

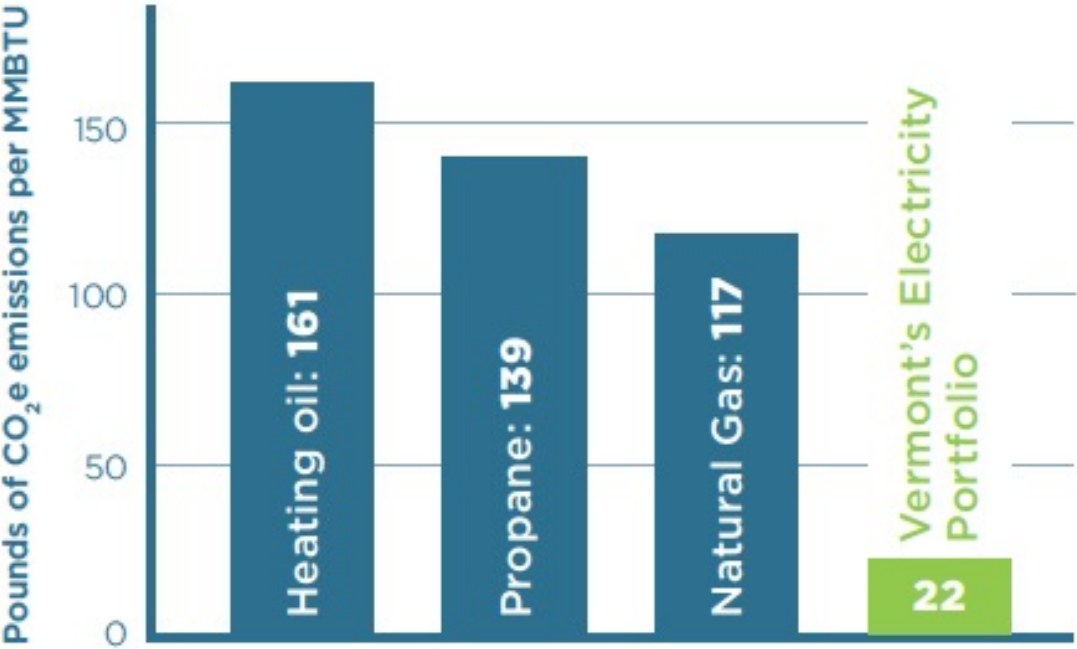
Jared Duval, Vermont Climate Council Member

- Council member appointed by the Senate Committee on Committees to represent a Vermont based organization with expertise in energy and data analysis
- Co-Chair, Science & Data subcommittee
- Member, Cross-Sector Mitigation subcommittee
- Member, Council Steering Committee

What Problems Does a Clean Heat Standard Address?

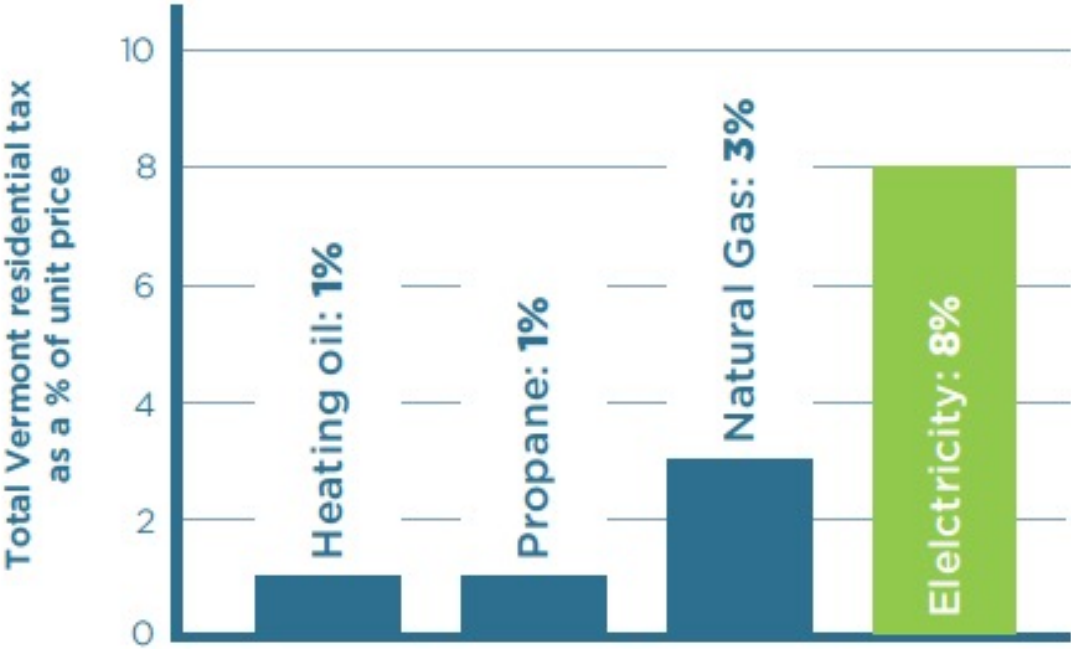
- **The large amount of climate pollution created by fossil fuel heating** (more than a third of Vermont's greenhouse gas emissions).
- The **high and unpredictable costs of most fossil fuel heating in Vermont**, especially for lower- and middle-income Vermonters who face high “energy burdens”
- Unlike utilities, **fossil fuel corporations are not yet required to reduce climate pollution over time**. This creates an uneven playing field and perverse incentives (currently putting upward pressure on the prices of our *cleanest* option: electricity).

Pounds of CO₂e emissions per MMBTU



Source: EIA, Emissions Factors for Greenhouse Gas Inventories, March 2020

Vermont taxes and fees as percent of unit cost



Source: Vermont Department of Public Service, 2019; Vermont Fuel Dealers Association, 2021.

Why a Clean Heat Standard?

- **Reduce climate pollution from fossil fuel heating**, which makes up more than a third of Vermont's greenhouse gas emissions.
- **Help Vermonters save money on energy** by providing services and incentives to switch from high-cost, price-volatile fossil fuels like propane and fuel oil to lower-cost, more price-stable clean heating options like heat pumps, heat pump water heaters, and advanced wood heat. Heating fuel expenses currently make up over a third of Vermonter's energy costs. This proposal aims to reduce the cost of heating, especially for lower- and middle-income households who currently face a disproportionately large “energy burden.”
- **Require fossil fuel corporations to provide cleaner heating options and/or to pay for pollution reduction measures that benefit Vermonters** – something we have long required of Vermont’s utilities.
- **Allow Vermonters to voluntarily choose whether to switch to cleaner heating options and, if so, provide flexibility in deciding which options are right for them.** The Clean Heat Standard will ensure that fossil fuel companies pay for services and incentives that can lead to cleaner and lower cost heating.
- **Put Vermont on a predictable pathway to achieve significant pollution-reduction over time, in line with Global Warming Solutions Act requirements.** Emissions reductions will be tracked with rigorous, accurate, and transparent lifecycle greenhouse gas accounting.

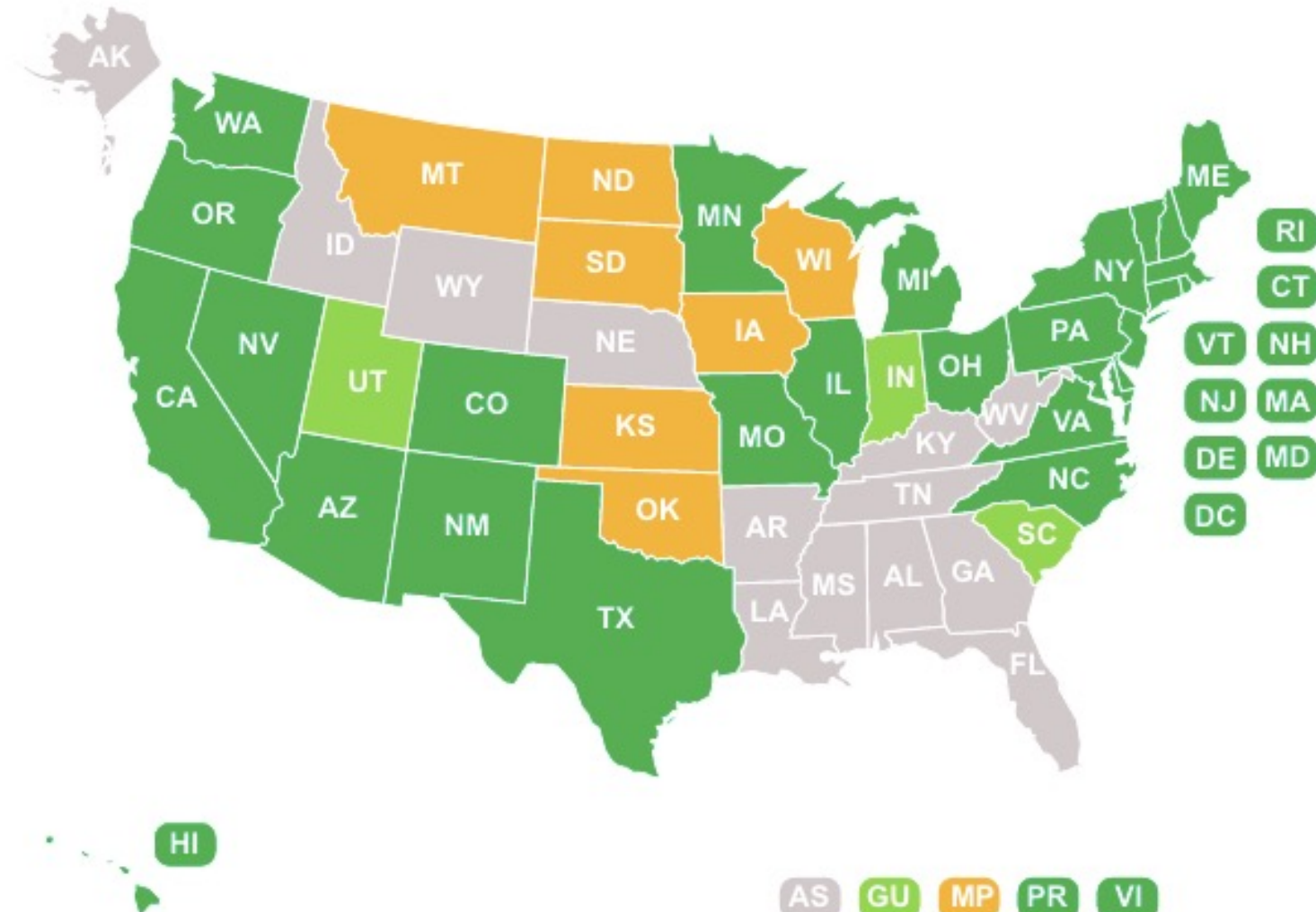
Why a Clean Heat Standard? (continued)

- **Performance standards are proven and effective:** Like Renewable Portfolio Standards (RPSs) that now exist in Vermont and 27 other states to clean up the electricity sector and the Low Carbon Fuel Standards that exist in California, Oregon, and Washington to clean up the transportation sector, the Clean Heat Standard would utilize the proven model of a performance standard to clean up the heating sector.
- Vermont would be the second state to implement a Clean Heat Standard, following Colorado.

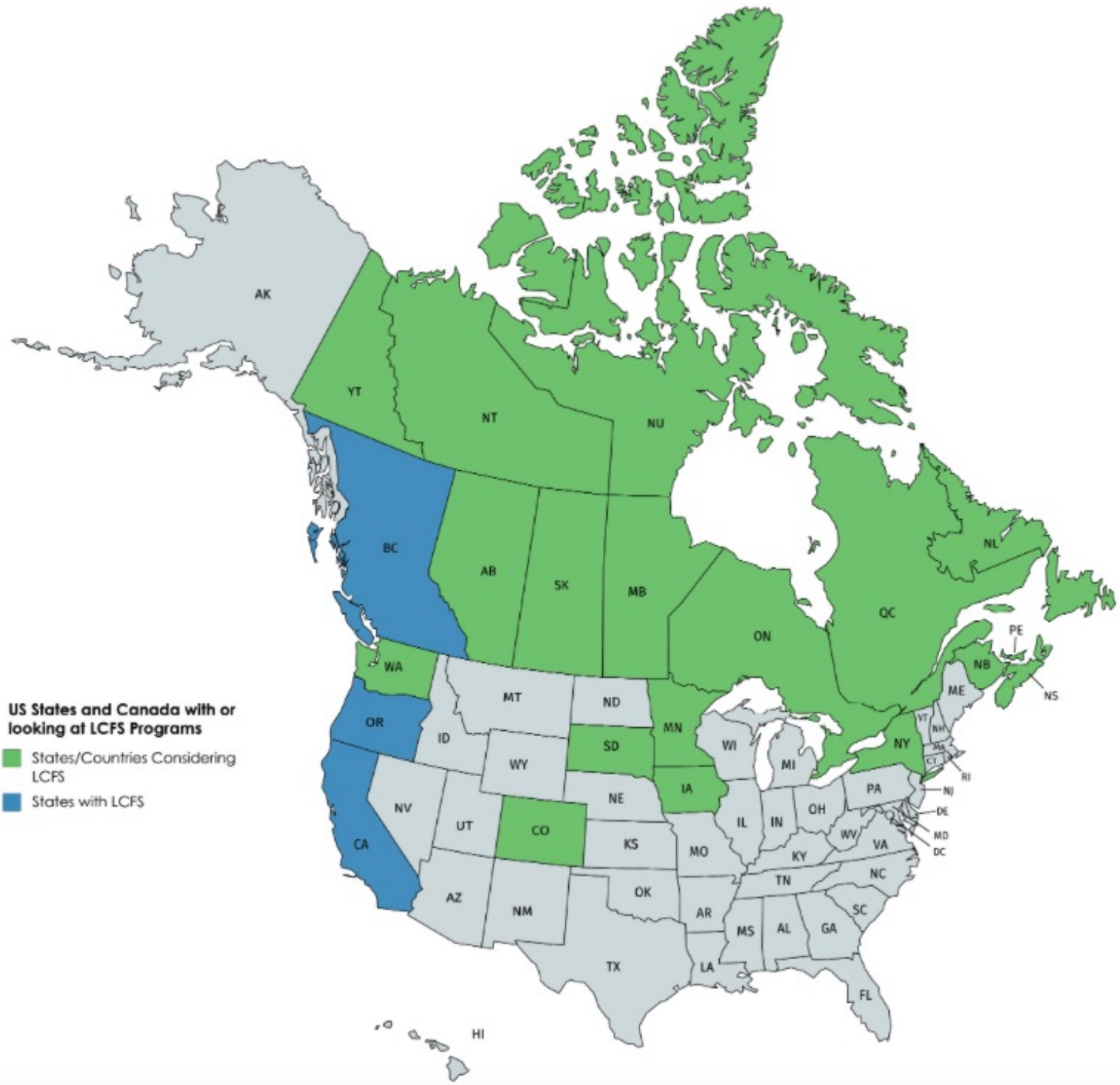
Renewable Portfolio Standards or Voluntary Targets

States and territories with Renewable Portfolio Standards	States and territories with a voluntary renewable energy standard or target	States and territories with expired RPS/CES requirements or goals	States and territories with no standard or target
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27 States have performance standards (**Renewable Portfolio Standards**) that require *electric utilities* to increase renewable power sources in their portfolios while decreasing fossil sources



Three U.S. states – California, Oregon, and Washington – along with the Canadian province of British Columbia have performance standards (**Low Carbon Fuel Standards**) for their *transportation fuel sectors*, with many more states and Canadian provinces considering joining them.



Who Needs Vermont To Implement a Clean Heat Standard?

- **Vermonters who want to move to clean heating options and/or reduce their heating costs** – especially lower- and middle-income Vermonters.
- **Fuel dealers.** Without a CHS, they will lack market clarity. A CHS offers all Vermont heating providers sustainable new business models for the future.
- **The State of Vermont, the Vermont Legislature, and the Vermont Climate Council.** Quite simply, Vermont's Climate Action Plan (CAP) does not meet Global Warming Solutions Act (GWSA) legal requirements without a Clean Heat Standard (CHS) -- the single highest impact pollution reduction policy recommended in the CAP. Without a CHS, to meet GWSA requirements the Agency of Natural Resources (ANR) would have to commence rulemaking for regulations that could be blunter, less efficient, less cost-effective, and less desirable than a CHS.

Challenges to Be Aware Of

- **Accurate lifecycle assessments of GHG emissions from fuels are key to a credible, effective CHS. Lifecycle accounting** is the approach taken by California's Low Carbon Fuel Standard and Oregon's Clean Fuels Program, drawing on lifecycle assessments from the GREET model developed at Argonne National Laboratory.
- **Equity needs to be prioritized, both in process and in CHS credit design. Options include:**
 - Require a high fraction of Clean Heat credits to come from serving low- & moderate-income homes
 - Provide extra credits for providing clean heat in rental housing
 - Link clean heat services with weatherization jobs, especially via the Weatherization Assistance Program serving low- and moderate-income Vermonters
 - Make incentive payments income-sensitive
- For administrative ease, the obligation on fossil fuel suppliers should be placed on the **"first jurisdictional importer of fuels"** (as far upstream as possible).