Increasing Energy Independence and Lowering Energy Costs for Mainers through Federal Clean Technology Investments

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Natural Resources Council of Maine
Protecting the Nature of Maine

FEBRUARY 2025 REPORT

Introduction

The past few years have seen Maine families, local businesses, and Wabanaki Nations benefit from at least **$2.2 billion in direct and induced investments** from federal clean technology programs. Those investments have made Maine more energy independent and helped make progress toward the goals laid out in *Maine Won't Wait,* the state's four-year climate action plan.

Many of the programs that provide these important sources of funding for Maine's communities and businesses are at risk if Congress repeals major provisions of the Bipartisan Infrastructure Law (BIL) or the Inflation Reduction Act (IRA) through budget reconciliation, as President Trump and his administration and Congressional leaders have indicated.[1]

High energy costs in Maine are primarily driven by dependence on out-of-state oil and gas. Investments in clean energy technologies that cost less to run result in lower overall energy costs for residents and businesses. Reducing Maine's dependence on fossil fuel is a practical pathway to affordable, reliable energy and strong economic growth.

Maine does not produce fossil fuels but spends more than $4 billion per year buying them from elsewhere, with prices driven primarily by global markets over which Maine has no influence. Maine families and businesses are subject to volatile prices for most kinds of energy:

- Transportation fuels like gasoline and diesel;
- Heating fuels like heating oil, propane, and natural gas; and
- Electricity costs driven by natural gas power generation on the New England grid.

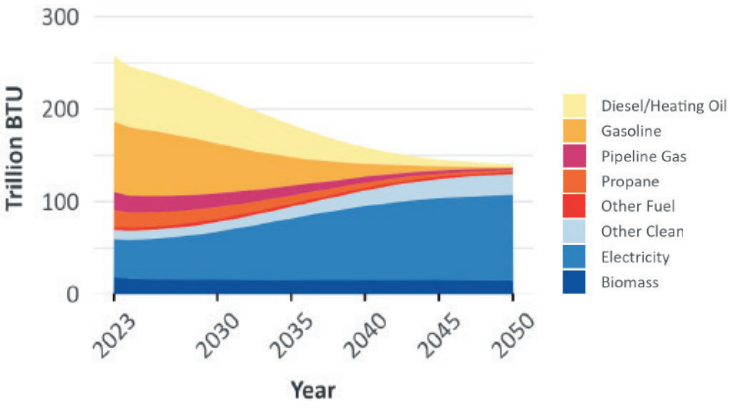
Continuing federal clean energy investments and programs, and ensuring committed funding is deployed, is necessary to continue reducing energy costs for all residents, growing new jobs that keep people here in Maine, increasing energy independence, and reducing pollution, public health impacts, and climate risks in communities across the state.

Clean Energy Provides Economic Benefits and Lowers Costs, Now and in the Future

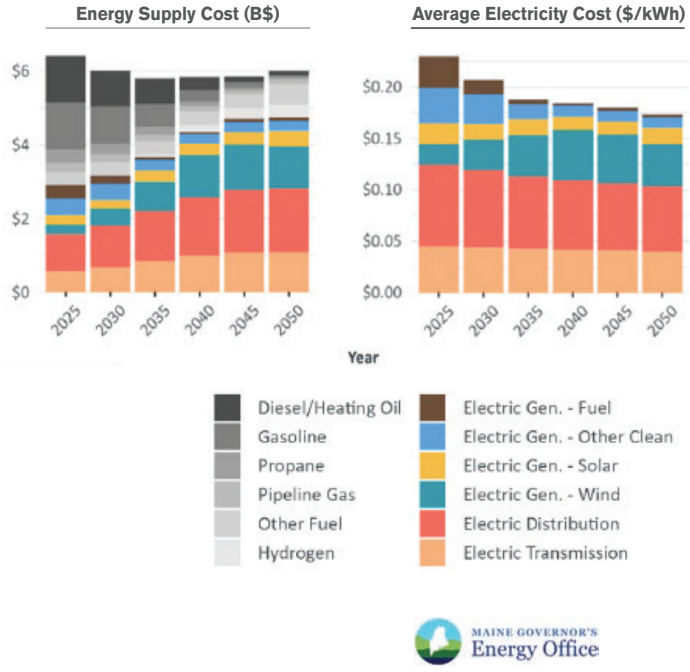
Maine's clean energy industry contributed $2.31 billion to the state's economy in 2022 alone and includes more than 2,500 clean energy businesses. Clean energy jobs have helped lead Maine's economic growth, with jobs in the sector growing faster than jobs economy wide. The clean energy industry now employs more than 15,000 Mainers.[2]

Federal clean technology programs in the BIL and IRA support the achievement of Maine's clean energy and climate goals, which are already saving Maine families and businesses money on energy costs. Maine's existing renewable portfolio standard already saves ratepayers **$21.5 million per year.**[3] Achieving the state's goal of reaching 100% clean electricity by 2040 could **reduce average household energy costs by ~$1,300 per year** as lower-cost and more efficient electricity replaces higher-cost fuels.[4]

Clean Energy Technologies Reduce Total Energy Consumption



Energy Supply Costs and Average Societal Electricity Cost for Maine (2022$)

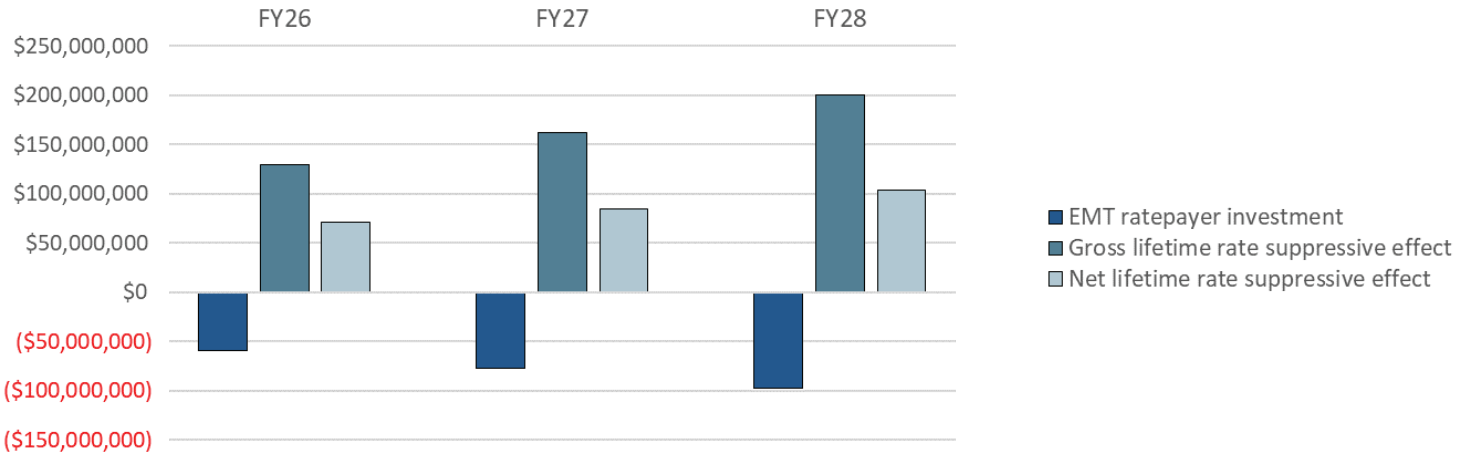


MAINE GOVERNOR'S Energy Office

Clean energy projects like wind and solar can also provide significant benefits to municipalities, including local tax revenue, contribution to municipal budgets, and stabilization or reduction in property taxes for residents.

A central strategy in Maine's energy and climate policies is *beneficial electrification*, which includes substituting fossil fuels in the heating and transportation sectors with electricity generated from clean, renewable sources, and reducing energy bills for homes and businesses across the state through energy efficiency improvements. For example, homeowners save on heating costs by switching from oil to high-efficiency heat pumps,[5] and drivers save on fuel costs by switching from gasoline-powered cars to electric vehicles.[6]

Beneficial electrification has a powerful ability to deliver real benefits to Maine's electricity consumers by spreading out transmission and delivery costs and lowering rates for everyone. The most recent triennial plan from the Efficiency Maine Trust (EMT) includes many programs supported by federal policies that promote energy efficiency, electrification, and load flexibility, among other things, that will **push down electric rates for Maine families and businesses by more than $490 million** over the lifetime of those investments.[7]

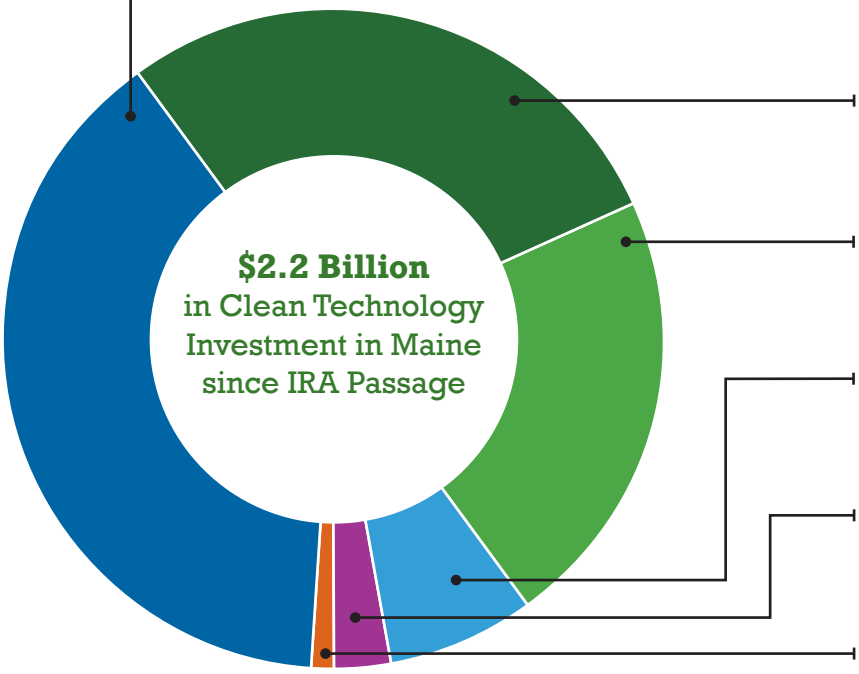


Federal Investments in Maine

A new NRCM analysis of MIT/Rhodium Group Clean Investment Monitor data shows that federal policies, like those included in the BIL and IRA, **have supported at least $2.2 billion in direct and induced public and private investments in Maine.**[8] These include direct federal investments in clean technologies in Maine, including clean electricity tax credits, home energy and home energy efficiency tax credits, zero-emission vehicle tax credits, and grant programs totaling $494.1 million. When private investment is included, since the passage of the IRA in Q3 of 2022:

- Business and household investments in Maine, including distributed and rooftop solar installations, energy storage, heat pumps, and electric vehicles supported by clean energy-friendly tax credits since the passage of the IRA totaled **$1.37 billion.**
- Clean energy investments in Maine, including larger-scale solar, wind, and energy storage, totaled **$842.1 million**.

These totals include only investments that have already been made or committed to date. If these federal programs continue, they are expected to support significant additional growth and investment in clean energy technologies and projects, with their myriad benefits to Maine. Conversely, if federal programs supporting clean energy in Maine in the BIL or IRA are repealed by Congress, uncertainty will increase, some committed funding could be clawed back, and projects could be cancelled. This will harm Maine's economy, reduce access to cost-saving clean energy technologies, and continue Maine's dependence on out-of-state oil and gas.



$866.3 Million
Distributed Electricity & Storage
Business & Household

$623.4 Million
Solar
Energy & Industry

$485.6 Million
Zero-Emission Vehicles
Business & Household

$155.1 Million
Storage
Energy & Industry

$63.7 Million
Wind
Energy & Industry

$21.7 Million
Heat Pumps
Business & Household

Selected Federal Clean Technology Investments in Maine

The BIL and IRA created numerous programs to help families and businesses adopt clean technologies, create jobs and new economic opportunities, and lower energy costs. There are programs designed to benefit businesses, Tribal nations, rural and low-income Mainers, drivers, and homeowners among others in specific ways. Some funding streams flow directly to Mainers through tax credits, or to businesses as grants, and some are competitively awarded to program administrators like the Efficiency Maine Trust. Below is a non-exhaustive list of some of the federal programs and funding that has come to or been committed to Maine through the BIL and IRA.

- $6.6 million for grid resilience investments in Maine communities and Tribal nations – Maine is investing $6.6 million in funding from the U.S. Department of Energy's Grid Resilience State and Tribal Formula Grant program, funded by the BIL. Projects include funding a community microgrid for the Penobscot Nation at Indian Island, as well as other investments to transmission and distribution infrastructure and other equipment to increase resilience of the electric grid and decrease the frequency and duration of outages, including within disadvantaged communities and areas experiencing a high frequency and/or long durations of outages.[9]
- $7.4 million to begin work on a community microgrid in the Passamaquoddy Tribe Indian Township – The Passamaquoddy Tribe Indian Township received $7.4 million in funding from the U.S. Environmental Protection Agency (EPA) through the IRA's Climate Pollution Reduction Grant program. The funding will support the first phase of the construction of a community microgrid, including the installation of solar photovoltaic systems with battery backup and load management at residential and municipal buildings.[10]
- $10 million for heat pumps in rural manufactured and mobile homes in Maine – Maine was awarded $10 million in funding from the BIL to support the installation of high-efficiency heat pump systems in rural mobile and manufactured homes in Maine and expand workforce training for local installers to do the work. Eligible residents under this initiative could have their existing heating systems retrofitted with ducted whole-home heat pump systems, a transition that could reduce their energy costs by an estimated 40 percent, based on current energy costs.[11]
- $15 million to expand Efficiency Maine's clean energy loan programs – Efficiency Maine's Green Bank, created by the Maine Legislature in 2021, was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awarded $15 million in IRA funding through the U.S. EPA's Greenhouse Gas Reduction Fund. The funding will be used to expand its loan and lease offerings across a broader range of homeowners, small businesses, commercial properties, schools, and municipalities.[12]

- $23.5 million for Acadia National Park to transition to all-electric buses – Downeast Transportation Inc., which provides public transportation at Acadia National Park, received $23.5 million in funding from the BIL through the U.S. Department of Transportation (USDOT) to fully electrify its bus fleet. The buses will be used in Acadia National Park each year from mid-June to early October, and Downeast Transportation plans to use them on nearby routes year-round.[13]
- $34 million to build public electric vehicle (EV) chargers across Maine – Maine received two awards totaling $34 million from the BIL to expand public EV charging infrastructure across the state. This funding supports the Recharge Maine initiative, a partnership among the Maine Department of Transportation, Efficiency Maine, the Governor's Office of Policy Innovation and the Future, the Governor's Energy Office, and the Maine Department of Environmental Protection, which is deploying $42 million to install EV chargers in rural and urban areas, and along key highway corridors, making Maine's public EV charging network more robust, accessible, and reliable, so more Maine residents and businesses across the state can access the significant fuel cost savings associated with operating electric vehicles.[14]
- $45 million in tax credits for home energy and efficiency upgrades benefiting more than 21,000 Mainers – The IRA extended and expanded tax credits that help households invest in residential clean energy such as solar panels, as well as home energy efficiency. Internal Revenue Service data shows that in tax year 2023 alone, 21,730 Mainers claimed $45.7 million in tax credits for residential clean energy investments – such as solar electricity generation, solar water heating, and battery storage, among other technologies, and for energy-efficient home improvements such as heat pumps, efficient air conditioners, insulation, windows, and doors. Investments in clean energy and energy efficiency benefit households by lowering and stabilizing their monthly utility bills, and benefit all Americans by mitigating climate change and air pollution.[15]

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- $62 million to increase access to solar for low-income Mainers – Maine was awarded $62 million of IRA funding to develop a Solar for All program for Maine — long-lasting solar programs that enable low-income and disadvantaged communities to deploy and benefit from distributed residential solar. The funding was awarded through the U.S. EPA's Greenhouse Gas Reduction Fund.[16] This funding will support programs to equitably accelerate the deployment of solar and energy storage to benefit Maine's most vulnerable households, delivering energy savings, a cleaner environment, and high-quality jobs.[17]
- $65 million to support grid modernization, resilience, reliability, and renewable energy interconnections in rural Maine – Maine was awarded $65 million by the U.S. Department of Energy through the Grid Resilience and Innovation Partnerships (GRIP) Program, funded by the BIL. The funding will support the deployment of innovative software and hardware technologies to create a more modern and dynamic grid that will increase grid hosting capacity for distributed energy resources (DERs) and address interconnection delays, as well as increase capacity of transmission lines by monitoring real-time conditions through sensors, allowing for greater integration of renewable energy without costly infrastructure upgrades. These investments will create significant workforce development opportunities and community benefits through accelerating renewable energy deployment in rural Maine while increasing resilience and ensuring affordability for utility customers.[18]
- $72 million for home energy efficiency and home energy upgrades for low-income Mainers – Maine has been allocated nearly $72 million in federal funding to support residential energy efficiency and electrification incentives, funded by the IRA. This funding is available under two distinct programs in Maine. The Home Electrification and Appliance Rebates (HEAR) program prioritizes the electrification of space heating by providing rebates for efficient heat pump systems in new construction of affordable multifamily housing and single-family manufactured (mobile) homes. The Home Efficiency Rebates (HER) program will provide rebates for efficiency upgrades in existing multifamily buildings that achieve a minimum of 35% energy savings, emphasizing heating system retrofits that replace fossil fuel systems with heat pump technologies. Enhanced incentives will be available for projects in buildings serving low-income households.[19]
- $147 million to support a cutting-edge, long-duration energy storage facility in Lincoln, ME – The U.S. Department of Energy, using BIL funding, awarded a $147 million grant award to support a novel and

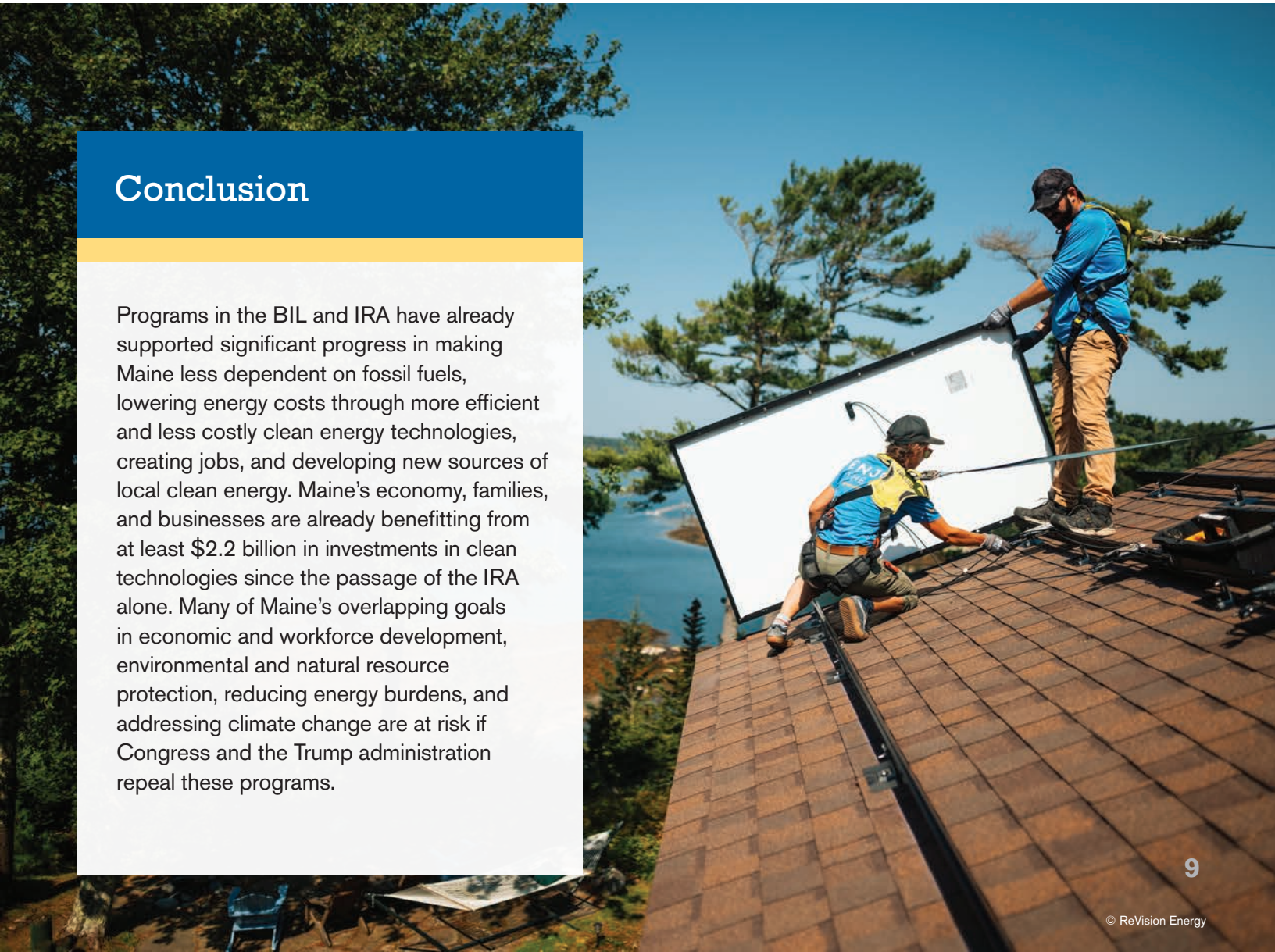
innovative multi-day energy storage system in Lincoln, Maine, to enhance grid resilience and optimize the delivery of renewable energy. The project, at the site of the former mill in Lincoln, would be the first of its kind in New England and the largest long-duration energy storage project in the world to date. The project will be able to continuously discharge energy for up to 100 hours or just over 4 days, strengthening the transmission system to support the delivery of higher loads of power from renewables, including nearby onshore wind turbines, and contributes to Maine's goal of 400 MW of energy storage installed by the end of 2030.[20]

- $206 million in energy grants and loans to rural Maine small businesses and farms – As of January 2025, the U.S. Department of Agriculture (USDA), with funding from the IRA, has invested more than $14 million in grants and $192 million in loans and loan guarantees to 171 awardees through the Rural Energy for America Program (REAP). With these investments, Maine farmers and small business owners gain access to clean energy, create jobs, and help lower their energy bills by implementing cost-saving, clean, efficient energy systems on their properties.[21]

- $425 million for transmission infrastructure to support low-cost wind energy from Aroostook County – The U.S. Department of Energy awarded a $425 million capacity contract — one of the largest ever Federal investments in energy development in Maine — to support the building of new transmission infrastructure to bring more low-cost wind energy online in northern Maine. Connecting Aroostook County's wind resources to the New England grid will create jobs and economic benefits in this important rural region of the state, help stabilize electricity prices, strengthen grid reliability, and contribute to Maine's energy independence.[22]

Conclusion

Programs in the BIL and IRA have already supported significant progress in making Maine less dependent on fossil fuels, lowering energy costs through more efficient and less costly clean energy technologies, creating jobs, and developing new sources of local clean energy. Maine's economy, families, and businesses are already benefitting from at least $2.2 billion in investments in clean technologies since the passage of the IRA alone. Many of Maine's overlapping goals in economic and workforce development, environmental and natural resource protection, reducing energy burdens, and addressing climate change are at risk if Congress and the Trump administration repeal these programs.



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[2] Maine Governor's Energy Office. *2023 Maine Clean Energy Industry Report.* https://www.maine.gov/energy/sites/maine.gov.energy/files/2024-05/2023%20MECEIR%20Report%20Final.pdf (pg. 3)

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[4] Maine Governor's Energy Office. *Maine Pathways to 2040: Analysis and Insights.* January 2025. https://www.maine.gov/energy/sites/maine.gov.energy/files/2025-01/Maine%20Pathways%20to%202040%20Analysis%20and%20Insights.pdf (pg. 3)

[5] Efficiency Maine Trust. *Residential Heating System Cost Calculator.* https://www.efficiencymaine.com/at-home/heating-cost-comparison (pg. 4)

[6] U.S. Department of Energy. *Drive-Electric Fuel Savings Calculator.* https://www.energy.gov/drive-electric-fuel-savings-calculator (pg. 4)

[7] Efficiency Maine Trust. *FY2024 Annual Report.* November 26, 2024. https://www.efficiencymaine.com/docs/FY2024-Annual-Report.pdf (pg. 4)

[8] A note on data and methodology for this analysis: $2.2 billion is likely an underestimate of clean energy investments. Some clean energy projects that have been built in Maine recently (for example Downeast Wind, a large onshore wind project in Washington County) are expected to be included in Clean Investment Monitor data in upcoming quarterly updates. Heat pump data is also derived from national sales data. Efficiency Maine's most recent annual report indicated that its programs helped install 27,520 high-performance heat pumps over 12 months between July 2023 - June 2024 alone, indicating significantly more than $21.7 million in business and household heat pump investments over this time period. The total also does not include significant additional federal funding for climate resilience investments in Maine communities through the BIL and IRA.

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[10] U.S. Environmental Protection Agency. *Biden-Harris Administration announces nearly $7.5 million grant to Passamaquoddy Tribe Indian Township to cut climate pollution and accelerate clean energy transition.* September 5, 2024. https://www.epa.gov/newsreleases/biden-harris-administration-announces-nearly-75-million-grant-passamaquoddy-tribe (pg. 6)

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[19] Efficiency Maine Trust. *Inflation Reduction Act Home Energy Rebates Program.* https://www.efficiencymaine.com/ira-home-energy-rebates (pg. 8)

[20] Office of Governor Janet T. Mills. *Governor Mills, Senators Collins & King, and Congresswoman Pingree Announce Nearly $150 Million Federal Grant to Develop World's Largest Multi-Day Energy Storage Facility in Lincoln, Maine.* August 6, 2024. https://www.maine.gov/governor/mills/news/governor-mills-senators-collins-king-and-congresswoman-pingree-announce-nearly-150-million (pg. 9)

[21] U.S. Department of Agriculture. *Sixteen REAP Grants Announced for Maine Businesses.* January 10, 2025. https://www.rd.usda.gov/newsroom/news-release/sixteen-reap-grants-announced-maine-businesses (pg. 9)

[22] Office of Governor Janet T. Mills. *Governor Mills Applauds $425 Million Investment from Biden-Harris Administration to Advance Northern Maine Transmission Line, Strengthen Electric Grid & Embrace Clean, Affordable, Renewable Energy.* October 3, 2024. https://www.maine.gov/governor/mills/news/governor-mills-applauds-425-million-investment-biden-harris-administration-advance-northern (pg. 9)

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