Vermont Policy Update: Accelerating GHG Reduction Through Efficiency and Electrification

NH Local Energy Solutions Conference 2019

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About VEIC

• Nonprofit founded in 1986
• 300+ employees
• Locations: VT, DC, OH, WI
• Design, deliver, and evaluate programs nationwide:
  • Energy efficiency
  • Clean transportation
  • Renewable energy
• Currently supporting EERS planning in New Hampshire

Our Customers:
• Utilities
• Government
• Foundations
• Environmental & Consumer Groups
About Efficiency Vermont

- Performance-based energy efficiency utility
- Founded in 2000
- Administered by VEIC, regulated by the PUC
- Helps Vermont residents and businesses reduce their energy costs
Vermont GHG Emissions

Vermont’s greenhouse gas emissions have been increasing despite significant reduction commitments.

Vermont’s GHG emissions by sector

- **Transport**: 43%
- **Building/Thermal**: 28%
- **Agriculture**: 11%
- **Electric Generation**: 10%
- **Industrial Processes**: 6%
- **Waste**: 2%


*ENERGY GENERATION AND CONSUMPTION ACCOUNT FOR 81% OF VT’s GHG EMISSIONS*

Source:
Energy Action Network 2018 Progress Report
Vermont’s Energy System

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Challenges to Vermont’s Grid: Flat or Declining Load but Rising Peak Costs

• Since 2013:
  • 400% increase in capacity costs (FCM)
  • 25% increase in transmission costs (RNS)
  • While solar net metering and EE decrease kWh sales & renewable energy certificate (REC) prices fall

• What are “peak costs” anyways?
  • Capacity: ISO-NE annual peak hour (1) = ~$100/kW-year
  • Transmission: RNS monthly peaks (12) = ~$100/kW-year
Challenges to Vermont’s Grid: A Growing Duck
Vermont Solutions

Beneficial electrification
- Heat pumps
- EVs

While flattening the duck and mitigating peak impacts....
Upcoming VT Policy Discussions

• Advocates and legislators are mapping out priorities for 2020 session
  • Global Warming Solutions Act
  • Changes to Renewable Energy Standard
  • Energy Efficiency Utility Modernization
  • Transportation Climate Initiative
Efficiency Vermont Future Vision

• Proposing new performance goals for 2021-2023 period:
  • Flexible kW
  • GHG reduction

Redefined Efficiency

Reducing GHG Emissions

- Electric
  - Controls to reduce peak
  - Time & location

- Transportation
  - Marketing
  - Supply chain
  - Efficient product support
  - Demand management

- Thermal
  - Weatherization
  - Efficient heating

- Other
  - Digesters
  - Refrigerant Management
Drive Adoption of Cold-Climate Heat Pumps

CEP Target of 35,000 by 2025

Annual New CCHP Unit Forecast in Vermont

- New CCHP Units (not in program for EVT)
- New CCHP Units (In program for EVT)
- New CCHP Units - replacing existing units (In program for EVT)
Focus on Flexibility

Pilot testing grid-interactive water heaters as a virtual thermal battery

Join Project PowerShift
Help Washington Electric Co-Op keep energy costs lower for our community.
Transportation and Climate Initiative

• Goal: create a regional initiative to cap transportation emissions, modeled after RGGI
• Would apply to prime suppliers of on-road gas & diesel
• Open questions:
  • Level of cap
  • How to use auction proceeds
• States choose to sign on in mid-2020, then adopt TCI rule in 2021

https://www.transportationandclimate.org/
Thank you!

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