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

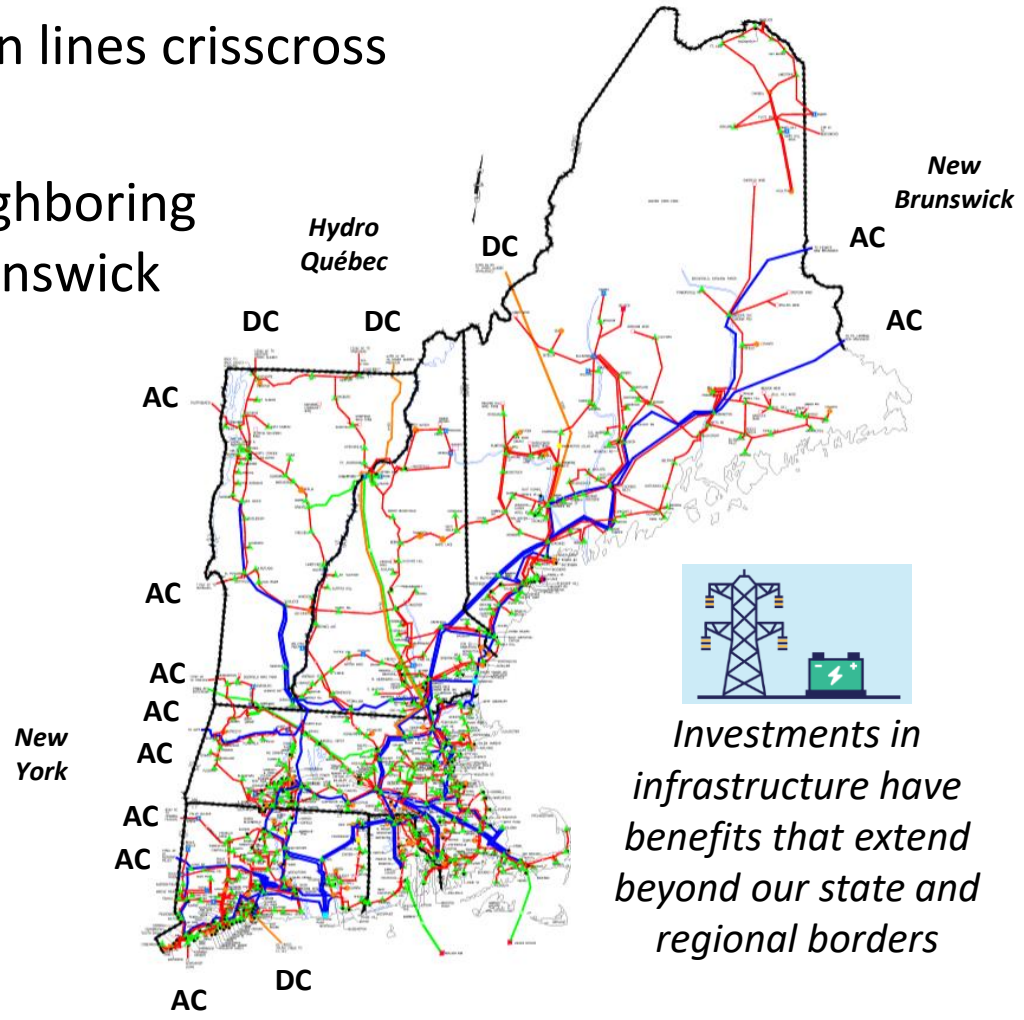
Mary Louise "Weezie" Nuara
Deputy Secretary for Federal and Regional Energy Affairs

October 28, 2026



Massachusetts 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
- **14 transmission lines** connect New England to neighboring power systems in New York, Québec, and New Brunswick
  - **7%** of the region's energy needs were met by imports of power in 2025
- Nearly **400 generators** are connected to the high-voltage transmission system with roughly **29,000 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**



Investments in infrastructure have benefits that extend beyond our state and regional borders

Sources: https://www.iso-ne.com/about/key-stats/transmission/ and https://www.iso-ne.com/about/key-stats/resource-mix/

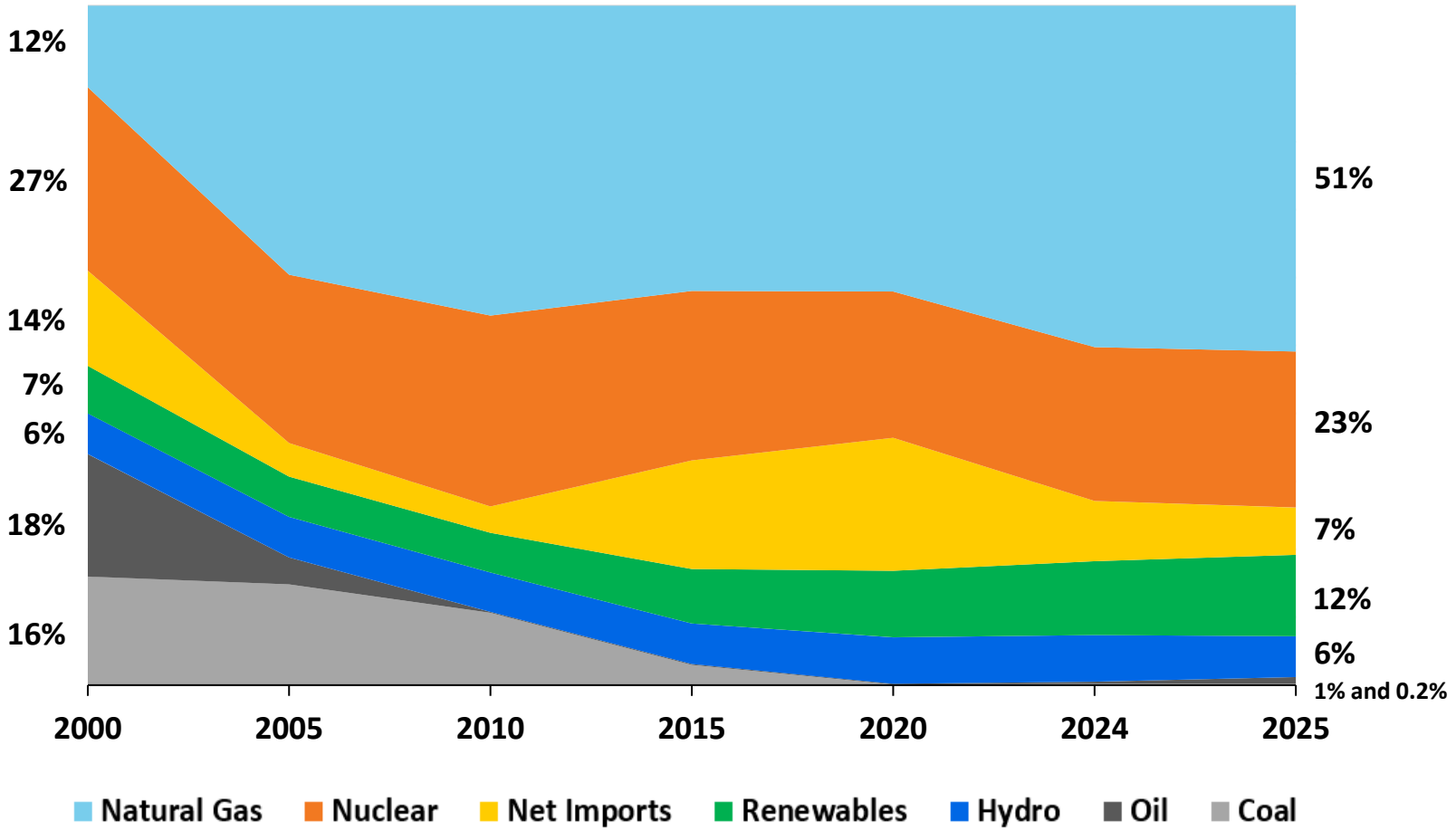
Source: https://www.iso-ne.com/about/key-stats/maps-and-diagrams

The Resource Mix Has Evolved Over Time, and It Will Continue to Change Over the Next Few Decades

Annual Electricity Use
125,394 GWh

Sources of Electricity in New England

Annual Electricity Use
117,262 GWh



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

What Resources May Be on the Horizon?

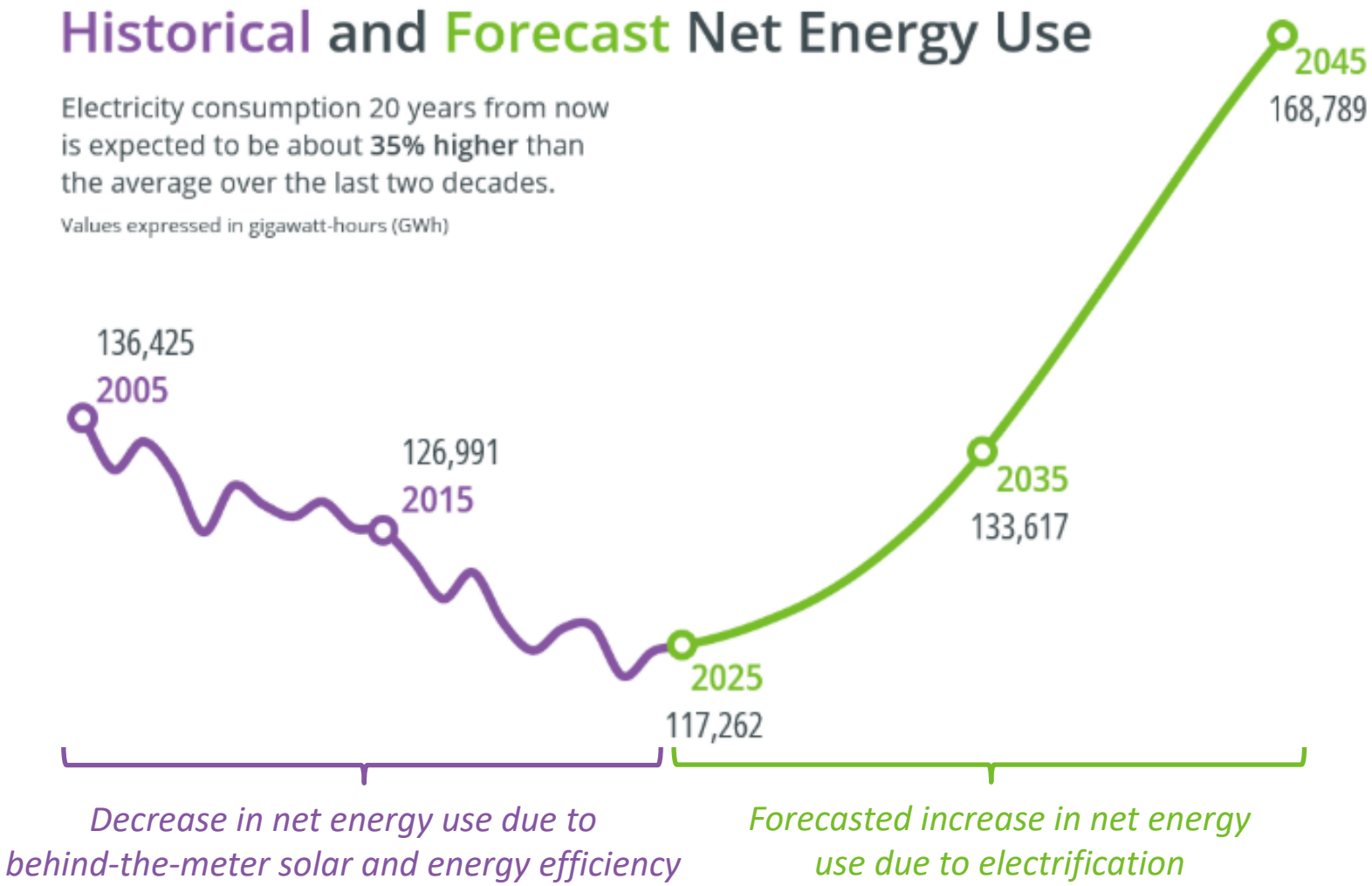
State decarbonization goals, clean energy requirements, and competitive procurements are driving a dramatic shift in the resources seeking interconnection to the New England electric grid.

ISO New England's Transitional Cluster Study, competed August 2026, consisted of 23 projects –

- 18 battery energy storage projects
- 2 offshore wind projects
- 2 solar projects
- 1 onshore wind project

Source: ISO-NE Transitional Cluster Study (August 6, 2026)
https://www.iso-ne.com/static-assets/documents/100038/tcs-final-report-non-ceii.zip

Electricity Consumption Is Expected to Increase, with Winter Peak Demand Expected to Double by 2045

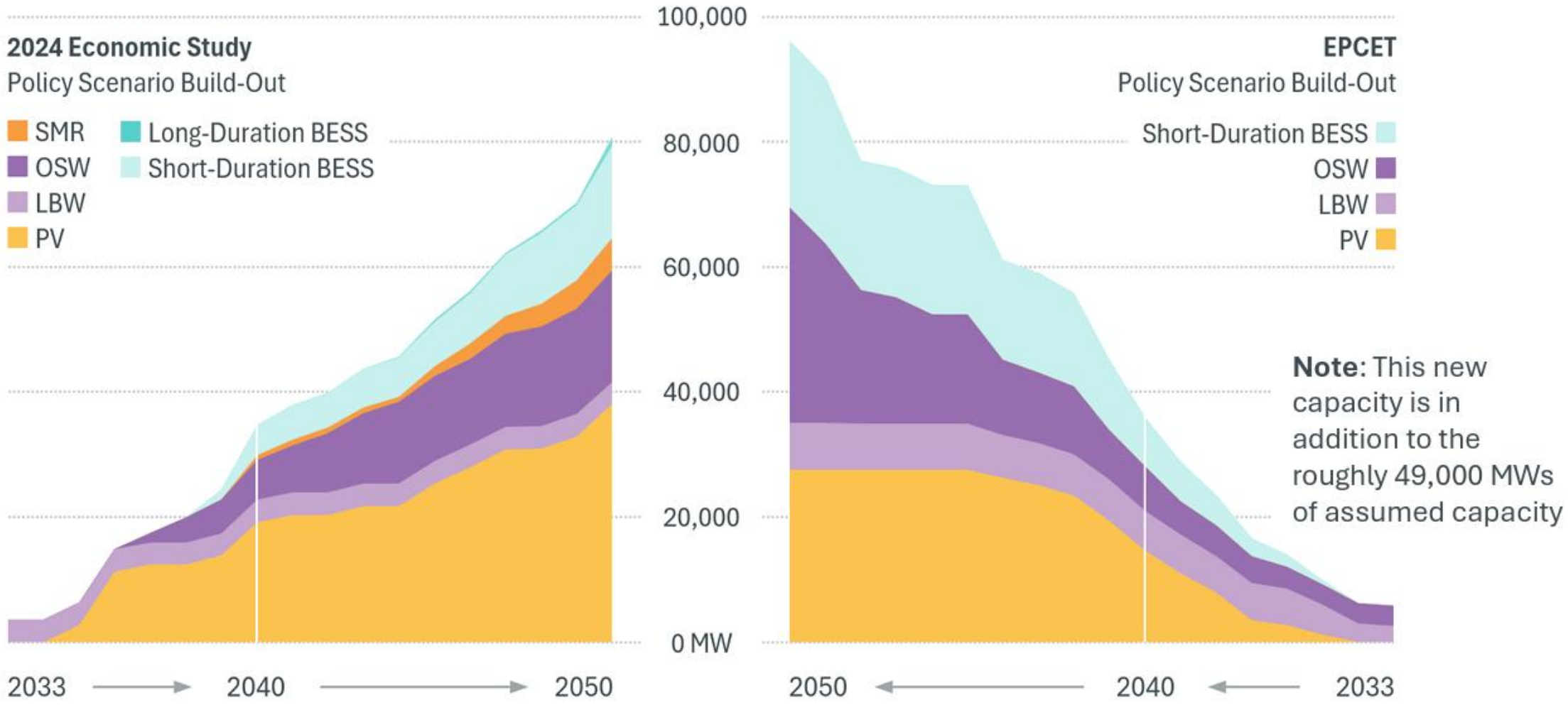


What About Peak Demand for Electricity?

- Today, New England is a summer-peaking system
- By the mid-to-late 2030s, ISO New England expects peak electricity demand to occur during the winter rather than the summer
- The highest winter peak to date was 22,818 MW on January 15, 2004

Source: https://isonewswire.com/2025/05/19/iso-ne-innovations-push-electricity-forecast-further-into-the-future/

Regional Studies Suggest Firm, Dispatchable Resources Could Reduce Capacity Build-Out Needed to Meet Demand and Achieve Goals



Sources:
https://www.iso-ne.com/static-assets/documents/100016/2024-epcet-report.pdf
https://www.iso-ne.com/static-assets/documents/100027/2024_economic_study_ne_evolving_grid.pdf

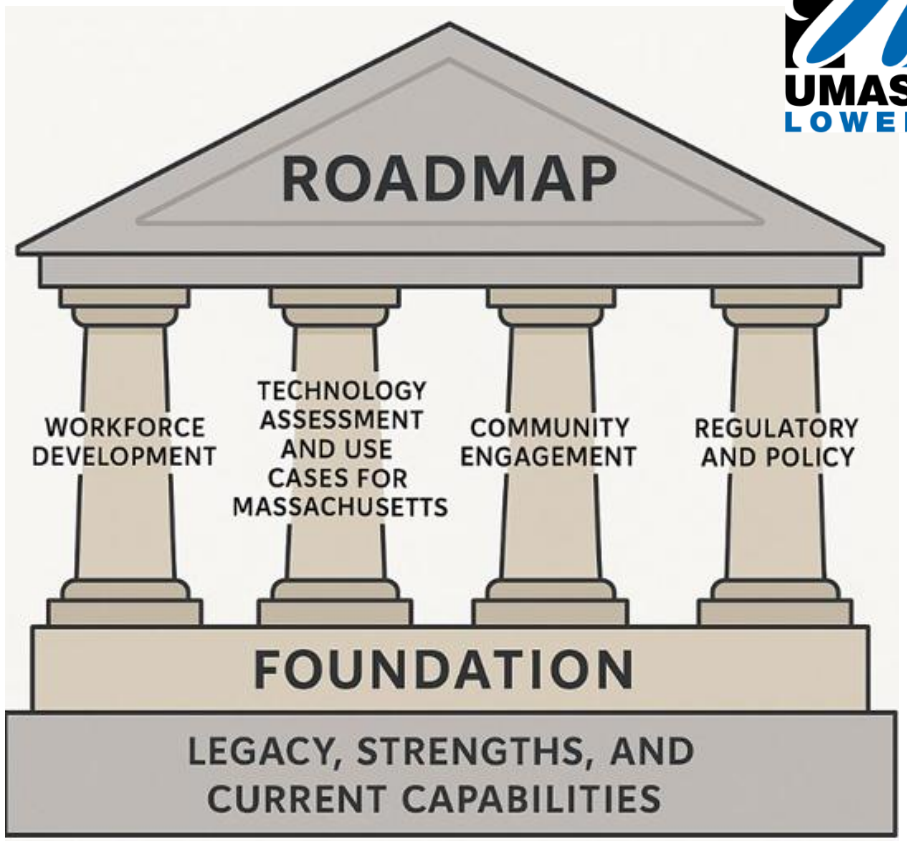
Governor Healey's Energy Affordability Bill Would Remove Barriers to the Consideration of Advanced Nuclear Technologies

- In May 2025, Governor Healey filed the ***Energy Affordability, Independence and Innovation Act*** to tackle rising energy costs, make Massachusetts more energy independent, and spark new innovation in the energy sector
- The bill would repeal the 1982 law that mandates that any proposed new nuclear power plant receive –
  - Approval by a majority of voters through a statewide ballot initiative
  - Approval by the General Court through a resolution adopted by the House and Senate, with findings related to the proposed facility
- No other proposed power generation source is subject to these requirements
- The bill would preserve the rigorous federal, state, and local approvals required through formal siting and licensing processes that include robust public participation

Sources:
https://www.mass.gov/info-details/the-energy-affordability-independence-and-innovation-act
https://www.mass.gov/doc/policy-brief-energy-affordability-independence-innovation-act-bringing-more-energy-into-massachusetts/download

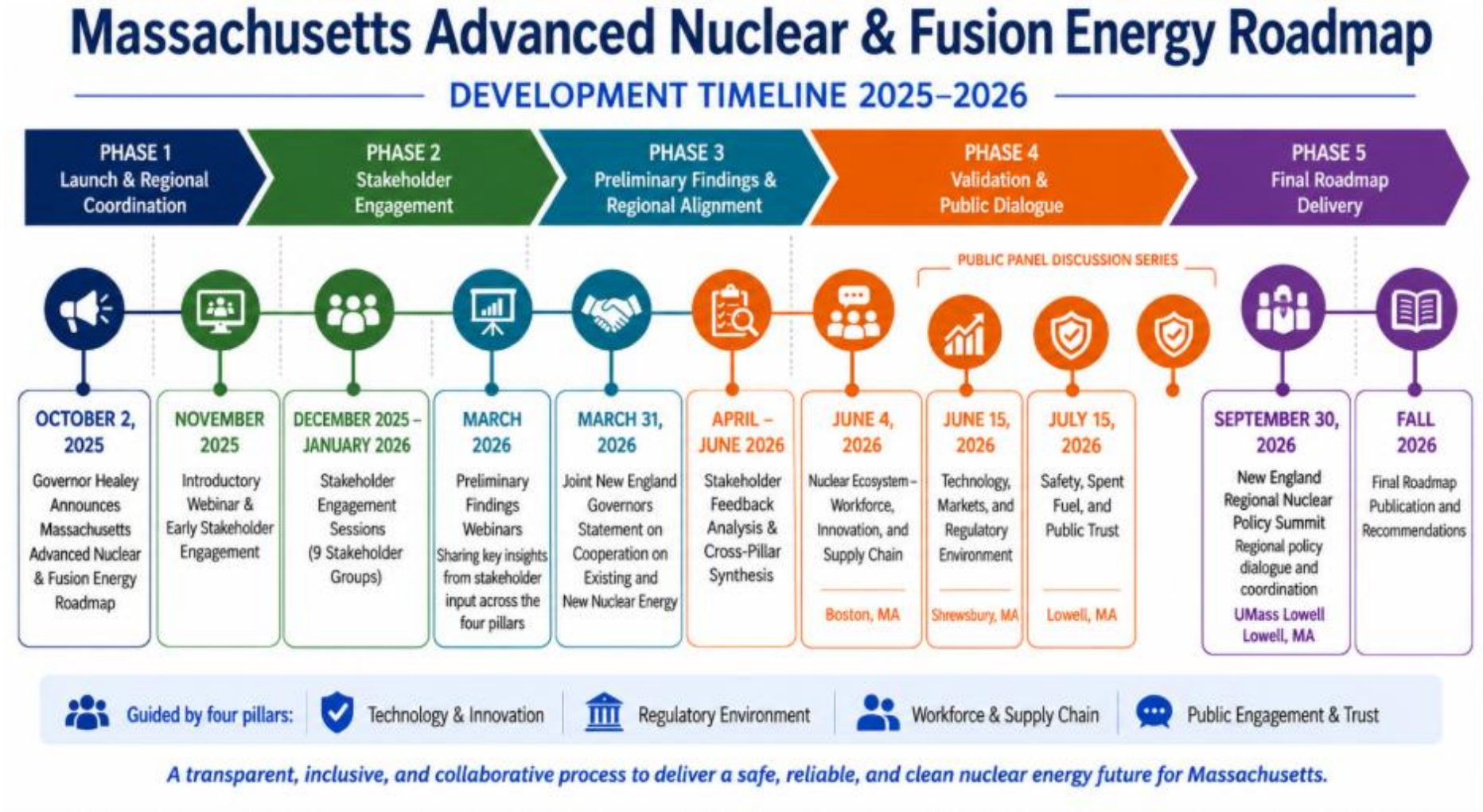
Massachusetts Partners with UMass Lowell on Development of an Advanced Nuclear and Fusion Energy Roadmap Report

- In October 2025, Governor Healey launched the **Advanced Nuclear and Fusion Energy Roadmap** development effort
  - Strategic framework for evaluating the potential role of advanced nuclear and fusion energy technologies in advancing Massachusetts' long-term energy security, economic development, and innovation objectives
- More than **1,000 participants** are helping shape the Roadmap, bringing together industry, academia, labor, government, and communities



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

The Roadmap Development Effort Has Followed a Structured, Iterative Process



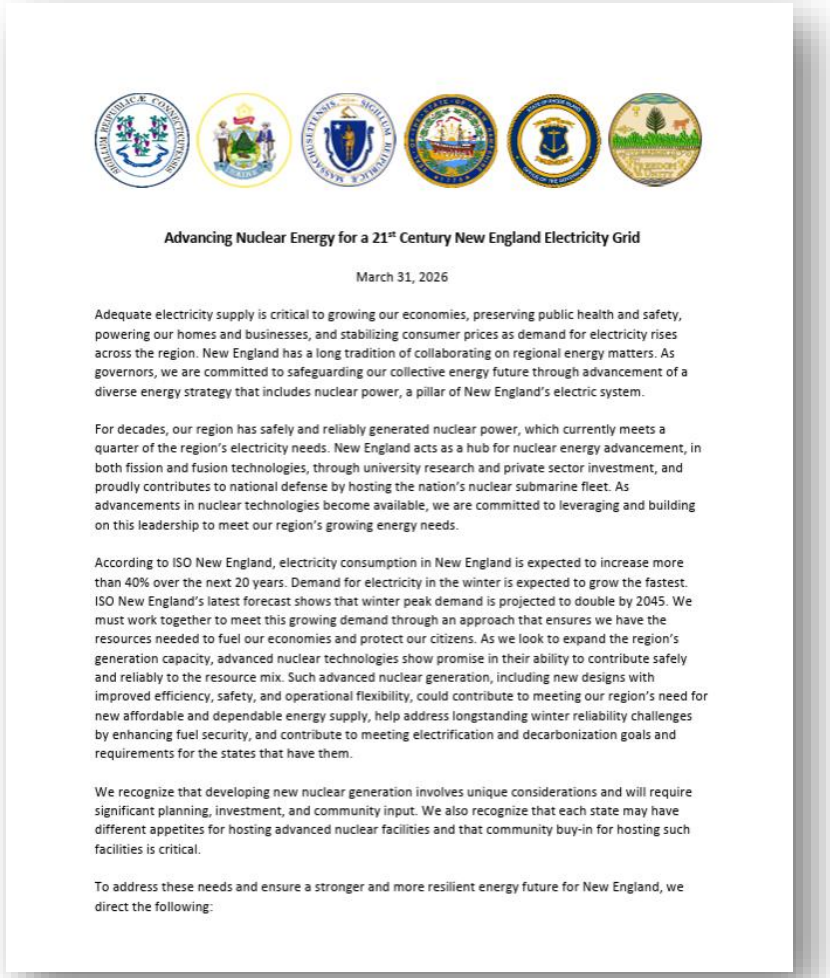
Source: https://www.uml.edu/sustainability/research/nuclear-roadmap.aspx

Massachusetts Possesses the Foundational Elements of a Nationally Competitive Advanced Nuclear and Fusion Energy Ecosystem

- New England was an early nuclear energy leader, with nine operating units by 1990, including two in Massachusetts
- UMass Lowell, MIT, and other institutions in Massachusetts offer **world-class academic, research and training programs** for those interested in the nuclear and fusion energy industry
- UMass Lowell and MIT both have research reactors, representing two of the 25 licensed research reactors in the country
- Massachusetts is also home to Commonwealth Fusion Systems, headquartered in Devens, where it is developing **commercial-scale fusion technology**
  - Commonwealth Fusion Systems is manufacturing highly specialized magnets on-site as it works to complete the first demonstration fusion machine by 2027, with plans to deploy a 400 MW commercial-scale fusion machine in Virginia by the early 2030s

The New England States Have a Long Tradition of Collaborating on Regional Energy Matters

- On March 31, 2026, the New England governors issued a **statement** calling for the continued safe, affordable, and reliable operation of the region's existing nuclear power plants and exploration of advanced nuclear and fusion energy technologies
  - The statement called on state energy offices to host a **regional convening** to share information and solicit input from regional stakeholders
- On September 30, 2026, the New England states hosted a **Regional Nuclear Summit** to examine the potential for advanced nuclear technologies to support long-term energy affordability, grid reliability, and economic competitiveness



Advancing Nuclear Energy for a 21st Century New England Electricity Grid

March 31, 2026

Adequate electricity supply is critical to growing our economies, preserving public health and safety, powering our homes and businesses, and stabilizing consumer prices as demand for electricity rises across the region. New England has a long tradition of collaborating on regional energy matters. As governors, we are committed to safeguarding our collective energy future through advancement of a diverse energy strategy that includes nuclear power, a pillar of New England's electric system.

For decades, our region has safely and reliably generated nuclear power, which currently meets a quarter of the region's electricity needs. New England acts as a hub for nuclear energy advancement, in both fission and fusion technologies, through university research and private sector investment, and proudly contributes to national defense by hosting the nation's nuclear submarine fleet. As advancements in nuclear technologies become available, we are committed to leveraging and building on this leadership to meet our region's growing energy needs.

According to ISO New England, electricity consumption in New England is expected to increase more than 40% over the next 20 years. Demand for electricity in the winter is expected to grow the fastest. ISO New England's latest forecast shows that winter peak demand is projected to double by 2045. We must work together to meet this growing demand through an approach that ensures we have the resources needed to fuel our economies and protect our citizens. As we look to expand the region's generation capacity, advanced nuclear technologies show promise in their ability to contribute safely and reliably to the resource mix. Such advanced nuclear generation, including new designs with improved efficiency, safety, and operational flexibility, could contribute to meeting our region's need for new affordable and dependable energy supply, help address longstanding winter reliability challenges by enhancing fuel security, and contribute to meeting electrification and decarbonization goals and requirements for the states that have them.

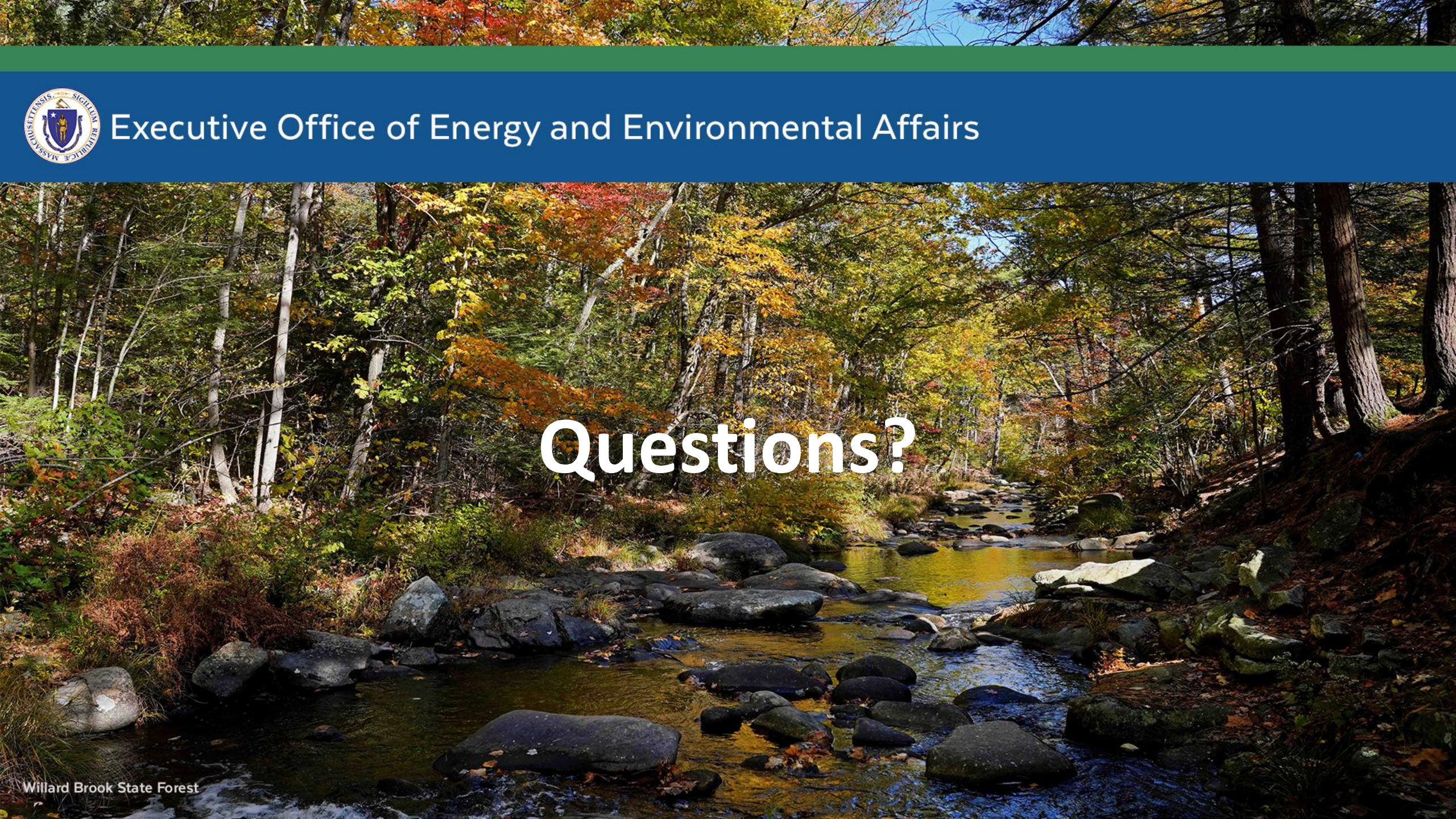
We recognize that developing new nuclear generation involves unique considerations and will require significant planning, investment, and community input. We also recognize that each state may have different appetites for hosting advanced nuclear facilities and that community buy-in for hosting such facilities is critical.

To address these needs and ensure a stronger and more resilient energy future for New England, we direct the following:

Sources:
https://www.mass.gov/doc/new-england-governors-nuclear-statement/download
https://www.mass.gov/news/healey-driscoll-administration-to-host-new-england-governors-nuclear-energy-summit

What's Next? Massachusetts Plans to Issue the Final Roadmap Report by the End of the Year

- Leverage Massachusetts' universities, skilled trades, advanced manufacturers, and innovation ecosystem to attract investment, grow supply chains, and accelerate commercialization
  - Massachusetts can leverage its 250,000+ manufacturing workers, skilled trades, and technology companies to capture growing national nuclear markets
- Modernize research reactors, expand testing and demonstration capabilities, and establish clearer regulatory pathways to support emerging technologies, including microreactors and fusion
- Expand collaboration with New England states, national laboratories, federal agencies, and industry to accelerate readiness and attract investment
- Strategic readiness today preserves Massachusetts' ability to evaluate advanced nuclear and fusion energy as potential solutions for the future


Executive Office of Energy and Environmental Affairs
Questions?
Willard Brook State Forest