



VERMONT LEGISLATIVE
Joint Fiscal Office

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Fiscal Note

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H.289 – An act relating to the Renewable Energy Standard

As recommended by the House Committee on Environment and Energy, Draft 6.1

Bill Summary

The bill would make numerous changes to the Renewable Energy Standard (RES). It would require that most retail electricity providers' annual load be comprised of 100 percent renewable energy by January 1, 2030. For GlobalFoundries and municipal providers, the deadline would be January 1, 2035. The bill would also increase the required amounts of distributed renewable generation, new renewable energy, and load growth renewable energy. Some exceptions are spelled out in the bill.

The bill would have direct and indirect fiscal impacts on Vermont.

Providers that cannot meet the requirements could instead make alternative compliance payments at rates specified in the bill. Unless it meets strict efficiency and greenhouse gas reduction standards, wood biomass electricity generation coming into service after January 1, 2023 would not count toward a provider's renewable energy total. Under certain conditions, electricity generated by hydropower plants not owned by a provider would count toward the distributed renewable generation or energy transformation requirement.

Fiscal Impact

The bill would have direct and indirect fiscal impacts on Vermont. However, due to various unknowns – potential technological advances, changes in demand for electricity, adaptations in the ISO-New England grid, actions of Vermont's utilities in future years, etc. – there is considerable uncertainty regarding the impacts.

The Joint Fiscal Office (JFO) estimates the direct cost to the State budget, including the General Fund and other sources for appropriation, would be about \$11,500 in fiscal year 2025 and would grow to about \$975,000 in fiscal year 2035. The cost would come from electricity rate increases applied to electricity used by the State beyond those already expected in absence of the bill.

Some revenue streams would increase as a result of the bill. The Low-Income Home Weatherization Assistance Fund would receive increased revenue from the gross receipts tax on retail sales of electricity – about \$9,000 in fiscal year 2025 and rising to about \$897,000 in fiscal year 2035. The Department of Public Service (PSD) would receive additional revenue, to be used for maintenance, from the tax on the gross operating revenues of providers of electric energy. Starting in fiscal year 2026, that revenue would amount to roughly \$14,000 and rise to about \$554,000 in fiscal year 2035. The Public Utility Commission (PUC) would

receive funds, also to be used for maintenance, from that revenue source as well; approximately \$9,000 in fiscal year 2026 and about \$355,000 by fiscal year 2035. At this time, no additional State personnel would be needed to administer the new RES.

The overall effect of indirect fiscal impacts is unclear. Indirect fiscal impacts would arise from increased resource investment in Vermont, a minor decline in consumption growth by households, and a slight slowing in the growth rate of the State's gross domestic product (GDP). Illustrative modeling by The Brattle Group suggests those macroeconomic effects could result in slightly higher growth in tax revenues in future years. It is possible, but not certain, that State expenses such as health care costs or climate change-related investments in adaptation and resilience measures could grow less rapidly if lower greenhouse gas emissions led to better health and less environmental damage.

Background and Details

Only Section 4 has a fiscal impact.

Section 4

Section 4 would require that the amount of total renewable energy for GlobalFoundries and municipal retail electricity providers reach 100 percent by 2035. All other retail electricity providers would have to reach 100 percent by 2030. Section 4 would also establish required amounts of distributed renewable generation, new renewable energy, and load growth renewable energy for electricity providers of different sizes and types. It would also create a new regional renewable energy category for the RES. Finally, it provides alternative compliance payment rates for utilities that cannot reach the new targets for the RES.

To estimate the direct fiscal impacts, JFO relied on three sources. The three sources are the technical analysis of Sustainable Energy Advantage (SEA), LLC for PSD's Stakeholder Advisory Group; the macroeconomic analysis conducted by the Brattle Group for the 2023 Legislative Working Group on Renewable Energy Standard Reform, and the recent PSD memo to the House Committee on Environment and Energy regarding its estimate of the full cost of H.289 over the next 10 years. Estimates for the direct fiscal impacts are based on SEA modeling of Scenario 2 and Scenario 5, the two scenarios that are closest to the requirements in H.289.

Using average effects under Scenario 2 and Scenario 5, PSD adjustments imply costs that are 1.3 times the costs used by SEA and Brattle for two reasons (PSD; February 6, 2024 memo and subsequent communications). First, H.289 includes some significant exemptions and carve outs for RES reform that could reduce costs by about one-third, from about \$770 million over 10 years to about \$500 million over 10 years. Second, PSD adjustments include an estimate of about \$500 million over 10 years in transmission upgrades needed to accommodate the higher levels of distributed solar generation required by this bill. That cost estimate wasn't available at the time of SEA's or Brattle's analysis. The \$500 million estimate for transmission upgrades could be lower if electricity providers effectively manage storage, timing of electric vehicle charging, and location of new solar arrays. The overall cost of implementing H.289 based on Scenarios 2 and 5 is estimated to be roughly \$1 billion over 10 years, after the PSD adjustments. JFO assumed the time path for the all-inclusive increased costs would follow the time path used in the SEA and Brattle reports and would be covered entirely by rate increases.

Direct fiscal impacts

Increased State costs stem from an anticipated rise in electricity rates beyond those increases assumed in absence of the bill. Scenarios 2 and 5 as modeled by SEA are close to the renewable energy requirements in H.289; JFO incorporated estimated costs from PSD to reflect flexibility allowed in the bill to meet requirements as well as the cost of transmission upgrades to handle greater distributed solar generation. JFO assumed the amount of electricity used by State government would stay relatively constant over time, about 35,500 Megawatt hours.

Estimate for H.289: Additional Cost to State Government for Electricity	
FY 2025	\$11,500
FY 2026	\$86,500
-	-
FY 2030	\$352,000
-	-
FY 2035	\$975,000

Sources: JFO estimates using SEA results for Scenarios 2 and 5; PSD memo on estimated total costs of H.289 and subsequent communications; Department of Buildings and Grounds data on annual MWh used by State government.

Additional State revenues would come from three tax streams.¹

- A monthly gross receipts tax of 0.5 percent levied on the retail sale of electricity; funds would go to Low Income Home Weatherization Program.
- A tax on gross operating revenue of providers of electricity is levied on the prior calendar year’s gross operating revenue. It is paid on April 15.
 - For maintenance costs at PSD, the tax is 0.00320 of gross operating revenue.
 - For maintenance costs at PUC, the tax is 0.00205 of gross operating revenue.

Fiscal Year	Estimate for H.289: Additional Revenues to State Government from Three Tax Streams		
	Gross Receipts Tax	Tax on Gross Operating Revenues	
		PSD	PUC
FY 2025	\$9,100	-	-
FY 2026	\$71,000	\$13,900	\$8,900
-	-	-	-
FY 2030	\$317,000	\$171,500	\$109,700
-	-	-	-
FY 2035	\$897,000	\$554,000	\$354,900

Source: JFO estimates using SEA results for Scenarios 2 and 5 and the PSD memo on total costs of H.289. The tax rate to support PSD is 0.00320, and the tax rate to support PUC is 0.00205.

No additional staff positions are needed. PSD would reallocate existing staff resources rather than request new staff positions, and PUC is not requesting any new positions at this time.

Indirect fiscal impacts

The indirect fiscal impacts described below, relative to “Business as Usual,” would occur under H.289. JFO relied on modeling conducted by the Brattle Group for the 2023 Legislative Working Group on Renewable Energy Standard Reform, who in turn used inputs from modeling by SEA.

¹ See 33 V.S.A. § 2503 for the gross receipts tax and 30 V.S.A. § 22(a) for the taxes on gross operating revenues.

- Slightly higher state revenues
 - The Brattle Group’s modeling using a stylistic tax structure showed slightly higher State revenues but slightly lower GDP growth, particularly after 2030, than in the absence of H.289
 - The slightly slower growth rate of Vermont’s GDP is based on two effects: economic activity would increase a bit faster due to renewable energy investments, but growth in consumption by Vermonters would slow slightly as electricity rates rise and their spending power declines
- Possibly a slightly lower rate of growth in State spending for Medicaid and other health care programs
 - If a decline in greenhouse gas emissions leads to better health for Vermonters, State spending for Medicaid and other health care programs might grow slightly less rapidly
- Possibly a slightly lower rate of growth in State spending in response to climate change
 - If climate change accelerates a bit more slowly, State spending on climate change mitigation, adaptation, and resilience might grow at a slightly slower rate

Appendix: Resources

The Brattle Group, “Economic Impacts of Expanding Vermont’s Renewable Energy Standards,” December 13, 2023.

https://ljfo.vermont.gov/assets/Meetings/Renewable-Energy-Standard-Reform-Working-Group/2023-12-13/07d799fec2/Brattle-Presentation-12132023_Presented.pdf

Legislative Working Group on Renewable Energy Standard Reform, Act 33 of 2023.

<https://ljfo.vermont.gov/committees-and-studies/renewable-energy-standard-working-group>

State of Vermont General Assembly, “Report of the Legislative Working Group on Renewable Energy Standard Reform,” December 20, 2023.

https://ljfo.vermont.gov/assets/Uploads/5f88e10ecc/RESWG_final_report.pdf

Sustainable Energy Advantage, LLC for the Vermont Public Service Department, “Technical Analysis of a 100% Renewable or Clean Energy Standard: Final Results” November 27, 2023.

<https://publicservice.vermont.gov/sites/dps/files/documents/VT%20RES%20Technical%20Analysis%20Final%20Report%2011.27.23.pdf>

Vermont Public Service Department, “Follow up from January 30 Testimony regarding costs of Renewable Energy Standard proposals,” February 6, 2024.

<https://legislature.vermont.gov/Documents/2024/WorkGroups/House%20Environment/Bills/H.289/Witness%20Testimony/H.289~TJ%20Poor~PSD%20Renewable%20Energy%20Standard%20Costs%20Memo~2-6-2024.pdf>