# Electricity Pathways Task Group

Update for Cross-Sector Mitigation Subcommittee

October 10, 2024

# Electricity Task Group

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# Pathway 1: Further Reduce GHG from the Electric Sector

Strategy:  100% Carbon-free or Renewable Electricity

Status: Implemented – Act 179 of 2024 updated RES

- Includes new tiered 100% RE goals and check in reports, studies

Potentially complementary actions to consider for 2025 update:

- Follow activity on study required by Act 179 regarding potential replacement of group net metering for community access, particularly affordable housing
- Update on status of state Solar for All and other low-income customer and community-based RE programs underway
- Continue to monitor time scale of load/renewable generation matching
- Other?

# Pathway 2: Enable All Vermonters to Choose Electrification

**Strategy: Providing financial and technical assistance for Vermonters to upgrade electric service & install equipment.**

**Status: Work underway, for example:**

- Utilities supporting distribution transformer upgrades when cost effective to enable electrification implements
  - PUC report due January 15, 2025 on service upgrades for EVSE-installations
- Federal funding being deployed to support electric panel upgrades – Home Electrical System Upgrades grant

**Potentially complementary actions to consider for 2025 update:**

- Focus on ways to address specific barriers to electrification that help support a just transition – offering funding for specific income levels or communities; making sure programs have easy signup and participation; providing technical assistance
- Look at whether improvements can be made to outreach, contractor availability and participation, etc. to drive expansion/uptake of electrification programs and upgrades (like panels) for greater customer sign ups, including through strategies such as on-bill financing
- Look at approaches to ensure the electric grid supports customer electrification necessary to meet GWSA Goals, incl. service drops, transformers, smart panels, etc. Consider cost-effectiveness and equity issues in decisions on how to pay for these types of upgrades
- Whether appropriate and if so options for further electric sector program support for electrification of thermal sector if a Clean Heat Standard or alternative is not adopted
- Whether to support adoption of cost-effective building and electric codes for new construction that are consistent with GWSA goals
- Role of regulated utilities if any to offer decarbonization options such as networked geothermal systems

# Pathway 3: Load Management and Grid Optimization

**Strategy: Support and expand on existing programs and policies that encourage load management and grid optimization.**

Action 1: Support direct utility load control programs, including implementation of management platforms

**Status: Work underway, see below**

## Potentially complementary actions to consider for 2025 update:

Continue to encourage use and expansion of tools to support this action, including through:

- Energy Storage Assistance Program – To help low-income customers install residential storage systems
- Flexible Load Management – Enabling distribution utility programs and potentially energy efficiency utility goals
- Non-Wires Alternatives for Transmission and Subtransmission – Supporting tools such as storage, targeted siting of generation, and load management to avoid more expensive upgrades in some locations
- Integrated Resource Planning – Requiring utilities to analyze load and plan for management where beneficial
- Advanced Metering Infrastructure – Support continued deployment across Vermont and upgrade/replacement of systems with latest technology as warranted

# Pathway 3: Load Management and Grid Optimization (continued)

**Strategy: Support and expand on existing programs and policies that encourage load management and grid optimization (Continued)**

Action 2: Encourage dynamic rate offerings, including those designed to encourage direct load/generation matching, and rate design to support electrification through shared customer savings

**Status: Work underway**

- Utility Electric Vehicle Tariffs
- Load Management, frequency regulation, Time-of-Use tariffs
- Several federal funding opportunities applied for and some received, e.g., BED and NOMAD. Some funding opportunities not selected (state GRIP) and others pending

**Potentially complementary actions to consider for 2025 update**:

- Load Management and Grid Optimization is the goal – storage, rates, programs are tools to reach that goal.
- Encourage deployment of available tools cost effectively and equitably (similar to how described in Action 1)
- Consider appropriateness of potential equipment standards that favor or require load management capability, the effect on availability of products and how Vermont fits in broader market. Look for opportunities to partner or follow other states (like CA on auto emissions)
- Consider whether or not to broaden this Pathway (or new one) to directly incorporate resilience – see next slide

# Other potential topics, either in this area or cross-cutting:

**Land Use!**

Prior plan noted compact development/smart growth. Consider how that intersects with mitigation and adaptation. This is an incredibly important issue deserving of highlighted treatment. It cuts across electric, transportation, and thermal sectors, and requires longer-term planning and outcome horizons relevant to 2050 goals overall. See DPS Comprehensive Energy Plan section on land use in energy planning as an example.

**Resilience!**

As Vermont experiences increasingly fierce storms creating damage, at the same time housing and economic growth issues are so important, is there a way to better coordinate and support infrastructure hardened across sectors. For example, for electric, grid hardening, undergrounding, deployment of clean energy tools … for transportation, hardened bridge, culvert and road design (sometimes in same corridors as utilities) … for land development, location and design of structures. All of these are interrelated, not only within one subcommittee or sector.