

Final Report on All-Fuels Energy Efficiency Pursuant to Act 62

House Committee on Energy & Technology

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Act 62 Questions to the PUC

Act 62 of 2019 asked the PUC to **consider**:

- 1) **Creation of an all-fuels energy efficiency program** to provide for the coordinated development, implementation, and monitoring of efficiency, conservation, and related programs and services **for all regulated and unregulated fuels**
- 2) **Expansion** of the programs and services that existing efficiency utilities may provide
- 3) **Funding** and other related issues

Two Reports

- 1) **Preliminary Report on January 15, 2020:** to the Senate Committee on Natural Resources & Energy and the House Committee on Energy & Technology
 - ✓ Progress made and any preliminary findings and recommendations

- 2) **Final Report on January 15, 2021:**
 - ✓ Findings and detailed recommendations

What Was in the Preliminary Report

- 1) **Laws, goals, and policies** that guide Vermont's existing and disparate energy programs – a comprehensive inventory
- 2) **Progress** made to date on State goals
- 3) Summary of the **current energy programs and funding mechanisms**
- 4) **Gaps in programs and funding** that prevent Vermont from achieving its energy and GHG reduction goals
- 5) **Conclusion:** If Vermont is to make meaningful progress towards these goals, ***funding is the most pressing issue*** – funding outside the traditionally regulated sectors of electricity and natural gas.

What Was *Not* in the Preliminary Report

The Preliminary Report did not answer the question of whether to create an all-fuels efficiency program.

After laying the groundwork of the Preliminary Report, the Commission undertook another year of inquiry, engaging a wide range of experts and stakeholders, to answer this fundamental question.

The full Preliminary Report is available at:

https://legislature.Vermont.gov/assets/Legislative-Reports/Act-62_PreliminaryReport-1.15.20.pdf.

Question #1: Whether to Create a New “All-Fuels” Energy Efficiency Program

Answer: **No new overarching program is needed.**

The State has the people, the know-how, the infrastructure, and the coordination in place to help Vermont take the next step along its climate journey – to reduce greenhouse gas emissions from the heating (thermal) and transportation sectors.

Current systems and programs have made significant progress in the electric sector, but not in the unregulated fuels sector – heating and transportation.

Only One Essential Need

Without **more funding**, we will fall far short of State goals
in the thermal and transportation sectors.

What Is in the Final Report

- Review of current programs and their coordination
- Current funding sources
- Principles to guide any new funding
- 3 funding recommendations
- Appendices:
 - ✓ Consideration of cost-benefit accounting, T-RECs, and list of current technologies, services, and strategies
 - ✓ Summary of prior reports on this topic that reached similar conclusions
 - ✓ History of the case and list of participants

Good News #1

- Vermont has a robust, diverse, and well-coordinated ecosystem of programs, services, expertise, and oversight.
- We do not need any statutory changes to enable more technologies or services to qualify as “energy efficiency.”
- We do not need any statutory changes to analyze energy programs through full cost-benefit life-cycle accounting.

Good News #2

Economic impact modeling indicates that sustained spending on the State's core weatherization efforts will be a timely investment in Vermont, with long-term economic gains:

- ✓ Increase in personal income of \$27-\$39 million per year
- ✓ Increase in gross state product of \$20-\$21 million per year
- ✓ Employment for hundreds of Vermonters

Current Sources of Revenue, *slide 1*

Source	Application	Collection Mechanism
Fuel Tax (per gallon)	Low-income Weatherization Assistance Program (WAP)	Per-gallon tax on heating oil, propane, kerosene, dyed diesel
Fuel Tax (gross receipts)	Low-income Weatherization Assistance Program (WAP)	Gross receipts tax on sale of electricity, natural gas, coal
ISO-NE Forward Capacity Market	Weatherization, thermal efficiency, heating-fuel switching for all income levels	Revenues from bidding electric efficiency resources into Forward Capacity Market
Regional Greenhouse Gas Initiative (RGGI)	Weatherization, thermal efficiency, heating-fuel switching for all income levels	RGGI auction proceeds
LIHEAP	Low-income fuel assistance	Federal and State appropriations

Current Sources of Revenue, *slide 2*

Source	Application	Collection Mechanism
Electric utilities' RES Tier III	Greenhouse gas reductions through beneficial electrification (thermal, process fuels, transportation)	Electric rates
Electric Energy Efficiency Charge	Electric efficiency for all income levels and businesses	Electric utilities' energy efficiency charge
Natural Gas Energy Efficiency Charge	Weatherization, thermal efficiency, heating-fuel switching for all income levels	Vermont Gas Systems' energy efficiency charge

The Bottom Line

- Current levels and sources of funding are not enough to achieve State goals in the thermal and transportation sectors.
- In fact, these current revenue streams are diminishing.
- New funding strategies must be affordable, should not jeopardize low-income programs (WAP), and should prioritize low- and moderate-income Vermonters.

Proposed Additional Sources of Revenue

Source	Application	Collection Mechanism
Transportation Climate Initiative (TCI)	Transportation decarbonization	TCI auction proceeds
Thermal Efficiency Benefit Charge (TEBC)	Weatherization, thermal efficiency, heating-fuel switching for all income levels	New efficiency charge on fuel oil, propane, kerosene
Fuel Tax (gradually increased)	Low-income Weatherization Assistance Program (WAP)	Gradually raise existing fuel tax on heating oil, propane, kerosene, dyed diesel fuel

1) Achieve financial benefits for Vermont from regional Transportation Climate Initiative

- TCI raises funds from auctioning greenhouse-gas emission allowances related to transportation-sector fuels (Vermont's largest source of GHG).
- The Legislature could appropriate revenues from TCI proceeds to invest in public transportation, electric vehicles and charging infrastructure, renewable fuels, smart growth, and more. Currently there is no funding source to transform this market or send price signals to drivers.
- TCI accomplishes this by raising funds from the sale of polluting fuels while keeping electricity affordable.

2) Collect a Thermal Efficiency Benefit Charge for “all income” Weatherization

- Currently, Efficiency Vermont’s budget for thermal efficiency (for all income levels) comes from ISO-NE’s Forward Capacity Market and the Regional Greenhouse Gas Initiative. A new “benefit charge” could bolster the insufficient revenue from FCM and RGGI – now \$10M/year but declining to \$4.5M/year over the next 10 years!
- Such a charge would work like current efficiency charges on electricity and natural gas, but it would be assessed only on fuel oil, kerosene, and propane.
- Detailed recommendations on how set, collect, and administer the revenue from such a charge can be found on pp. 13-14 of the final report.

How Much Program Funding Is Needed for “all-income” Weatherization to Meet Paris Climate Goals?

	Low start	High by 2035	Average
Efficiency Vermont	\$4 million/year	\$33 million/year	\$18 million/year
RAP			\$18 million

How Could Those Funds Be Raised?

TEBC Level	Range of Potential Revenue
2 cents/gallon	\$4,020,000 - \$4,544,000
4 cents/gallon	\$8,039,000 - \$9,087,000
6 cents/gallon	\$12,059,000 - \$13,631,000
8 cents/gallon	\$16,079,000 - \$18,174,000

3) Gradually Increase Fuel Tax to Benefit Low-Income Vermonters

- Low-income customers have the highest energy burdens (energy costs as a percentage of income).
- Low-income customers are most likely to suffer from the health effects of poorly weatherized homes.
- Low-income customers are the least able to invest in efficiency projects.

The Current Fuel Tax

- Currently assessed on the retail sale of heating oil, propane, kerosene, and other dyed diesel fuel delivered in Vermont
- Combined with the fuel tax on the retail sale of electricity, natural gas, and coal, it funds the low-income Weatherization Assistance Program (WAP) for eligible households.
- In 2019, WAP weatherized 767 households (average investment \$9,689) to save low-income customers >190,000 gallons of fuel oil in the first year, or 1,886 tons of carbon dioxide.

Proposal for a Gradual Increase

- Fuel Tax is currently 2 cents per gallon (not adjusted since 2016).
- Suggest gradually increasing to 4 cents, then 6 cents (for \$4.5-\$10.6 million more revenue per year – *see p. 15 of report*).
- Apply only to low-income Weatherization Trust Fund.
- We do *not* recommend increasing the fuel tax on electricity and natural gas.
- *Page 19* of the report also recommends ways to protect LIHEAP participants from an increase.

4) Support Existing Ecosystem of Programs

Vermont has a robust and well-coordinated variety of program administrators and market actors – *see pp. 21-24 of report.*

- ✓ Efficiency utilities
- ✓ Electric and natural gas utilities
- ✓ Weatherization agencies
- ✓ Contractors, retailers, car dealers
- ✓ Regulators

Underlying Principles

- 1) New funding should come from unregulated fossil-fuel sources – keep electricity an affordable, renewable fuel.
- 2) Focus on low- and middle-income Vermonters.

Energy Burden

Of their annual total energy costs, Vermonters spend:

- ✓ On transportation: 45% (\$2,636)
- ✓ On thermal energy: 35% (\$2,050)
- ✓ On electricity: 20% (\$1,150)

Source: Efficiency Vermont's Energy Burden Report

Sector Disparities

- 1) Vermont's energy successes have come in the electric sector.
- 2) Transportation and thermal energy cause more than 70% of the state's greenhouse gas emissions and represent 80% of household energy costs.
- 3) Historically, these sectors have contributed relatively little to fund Vermont's clean energy programs.

Act 62 – Final Report on All-Fuels Energy Efficiency

The full final report and appendices can be found at:

https://puc.vermont.gov/sites/psbnew/files/doc_library/act-62-final-report_0.pdf