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Clean Heat for a Cooler Planet: Vermont's Clean Heat Standard

Senate Natural Resources and Energy

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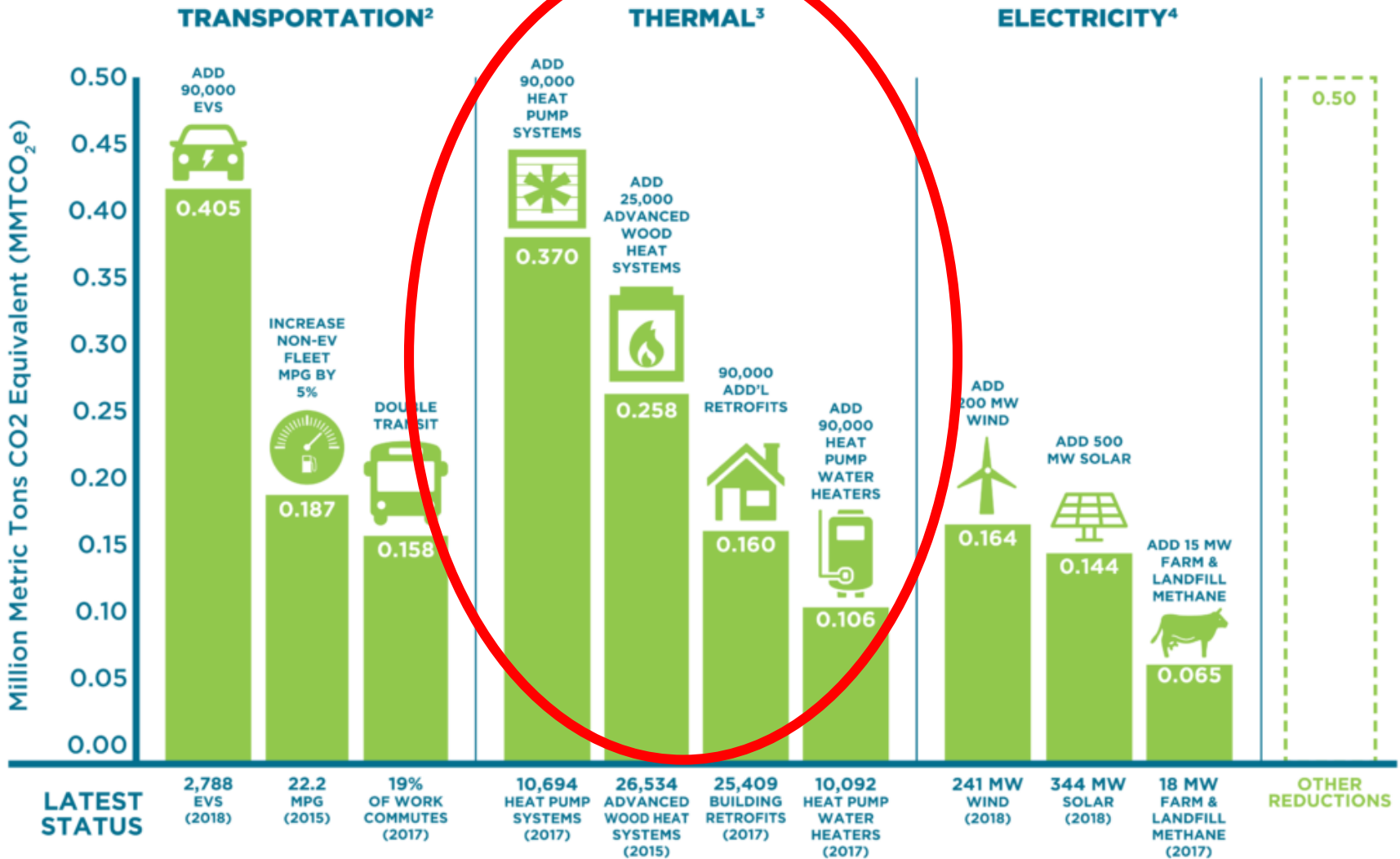
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Fossil Heat: Our toughest climate challenge

1. HEAT (buildings, hot water) = 28% of VT's climate emissions
2. Large reductions are required -- 40% by 2030, 80% by 2050 to meet climate goals, legal mandates
3. Buildings are “hard” and “slow”
4. We love our fuel choices and our fuel dealers
5. ...whose climate emissions are still unregulated
6. ...and unpriced

2.53 MMTCO₂e reduction by 2025 is required to meet the Paris Agreement¹



Sources and Notes: 1. EAN calculations based on relative emissions reductions in MMTCO₂e based on 2018 Greenhouse Gas Emissions Inventory Brief (1990-2015), VT Agency of Natural Resources. 2. EVs assumes 50% AEV and 50% PHEV. Transit includes direct reduction of single occupancy vehicle commutes through buses, trains, rideshare, vanpool, etc. 3. Heat pumps and heat pump water heaters assume switching from oil or propane heaters to 75% renewable electricity. Advanced wood heat includes automated, central wood heat systems and pellet stoves. Weatherization assumes project results in 25% reduction in energy use (the statutory goal). 4. Wind includes imported wind, since there are no plans to build wind in Vermont prior to 2025.

Vermont's clean heat standard (CHS)

What is a Clean Heat Standard ?

An obligation on fossil fuel heat providers to deliver a growing fraction of low-emission heat across their sales of heating fuels in Vermont

- Percentage grows over time to meet VT goals
- Scaled to wholesale providers' past year's sales
- What counts as clean? In general: renewable fuels (biodiesel, renewable gas), low carbon electricity (heat pumps), advanced wood heat.
- Best analogy: Renewable Portfolio Standard (RPS) for electricity sales by power companies

Why a clean heat standard?

- We like our fuel dealers – but the fuel business needs to change, and a CHS will help
- Carbon taxes – alone, are a weak tool for the heat sector
- Efficiency is crucial, but delivers only 1/3rd of needed cuts
- We know rising standards work: RPS and EVT prove it
- A performance standard doesn't pick winners – competition can drive innovation & lower costs for customers
- Market certainty drives investment in new options
- Providers who don't deliver clean heat can purchase credits from those who do

Climate responsibility

- Power customers are paying for climate action:
 - Renewable obligations, Energy efficiency charges
- Electricity is getting cleaner and more efficient
- Fossil heat pollutes more, pays less, and does less to support clean energy
- Customer price signals are tilted backwards -- It's time for a level playing field (*see Act 62 report*)
- Clean Heat Standard would give responsibility and opportunity to the fossil sector too

CHS Structure

- **Point of regulation:** Wholesale providers selling fossil heating fuels for consumption in VT
- **What to count:** carbon emission savings from clean heat fuels & heating system conversions
- **Pace of change:** X% per year, based on prior sales
- **Obligated fuel sellers** can
 - Deliver creditable actions directly (e.g., biofuels)
 - Work through fuel dealers to deliver savings (e.g., install heat pumps, pellet stoves)
 - Purchase credits from others (e.g., EVT or Wx agencies)

More design issues:

- Clean Heat & Weatherization – we need both
- Helping low and moderate-income families:
 - Credit multipliers; cash supports; equity inclusion as with utility EE programs; link to weatherization assistance
- How to fund financial help for smaller fuel dealers and workforce training for the clean heat jobs the CHS will create?
- Technical details: CHS needs a TAG-type working group & regulatory backstop to ensure compliance

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Clean Heat for a Cooler Planet: A New Future for Vermont Gas

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What's the Exit Plan for Fossil Gas?

- Big picture: Climate mandates leave no room for fossil heating fuels, including fossil gas
- Vermont's clean heat strategy must cover both pipeline and delivered fuels
- As a regulated network utility, VGS has unique obligations and opportunities
- We need both:
 - A new business model for an energy service company with human and capital assets, and
 - **Climate-positive gas regulation**

VGS Climate Plan: bold vision with a realistic on-ramp



2019
Launch



2030
Commitment to
30% reduction in
customer GHG
emissions



2040
Technology shift
Market transformation

2050
Net Zero

Climate Plan built on core competencies

- Safety & customers remain at center
- Double energy efficiency
- Increase RNG in portfolio
- Partnerships for new thermal options



Commodity Gas Regulation

- Protects safety, customer service, cost-based rates
- Promotes end-use efficiency (at least in Vermont), but not decarbonization
- Promotes long-lived investments and new service hookups
- No plan for decommissioning the pipes network
- No strategy to replace fossil heat with low-carbon options

Transition gas regulation

- Protects safety, customer service, cost-based rates (where monopoly power exists)
- Promotes end-use efficiency and *requires* progressive emission reduction
- Promotes repurposing of the legacy fossil system where cost effective and accelerates depreciation of fossil assets where it's not
- Uses performance-based ratemaking
- Supports fuel-switching and other new customer energy services on a competitively-neutral basis.

Questions?

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