

# System Planning for Electrification

*MSBA Story of Building Event*

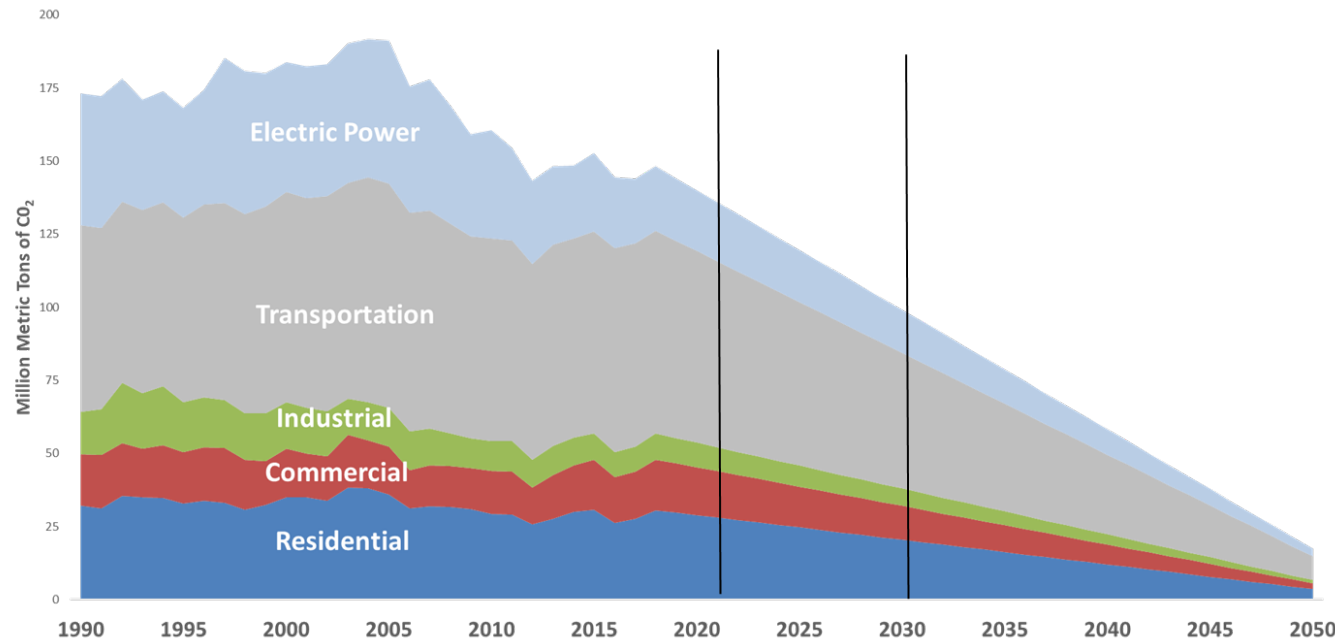
May 25, 2022

**How is Eversource going to accommodate the anticipated increased electrification of buildings?**

## Emission Reduction Targets Driving Broad Electric Supply and Demand Changes



Between now and 2030, New England needs a **30% reduction in CO2 emissions**



Electrification of transportation and heating driving **7% increase in peak demand per decade and 10% increase in energy demand per decade**



Significant supply additions to meet policy and demand targets, including replacing retirements

- 5,000+ MWs of offshore wind**
- 9,000+ MWs of solar generation**
- 3,000+ MWs of storage**
- 2,400+ MWs of hydro**

## Electrification: Transmission System Planning Perspective

### Regionally

- Anticipated impacts of electrification on state and regional electric energy and demand are included as part of the ISO-NE Capacity, Energy, Loads, and Transmission (CELT) forecast
  - For example, the 2022 Forecast includes
    - 1.9 GW of Heating Electrification by 2031
    - 1.5 GW of Transportation Electrification by 2031

### Federally

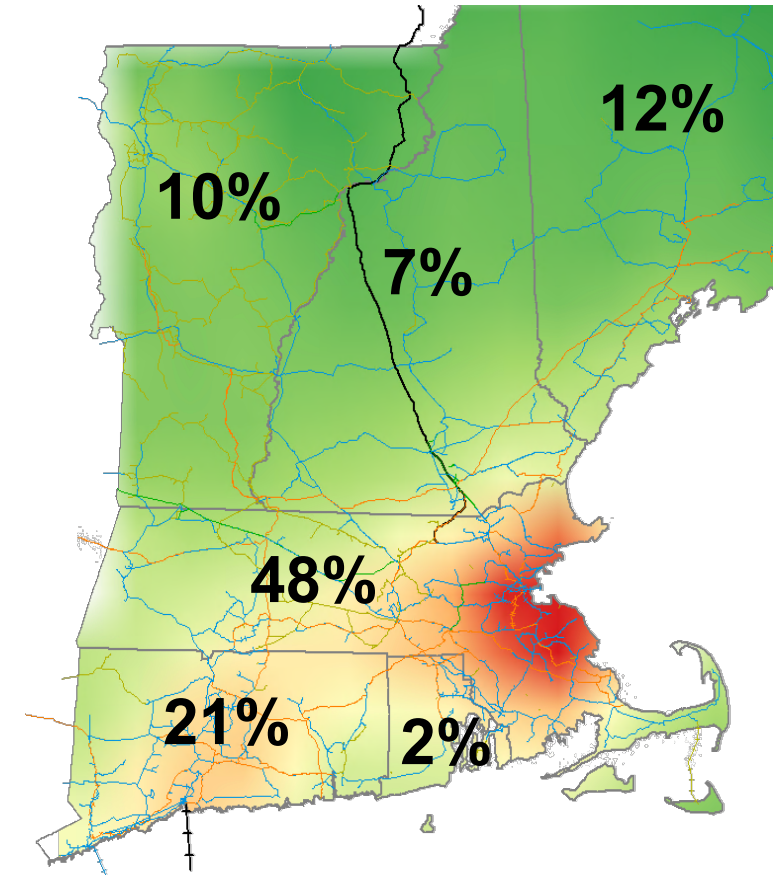
- Federal Energy Regulatory Commission pending Notice of Proposed Rulemaking on building for the future through regional transmission planning (Docket RM21-17)
  - Proposes to mandate studying Long-Term Scenarios that include federal, state, and local laws and regulations that affect demand, decarbonization, and electrification

### Locally

- Eversource Local System Planning already “Right-Sizing” projects for future system needs based on advanced long-range forecasting

## *Load Transition*

**22% increase in peak load by 2035**



*Heat map of peak load changes 2031 vs. 2035*

## Electrification: Distribution System Planning Perspective

- **Near Term**

- In the next 5-10 years, aggregate system demand likely to remain summer peaking
- Individual school interconnection is part of feeder planning and handled case-by-case
- Distribution system needs for school electrification aided by geographic dispersion of schools
- Most school projects within this horizon are expected to utilize available system margin
  - Average existing Substation ~20% below station limits in winter
- Distributed Energy Resources Capital Investment Projects (MA DPU Docket #20-75)
  - Eversource evaluated the electrification benefits of upgrades resulting from the provisional order

- **Long term**

- Demand expected to transition to winter peaking around 2030 or 2035
- Eversource is preparing for widespread electrification transition in various forums
- 2022 Rate Case (MA DPU Docket #22-22)
  - Performance Based Metrics to measure the Company's progress on its commitments
- Implementing an advanced metering infrastructure (AMI) tariff beginning with the implementation of a new customer information system

*We encourage you to collaborate with Eversource on your project early – we are here to help!*

**Jacob Lucas**

**Director – Transmission System Planning**

**860-726-4625**

**[Jacob.Lucas@Eversource.com](mailto:Jacob.Lucas@Eversource.com)**