



CLIMATE POLICY MILESTONES

A timeline of major climate policy events that have occurred in Rhode Island over the past decade.
Read more on page 2.

REBATES, INCENTIVES, & GRANTS

A Glimpse of Rebates, Incentives and Grants to assist Solar Photovoltaic Installation in Northeastern States – A comparison with Rhode Island.
Read more on page 4.

EC4 HIGHLIGHTS

The first ever EC4 spending plan, RI's 2020 GHG emissions portfolio, and updates to the GHG Inventory.
Read more on page 6

IN THIS ISSUE

Spotlight

Maine eyes time-of-use rates to encourage home electrification 3

Technology and Innovation

America's First Coast Guard-approved Solar-electric boat sails the Hudson River 3

Research highlights

A Glimpse of Rebates, Incentives and Grants to assist Solar Photovoltaic Installation in Northeastern States – A comparison with Rhode Island 4

Policy and regulatory updates

DOE releases new Guidance on Zero Energy Ready Homes and energy efficient homes 45L Tax Credit 4

Opportunities

DOE now Accepting Applications for Energy Efficiency and Conservation Block Grant (EECBG) 3

UPCOMING EVENTS

EBC Brownfields for Climate Resiliency & Clean Energy - January 10

GECA Understanding the Massachusetts MOR-EV Rebate for Electric Cars - January 17

ASHRAE Winter Conference 2024 - January 20-24

URI 2024 Virtual R.I. Food System Summit - January 27

MEETINGS COVERED

Future of Gas Stakeholder Committee

Technical Working Group

EC4

Climate Policy MILESTONES

2016

- Providence commits to carbon neutrality by 2050
- RI GHG Emissions Reduction Plan
- Block Island Wind Farm

2020

- Executive Order Advancing 100% Renewable Electricity for 2030
- Rhode Island Urban Forests for Climate and Health Initiative
- Heating Sector Transformation Report

2022

- 100% Renewable Energy Standard by 2033
- Green Buildings Act Expansion
- Electrifying Transportation Strategic Policy Guide
- 2022 Update to the Greenhouse Gas Reduction Plan
- Drive EV Program

2014

- EC4 established by Resilient Rhode Island Act
- Narragansett Bay Commission CSO Tunnel Phase II completed

2017

- Executive Order establishing Chief Resiliency Officer and kicking off Resilient Rhody
- Executive Order Reaffirming Rhode Island's Commitment to the Paris Climate Agreement
- announcement of strategic goal to achieve 1000 MW clean energy by the end of 2020

2021

- Act on Climate
- Heating Sector Transformation Report
- Carbon Pricing Study
- Forest Conservation Act



TECHNOLOGY & INNOVATION

America's First Coast Guard-approved Solar-electric boat sails the Hudson River

The Solaris, a solar-electric boat, is the first Coast Guard-approved vessel in the nation. Powered solely by a 6-kilowatt solar panel array and 32 lead-acid batteries, it travels 100 miles without conventional fuel. It operates commercially from May to October, offering tours for up to 24 people, showcasing the beauty of the Hudson River. This innovative vessel represents a move towards sustainability in an industry often associated with air pollution and carbon emissions, aligning with recent efforts to mitigate these environmental impacts.

Maine eyes time-of-use rates to encourage home electrification

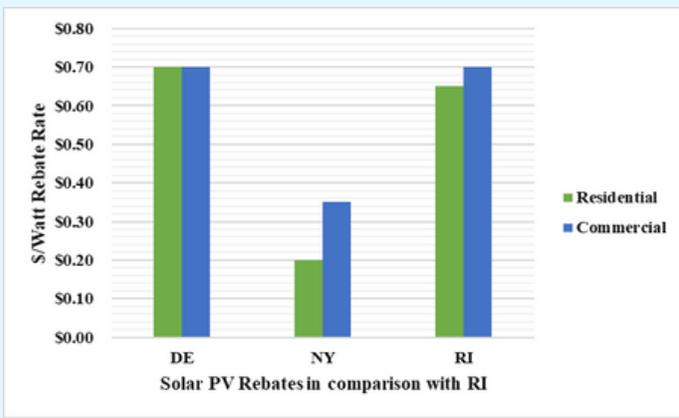
In response to an increase in electric vehicle usage statewide, Maine considers implementing Time-of-use (TOU) rates to curb the impact of EV charging on peak demand. Currently, Central Maine Power and Versant Power are independently piloting TOU programs for seasonal heating, heat pumps, and electric vehicle charging. Meanwhile, the Maine PUC seeks to expand TOU pricing to accomplish various climate policy goals such as the expansion of electric vehicles, heat pump usage, and high-efficiency water heating and space heating. These decarbonization-friendly technologies are expected to drastically increase New England's summer and winter peak demands, likely exceeding available renewable power supplies and creating more emissions if no mitigation actions are taken. TOU rates and other methods of load management are potential solutions.

New Hampshire Delegation Welcomes Nearly \$500,000 to Expand Energy Efficiency Efforts in Rural Communities

New Hampshire has historically fallen behind in clean energy programs compared to the rest of New England. However, recently it has been aiming to change that. Clean Energy NH, the state nonprofit clean energy organization has obtained nearly \$500,000 to expand energy efficiency programs for small businesses and agricultural producers. The funding was allocated from the \$2 billion within the Rural Energy for America Program (REAP), a subsection of the IRA. NH congressman Chris Pappas stated, "Supporting rural businesses looking to transition to clean energy is vital to protecting our environment, creating jobs, and generating economic growth." This is a win for NH's small business-based economy and state decarbonization efforts.

DOE now Accepting Applications for Energy Efficiency and Conservation Block Grant (EECBG)

Department of Energy (DOE) announced that the application portal for the Energy Efficiency and Conservation Block Grant (EECBG) Program is now live. EECBG aims to aid states, local governments, and Tribal communities in implementing measures to curtail energy consumption, reduce fossil fuel emissions, and enhance overall energy efficiency. Distinguished from the conventional grant approach, EECBG Program vouchers offer a more streamlined application process and reduced administrative complexities. DOE encourages applicants whose EECBG Program formula allocation is less than \$250,000 to pursue this option. The deadline for submissions, encompassing both grant proposals and vouchers, is April 30, 2024.



FROM RHODE ISLAND ENERGY CONSULTANT TEAM'S RESEARCH DESK

A Glimpse of Rebates, Incentives and Grants to assist Solar Photovoltaic Installation in Northeastern States – A comparison with Rhode Island.

Research was conducted to compare green energy rebates and incentives in various states across East Coast. Only Rhode Island, Maryland, and New York offer grants to install solar PV. Pennsylvania's Alternative and Clean Energy Program (ACE) offers loans for clean energy generation projects. South Carolina's Mini-Grant Program provides limited competitive funding (up to \$10,000) to businesses and non-profits for high-impact demonstration projects in renewable energy and clean transportation. Other states provide technical evaluation and educational benefits.

Maryland's Clean Energy Grant Program offers grants of \$1000, \$500, and \$3000 to install residential solar photovoltaic system, solar water heater, and geothermal heat pump respectively.

Figure above provides a comparison of \$/Watt rebate rates of solar PV for both residential and commercial projects in RI, NY, and MD. RI's Renewable Energy Fund (REF) Small-Scale Solar Program provides \$0.65/Watt to residential and micro businesses with a maximum limit of \$5000 per customer. Additional \$2000 per project is given for including storage with solar. A similar REF commercial program provides \$0.70/Watt with maximum cap of \$400,000. The rebate goes down as the system size increases.

Continued...

DOE releases new Guidance on Zero Energy Ready Homes and energy efficient homes 45L Tax Credit

In August 2022, President Biden's signing of the Inflation Reduction Act marked a substantial federal commitment toward combating climate change. The home building industry has a pivotal role to play in this collective effort, notably through the extended and augmented energy-efficient homes tax credit (45L). Over the next decade, builders and developers can rely on a significant tax credit, enabling the construction of superior, high-performance homes that reduce utility expenses for households while fostering employment opportunities.

Recently, the IRS issued new guidance regarding the 45L tax credit, aimed at providing clarity on eligibility criteria, energy-saving prerequisites for various credit tiers (ranging from \$500 to \$5,000), and the stipulations for certification and verification. Certified Zero Energy Ready single-family homes qualify for a \$5,000 tax credit, as do units in multifamily buildings meeting credit's prevailing wage requirements. To be eligible, homes must obtain certification according to the version of the Zero Energy Ready Home program in effect, determined by the project's Permit Date (or Production Date for Manufactured Homes), as detailed in the program requirements document corresponding to the building type.

Solar rebates in NE continued...

NY-Sun Con Edison Program offers \$0.20/Watt for residential PV capped at 110% of annual calculated kWh usage (25kW-DC max), and between \$0.20 - \$0.35/Watt for non-residential up to 7.5MW-DC max. Delaware's DNREC Green Energy Program offers \$0.70/Watt for residential and commercial PV, and \$0.75/Watt for non-profits with maximum caps of \$6000, \$30,000, and \$35,000 for residential, commercial, and non-profits respectively.

In the last few months, the Stakeholder Committee and Technical Working Group for the Future of Gas in Rhode Island each met several times. Throughout those discussions, several themes were discussed in detail, including Commercial and Industrial Electrification, Technology Performance and Sensitivities, Renewable Gas and Electric Sector Modeling. Stakeholder meetings discussed clean energy standards, electrification, heat infrastructure, and technical aspects of the gas transition. The Technical Working Group (TWG) scrutinized scenario designs and highlighted the significance of space heating electrification in residential, commercial, and industrial sectors. The discussions focused on technology efficiency, scenario sensitivities, and renewable gas modeling. In addition, stakeholder and technical working group members provided input on the proposed design for six decarbonization model scenarios to include in modeling that were submitted to the Public Utilities Commission.

All the scenarios assess the impact of pursuing the chosen technology to either transition away from gas infrastructure or leverage the existing infrastructure to support decarbonization. The Public Utility Commission subsequently approved the modeling of these scenarios. The results will be compared to assess the viability, the cost, and the risks of different approaches to the future of the gas system. All scenarios are designed to achieve the Act on Climate targets for decarbonization relative to a 1990 baseline, which are 45% by 2030, 80% by 2040, and net zero by 2050.

In addition to the decarbonization scenarios described above, E3 proposed to model a reference scenario that can be used as a counterfactual against which to compare impacts of the decarbonization scenarios. This scenario evaluates the impact of key demand drivers such as population growth rates, as well the impact of existing measures and policies on emissions reductions in Rhode Island. The consultant team, on behalf of the Council, has provided Rhode Island-specific energy efficiency data to support the development of an informed forecast for potential opportunities for efficiency in the future.

The technical working group also submitted a revised proposal on Biofuels Emissions Accounting, Fuel Availability, and Costing Methodology. The revised approach focuses on exploring hypothetical scenarios related to biofuel availability, probing aspects like the types of fuels available under different decarbonization efforts, potential constraints on production pathways, allocation of renewable fuels to challenging-to-decarbonize uses, limitations on renewable electricity for synthetic fuel production, and risks linked to non-commercialized technologies like synthetic natural gas. This narrative approach aims to qualify impacts and risks associated with decarbonization strategies rather than precisely modeling biofuel availability.

EC4 SPENDING PLAN HIGHLIGHTS

\$1.1M DRIVE EV Program

\$200K GHG Reductions & Resiliency Outreach to the Business Community

\$150K RIIB Energy Asset Management Program

\$100K Climate Vulnerability Assessments

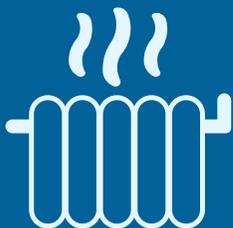
\$100K Programmatic Support to the Chief Resiliency Officer (CRO)

RI greenhouse gas EMISSIONS PORTFOLIO



38%
TRANSPORTATION

21%
ELECTRICITY CONSUMPTION



19%
RESIDENTIAL HEAT

GHG INVENTORY

2020 EMISSIONS UPDATE RIDEM

Quick Facts

- 2020 emissions below mandate - 10% lower than 1990 baseline
- Statewide net GHG emissions reductions 20.1%
- 7.4% gross GHG emissions offset by LULUCF
- COVID-19 pandemic caused 80% reduction in aviation emissions & 7.3% reduction in highway vehicles emissions

Updated Global Warming Potentials (GWP)

- GWP: evaluates how much heat a GHG traps & how long it remains in the atmosphere
- State GWPs upgraded to 100 year timescale to align with EPA and United Nations standards

Improved LULUCF Reporting

- Land Use, Land Use Change, and Forestry
- Covers forest land, croplands, grasslands, wetlands, settlements
- Forest land: now includes land converted to forest land in addition to remaining forest land
- Wetlands: now includes remaining coastal wetlands and land converted to coastal wetlands
- Settlements: now includes land converted to settlements in addition to remaining settlements

Next Steps

- Reduce 3 year reporting lag
- Research into conversion to 20 year GWPs