



Somerville City Council Update

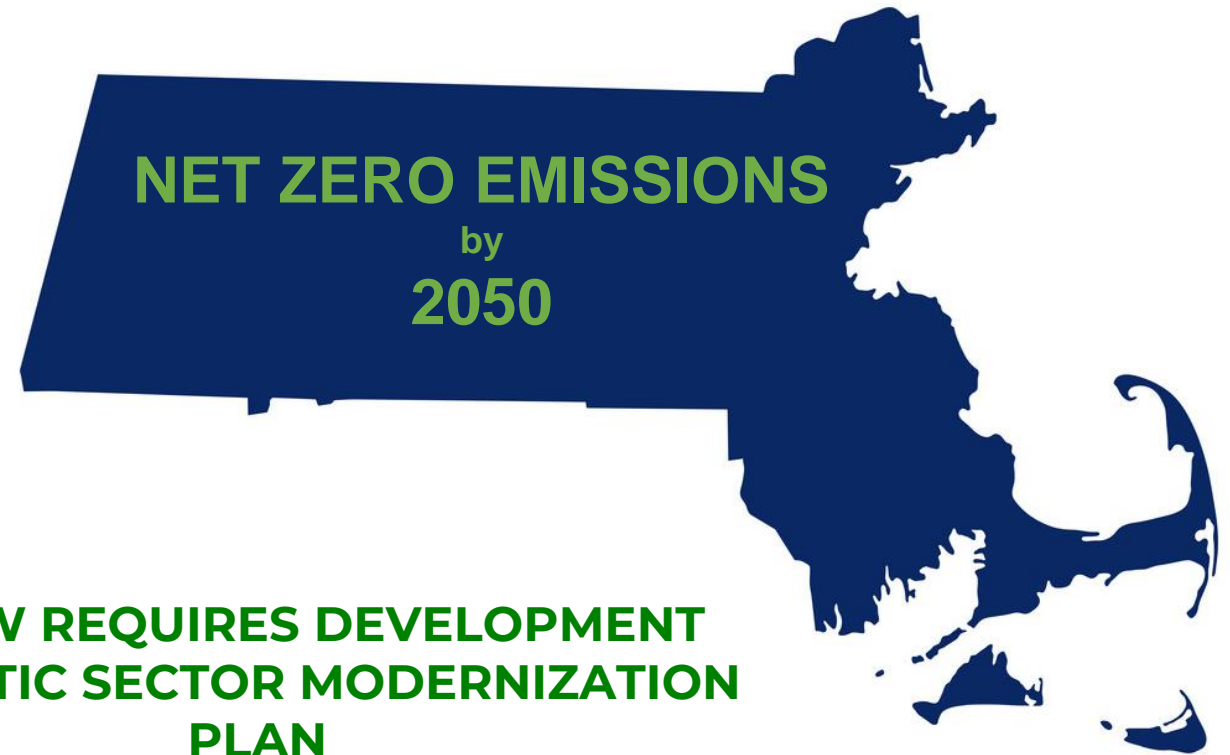
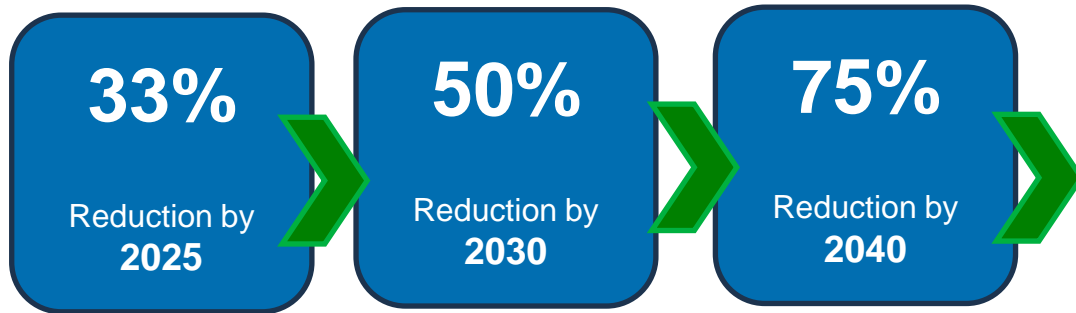


Agenda

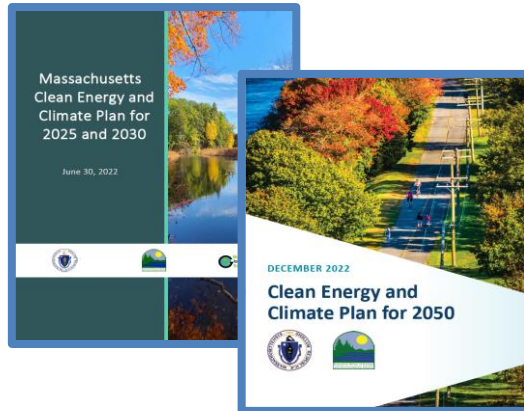
- Introductions
- Massachusetts' Clean Energy Goals
- Electric Sector Modernization Plan (ESMP)
- Demand Growth
- Projects Underway and Planned
- Outreach and Stakeholder Engagement
- Q&A

Massachusetts' Clean Energy Goals

MA LAW REQUIRES REDUCING GREENHOUSE GAS EMISSIONS

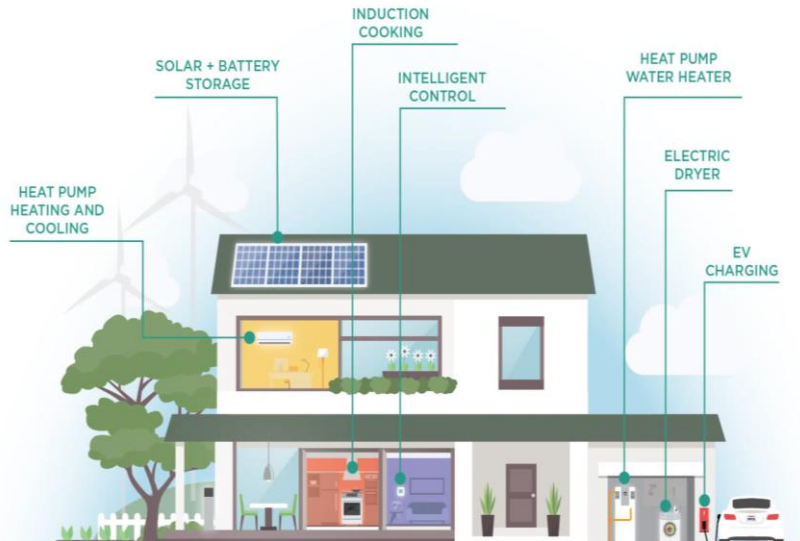











MA LAW REQUIRES DEVELOPMENT OF ELECTRIC SECTOR MODERNIZATION PLAN



2022 Climate Bill requires each Electric Distribution Company develop an **Electric-Sector Modernization Plan (ESMP)** to proactively upgrade the distribution and, where applicable, transmission systems to meet the Commonwealth's climate goals

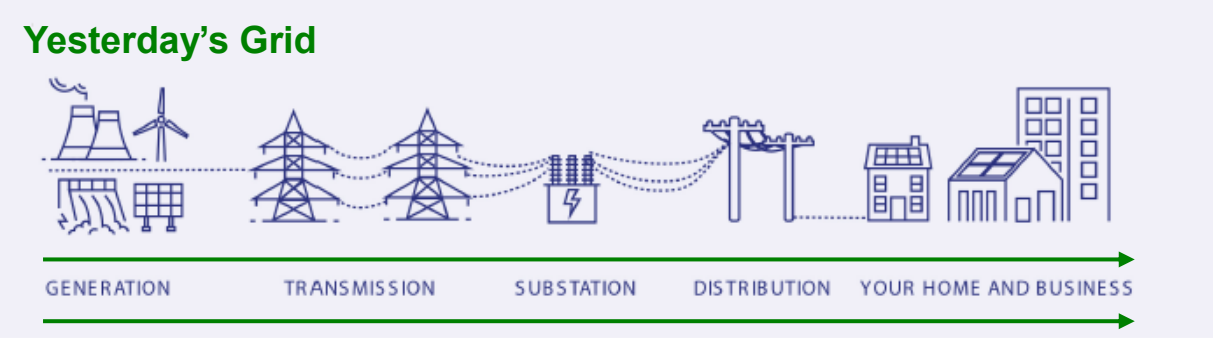
Home of the Clean Energy Future



	 Today	 Future	 Usage Changes
Heating 	Fossil Fuel	Heat Pump	+ 1,000 kWh per month during the winter months
Cooling 	Air Conditioner	Heat Pump	- 100 kWh per month during summer if home previously had central A/C.
Transportation 	Gas-Powered	Electric-Powered	+ 400 kWh per month, per vehicle
Household Appliances 			+ 100 kWh per month for induction cooking
Average Monthly Usage	~ 700 kWh	~ 1,400 kWh in summer ~ 2,400 kWh in winter	2-3x more household electric usage
 Rooftop Solar			On average, producing rooftop solar can help offset energy consumption by about 700 kWh per month.

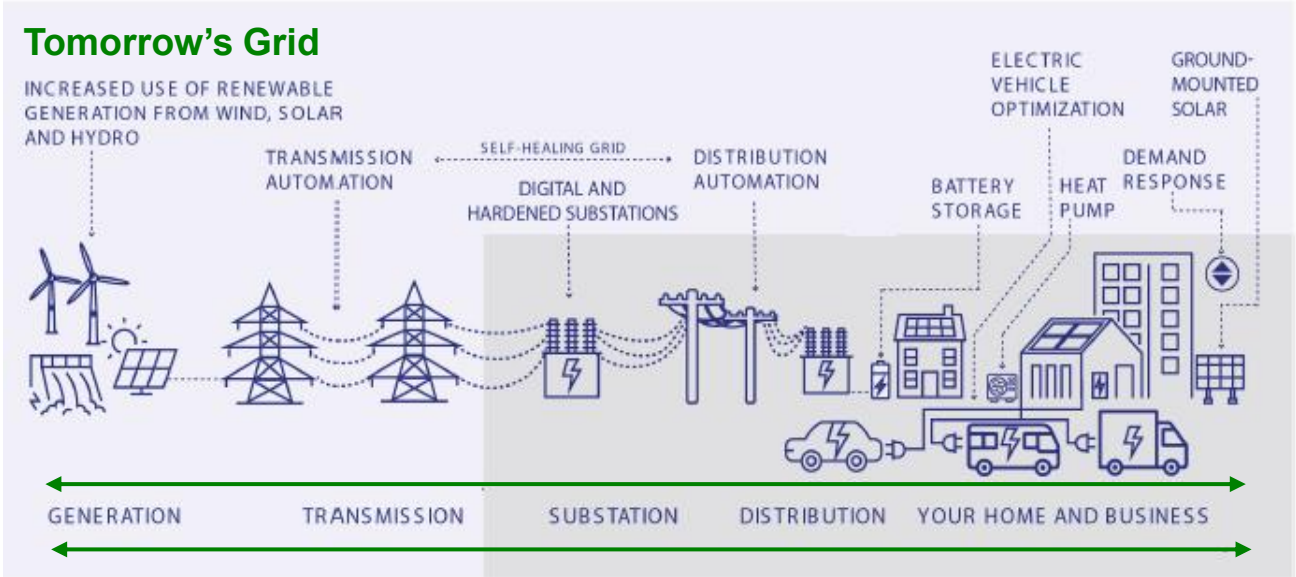
Solving for Increased Electric Demand

WHERE WE ARE



- Infrastructure Needed**
Requires an electric network buildout and upgrades at an unprecedented pace and scale, in collaboration with customers, communities, policymakers, and other stakeholders.

WHERE WE ARE HEADING



- Meaningful Engagement**
Those potentially impacted by this transition deserve to play a role in energy discussions that affect their lives



Key Drivers of the Net-Zero Goals

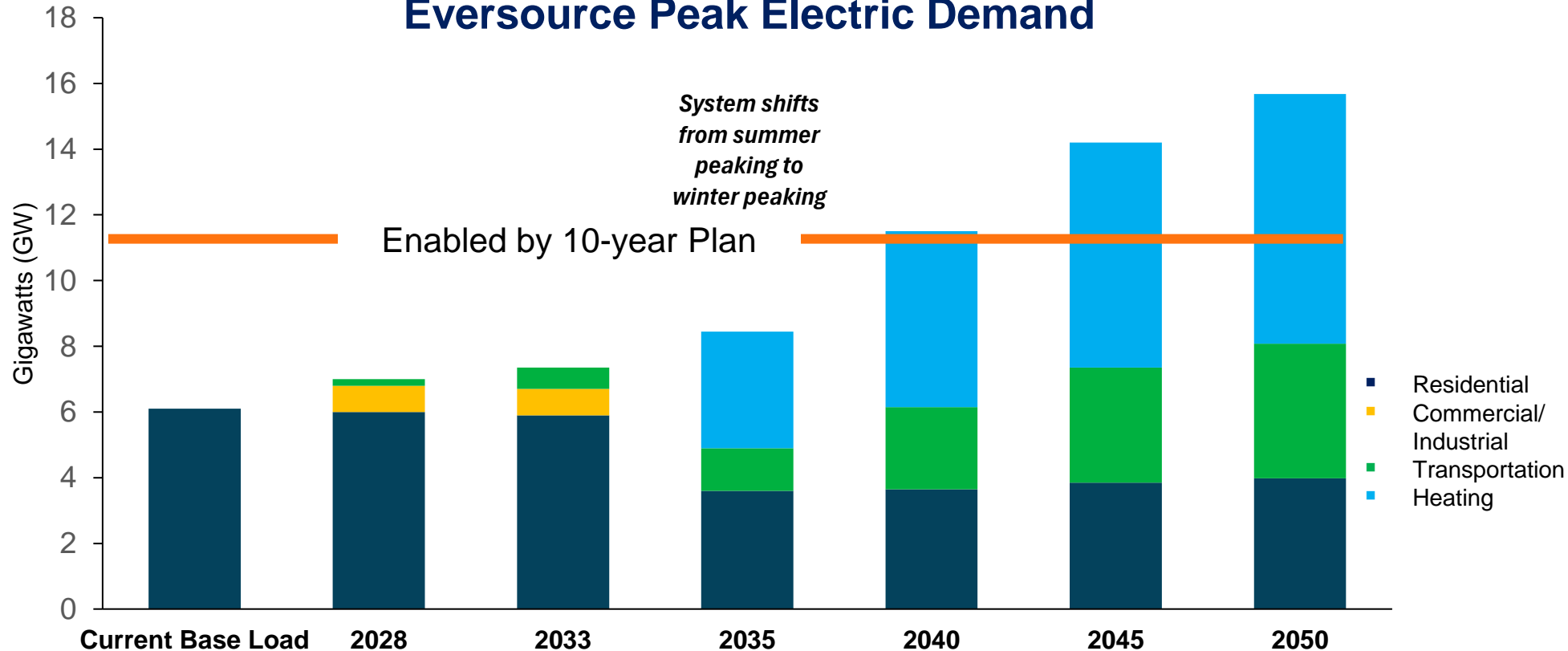


Electric vehicle adoption projected to add 1.3 GW of winter demand by 2035



Zero-carbon heating projected to add 3.5 GW of winter demand by 2035

Eversource Peak Electric Demand



What is a Gigawatt?

It's the equivalent of 100 million LED bulbs!

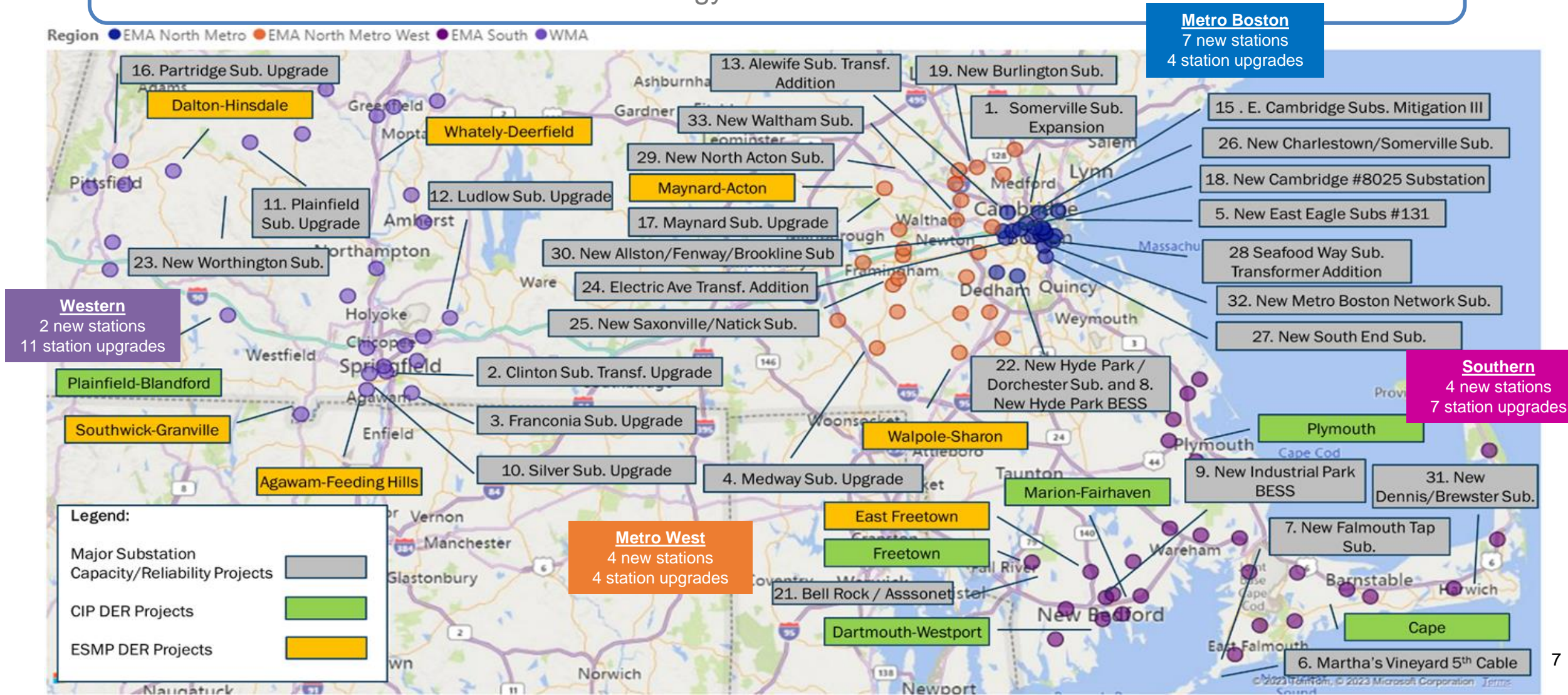


Source: [energy.gov](https://www.energy.gov)

Location of Major Capital Projects in the 10-Year Plan

Investments in 17 new clean energy hubs and upgrades to 26 over the next ten years will enable the clean energy future in Massachusetts

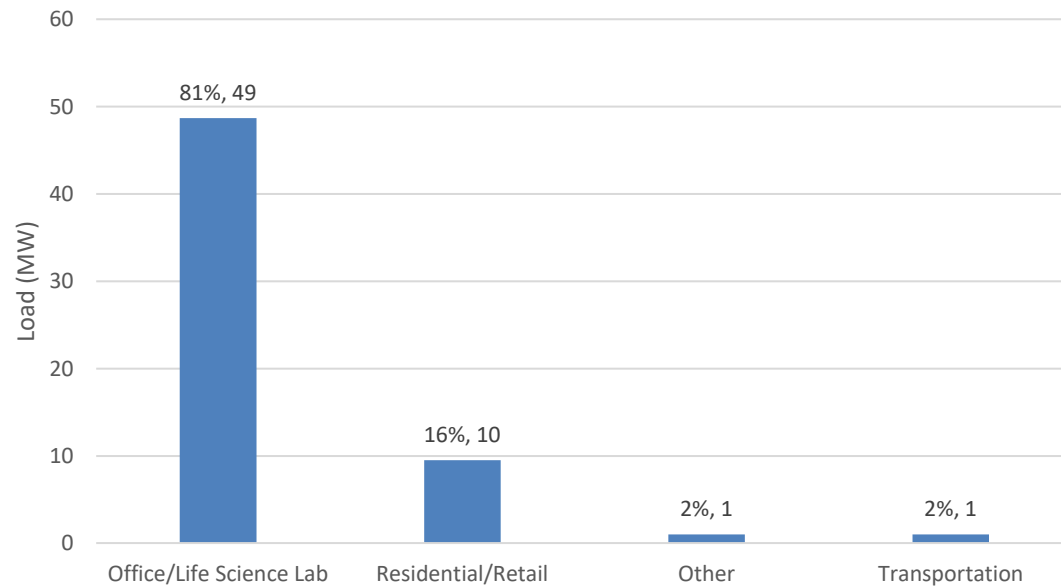
Region ● EMA North Metro ● EMA North Metro West ● EMA South ● WMA



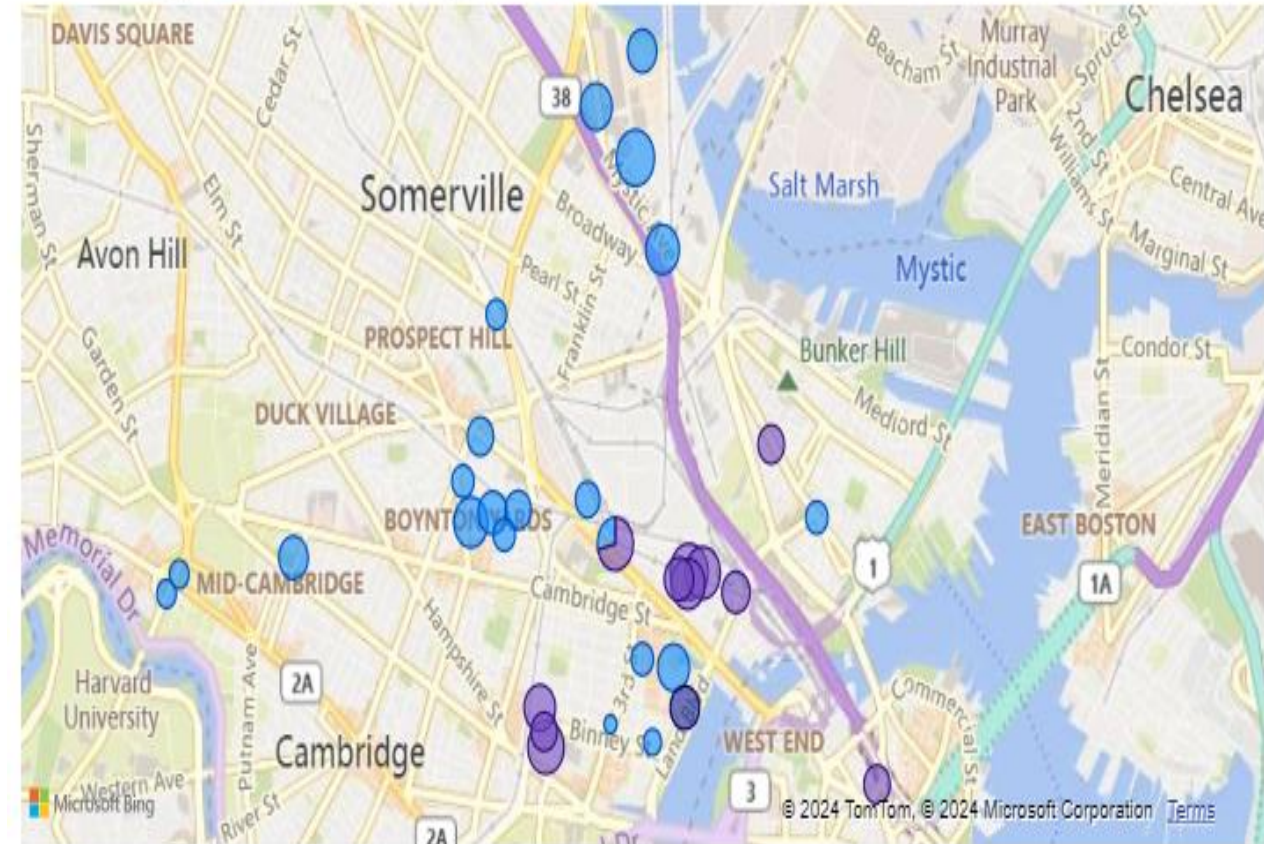
What's driving the near-term demand growth in Somerville?

- The Company is closely monitoring development in Somerville
- New Office blocks and life science building development at Assembly, Boynton Yards, and Union Square make up 81% of 60MW of new load in Somerville city proper

Large Customer Categories for Step Loads to 2030



Customer Type ● Commercial Expansion ● New Commercial

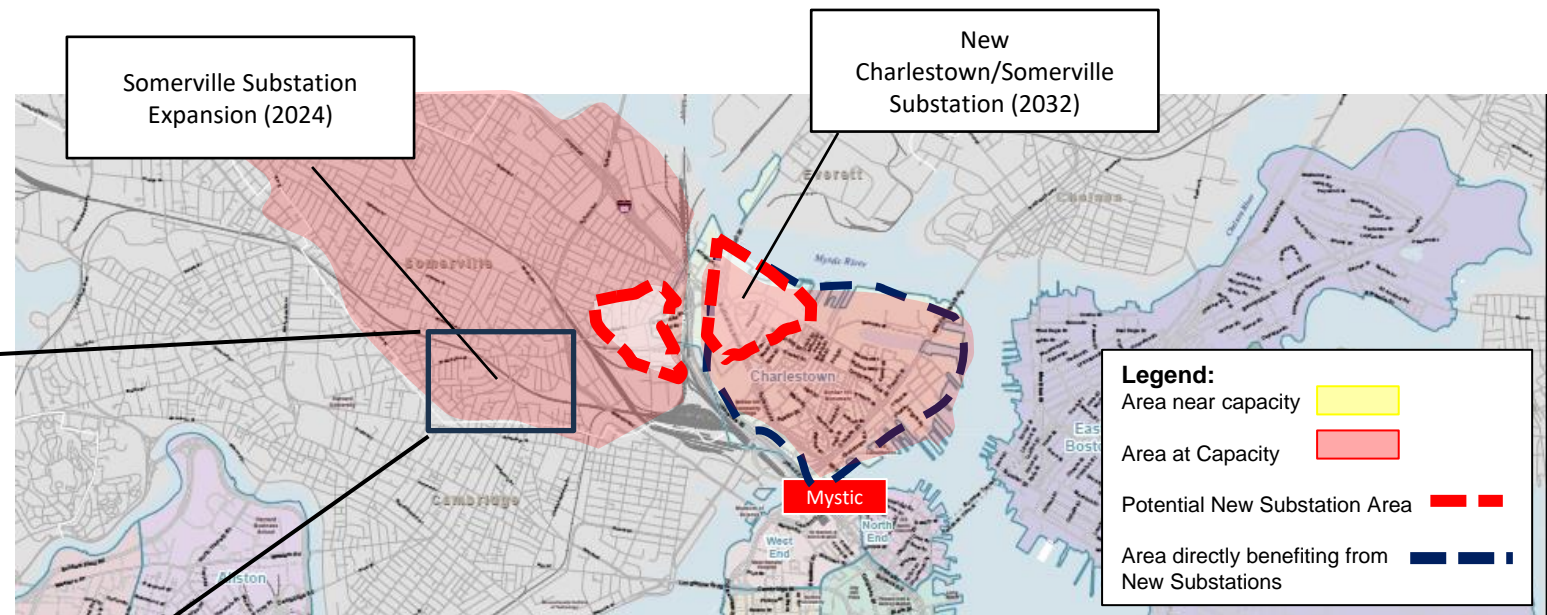


10 Year Capacity Deficiencies in The City of Somerville translate to negative reliability outcomes if not immediately addressed

Substation Name	Boston Communities Served	2030 Substation Loading %	Ten-Year Project Solution And Need Date
Mystic	Charlestown, City of Somerville	99	2022. Somerville Substation Expansion (Delayed as of September 2024) 2032. New Charlestown/Somerville Substation

City of Somerville

- New Charlestown/Somerville Substation provides long-term capacity relief for neighborhood of Charlestown and City of Somerville



Electric System Projects Currently Underway and Planned for Somerville

Prospect Street Substation #402 (Somerville) and Distribution Work (Somerville & Cambridge)

➤ **Underway** – Construction ongoing for addition of a third transformer at the existing Prospect Street Substation in **Somerville**. This project also includes about 2.5 miles of new distribution duct bank, including portions in Somerville and Cambridge.

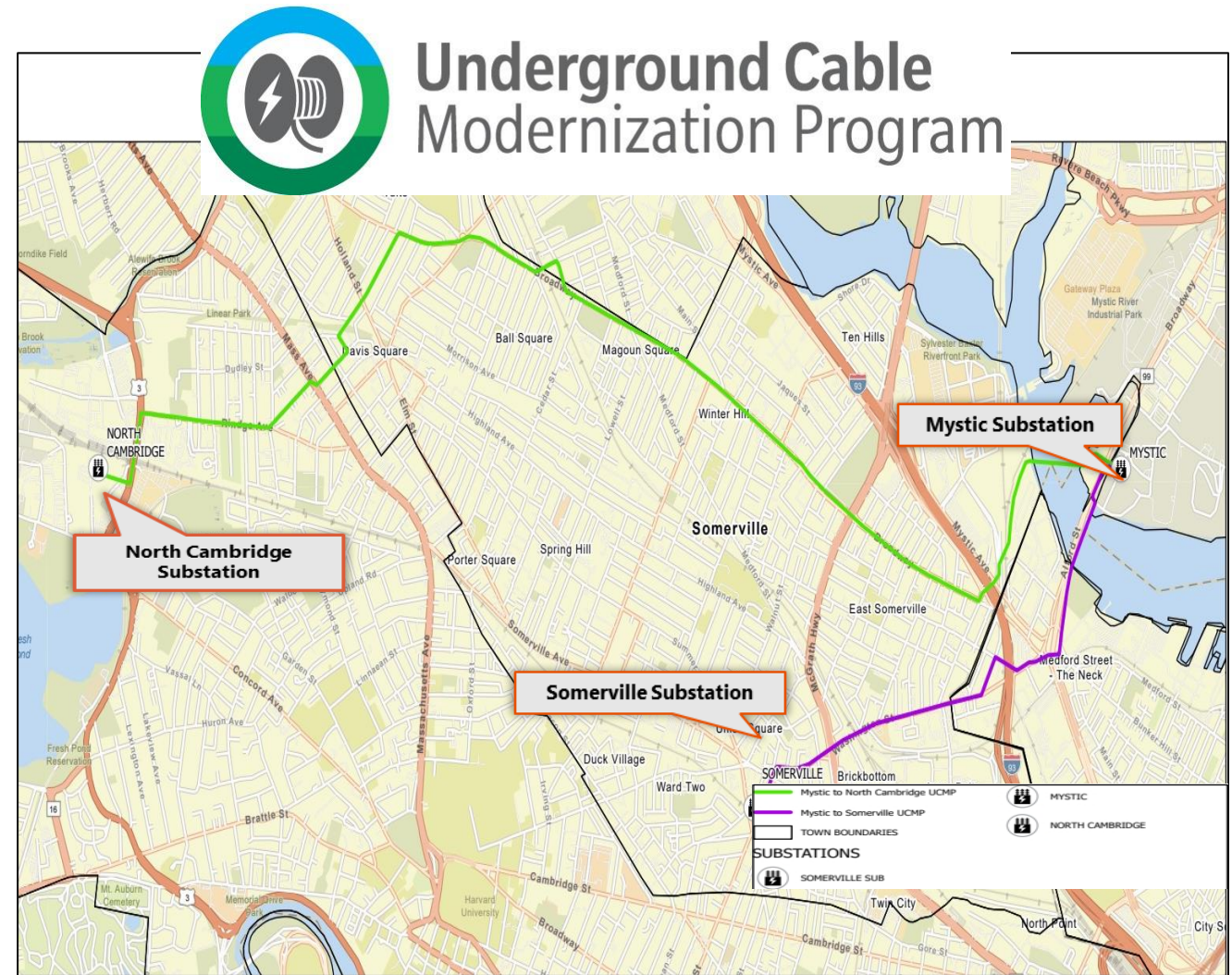
Greater Cambridge Energy Program, Substation #8025

➤ **Underway** - Executive Facilities Siting Board approval of new underground substation, five underground transmission routes through city streets to existing substations in Boston, Cambridge, and Somerville.

New Projects in Planning Phase

❖ **Planning** – Underground Cable Modernization Program (UCMP) aims to replace high pressure fluid filled (HPFF) cable with new duct bank and cross-linked polyethylene (XLPE) cable between Mystic and Prospect Street substation and Mystic to North Cambridge substation.

❖ **Planning** - Fence and Control House Upgrades





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