

Rhode Island Under 2 MOU Appendix

Overview

As a coastal state uniquely vulnerable to the impacts of climate change, the need for Rhode Island¹ to take bold action to reduce greenhouse gas emissions is clear. Although climate change presents formidable challenges, it also provides an unprecedented opportunity to capitalize on technology advances, industry growth opportunities, and innovation as Rhode Island works to lower our carbon footprint. In transforming our energy systems, Rhode Island can achieve climate change goals, while unlocking economic opportunity and improving the environmental and public health of our citizens and communities.

The 2014 Resilient Rhode Island Act created the Executive Climate Change Coordinating Council (EC4) and charged the Council with developing a Plan to meet specific GHG reduction targets of: (i) ten percent (10%) below 1990 levels by 2020; (ii) forty-five percent (45%) below 1990 levels by 2035; and (iii) eighty percent (80%) below 1990 levels by 2050.² The EC4 GHG Emissions Reduction Plan, completed in December 2016, demonstrates that viable pathways exist for Rhode Island to achieve the Act's targets. In fact, thanks to the leadership of the Administration and General Assembly, Rhode Island is already poised to meet and exceed the Act's near-term 2020 GHG reduction target. This achievement is due in no small part to steadfast political support for Rhode Island's nationally-recognized programs in energy efficiency (the Least-Cost Procurement mandate) and renewable energy (including the nation's first offshore wind project).

The Plan shows that Rhode Island is well-positioned to leverage near-term successes into a sustained, long-term effort to transform the state's energy economy. Although our existing suite of policies will enable Rhode Island to meet the 2020 GHG reduction target, achieving the 2035 and 2050 GHG reduction targets will entail major, economy-wide energy transformations, both at a state and regional level. To do so, the Plan recommends several key areas of policy action to address climate change and achieve the Resilient Rhode Island GHG targets.

Actions and Commitments

Rhode Island has existing policies and proven models to address major GHG mitigation options, creating a strong foundation the State can build upon to achieve the Resilient Rhode Island GHG targets. Rhode Island has identified the following policy areas as necessary components to reaching long-term GHG goals:

- **Energy Efficiency:** Rhode Island's Least-Cost Procurement (LCP) law, enacted in 2006, requires electric and natural gas utilities (i.e., National Grid) to invest in all cost-effective energy efficiency that costs less than conventional energy supply resources. Under Least-Cost Procurement, Rhode Island has achieved nation-leading levels of electricity and natural gas savings in recent years. The state was ranked the third most energy efficient state in the country in 2017 and has ranked in the top ten for ten years in a row. Additionally, existing statutes in Rhode Island set minimum energy efficiency standards for appliances and buildings. As of December 2016, Rhode Island had adopted the 2012 International Energy Conservation Code (IECC) with Rhode Island-specific amendments for both residential and commercial buildings. A 2016 white

¹ According to the U.S. Bureau of Economic Analysis, Rhode Island's 2016 population was 1,056,426 and GDP was \$57.4 billion.

² In 2015, Rhode Island's GHG emissions were estimated at 1.33 million metric tons CO₂e.

paper commissioned by National Grid recommended aspirational goals of establishing a Zero Energy Building (ZEB) residential and commercial building energy code by 2035 (either mandatory or through voluntary stretch codes), with 100% of new construction to be ZEB after 2035, and 10% of existing buildings to be retrofitted to ZEB by 2035. For appliance standards, Rhode Island is allowed under federal law to set standards for products not covered by federal standards.

- Vehicle-miles-traveled Reductions: The Rhode Island Division of Planning currently maintains the State Guide Plan (SGP), which directs the long-term growth and development of the state. A component of the SGP, Land Use 2025, guides land use decisions and directs growth and development to areas within the Urban Services Boundary. Transportation 2035, another component of the State Guide Plan, guides investment of federal transportation dollars at the local level. Strategies in this plan include reducing VMT through use of alternative travel modes, ridesharing, and integration of bicycle and pedestrian facilities. The plan includes targets to reduce single occupancy vehicle commuting and increase transit mode share of work trips from 2.5% in 2000 to 2.8% in 2010, 3.0% in 2020 and 3.2% in 2030. Existing transit programs administered through RIPTA (bus), the MBTA (commuter rail), and RIDOT (ferry) encourage transit ridership. Finally, Rhode Island General Laws §36-6-21.1 establishes the State Employee Transportation Guide Plan and sets VMT reduction goals for State employees.
- Clean Energy: Rhode Island has made great strides in advancing renewable energy in recent years, including the construction of the nation's first offshore wind farm off Block Island. Rhode Island has a number of existing policies in place to promote the use of renewable and clean energy, including the Renewable Energy Standard (RES), the Long-Term Contracting Standard for Renewable Energy (LTC), the Affordable Clean Energy Security Act (ACES), the Renewable Energy Growth Program (REG), and Net Metering.
- Electrification and Biofuels for the Heating and Transport Sectors: Rhode Island's GHG Plan indicates that meeting long-term targets for GHG reductions will require significant electrification of heating and transportation. Specifically, modeling suggests that to meet the 2050 GHG reduction target, 81% of residential and 67% of commercial main heating load will need to be met with efficient electric heat pumps; and 76% of on-road VMT electrified and 97% of rail transport will need to be electrified. For the remainder of the heating and transportation sector that is not electrified, biofuels may provide additional GHG emissions reductions. Biofuels are liquid fuels derived from renewable organic substances (e.g., recycled cooking grease, plant residues, animal fats, and other renewable feedstocks). The 2013 Biodiesel Heating Oil Act established a 5% bioblend requirement for all heating oil sold in the state by July 1, 2017.
- Land Use Conservation: Approximately 22% of Rhode Island is in permanent conservation status, and 55% of Rhode Island is forested; however, the state's forest resource is being lost and fragmented by a wide variety of development pressures. Existing programs like the Forest Legacy Program, the Forest Stewardship Program, and Urban and Community Forestry help reduce those pressures and allow forest land to be preserved and utilized as a carbon sink. Continued public support for funding open space protection continues to be a critical component of the state's land protection efforts. Additionally, the state can minimize loss of existing forest acreage by prioritizing investments to support new growth within the existing Urban Services Boundary (as delineated in Land Use 2025) and in State-approved growth centers. The Rhode Island Coastal

Resources Management Council (CRMC) and its partners have developed Sea Level Affecting Marshes Model (SLAMM) maps for the coastal wetlands in all 21 Rhode Island coastal communities. The SLAMM maps demonstrate how coastal wetlands – which serve as important carbon sinks – will be impacted by different sea level rise scenarios. State and local community planning efforts are beginning to incorporate SLAMM maps into decision making processes about coastal wetland conservation and migration. Ensuring the survival of Rhode Island’s wetlands is an important component of GHG and resiliency/adaptation priorities.

- Power Sector Transformation: Achieving the levels of GHG reduction targeted through the Resilient Rhode Island Act will necessitate much higher levels of renewable energy, as well as substantial electrification of the heating and transportation sectors. These trends hold significant implications for the way utilities plan, operate, and invest in the electric grid. State policymakers and utility regulators are developing and proposing thoughtful changes to utility planning, business models, performance incentives, and rate design in order to enable a transition to the future grid that values, integrates, and plans for growth in clean energy and carbon-free resources, while maintaining a safe and reliable electric system.
- Lead by Example: Under Executive Order 15-17, Governor Raimondo ordered state agencies to Lead by Example in energy efficiency and clean energy by setting the following goals: reducing energy costs by 10% by FY19; shifting the State’s energy supply portfolio to 100% renewables by 2025; ensuring a minimum of 25% of new light-duty State fleet purchases and leases are zero-emission vehicles by 2025; and developing a voluntary building stretch code. Over the medium and long-term, State policymakers could consider building on this commitment by state government to serve as an early adopter to demonstrate the benefits of GHG mitigation and clean energy solutions. At the local level, cities and towns can play an important role in achieving state GHG targets by integrating mitigation into community planning efforts, setting their own reduction goals, investing in clean energy projects, and directly engaging with diverse community voices. For example, Mayor Jorge Elorza recently committed the City of Providence to becoming a carbon neutral city by 2050 and conducted its first GHG inventory with support from the Compact of Mayors, a growing coalition of cities and towns across the world that are committed to reducing GHG emissions.