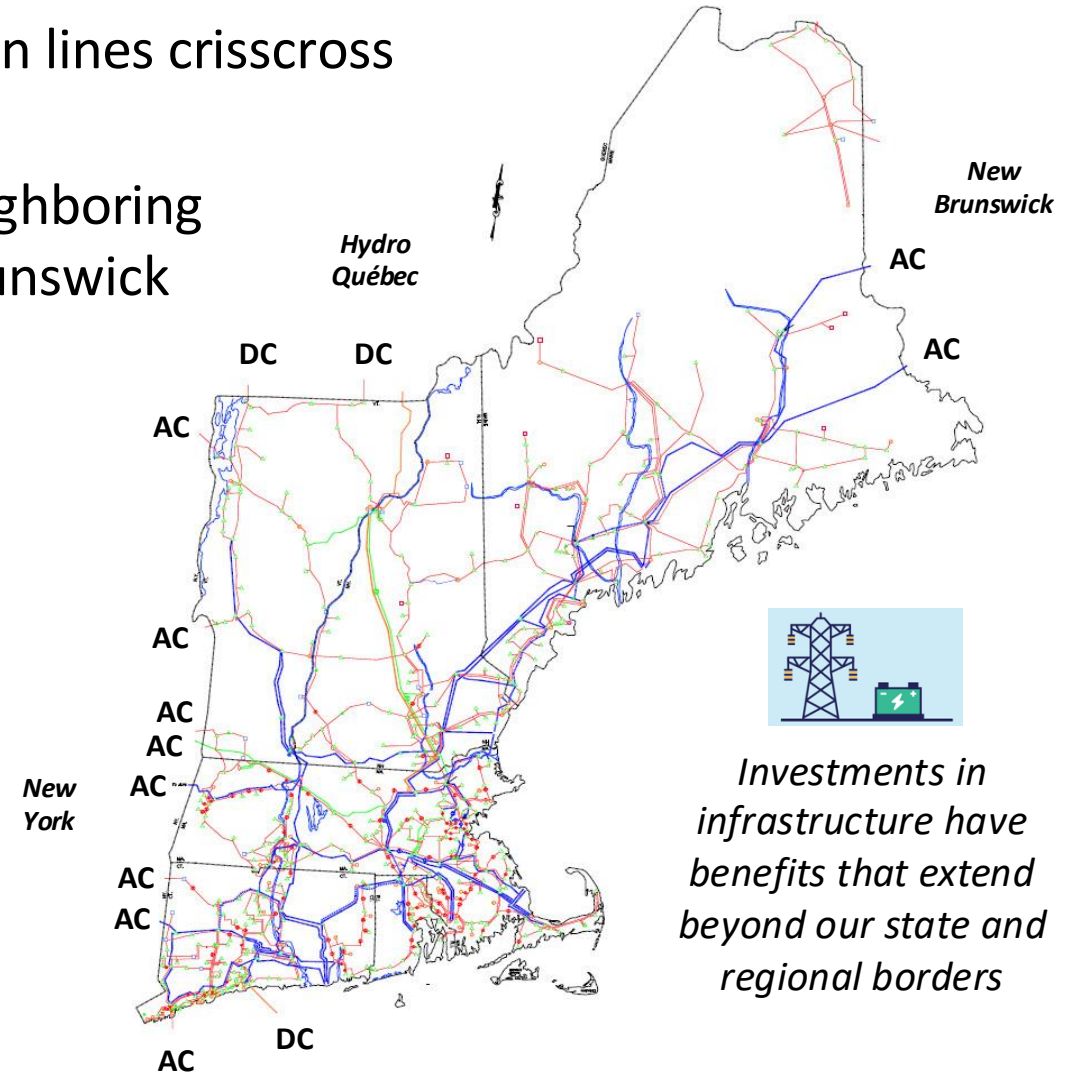
January 7, 2026





Massachusetts Is Not an Energy Island – It Shares a Regional Grid and Is Connected to Neighboring Power Systems

- More than **9,000 miles** of high-voltage transmission lines crisscross the New England region
- **13 transmission lines** connect New England to neighboring power systems in New York, Québec, and New Brunswick
 - **9%** of the region’s energy needs were met by imports of power in 2024
- Nearly **400 generators** are connected to the high-voltage transmission system with roughly **30,000 MW** of total generating capacity
 - Region’s all-time summer peak demand for electricity set in August 2006 at **28,130 MW**
- The flow of power over the high-voltage transmission system is managed by the region’s grid operator **ISO New England**



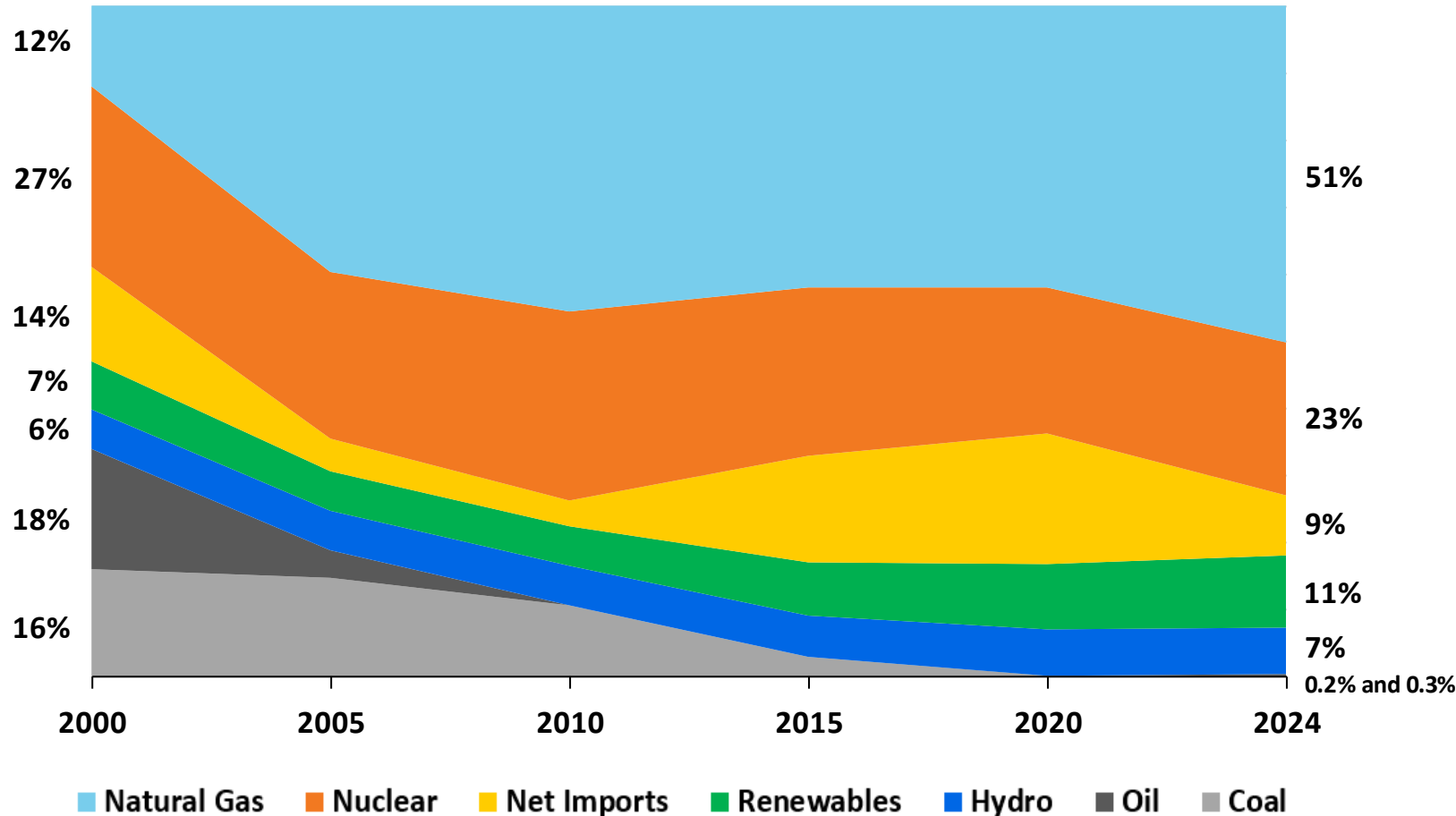


The Resource Mix Has Evolved Over Time, and It's Expected to Change Dramatically Over the Next Few Decades

Annual Electricity Use
125,394 GWh

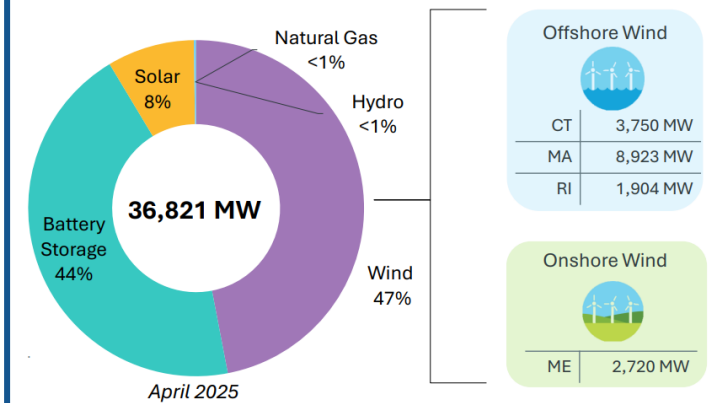
Sources of Electricity in New England

Annual Electricity Use
116,813 GWh



What Resources May Be on the Horizon?

*State greenhouse gas reduction mandates, clean energy requirements, and competitive procurements are driving a dramatic shift in the resources seeking interconnection to the New England electric grid**



*Note: ISO-NE is implementing major interconnection reforms.

Source: <https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/net-ener-peak-load>

Source: ISO-NE Interconnection Request Queue (April 2025)
<https://www.iso-ne.com/system-planning/interconnection-service/interconnection-request-queue/>



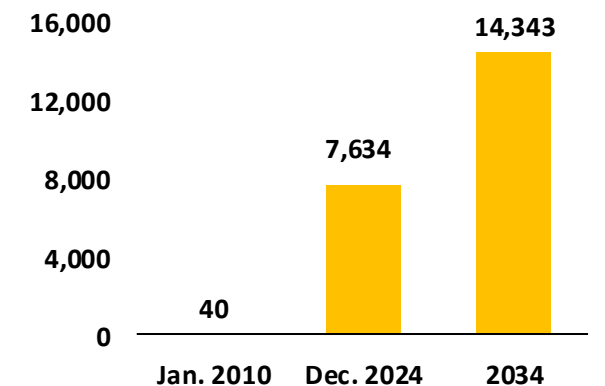
Massachusetts Continues to Invest in Solar Photovoltaic (PV) Resources to Advance its Priorities

- Massachusetts has seen **tremendous growth** in the adoption of solar
 - In 2006, there were fewer than **600 solar installations** across the Commonwealth, totaling approximately **4 MW** of installed capacity
 - Through December 2024, there were more than **200,000 solar installations** across the Commonwealth, totaling roughly **4,000 MW** of installed capacity
- The **Solar Massachusetts Renewable Target (SMART)** Program is the Commonwealth’s primary incentive program established to support the development of cost-effective solar in Massachusetts
- Each year, working with state officials and utilities across the region, ISO New England develops a solar PV forecast to account for the growth of distributed solar in its long-term planning

December 2024 Solar PV Installed Capacity (MW_{ac})

State	Installed Capacity (MW _{ac})	No. of Installations
Massachusetts	4,019	206,118
Connecticut	1,289	106,620
Maine	1,053	12,100
Vermont	529	22,166
Rhode Island	465	25,395
New Hampshire	280	24,706
New England	7,634	397,105

Cumulative Growth in Solar PV through 2034 (MW_{ac})



Sources:

<https://www.mass.gov/solar-information-programs>

https://www.iso-ne.com/static-assets/documents/100021/2_2025_final_pv_forecast.pdf

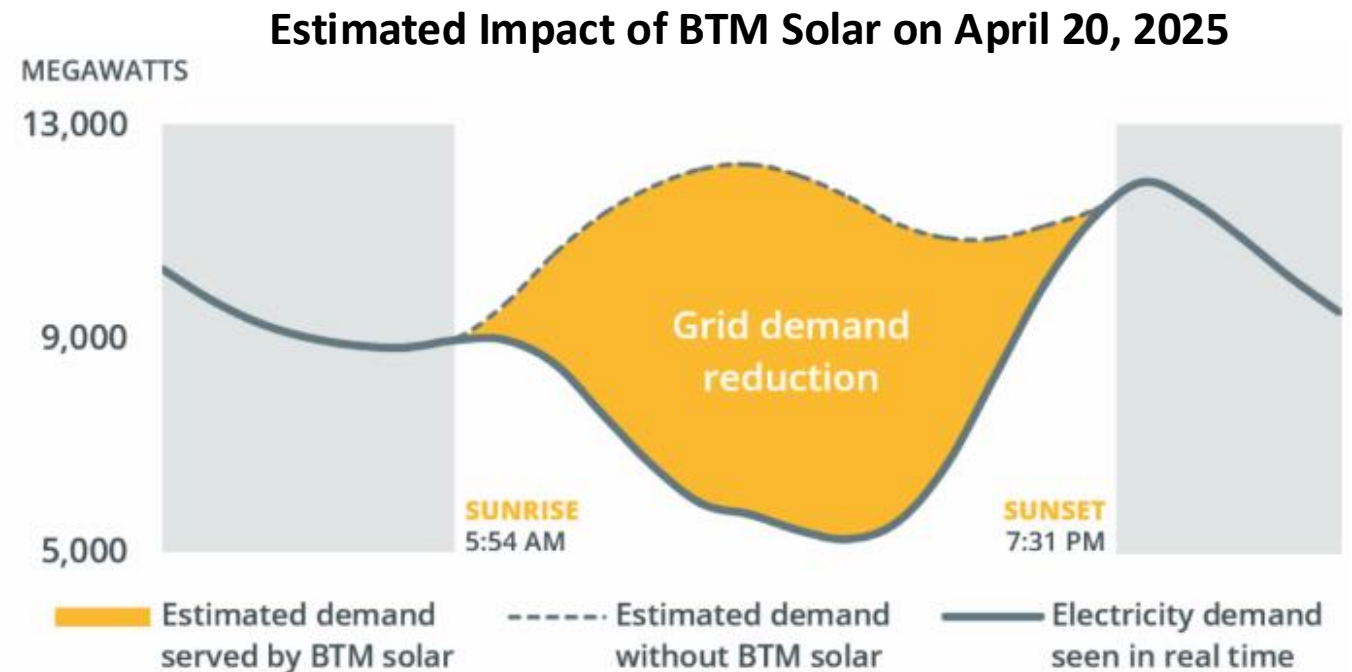
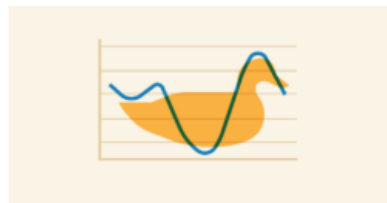


Investments in Solar Are Having a Significant Impact on the Regional Power System

- New England saw record low demand for electricity, due in large part to production from distributed, behind-the-meter (BTM) solar resources, on **April 20, 2025**
- On this day, demand for electricity from the bulk power system was lowest during the **afternoon hours** – not during the overnight hours – hitting an all-time low of **5,318 MW**
- Production from BTM solar resources on this day was estimated to be more than **5,000 MW** throughout much of the afternoon
 - Without contributions from BTM solar resources, ISO New England estimated that demand would have been twice as high

Why do they call it the “duck curve”?

Well...

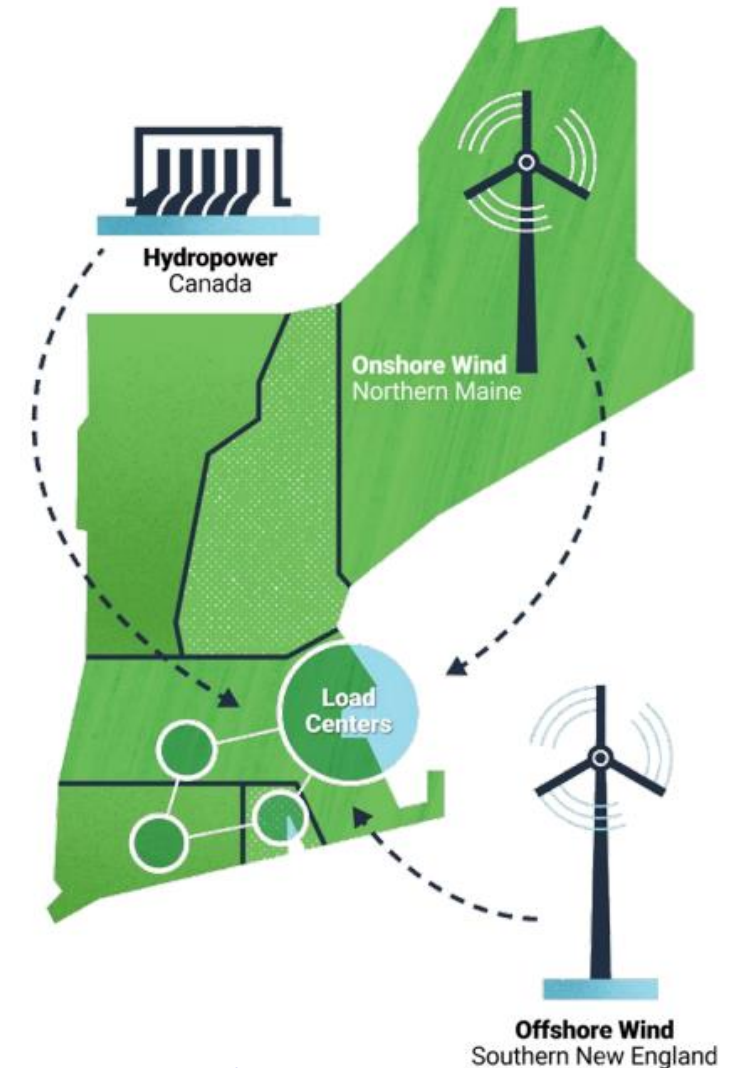


Source: <https://isonewswire.com/2025/09/17/regions-100th-duck-curve-day-migrates-to-early-fall/>



New England Must Invest in Transmission Infrastructure to Strengthen the Grid and Integrate Clean Energy Resources

- The transition to a cleaner grid depends on a **robust transmission system** capable of interconnecting significant additions of renewable energy and safely transmitting that energy to homes and business across New England
- Working with its state, regional, and federal partners, Massachusetts is laser focused on **actionable steps** to build out the region's transmission system to access offshore wind, onshore wind, and other clean energy resources
 - Funding through U.S. Department of Energy's Grid Innovation Program
 - Competitive solicitation(s) for transmission through ISO New England's new Longer-Term Transmission Planning (LTTP) process
 - Extensive coordination efforts through Northeast States Collaborative on Interregional Transmission





Longer Term Transmission Planning (LTTP) Reforms

- On **May 9, 2024**, following an extensive stakeholder process, ISO New England filed new transmission planning rules with the Federal Energy Regulatory Commission (FERC) that would allow states to operationalize longer-term transmission planning studies (e.g., the 2050 Transmission Study) through a regional transmission procurement process that ISO New England would administer
- On **July 8, 2024**, FERC approved ISO New England's new transmission planning rules, enabling the ISO to issue a competitive Request for Proposals (RFP) at the New England states' request to meet transmission system and policy-related needs decades into the future with cost allocation across the six-state region
 - 100% state-driven process designed to meet multiple transmission system and policy-related needs (e.g., reliability, market efficiency, clean energy integration) in a more holistic, forward-looking manner

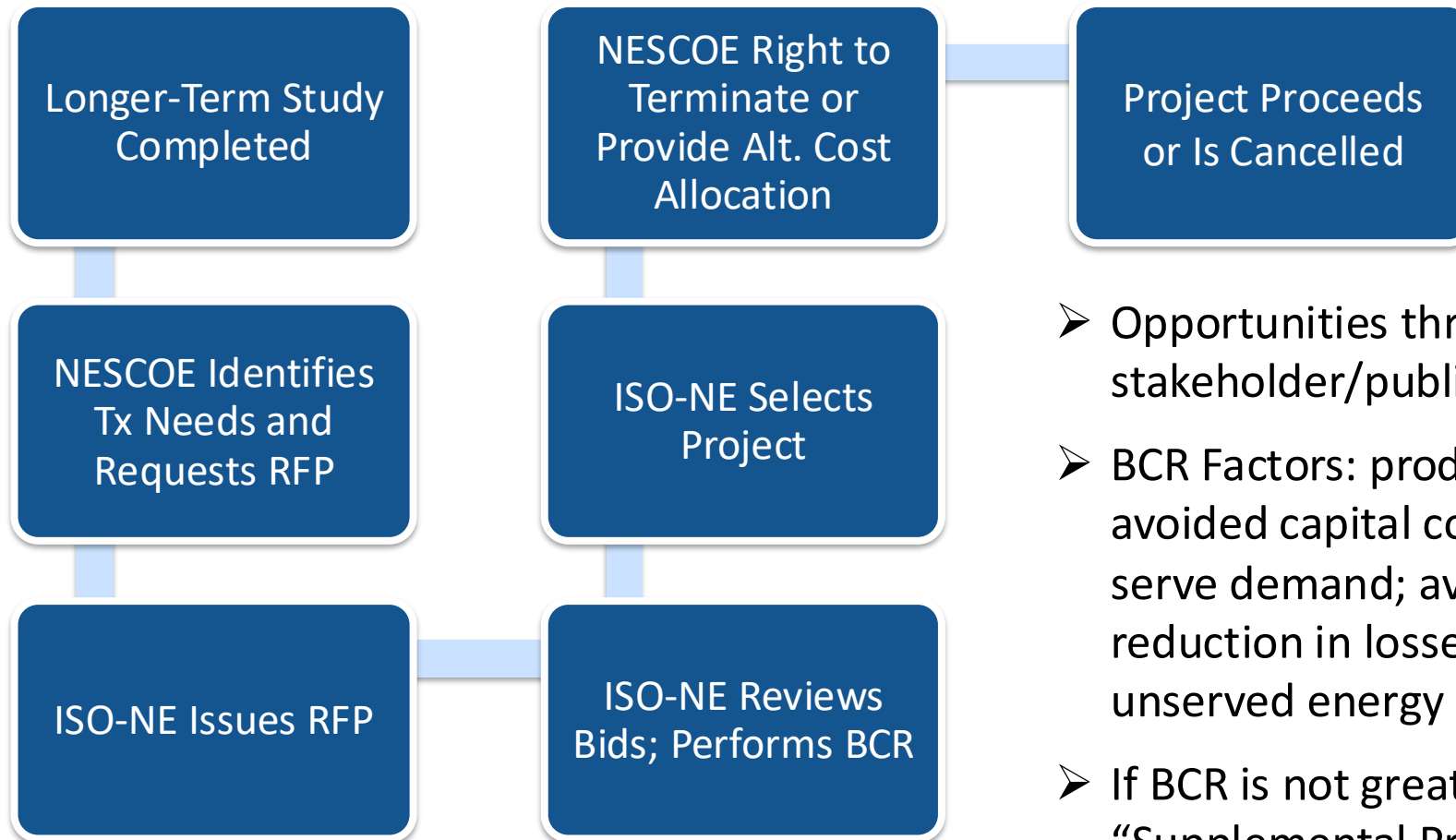


Sources:

https://www.iso-ne.com/static-assets/documents/100011/rev_to_att_k_longer-term_trans_planning_process.pdf

<https://www.iso-ne.com/static-assets/documents/100013/er24-1978-000.pdf>

Key Features of the LTTP Process

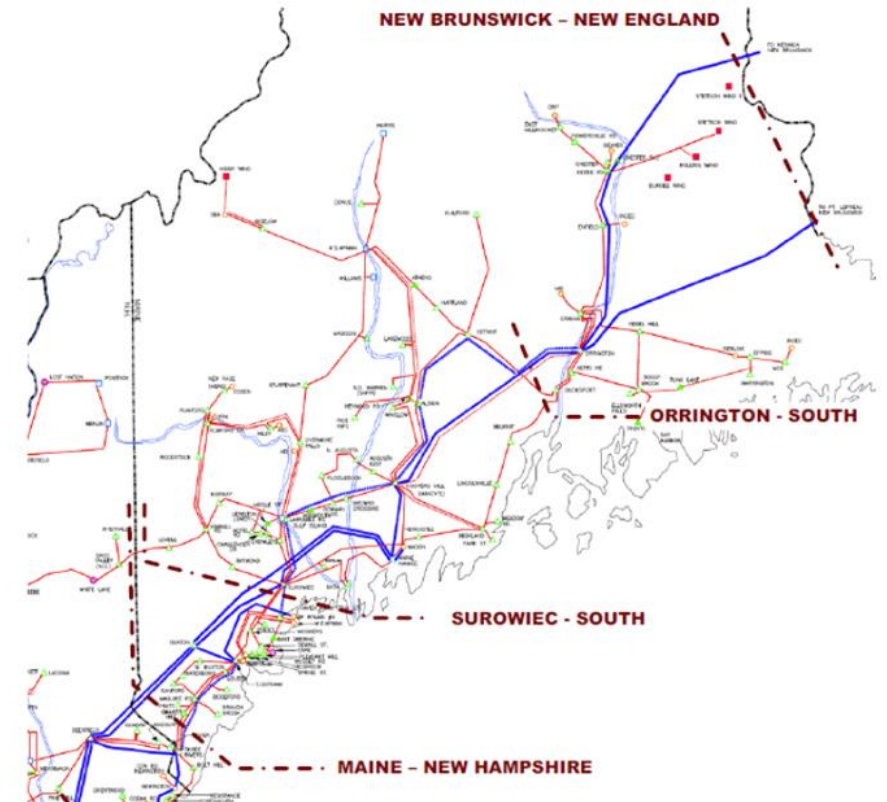


- Opportunities throughout the process for stakeholder/public engagement
- BCR Factors: production cost/congestion savings; avoided capital cost of local resources needed to serve demand; avoided transmission investment; reduction in losses; and reduction in expected unserved energy
- If BCR is not greater than 1.0, this triggers a “Supplemental Process” where states determine whether to move forward



Next Steps in the Current LTTP Process

- In February 2024, ISO New England completed the 2050 Transmission Study -- region's first-ever Longer-Term Transmission Study
- In July 2024, FERC approved ISO-NE's proposed Phase 2 LTTP tariff reforms
 - Allowing NESCOE to request that ISO-NE issue an RFP for new transmission infrastructure in connection with needs identified in a Longer-term Transmission Study
- In December 2024, NESCOE requested that ISO-NE issue its first-ever regional transmission RFP
- On March 31, 2025, ISO New England issued RFP
 - Upgrade two transmission interfaces (ME-NH, Surowiec-South)
 - Accommodate at least 1,200 MW of additional generation sources in ME
- Responses were due by September 30, 2025
- Project selection expected by September 30, 2026



Sources:

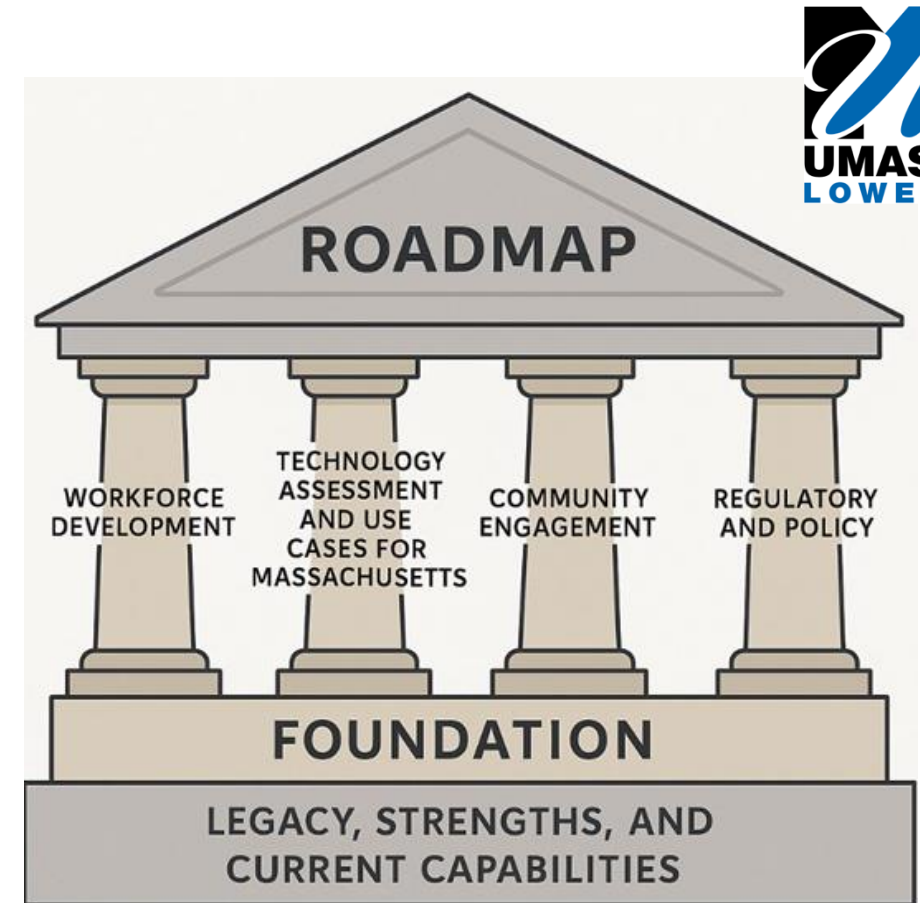
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<https://www.iso-ne.com/static-assets/documents/100013/er24-1978-000.pdf>



Massachusetts Partners with UMass Lowell on Development of an Advanced Nuclear and Fusion Energy Roadmap Report

- On November 2, 2025, the Healey-Driscoll Administration announced its partnership with the University of Massachusetts Lowell in developing an Advanced Nuclear and Fusion Energy Roadmap Report
 - The Roadmap will help guide state-level decision-making in the years ahead
 - Informational webinars in November and December 2025; stakeholder sessions in December 2025 and January 2026
 - Final report expected late Spring 2026



Sources:

<https://www.mass.gov/news/healey-driscoll-administration-to-launch-advanced-nuclear-and-fusion-energy-roadmaps-in-partnership-with-umass-lowell>

<https://www.uml.edu/sustainability/research/nuclear-roadmap.aspx>



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Questions?