



Redefining Gas Utilities through Innovation

Northeast Gas Association Innovation Summit

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Senior Executive for Energy Transition

September 27, 2025

Who the heck is VGS?

- Vermont Gas Systems is the state's only LDC, serving VGS has 56k customers in Northwestern VT
- We are the most progressive LDC in the nation!
- No leak policy, No cast iron or bare steel
- Award winning EEU, 94% Net Promoter, Full-Service HVAC, RNG, Leasing Gas and Electric equipment
- Favorable Regulatory environment
- Connect to TCE pipeline in Quebec (peak day spot gas \$10/mmbtu vs. \$100/mmbtu in Southern NE)
- Recent Clean Heat Standard exercise provided a deep dive into Carbon reductions
- Societal Cost of Carbon benchmark \$145/ton
- Embracing the Energy Transition, “punching above our weight class”



Look back-What was the plan...Electrify Everything

- Natural Gas future role was non-existent in many of the Northeast states.
- Off-shore Wind/Hydro/Solar were going to replace the need for gas as the electrification train seemed inevitable.
- Customers consistently listed “climate” in their top 5 concerns



Fast forward to 2025...things are shifting



In New England, Canadian hydropower has slowed to an ominous trickle

Whether due to drought, prices, or politics, the weekslong disappearance of Canadian hydropower from New England's grid exposes risks for the region.



By Sarah Shemkus
31 March 2025



How Americans View Climate Change and Policies to Address the Issue

Mixed views of how climate policies impact the U.S. economy



Inside Climate News

Pulitzer Prize-winning, nonpartisan
biggest crisis facing our planet.

Justice & Health

New York Can't Meet Its Ambitious Climate Targets. Maybe the Plan Was Doomed From the Start



NEWS ■ Energy

Energy Report Puts New England at 'Elevated Risk' of Electricity Shortages

Posted to [Energy](#) December 17, 2024 by [Michael Graham](#)

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Data center demand to push US power use to record highs in 2025, '26, EIA says

By Scott Disavino

June 10, 2025 1:09 PM EDT • Updated June 10, 2025



"We cannot solve our problems with the same level of thinking we were at when we created them"

Albert Einstein



LDC Vision 2040-Defined by Innovation

- **Customers**-LDC's across the region are seen as critical service providers by our customers, safely and affordably heating/cooling buildings.
- **Climate**-LDC's across the region are seen as essential GHG reduction resources, supporting RNG plants, Carbon Capture systems and driving down regional emissions.
- **Reliability/Resiliency**-LDC's across the region are building resiliency in our energy systems, with Distributed Generation, Storage and large Hybrid systems.



Building an Innovation Culture

Visionary Architects-Leaders that can shape the future pathways

Partners-Leaders that bridge internal and external organizations

Catalyst-Leaders that can build the ecosystem for change



Innovation Focus Areas

- Renewable Natural Gas-RNG
- Geothermal/Thermal Energy Networks
- Strategic Electrification/Hybrid Heat/Grid Support/Storage
- Carbon Capture/SynGas
- Methane Reductions
- Customer Services/Operations



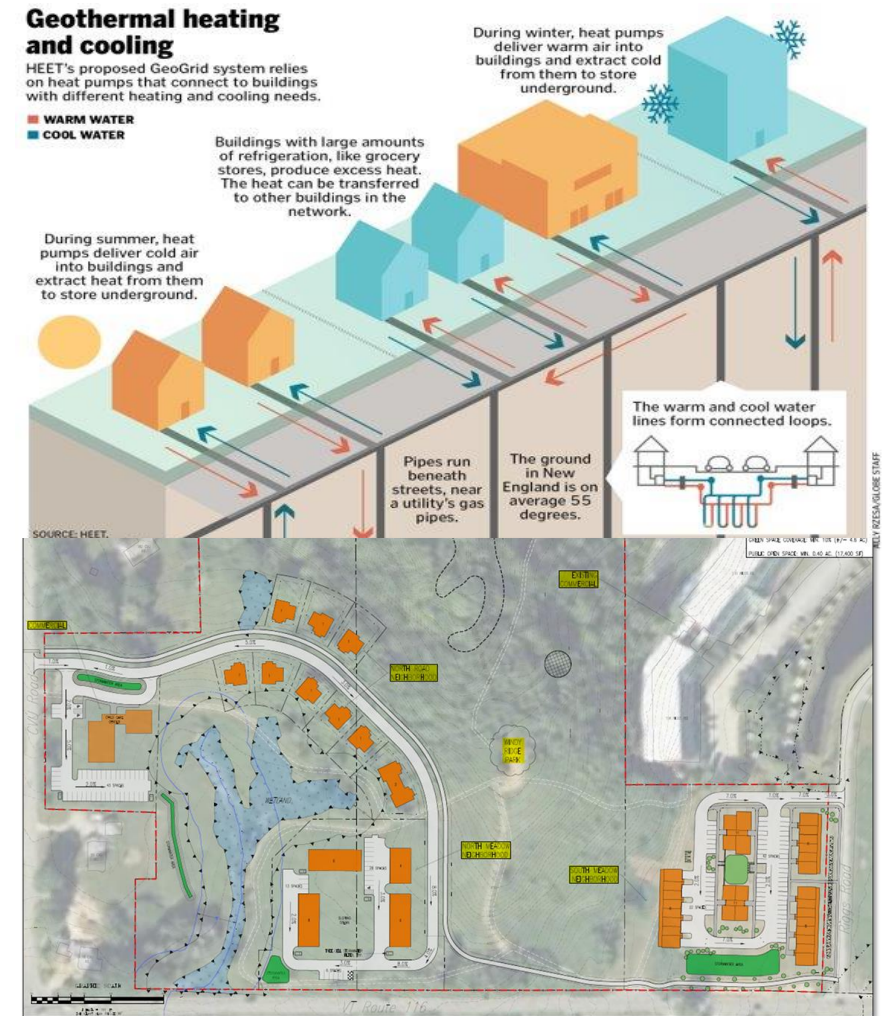
Renewable Natural Gas

- VGS was the 1st LDC in the U.S. to offer a voluntary RNG program (2018)
- VGS has authority to blend an additional 2% RNG each year (5% in '25)
- Benefits of RNG, drop in fuel, carbon neutral and even negative with farm and food waste projects
- Farm and Muni Wastewater RNG Projects have many direct and indirect benefits



Geothermal/Thermal Energy Networks

- VGS is developing a Utility Geothermal program as a next generation growth/evolution strategy
- We received approval for our first Geothermal project in a new LMI housing development.
- Focusing on new developments and maximize Tax incentive



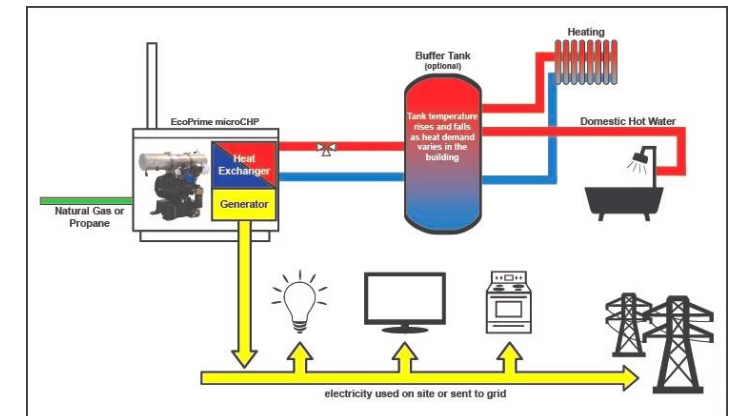
Strategic Electrification

- Controllable hybrid systems at the residential and commercial level (ex. Electric Boilers/RTU, Centrally Ducted HP)
- Shifting loads to the grid when the electricity is cheap and green.
- Track real time price and grid mix switch over point
- Target the early adopters, customers inclined to electrify
- Develop Energy as a Service model (selling MMBTU)



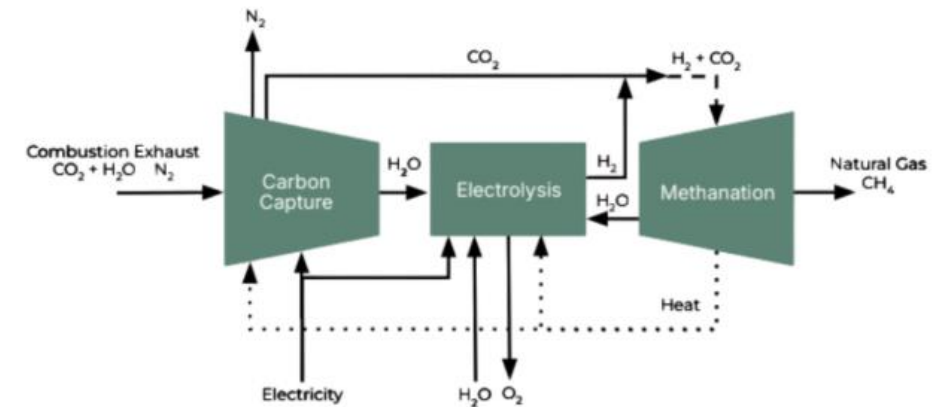
Strategic Electrification (cont.)

- DER-Distributed Energy Resources
- CHP/microCHP (w/CCS)
- Fuel Cells (w/CCS)
- Thermal Storage/Green Hydrogen
- Grid Service-Peaking, Freq. Modulation, “balancing resource”
- Avoided Transmission and Distribution Investments
- Resiliency will be paramount



Carbon Capture Systems

- CarbonX
- Standard Carbon
- CarbonQuest
- CO2 Markets developing-RNG Plants, Cement, Beverages
- SynGas systems with GreenH2



Innovative Regulatory Frameworks

- VGS-Innovation & RNG Spending in Alt Reg Plan
- Minn-Gas Innovation Act
- Colorado-Clean Heat Plans
- NY and MA have plans with Geo pilots
- Energir has Hybrid Heat deal with HQ
- VA, FL, IL, CA, WA, OR and MD have RNG investment



NGA Innovation Recommendations

- Develop a Regional 2040 Vision
- Engage in NGA Committees to shape initiatives
- Engage the Stakeholders (Customers, Regulators, Legislators, NGOs)
- Embrace Innovation and Embrace the Energy Transition
- Do not Squander this “Reset”!



Questions/Discussion



Thank You!

