



ESIG SPRING TECHNICAL WORKSHOP

Enabling DER as Distribution Grid Assets

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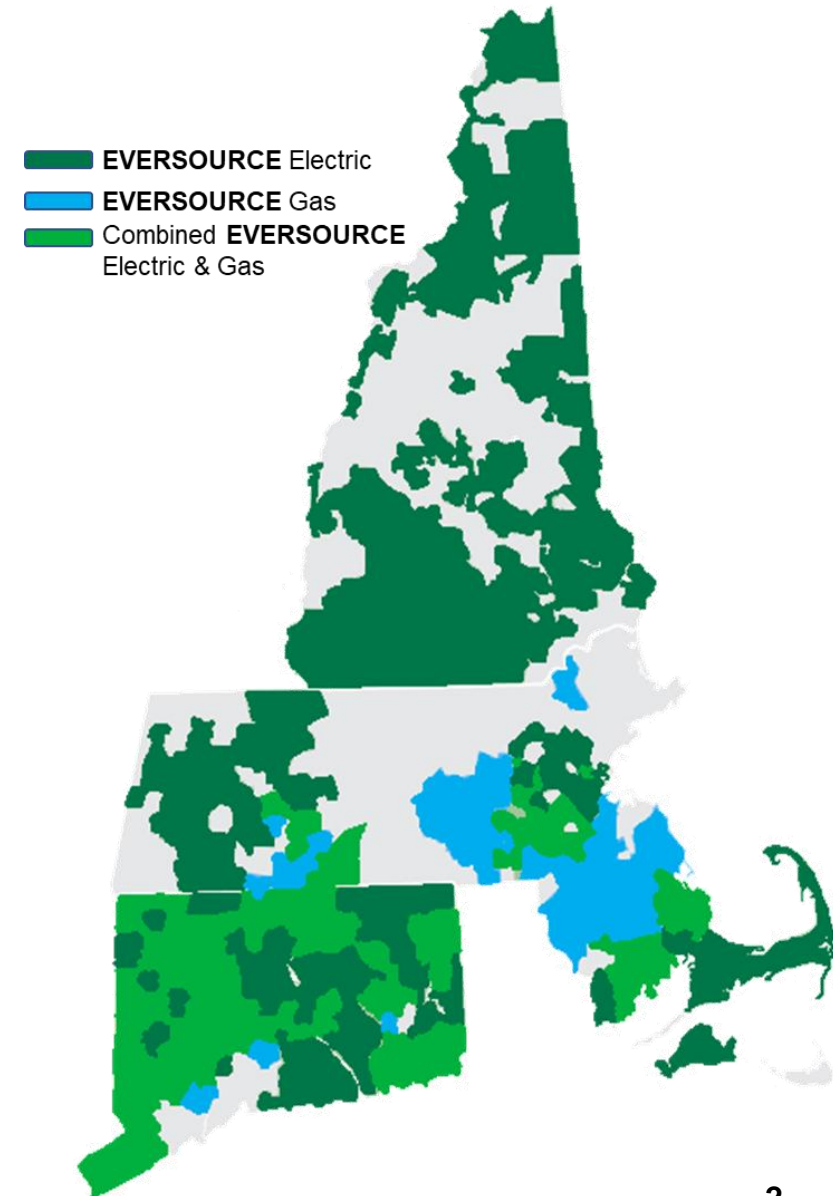
Eversource Energy



Eversource is New England's largest energy provider, proudly serving more than **3.6 million electric and natural gas customers** in CT, MA and NH

For the sixth year in a row, **Eversource** has been named among **America's Most Responsible Companies** by Newsweek

Eversource is leading the way, serving as **a catalyst for clean energy**, finding new and innovative ways to power New England





Non-Traditional Infrastructure Solutions

Eversource-deployed technologies used to address grid conditions, avoiding the need for traditional poles and wires infrastructure



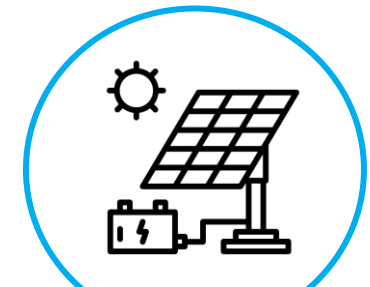
Bridge to Wires

Third-party owned BTM and FTM DER, dispatched by Eversource system operators, to add operational flexibility in areas with growing demand where traditional solutions are planned in the near term



Grid Services for Deferral

Eversource grid operators dispatch of customer owned aggregated BTM and FTM DER to manage local constraints in real time to cost effectively improve system efficiency and reliability, delaying the need for traditional infrastructure



Flexible Interconnections

Solutions leveraging on-site customer owned DER resources, To enable faster, more cost-effective interconnection of FTM DER.

DERMS Opportunity

	Bridge to Wires	Non-Traditional Infrastructure	Flexible Interconnection	Grid Services Solution
Distribution Line Deferral	X	X		X
Volt VAR Optimization				X
Lower Interconnection Cost			X	
Increase Hosting Capacity			X	
Reduce Real-Time Operations Risk	X	X		X
Microgrid Support				X

DER CONTROLLED BY EVERSOURCE TO ADDRESS REAL TIME GRID NEEDS IN VIRTUAL POWER PLANT (VPP) CONFIGURATION

- 1. Real Time Grid Constraint.** Local load at risk due to overload, or over/under voltage or ISO requires local DER dispatch to address transmission constraints
- 2. Coordinated Dispatch.** Eversource dispatcher calls upon VPP in the affected local area
- 3. VPP Responds.** Discharge Battery, call Demand Response or reduce charging demand, change Inverter settings to provide voltage, current or frequency support
- 4. Constraint Alleviated.** VPP action addresses issue

