Low-Income Weatherization Funded by Vermont's Home Weatherization Assistance Fund

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About Me

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  - Modified with Environmental Sciences
  - History, Minor
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Project Context

- Residential weatherization in Vermont needs are pressing:
  - Vermont **winters** are among the harshest in the U.S.
  - ~30% of VT housing **predates 1939**
  - Many homes and apartments are old, **drafty, not well insulated**, and have leaky windows and aging, inefficient heating systems.
  - Weatherization improvements not only **reduce energy bills**, but they can also **improve indoor air quality, reduce asthma, and increase comfort.**
  - **Low-income households face the highest burden** but often can not afford the cost of weatherization.
- For these reasons, the federal government, state agencies, and others have focused for decades on providing weatherization assistance to income-eligible households Vermont

Key Questions

- How is weatherization currently paid for in Vermont?
- What is the **Vermont Home Weatherization Assistance Fund** and how is revenue generated for the Fund?
- What is the scale and cost of low- and moderate-income weatherization in Vermont today?
- What role does the Fund play in supporting low-income weatherization?
- Given anticipated decreases in federal weatherization funds, **how much additional revenue could be generated for the Fund over time**?

Research Methodology

- **Reviewed federal acts, state legislation, reports, and data from the:**
  - Vermont Department of Taxes (VDT)
  - Vermont Public Utility Commission (PUC)
  - Vermont Public Service Department (PSD)
  - Legislative Joint Fiscal Office (LJFO)
  - Vermont Office of Economic Opportunity (OEO)
  - 4 Community Action Agencies (CAAs) & 2 WAP non-profits
  - EVT, BED, VGS (collectively, EEUs)
  - US Department of Energy (DOE)
- Reviewed 23 iterations of **33 V.S.A. §§ 2501–2503** (the statute establishing the Fund)
- **Conducted nearly 20 interviews** with representatives from state agencies, CAAs, EEUs, and policy organizations
- Coordinated with EAN's **Weatherization at Scale Network Action team**

Key Weatherization Funding in Vermont

Ongoing Funding

- Federal Weatherization Assistance Program (WAP)
- Vermont's Home Weatherization Assistance Fund
- Efficiency Vermont (EVT)
- Burlington Electric Department (BED)
- Vermont Gas Services (VGS)
- Regional Greenhouse Gas Initiative (RGGI)
- Forward Capacity Market (FCM)

Additional One-time

- American Rescue Plan Act (ARPA) 2021
- Infrastructure Investment and Jobs Act (IIJA) 2021
- Inflation Reduction Act (IRA) 2022

State Agencies Overseeing Weatherization

- **Department for Children and Families (DCF):** Cabinet-level agency focused on Vermonters' healthy development, safety, well-being, and self-sufficiency
- **Office of Economic Opportunity (OEO):** one of DCF's six divisions; oversees grant programs including the federal Weatherization Assistance Program (WAP), various one-time federal initiatives, and VT's Home Weatherization Assistance Fund
  - OEO distributes funds to four **Community Action Agencies (CAAs)** and one **WAP non-profit**
    - CAAs and the WAP non-profit work to eliminate root causes of poverty, stabilize low-income households, provide crisis intervention, and deliver weatherization services to income-eligible households
    - Each CAA and WAP non-profit covers a geographic area: **Capstone, CVOEO, NETO, SEVCA, and BROC**
    - CAAs and the WAP non-profit weatherize housing with fewer than 5 units in their territory; **3E Thermal** (a Capstone subdivision) handles multifamily housing (5+ units) statewide
- **Public Service Department (PSD):** Executive Branch agency ensuring affordable, reliable, safe, environmentally responsible utility service
  - Oversees federal fund transfers to EEUs and OEO; develops the **6-year Comprehensive Energy Plan** (2022 plan: sets a goal to weatherize 120,000 households by 2030); reviews EEU Triennial Plan budgets before PUC submission; and leads initiatives like the **Thermal Efficiency Task Force**

Key Weatherization Entities

Table 1: Map of CAAs' and WAP Non-Profit's Service Territories	
Agency	**Counties**
Capstone	Orange, Lamoille, Washington
CVOEO	Chittenden, Grand Isle, Addison, Franklin
NETO	Orleans, Essex, Caledonia
SEVCA	Windham, Windsor
BROC	Rutland, Bennington
3E Thermal	Statewide

Details about Weatherization Funding in Vermont

- **OEO funding sources:** Federal WAP formula and base allocations, plus recent ARPA and IIJA funds; State Fuel Tax revenue supplements WAP as demand and project costs rise; Delayed federal IRA fund allocations are cautiously anticipated in coming years
- **EEU funding sources:** RGGI carbon auction proceeds and Forward Capacity Market (FCM) funds support the Electric Efficiency Fund and the EEUs' Thermal Energy and Process Fuels (TEPF) weatherization programs
  - EEUs also draw on the Energy Efficiency Charge (EEC), a regulated line-item utility fee
    - VGS has an equivalent for natural gas
  - EVT has also received ARPA funding
- **LIHEAP connection:** Up to 15% (25% with waiver) of Vermont's federal LIHEAP block grant is redirected to OEO for weatherization, offset dollar-for-dollar by an equivalent Fuel Tax transfer to other LIHEAP programs.
  - A funding-source swap with no net change in total dollars
- **Other supplemental sources:** VLITE (funded by VELCO dividend income) grants: $100K to 3E Thermal (2020, multifamily weatherization), $900K to OEO (2013–2022, vermiculite removal enabling weatherization), $500K to Vermont Adult Learning (2020, weatherization workforce training), etc.

The Federal Weatherization Assistance Program

- WAP established in 1976 under **Title IV of the Energy Conservation and Production Act**
  - Aimed at boosting energy efficiency in low-income homes to keep costs low and increase safety
  - Created in response to the OPEC oil embargo, which spiked heating oil prices and left low- and moderate-income households less able to afford heat
- Over 50 years, WAP developed rigorous technical standards, professional certifications, and diagnostic tools; **2005 Energy Policy Act** expanded eligible technologies
- **Eligibility:**
  - Household meets county income limits,
  - OR is an active Seasonal Fuel Assistance recipient, OR includes a Supplemental Security Income recipient,
  - OR includes an adult who received Reach Up or Reach Up Post-Secondary in the past 12 months with no WAP benefit in the prior 15 years
- **Federal allocation formula** has shifted over time; 1990 amendment factored in cooling costs, favoring warmer states; 1995 formula added population, climate, and financial burden factors; 2020 Energy Act added non-energy benefits like health.

One-Time Federal Funding Volatility

- In addition to 50 years of varying levels of WAP funding, recent **one-time sources** of federal funding that Vermont has used (or intends to use) as supplemental WX funding include the:
  - American Recovery Policy Act (ARPA, 2021)
  - Infrastructure Investment and Jobs Act (IIJA, 2021)
  - Inflation Reduction Act (IRA, 2022)
- These funds are useful and important. Much work has been done to expand and train the WX workforce to enable use of the funds. A substantial increase in the number of WX projects has been achieved recently because of these funds.
- However, federal funds are subject to volatility beyond Vermont's influence.
  - In 2019, elimination of the federal WAP was proposed (unsuccessfully).
  - Recent federal **ARPA and IIJA** funds were substantially delayed.
  - 2022 federal IRA funds **have still not been allocated**.
- The federal "Project 2025" policy blueprint proposed eliminating the US Department of Energy's Office of State and Community Energy Programs (which administers WAP).
  - The federal FY2026 budget request proposed no funding for the Office
  - The House Appropriations Committee ended up allocating $250 million nationally, about half of FY2024's $471 million

Vermont's Home Weatherization Assistance Fund

- Vermont's **aging housing, cold climate, and heavy reliance on heating oil, propane, kerosene, and other dyed diesel** (rather than natural gas pipeline infrastructure) made weatherization a top priority
  - 1979 Iranian Revolution **spiked petroleum prices**
  - 1990 federal formula changes **reduced Vermont's WAP funding** as a colder-climate state
- PUC (then PSB) Chair Richard Cowart proposed a state weatherization fund to supplement federal dollars: **a uniform tax on all energy**
- **In 1990, Act No. 272** sponsored by the late Senator Mary Just Skinner was enacted that created the **Home Weatherization Assistance Trust Fund.**
  - Funded by a **0.5% gross receipts tax** on heating oil, kerosene, propane, natural gas, electricity, and coal
  - The revenue would be used to supplement federal WAP funds for low-income weatherization

Evolution of the Fund

- **2016 Changes to the Tax**
  - Renamed **"the Fuel Tax"**
  - Changed to an increased **excise tax of $0.02 per gallon for heating oil, propane, kerosene, and other dyed diesel fuel**
  - Changed to an increased **0.75% gross receipts tax for natural gas and coal**
  - Remained as a **0.5% gross receipts tax for electricity**
  - Collection shifted from quarterly to monthly
  - **Revenue from the Fuel Tax currently funds 40% of WAP qualified, low-income WX in Vermont**

- **Per-unit Cost Cap Tied to CPI and inflation:**
  - Increased from $3,000 → $6,000 in 2008.
  - Increased from $6,000 → $8,000 in 2015.
  - Increased from $8,000 → $8,500 in 2019.
  - **Current caps for funding from all sources are $15,300 (single-family) and $4,500 (multifamily) as of 2024**
    - Applies to material installed, onsite labor, and some offsite costs
    - Does not include administrative costs, liability insurance, training, technical assistance, and Efficiency Coaching

- **Escrow Rebate Mechanism**
  - Added in 1992
  - Enabled fuel sellers to offset tax obligations via rebates
  - Phased down over time from 12.5% → 2.5%
  - The escrow rebate was ended in 2017.
  - **Since then, Fuel Tax revenue has flowed directly to the Fund.**

Efforts to Increase Revenue for the Fund

- **Regulatory Assistance Project Report (2011)**
  Recommended raising the tax from 0.5% to 1.75% to generate about $7.3M more each year.
- **Thermal Efficiency Task Force (2012–13)**
  About 60 experts recommended switching to an excise tax ($0.024–$0.136 per gallon).
  2016 Law adopted this approach at $0.02 per gallon.
- **House Bill 439 (2019)**
  Would have raised the tax to $0.04 per gallon.
  Passed the House but died in the Senate.
- **PUC Act 62 Report (2021)**
  Recommended a new Thermal Efficiency Benefit Charge and phased increases to the Fuel Tax ($0.02 → $0.04 → $0.06 per gallon).
  Neither recommendation has been adopted.
- **PUC Clean Heat Standard Report (2025)**
  Supported raising the Fuel Tax but did not support establishing a Clean Heat Standard.

Major Weatherization Funding in Vermont

- Especially in recent years, large sources of **short-term, one-time** funds have been used to support weatherization.

- Once these funds are expended, either new sources of funding will be needed or the total **number of WX projects completed each year will decrease**.

Table 2: Ongoing Funding Sources for Weatherization in Vermont

Source	Amount	Duration
U.S. Department of Energy Base + Formula Allocation	$1.5-$2M	Yearly
Vermont Home Weatherization Assistance Fund	$8-$12M	Yearly
Efficiency Vermont (EVT)	$6M	2024-2026
Burlington Electric Department (BED)	$600,000	2024-2026
Vermont Gas Services (VGS)	$1.5M	2024-2026
Vermont Low-Income Trust for Electricity (VLITE)	$2.5M	2013-2025

Table 3: Short-term, One-time Funding Sources for Weatherization in Vermont

Source	Amount	Duration
American Rescue Plan Act (ARPA, 2021) to the Public Service Department (PSD) for Efficiency Vermont (EVT)	$45M	2022-2026
American Rescue Plan Act (ARPA, 2021) to the Department for Children and Families (DCF) for the Office of Economic Opportunity (OEO)	$40M	2022-2026
Infrastructure Investment and Jobs Act (IIJA, 2021)	$2M, $14.7M	2024, 2024-2027/2028
Inflation Reduction Act (IRA, 2022)	$29M	2025-2032

Low-Income Weatherization Funding in Vermont

Table 4: Low-Income Funding Sources for Weatherization in Vermont Units, by Administrator (2022-2025)					
Admin	**Funding Source**	**2022**	**2023**	**2024**	**2025**
OEO	State Fund	$10.9M	$8.7M	$11.0M	$12.0M
	Federal WAP	$1.8M	$1.8M	$1.8M	$1.8M
	IIJA	—	—	$2.3M	$4.5M
	ARPA	$10.0M	$10.0M	$10.0M	$10.0M
	IRA	—	—	—	—
EVT	TEPF	—	—	$758K	$147K
	EEC	—	—	$285K	$290K
	ARPA #1	$739K	$2.2M	—	—
	ARPA #2	—	—	$2.1M	$2.8M
BED	TEPF	—	—	—	—
VGS	EEC	$373K	$348K	$515K	$518K
Total		**$23.8M**	**$23.0M**	**$28.6M**	**$32.0M**
One-time Federal Funds Portion		**45.2%**	**52.8%**	**50.0%**	**54.0%**
State Fund Portion		**45.7%**	**37.9%**	**38.3%**	**37.4%**
EEU Portion		**4.7%**	**10.9%**	**12.7%**	**11.7%**
Federal WAP Portion		**7.6%**	**7.8%**	**6.3%**	**5.6%**

- **One-time Federal Funds** = 45% to 54% of WAP qualified, low-income WX spending
- **State Home Weatherization Assistance Fund** (Fuel Tax) = 37% to 45% of WAP qualified, low-income WX spending
- **EEU Funds** = 5% to 13% of WAP qualified, low-income WX spending
  - EEU funds are used for WX measures not eligible for WAP
- **Federal Weatherization Assistance Program** = 6% to 8% of WAP qualified, low-income WX spending

Fuel Tax Revenue Over Time

Figure 5: Fuel Tax Revenue Per Year

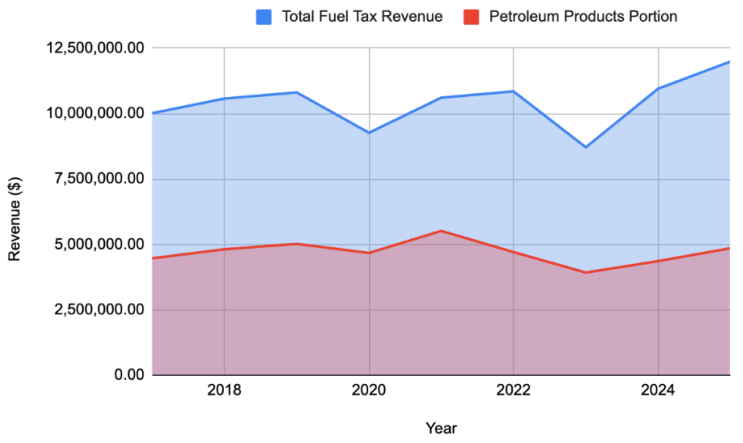
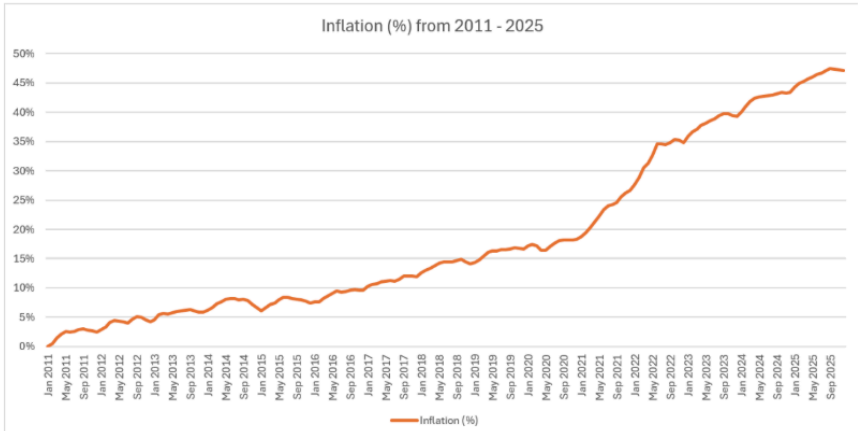


Figure 6: Inflation Percentages (2011-2025)



- Fuel Tax Revenue has varied from about $9 million to $12 million per year (over the period for which data is available from the Department of Taxes).
- The $0.02 per gallon Fuel Tax has not increased since 2017, but inflation has increased.
- A **$15,000 WX project in 2016 would cost about $21,000 in 2026**.
  - This indicates the “purchasing power” of the Home Weatherization Assistance Fund has decreased substantially over the past 10 years.

WX Projects Completed Since 2008

Table 7: Number of Housing Units Served, Comprehensive Thermal Retrofit							
	2008-2020	2021	2022	2023	2024	2025	Cumulative Total (2008-2025)
Efficiency Vermont	10,762	950	637	1,078	1,248	1,379	**16,054**
Burlington Electric Department	93	1	4	10	1	5	**114**
Vermont Gas Systems	4,139	438	525	306	240	409	**6,057**
Office of Economic Opportunity	16,541	1,458	1,104	1,139	1,211	1,310	**22,763**
Community Action Agencies and WAP non-profit	*13,716*	*1,116*	*899*	*824*	*894*	*956*	*18,405*
3E Thermal	*2,825*	*342*	*205*	*315*	*317*	*354*	*4,358*
Annual Total		**2,847**	**2,270**	**2,533**	**2,700**	**3,103**	
Cumulative Total	**31,535**	**34,382**	**36,652**	**39,185**	**41,885**	**44,988**	

- Over the past 5 years, a low of **2,270** (2022) and a high of **3,103** (2025) residential WX projects have been completed each year.
- Records kept since 2008 indicate a total of **44,988** residential WX projects have been completed thus far in Vermont.
  - This represents **37%** of the 2022 Comprehensive Energy Plan goal of weatherizing 120,000 households by 2030.

Estimated Cost Per WAP Qualified Project

Table 8: Estimated Average Cost per Project Unit of WAP Qualified Projects						
Year	**2022**	**2023**	**2024**	**2025**	**2026 (projected)**	**Average Cost (2022-2025)**
Average Cost per Unit	$20,517	$18,009	$20,647	$21,596	$18,019	$20,192
Average Cost per Unit (in June 2026 dollars)	$23,421	$19,739	$21,981	$22,403	—	**$21,886**
Average Cost of only materials, on site labor and offsite costs	$10,306	$11,869	$11,958	$11,825	—	$11,490
Energy Savings	$568	$922	$1,026	$1,015	—	$883

- Adjusted for inflation, the average WAP qualified, low-income WX project cost between 2022 and 2025 was about **$21,886** (reported in June 2026 dollars).

Estimated Cost Per WAP Qualified Project

Table 9: Revenue Needed to Maintain Recent Levels of Weatherization					
Year	**2022**	**2023**	**2024**	**2025**	**Average (2022-2025)**
Average Cost per Unit	$20,517	$18,009	$20,647	$21,596	$20,192
Average Cost per Unit (in June 2026 dollars)	$23,421	$19,739	$21,981	$22,403	$21,886
Number of Units Weatherized	1,104	1,139	1,211	1,310	1,191
Total Revenue to OEO	$22.7M	$20.5M	$25.0M	$28.3M	$24.1M
Total Revenue to OEO (in June 2026 dollars)	$25.9M	$22.5M	$26.6M	$29.3M	**$26.1M**

- Currently, OEO spends about **$26M** per year to complete the current level of WAP qualified, low-income WX projects.

Effect of Increasing the Fuel Tax

Table 10: Projected Fuel Tax Revenue, at Incremental Increases (in June 2026 dollars)						
Excise Tax per Gallon	Fuel Tax Overall Revenue	Excise Tax portion of Fuel Tax	Increase in Fuel Tax Revenue	Total OEO Revenue	Estimated Increase in OEO Funded Housing Units Weatherized	Total OEO Funded Housing Units Weatherized
$0.02	$12.4M	$5.0M	$0	$29.3M	0	1,310
$0.025	$13.7M	$6.3M	$1.3M	$30.6M	56	1,366
$0.03	$15.0M	$7.5M	$2.5M	$31.9M	112	1,422
$0.035	$16.2M	$8.8M	$3.8M	$33.1M	168	1,478
$0.04	$17.5M	$10.1M	$5.0M	$34.4M	224	1,534
$0.045	$18.7M	$11.3M	$6.3M	$35.6M	280	1,590
$0.05	$20.0M	$12.6M	$7.5M	$36.9M	336	1,646
$0.055	$21.2M	$13.8M	$8.8M	$38.1M	393	1,703
$0.06	$22.5M	$15.1M	$10.1M	$39.4M	449	1,759
$0.065	$23.7M	$16.3M	$11.3M	$40.7M	505	1,815
$0.07	$25.0M	$17.6M	$12.6M	$41.9M	561	1,871
$0.075	$26.3M	$18.8M	$13.8M	$43.2M	617	1,927
$0.08	$27.5M	$20.1M	$15.1M	$44.4M	673	1,983

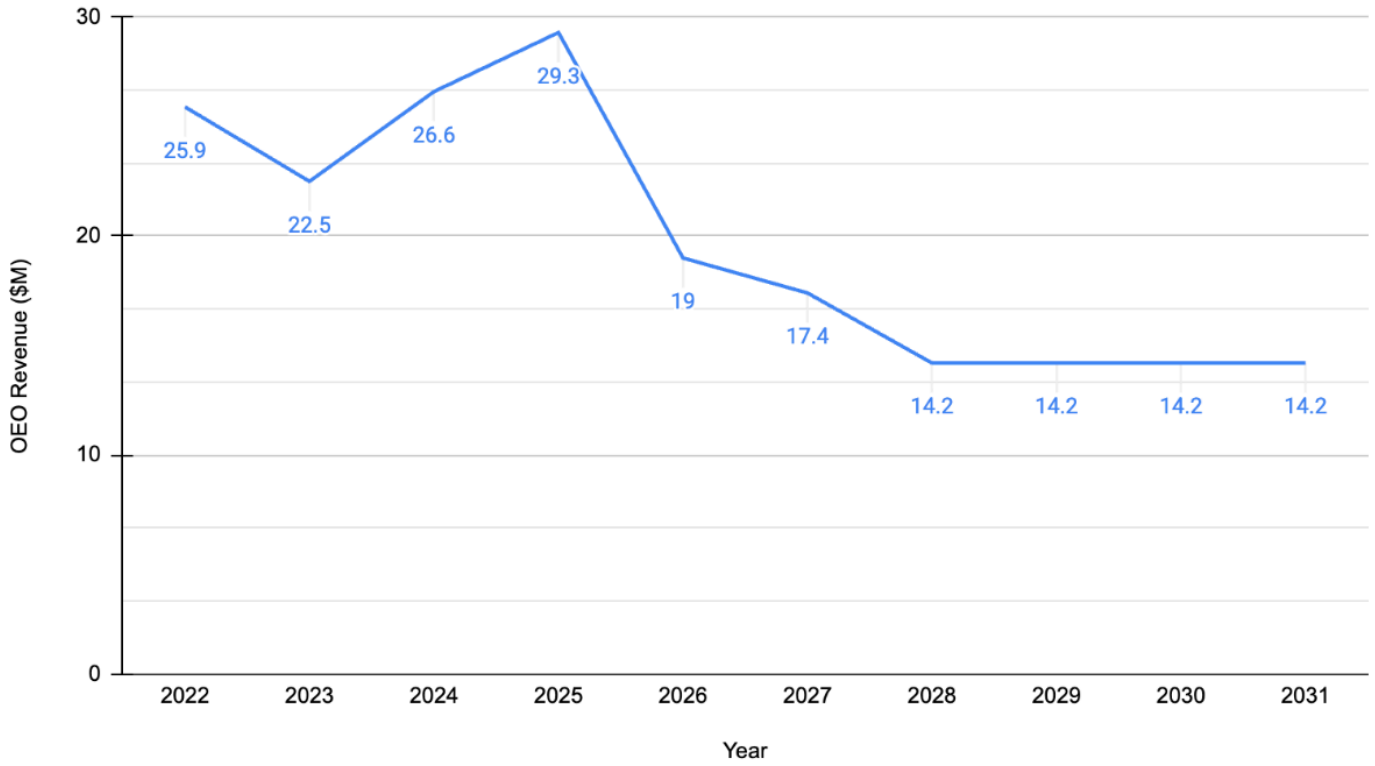
- Every **$0.005** increase in the Fuel Tax, is estimated to:
  - Generate an additional **$1.3M** in revenue
  - And fund an additional **56 weatherization projects each year**
- **$0.03 = 112** more projects
- **$0.07 = 560** more projects

Scenario Methodology

- **4 scenarios** were developed to assess the **impact of one-time, short-term federal funds expiring** on total OEO WX funding over the next 6 years.
- Estimates were then made to determine what **increase in the Fuel Tax** would be needed to fully fund OEO WX at the current level once those funds expire.
- Using the average estimated WX project cost from 2022 to 2025 (adjusted for inflation), the **number of low-income WX projects** that could be completed for each increment of Fuel Tax increase was projected as well.

Scenario 1: No IRA Funding; No Change to Fuel Tax

Figure 11: OEO Revenue for WX over Time (June 2026 dollars)

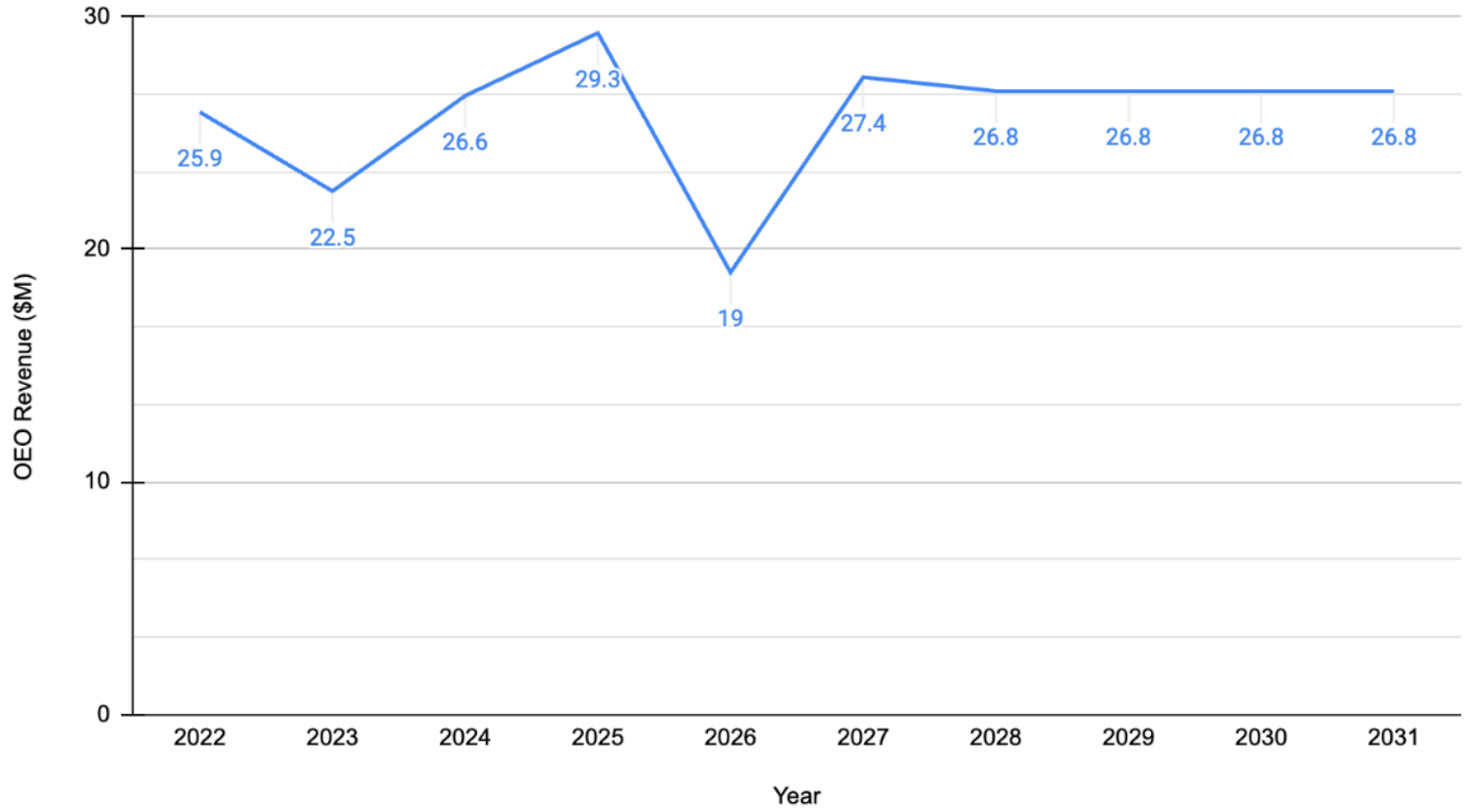


- If IRA funding **does not** come through, there will be a major drop off in weatherization funding in 2026 of about **$10M.**

Scenario 2: No IRA Funding; Increase Fuel Tax

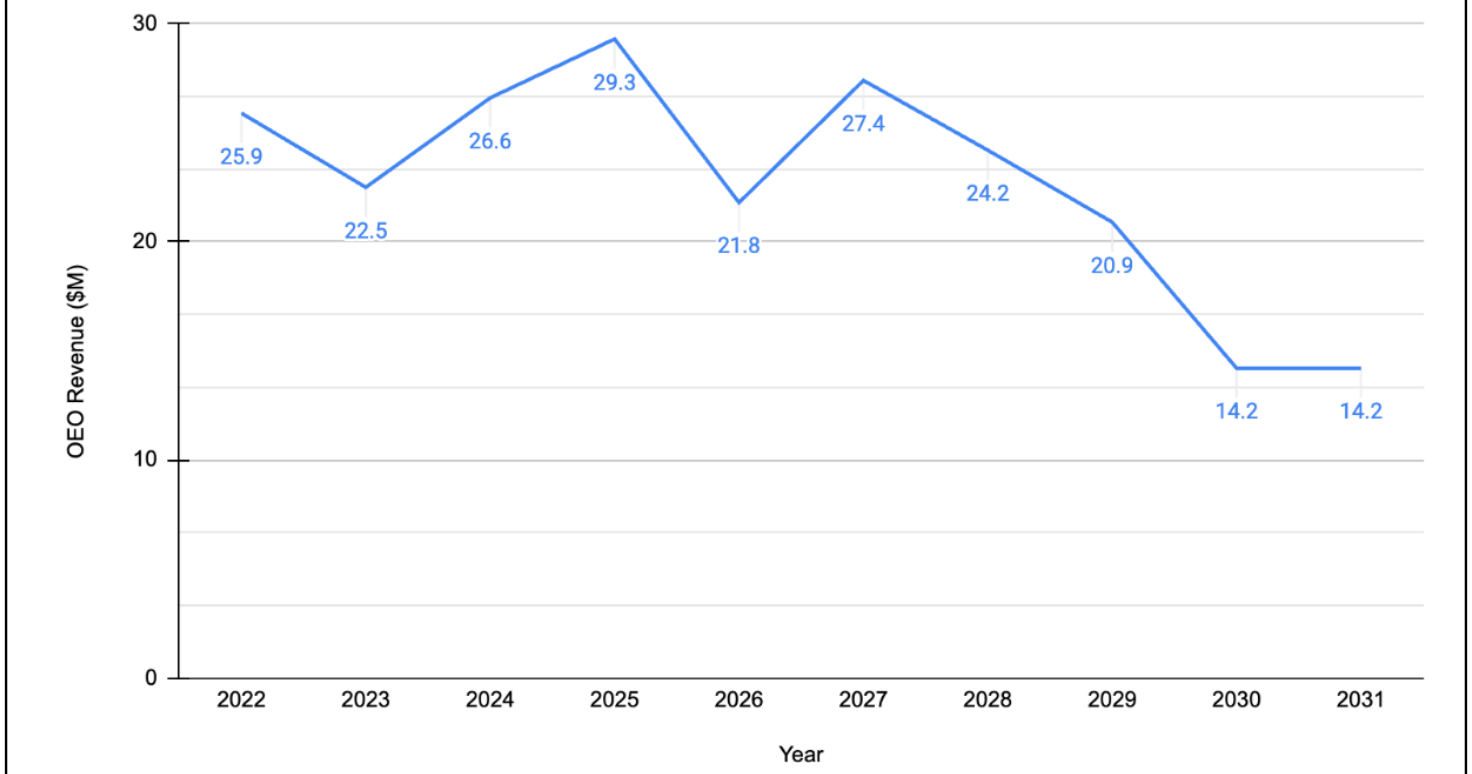
- If IRA funding **does not** come through, increasing the Fuel Tax to **$0.06 per gallon in 2027**, the first year for possible legislative change, then to **$0.07 in 2028** should generate enough revenue to maintain OEO WX funding at **$26M** per year.

Figure 12: OEO Revenue for WX over Time (June 2026 dollars)



Scenario 3: IRA Funding; No Change to Fuel Tax

Figure 13: OEO Revenue for WX over Time (June 2026 dollars)

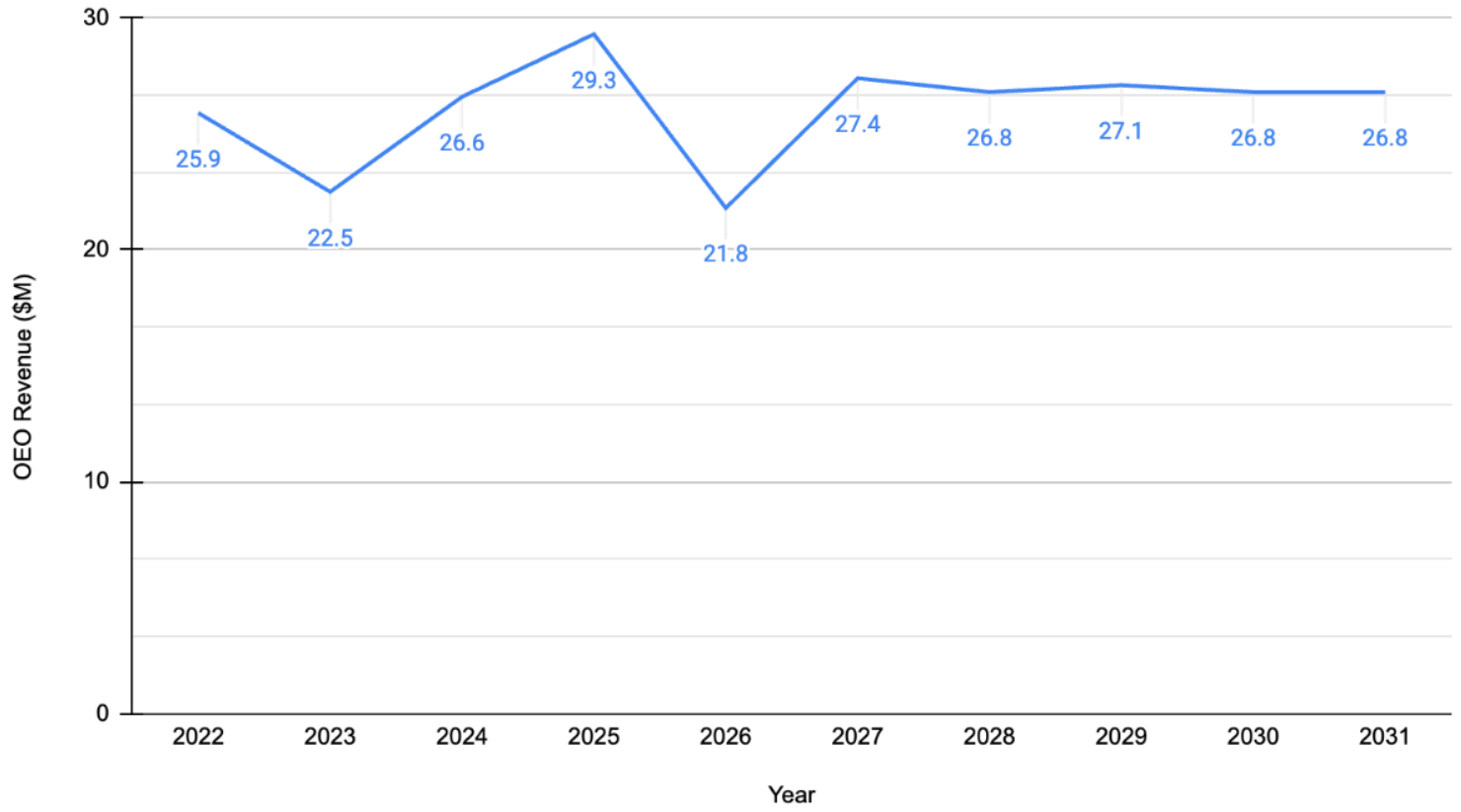


- If IRA funding **does** come through, there will still be a major drop in WX funding in **2026** of about **$8M,** then again, in **2030**, of about **$6M** as other one-time funding sources end.

Scenario 4: IRA Funding; Increase Fuel Tax

- If IRA funding **does** come through, increasing the Fuel Tax to **$0.03 per gallon in 2028**, then to **$0.045 per gallon in 2029**, and then again to **$0.07 per gallon in 2030** should be sufficient to maintain OEO WX funding at **$26M** per year.

Figure 14: OEO Revenue for WX over Time (June 2026 dollars)



Conclusion

- VT's Home Weatherization Assistance Fund has stably supplemented federal WAP funding for 30+ years, within a "braided" system of federal, state, utility, and non-profit funding, but some sources (ARPA, IIJA) are expiring soon, while others (IRA) are still uncertain

- **Finding 1:** A funding cliff is approaching
  - A $8–10M drop in OEO low-income weatherization funding looms in 2026 as federal funds decrease

- **Finding 2:** Raising the Fuel Tax has been recommended previously (PUC, RAP, TETF) as an approach for supporting low-income weatherization and as a hedge against volatile federal funding

Conclusion

- **Finding 3:**
  - **If IRA funding does not come through**: an increase in the Fuel Tax to $0.06 per gallon in 2027 and to $0.07 per gallon in 2028 would maintain current levels of WAP qualified low-income weatherization

  - **If IRA funding comes through:** an increase in the Fuel Tax to $0.03 per gallon in 2028, then to $0.045 per gallon in 2029, and then again to $0.07 per gallon in 2030 would maintain current levels of WAP qualified low-income weatherization

Thank you!

Comments or Questions?

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Appendix

Low-Income Weatherization Project Implementation

- **Delivery model:** CAA and WAP non-profit crews complete all WAP-funded projects; non-WAP funds (EVT, BED, VGS) cover additional efficiency, electrical, and health/safety work not WAP-eligible
  - EVT partners with all CAAs and WAP non-profits, while BED and VGS work only with CVOEO
- **Process:** eligible applicant → CAA or WAP non-profit Efficiency Coach site visit (may defer for health/safety issues) → WAP-trained Energy Auditor tests envelope (blower door test, infrared imaging) → scope of work sent to WAP coordinator → crews assigned, with area coordinators/QCIs monitoring progress → subcontractors brought in for complications like vermiculite removal or roof repair
- **Health & economic impact:** 10-year economic benefit is nearly 3x the initial cost; weatherizing ~2,000 low-income households/year is projected to **prevent 223 ER visits, 13 hospitalizations, and 0.5 deaths over 10 years**
- **Challenges:**
  - Workforce: funding volatility makes staffing levels unpredictable, discourages workers from entering the field, and makes it hard to sustain a trained workforce
  - Subcontractor gap: specialized work, like vermiculite removal, is especially hard to source in rural areas