

Updating Vermont's Renewable Energy Standard

Testimony on H.289

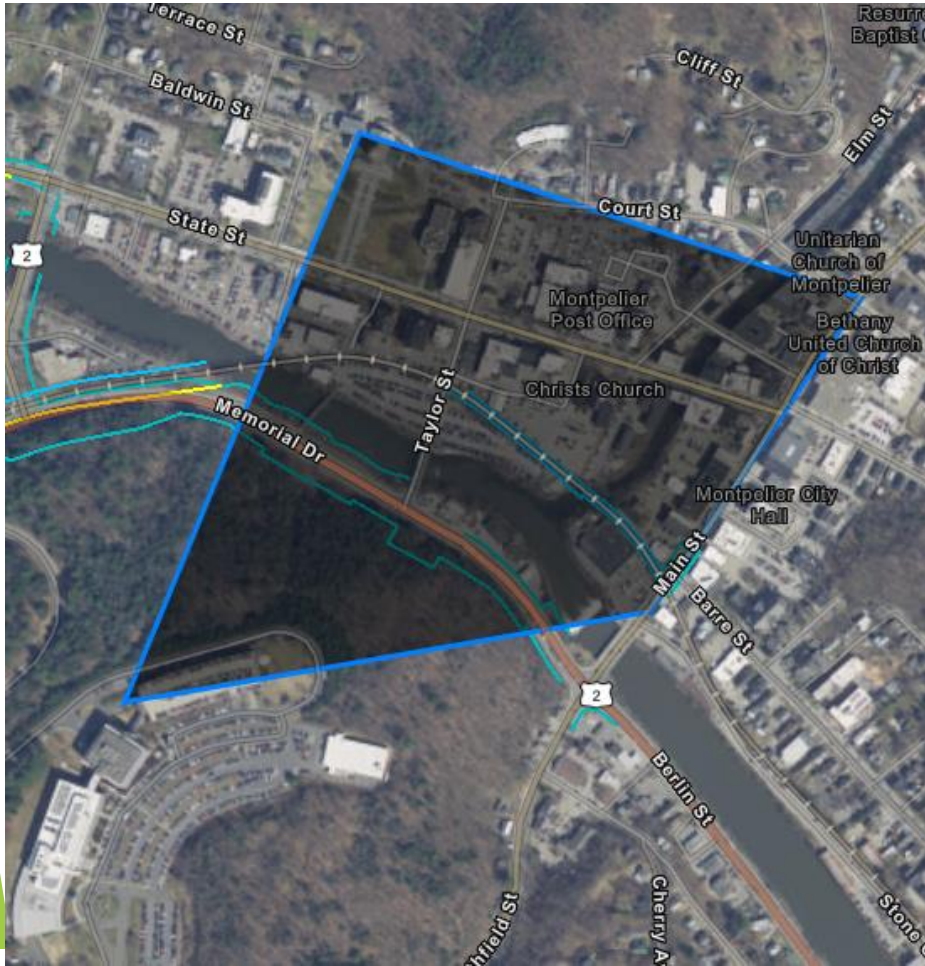
Peter Sterling, Renewable Energy Vermont

Testimony to Senate Natural Resources & Energy Committee

April 19th, 2024



Why Vermont Needs RES Reform: Environmental Justice



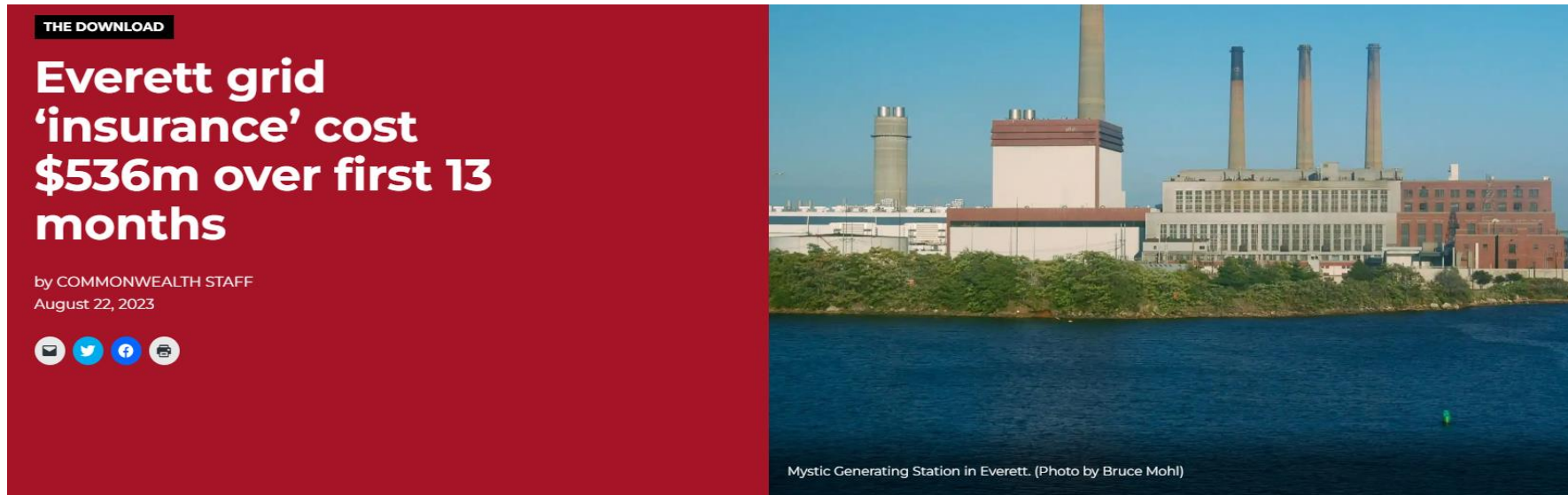
New England has 64 oil & gas fossil fuel plants larger than 50 MW

- 65% are located in communities with a higher than average share of people of color
- 60% in communities with a higher than average share of low-income residents
- 89% in communities with a higher than average share of kids under 5
- 44% are located in communities where all of these are true
- **None are located in Vermont!**



Footprint of the 60 acre 360MW baseload natural gas facility in Dayville, CT superimposed on Montpelier

Why Vermont Needs RES Reform: Status Quo is Wasteful and Expensive



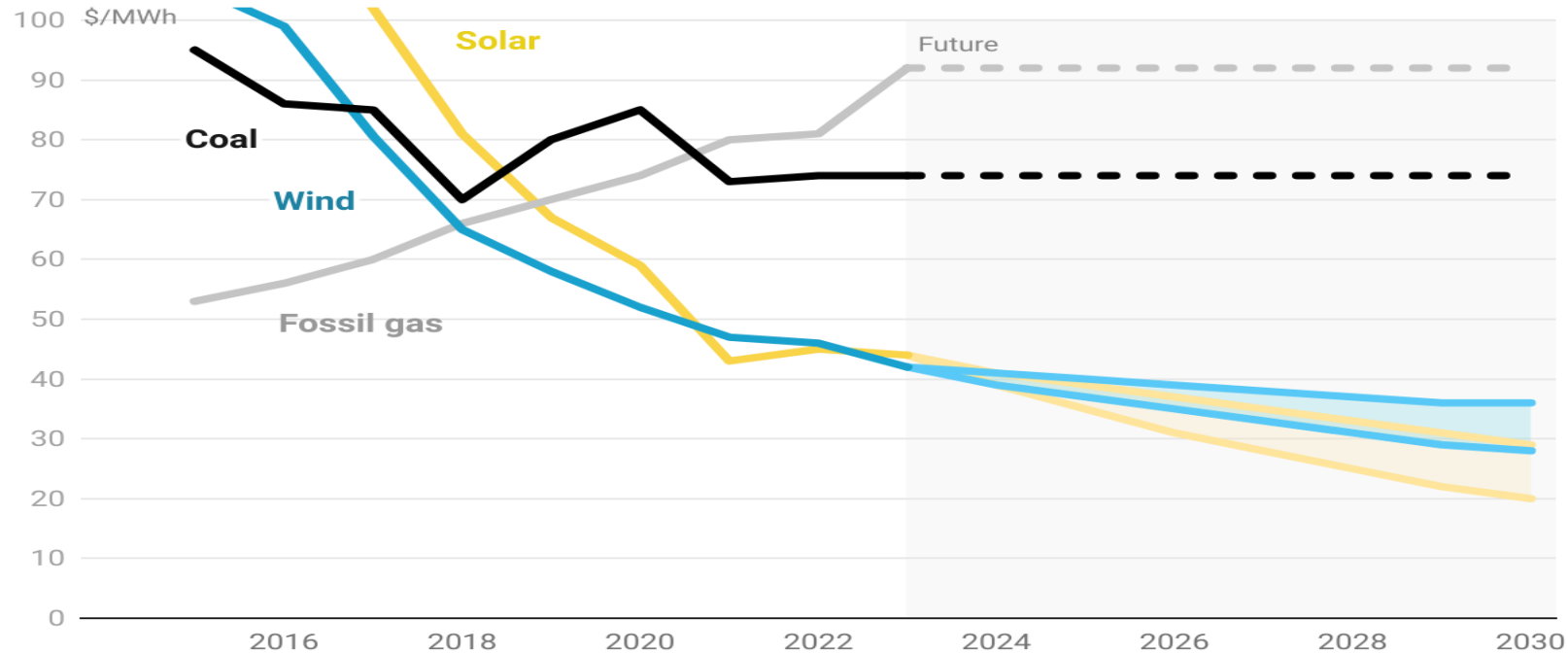
“NEW ENGLAND ELECTRICITY customers paid \$536 million during the first year of a two-year contract to prop up a power plant and liquefied natural gas facility in Everett as a hedge against regional energy shortages, according to an analysis released by the region’s power grid operator.”



VT PSD: The Price of New Wind and Solar is Projected to Keep Decreasing

Renewables will keep beating fossil fuels on cost

Analysts project that wind and solar will continue to get cheaper, falling further below coal and gas costs globally this decade.



Note: Shown is the levelized cost of energy, or a power plant's lifetime costs divided by its energy production. (\$/MWh)

Chart: Canary Media • Source: BNEF, RMI X-Change: Electricity 2023

SOURCE: PSD Biennial Net Metering Rate Filing April, 2024



What Does H.289 Do?

Utility	New RES Requirement	Amount of New Renewables (built after 2010)
GMP Tier 1	100% by 2030	
GMP Tier 2	20% by 2032	65MW/yr of solar, current GMP requirement is 21MW/yr
GMP Tier 4	20% by 2035*	About 192MW wind power by 2032 100% of new load after 2035 is from new renewables
GF Tier 1	100% by 2035	
GF Tier 2	20% by 2035	25MW of wind or 55MW of solar for Tiers 2&4 combined by 2032
GF Tier 4	10% by 2035	
VEC Tier 1	100% by 2030	
VEC Tier 2	20% by 2032	7MW/yr of solar, current VEC requirement is 2MW/yr
VEC Tier 4	10% by 2035	About 10MW of wind or 25MW solar by 2032
Muni's Tier 1	100% by 2035	
Muni's Tier 2	20% by 2035	4.6MW/yr of solar by 2032, current requirement 2MW/yr
Muni's Tier 4	10% by 2035	About 9.4MW of wind in total or 24MW of solar by 2032
BED/WEC/Swanton Tier 5	2025: 50% 2026: 75% 2027: 90% 2028-2034: 100% until new power purchases exceed 135% of 2022 purchases, then 50% through 2034 Post 2035: 75%	13MW of wind or 34MW of solar by 2032

Tier 1: Renewables of any size/age connected to the New England grid

Tier 2: Renewables <5MW built after 2010 in Vermont

Tier 4: Renewables of any size built after 2010 within NE or capable of connecting to Vermont

Tier 5: Renewables of any size built after 2010 for new load requirements for existing 100% renewable utilities

* As early as 2032 pending PUC check back report approval



H.289 Eliminates Off Site Net Metering But NOT Community Solar

PUC has radically limited off site net metering since 2022

- ▶ Since the NM 2.5 rates took effect on 9/22 there have been applications for just nine group net metering projects and only four CPGs granted.
- ▶ Just one of these four projects has been built. Under NM 2.4 there were 21 applications with 18 CPGs granted and 13 projects built.
- ▶ The PSD's proposal to lower NM 2.6 compensation is almost 3x larger than the drop from NM2.4 to NM2.5 for projects 150kW-500kW

Concord Monitor, April 12th: 1.3MW Community Solar Array Being Proposed in NH

“Members work with ReVision to determine how much of a share of the farm would cover their usual electrical needs, and can purchase that percentage of the farm. The percentage of the kilowatt-hours produced by the farm would then show up as a credit on their electricity bill.”

“This model allows the shareholders the benefits of solar, including the full federal tax credit and net-metering benefits, as if they had the panels on their property.”



Projected Costs of H.289

Energy Costs

All projections are based on PSD's modeling which undervalues distributed generation between 2025-2035 by not considering scenarios for additional battery storage, implementation of time of use rates, a potential increase in natural gas prices and no decrease in net metering compensation.

REV used PSD's model to calculate the rate impact of the additional cost energy cost outlined in JFO's fiscal note and found:

- ▶ no rate impact 2025 with 75% of energy costs occur after 2030
- ▶ a monthly rate impact of \$2.24-\$3.73 to the average bill in 2030

Any cost increase from moving to 100% renewable energy under H.289 occurs in the context of the \$14.5 billion PSD projects Vermonters will spend on electricity between 2025-2035

Transmission Costs

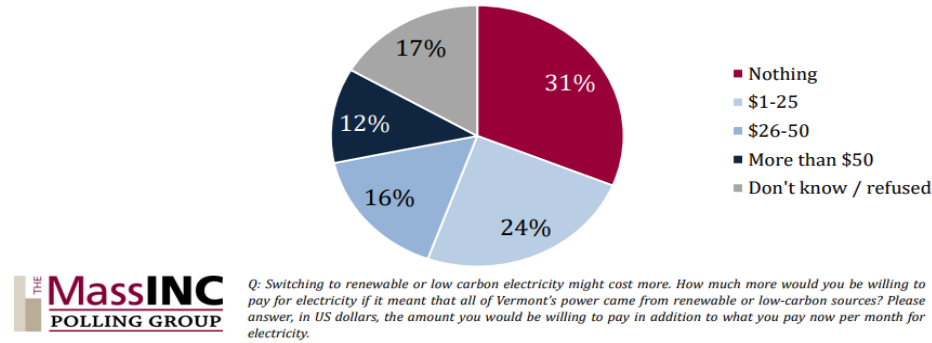
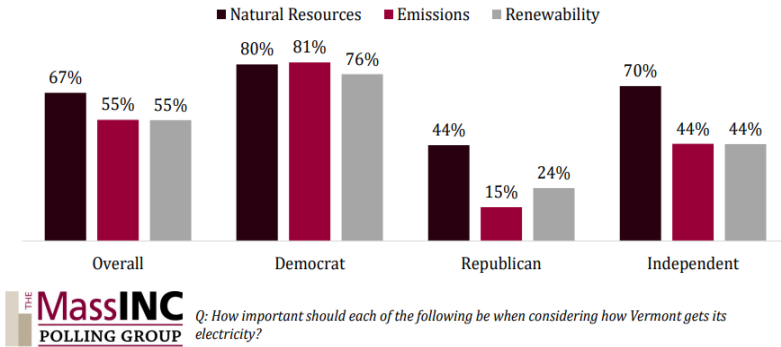
JFO's Fiscal Note now includes a zero-dollar possibility for transmission costs associated with H.289 ranging up to \$200m between 2025-2035 and that "potential technological advances, changes in demand for electricity, adaptations in ISO-NE grid, actions by VT utilities in future years, etc" may drive the costs down

VELCO's draft Long Range Transmission Plan estimates \$505m in transmission upgrades needed by 2033 *even without any changes to the RES* and some portion of these upgrades will offset some additional transmission costs associated with H.289

VELCO's draft LRTP states 1050MW of solar can be sited with no additional transmission costs through optimal siting. By the end of 2024, Vermont will have about 570 MW of solar. REV estimates that H.289 will require an additional 500-800MW of solar by 2035 depending on load growth and other factors



PSD Polling: Vermonters Favor RES Reform Decreasing Emissions and Willing to Pay More for Renewables



VT Public Service Department polling results, Fall 2023

Vermonters Didn't Ask to Make Net Metering More Expensive or For Greater Reliance on Nuclear Power

Of the 180 responses from Vermonters in PSD's report Follow-up Survey: Open-Ended Question

Verbatim Responses:

- None stated they wanted existing or future net metering customers to pay more
- One referenced wanting more nuclear power



H.289 has broad support because it:

- ✓ Gets Vermont to a 100% Renewable Energy Future- Vermont would be tied with Rhode Island as the first states in the nation to achieve this
- ✓ Helps Fight Climate Change by Decarbonizing the Electric Sector- REV estimates the GHG reduction from H.289 is the equivalent of taking up to 240,000 cars off the road by 2035
- ✓ Enhances Grid Reliability & Resilience
- ✓ Helps Vermont Take Control of its Energy Future
- ✓ Has a Small Impact on Electric Rates
- ✓ Gives Needed Flexibility to Vermont Utilities



Hardwick Electric Department
Burlington Electric Department
Green Mountain Power
Vermont Electric Co-Op
Washington Electric Co-Op
Global Foundries
Swanton Village
Town Of Northfield Electric Dept
Stowe Electric Dept

Supporting H.289

Village of Jacksonville
Village of Johnson
Village of Ludlow Electric Light Dept
Lyndon Electric Dept
Village of Orleans
Barton Village
Village of Enosburg Falls
Village of Morrisville Electric Light Dept

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