



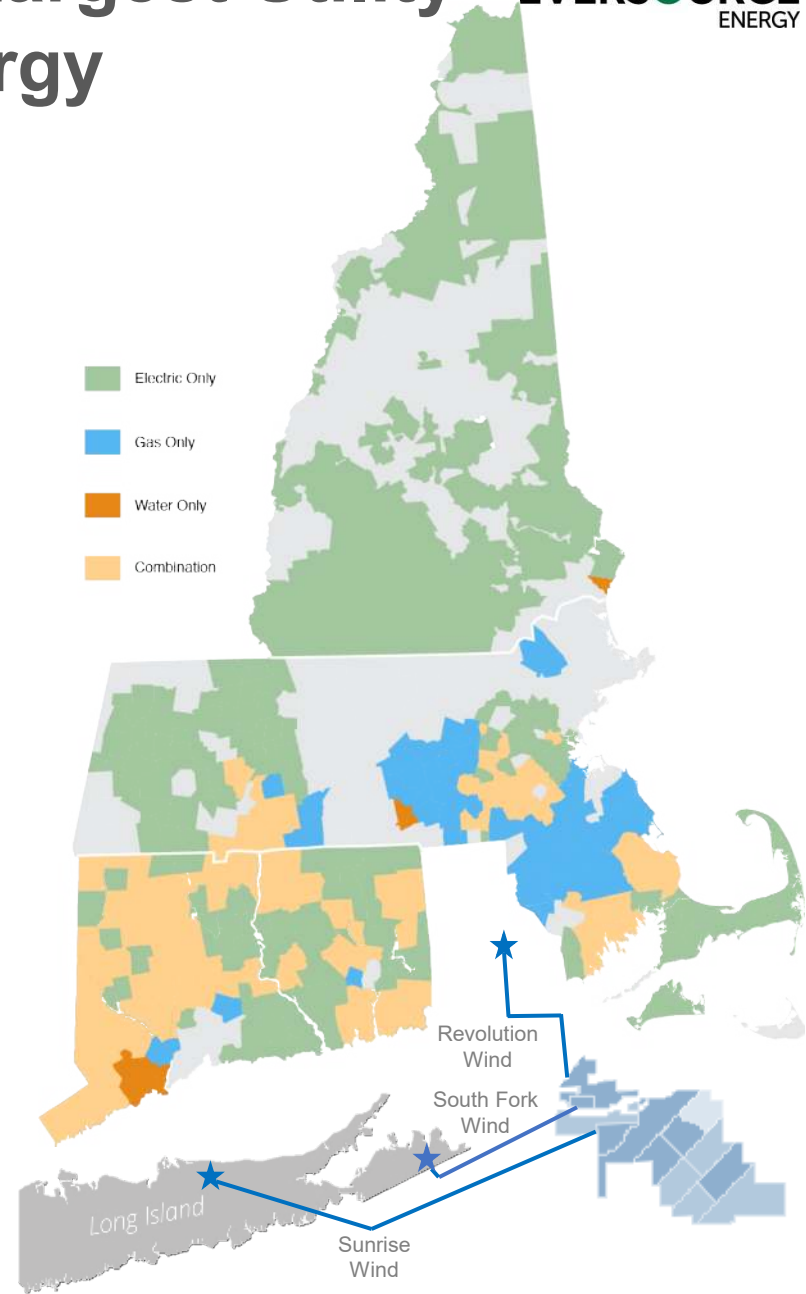
**EVERSOURCE**

Delivering cost-effective **Transmission Solutions** that provide reliable power and support a **Clean Energy Future**

# Eversource: New England's Largest Utility and a Catalyst for Clean Energy



- Provides **electric, gas and water** services
- **4.3 million** customers
- **9,100** employees
- Operates **49%** of New England's **transmission system**
- **Carbon neutral** by 2030
- Partnership with Ørsted to provide **~1700 MW of offshore wind power** to New England and New York



# The Role of Transmission

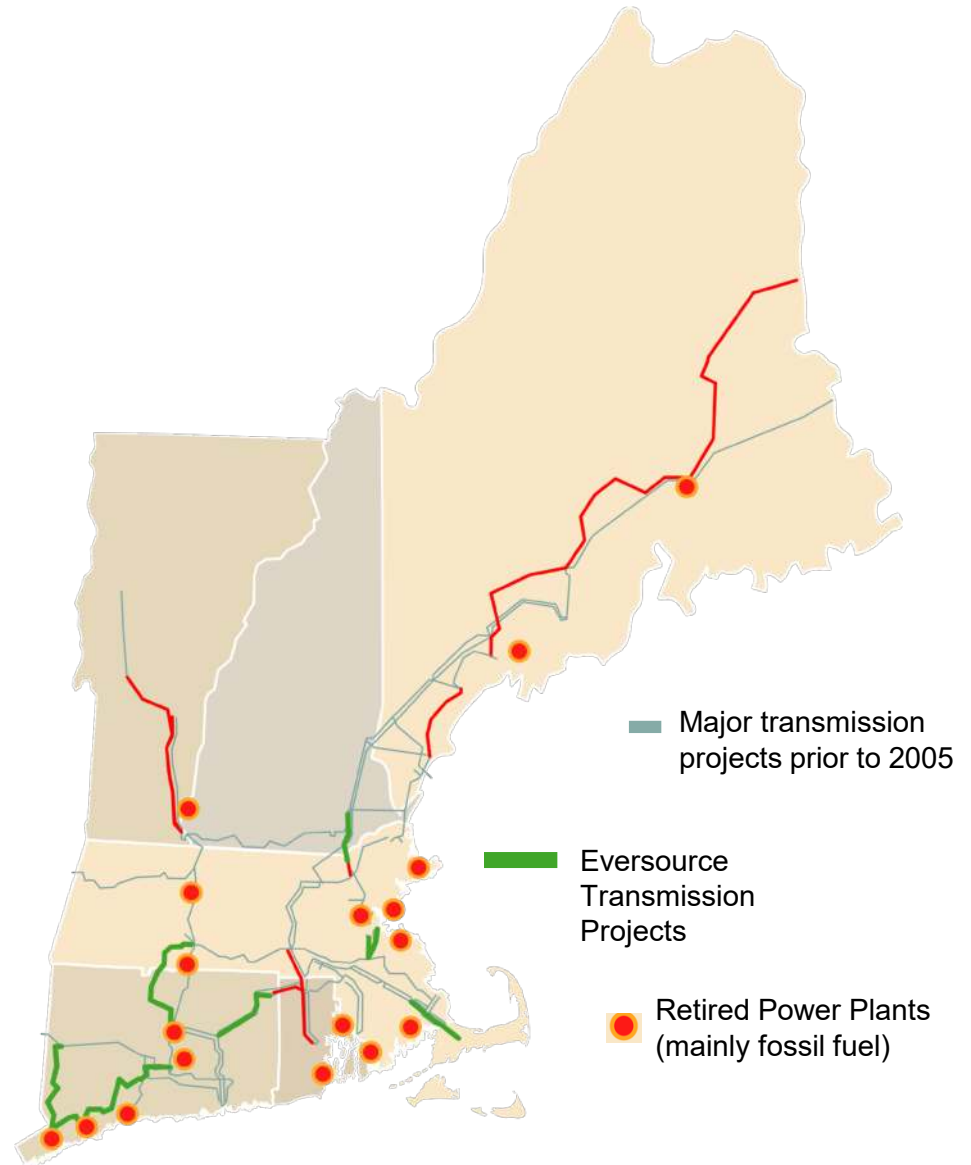
- ✓ Investments are addressing pockets of **load growth** and improving **reliability**
- ✓ Aging infrastructure replacements are improving **storm resiliency and automation**
- ✓ Significant progress towards greater integration of large- and small-scale **clean energy resources**
- ✓ Essential to the **future growth of affordable clean energy**



# A History of Solving Grid “Bottlenecks” & Improving Reliability

## 2005-2020:

- **8** major transmission programs
- **\$11B** investment
- **\$600M** in annual customer savings
- Over **6,000** MW of baseload generation retired since 2000
- **36%** reduction in CO<sub>2</sub> emissions





# Making the Grid More Resilient & Flexible



- Nearly **700** structures in total being replaced this year due to deterioration or other deficiencies
- Average age of structures being replaced: **55** years



- Lightning arresters to be installed on more than **700** structures across **56** power lines to protect the lines from lightning strikes
- Upgrading substation equipment for **operational flexibility, reliability** and to better manage **voltage variations** on the system



- **Rebuilding three power lines** and installing optical ground wire for increased automation
  - Whitefield to Northumberland (18 miles)
  - Franklin to New Hampton (11 miles)
  - Keene (1 mile)

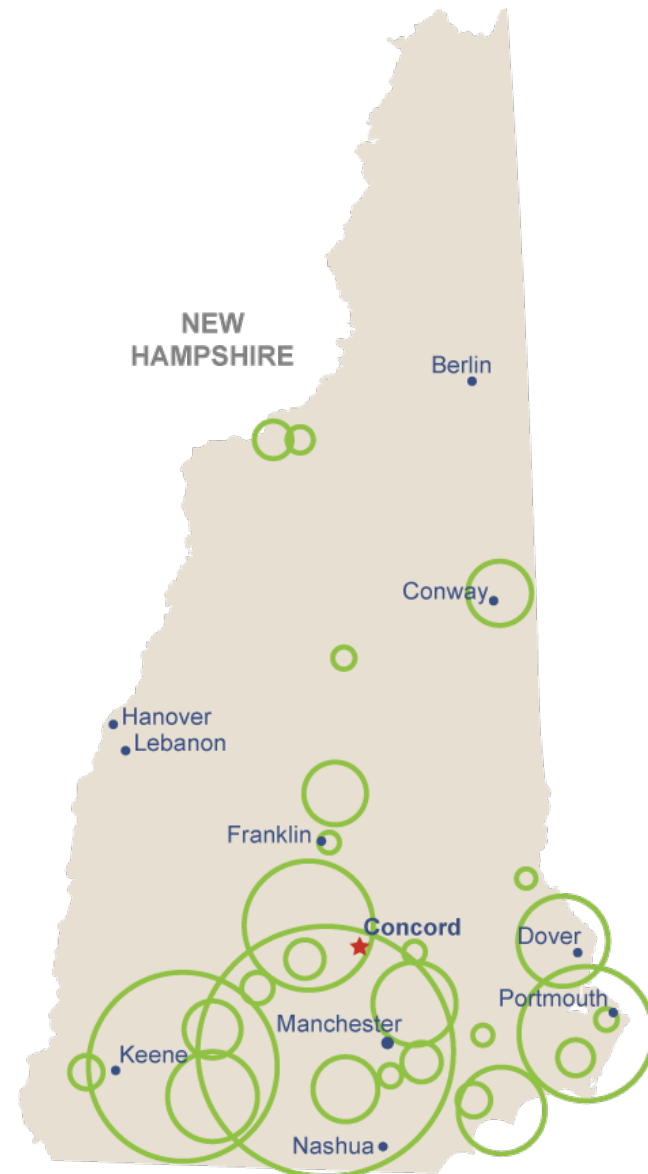
# New Hampshire Projects

## Since 2010:

- **91** transmission projects
- Total of nearly **\$1B** investment
- **\$200M+** of investments expected in the next few years

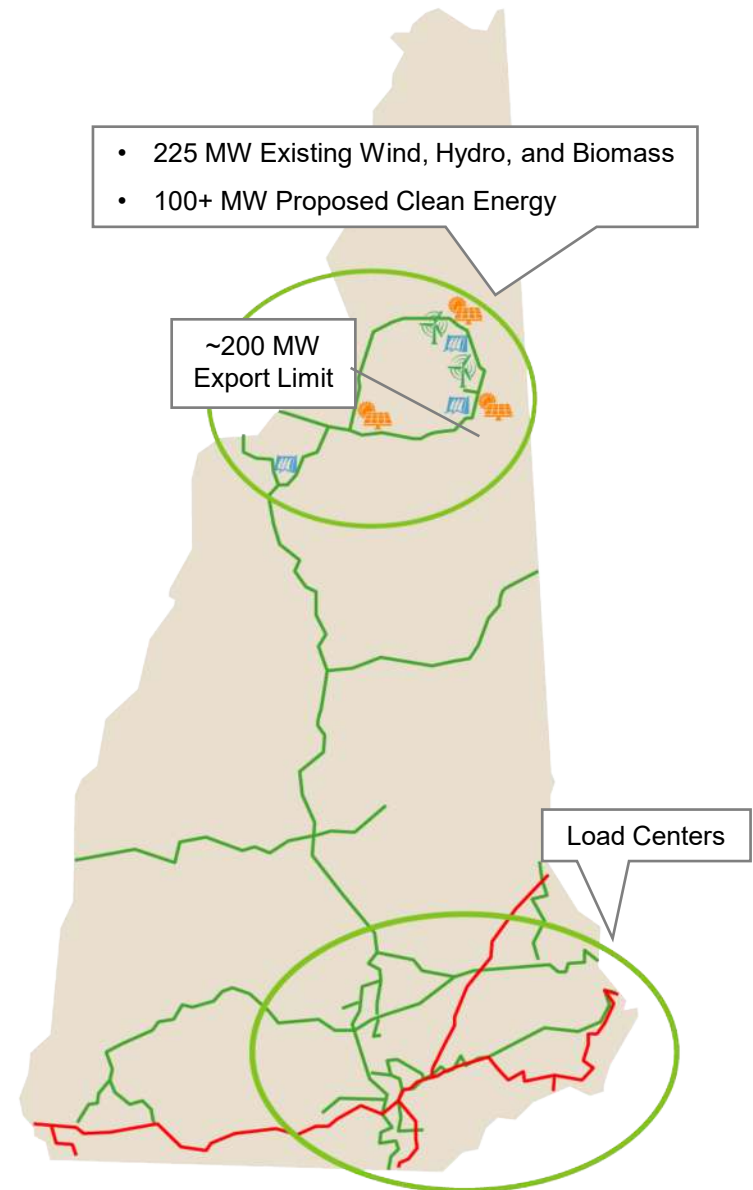
## Main Benefits:

- Improved reliability
- Strengthened resiliency
- Facilitated the integration of clean energy



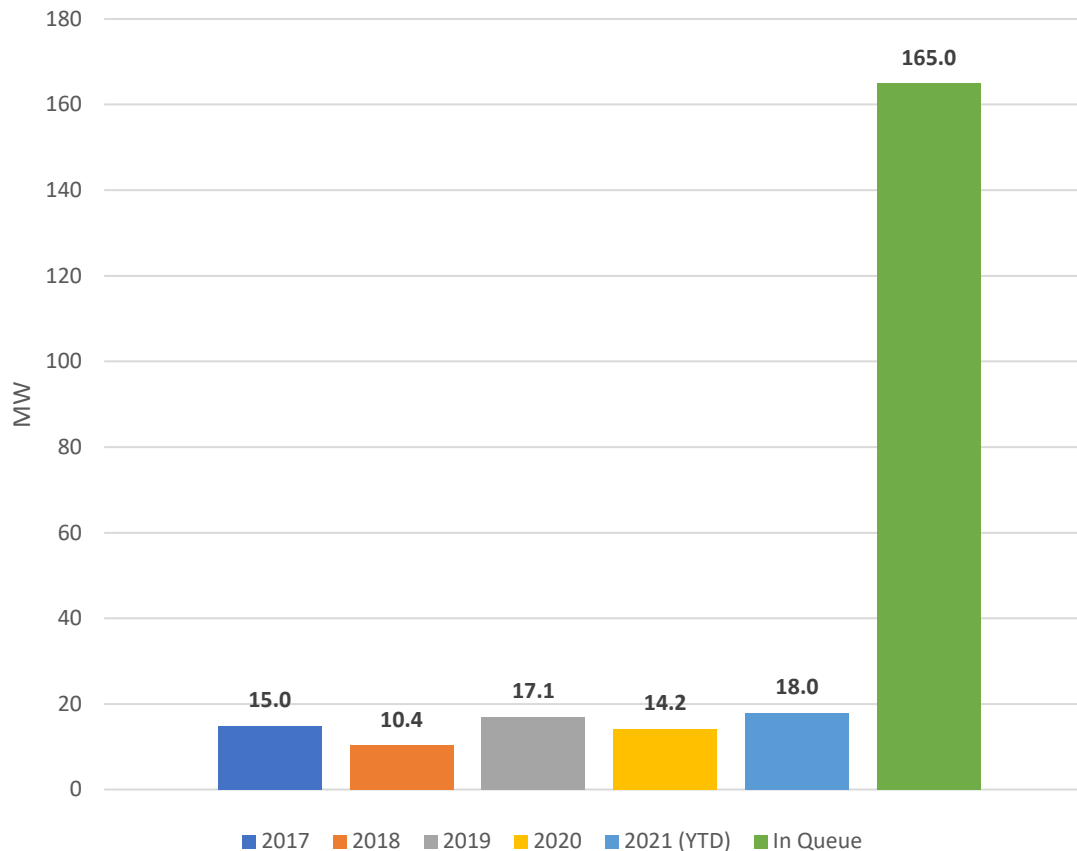
# Improving Resiliency and Unlocking Clean Energy

- Replacing aging infrastructure in the North Country to improve resiliency
- Designing upgrades to support future clean energy resources
- Allowing power to flow to where the demand is in southern New Hampshire



# Growth of Distributed Energy Resources (DERs) Expected to Accelerate

Installed and In-Queue Distributed Generation in NH

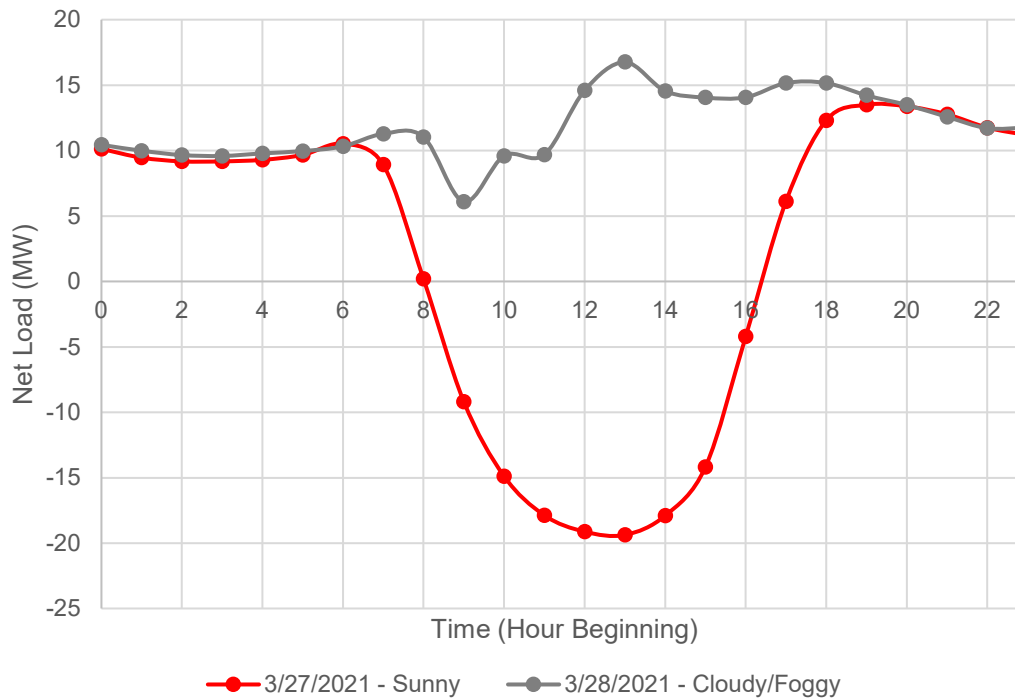


- Installation of DERs such as solar, EVs and batteries have been increasing
- DERs expected to grow dramatically
- Several large solar projects are “in the queue” waiting to connect to the grid due to capacity limits — the infrastructure can’t yet support it



# Transmission is Needed to Balance Load with Distributed Solar

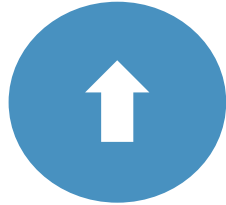
Industrial Park Substation Net Load



- On sunny days, **solar can produce more power than is needed** for a region served by a substation, so the excess power is delivered by the transmission system to other parts of the grid
- On cloudy days, **solar doesn't produce enough power**, so the transmission system delivers power to the station from other parts of the grid

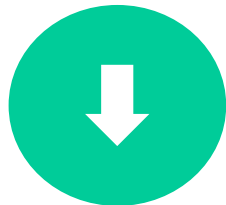
*Example of how power flows at an Eversource substation with a large amount of distributed solar*

# Enabling Explosive Growth in Clean Energy and Supporting Higher Demand



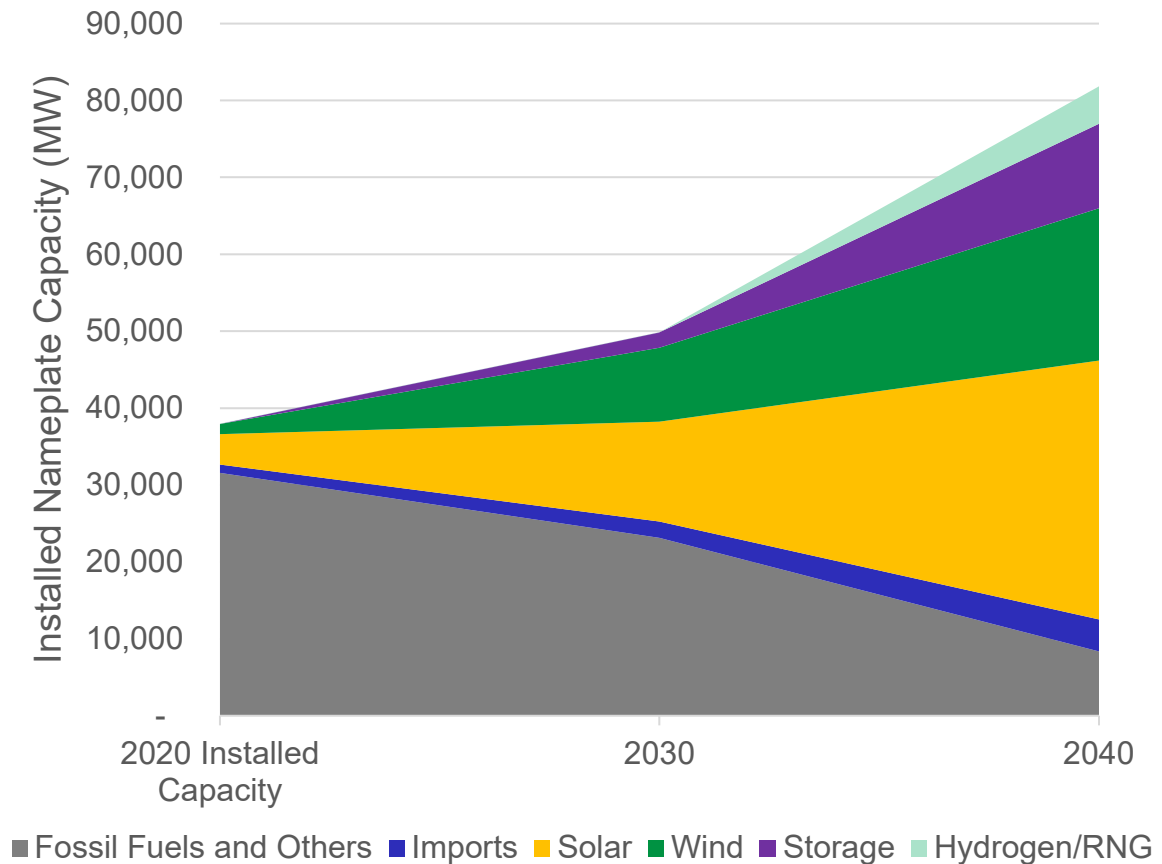
Electrification increases demand by at least **65% by 2050**

Imported hydro capacity increases by approx. **3,000 MW by 2040**



Investments in demand response, energy efficiency and distributed resources will help to moderate the electric demand

Potential Supply Scenario That Meets New England State Decarbonization Policies



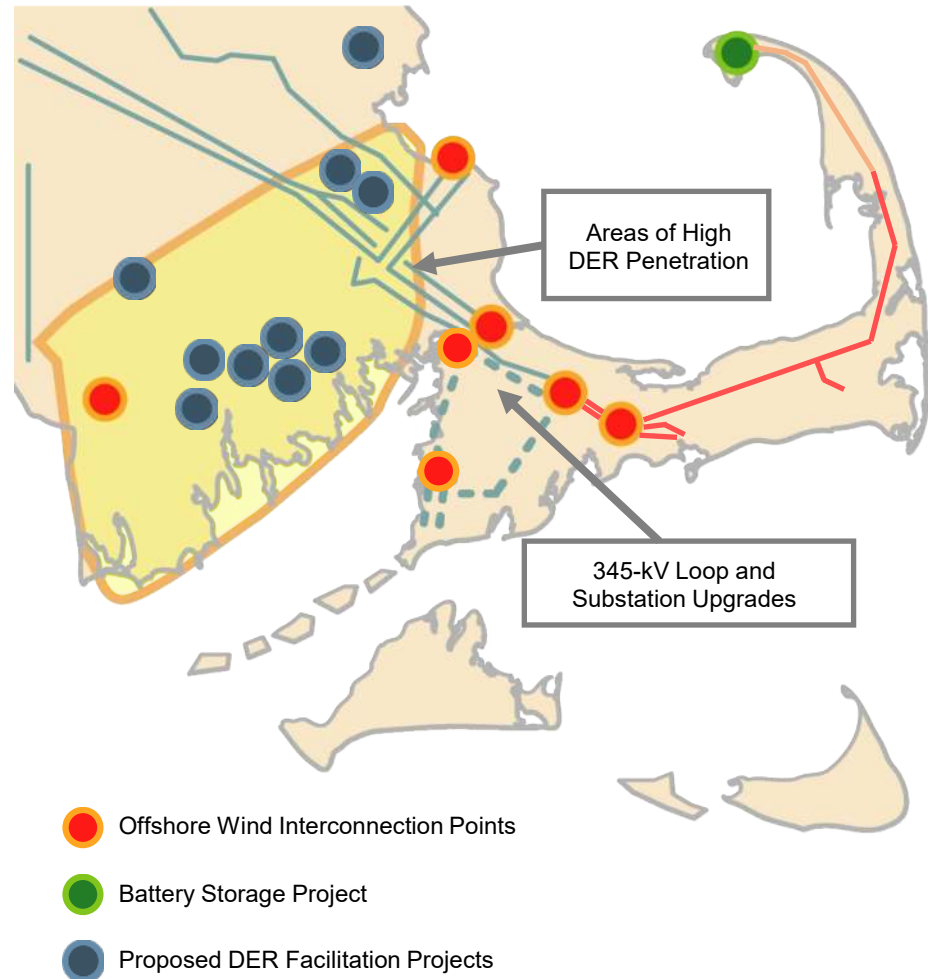
# Combining Grid Reliability, Resiliency and Clean Energy

## Co-optimized transmission solutions

to address reliability needs and interconnect offshore wind

**Energy storage solution** to provide essential back-up power for resiliency

**Proactively planning for clusters** of distributed generation and integrating with local transmission projects



# How We Achieve the Grid of the Future in New England



- **Collaborating** with states, FERC, ISO-NE, communities and clean energy developers
- **Planning ahead to look for ways to cost effectively prepare the grid now** for future clean energy and electrification demands
- **Modernizing the grid** to support both large-scale and distributed clean energy resources while maintaining reliability and resiliency

# Questions?



# Key Components of NH Rates

Average Residential Customer  
(600 kilowatt-hours)  
As of August 1, 2021

