



Least-Cost Procurement Statute Rhode Island

Policy Description

The Least-Cost Procurement statute in Rhode Island requires electric and gas distribution companies to invest in all cost-effective energy efficiency measures, including combined heat and power (CHP), before acquiring additional electricity supply. Prior to the Least-Cost Procurement statute, passed in 2006, Rhode Island electric distribution companies implemented demand-side management programs. The cost of these programs was recovered through a system benefits charge (SBC) levied on the distribution service portion of customer utility bills. The SBCs were set at a fixed rate of 0.2 cents/kWh, which limited program funding to less than the amount needed to capture all cost-effective energy efficiency.

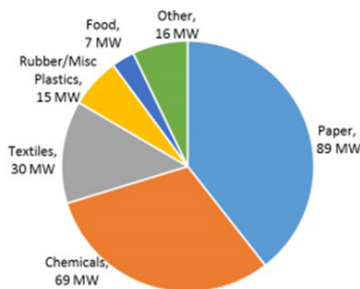
Under the statute, National Grid, the primary investor-owned utility for Rhode Island, sizes yearly program budgets to meet annual targets for electricity and natural gas savings. These targets are based on a detailed analysis of the amount of available cost-effective energy efficiency. To achieve the targets, National Grid creates and implements annual “energy efficiency procurement plans,” working under the oversight and expert guidance of a consumer stakeholder committee, the Energy Efficiency and Resource Management Council (EERMC). The plans are composed of a portfolio of energy efficiency programs targeting different market sectors of energy consumers: residential, income-eligible, and commercial/industrial. The plans also address system reliability by considering the potential of “non-wires alternatives” energy efficiency, demand response, distributed generation, and other innovative methods to curtail electric load in constrained areas of the distribution network.

Current incentives for CHP funding come from the general energy efficiency program budget. CHP projects must pass a cost-benefit screening analysis to demonstrate that the combined economic, environmental, and system reliability benefits of installing CHP outweigh those of lower-cost energy systems that cannot provide the environmental and system reliability benefits of CHP.

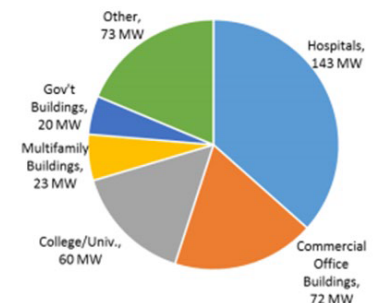
Policy Development

According to the U.S. Department of Energy (DOE) CHP Installation Database, Rhode Island had approximately 115 MW of installed CHP capacity in 2006. A 2008 study conducted by Northeast States for Coordinated Air Use Management (NESCAUM) found that the total technical potential for in-state CHP likely fell between 350 MW and 714 MW. From this study, it was estimated that up to 330 MW of new CHP capacity could be cost-effectively installed by 2020. A more recent DOE technical potential study identified 616 MW of overall CHP capacity potential at 1,114 sites in Rhode Island.

Top Industrial Types with On-site CHP Technical Potential



Top Commercial Business Types with On-site CHP Technical Potential



Technical Potential for CHP in Rhode Island

Rhode Island has a total of 616 MW of CHP technical potential: 225 MW at industrial sites and 391 MW at commercial, institutional, and multifamily facilities.

Source: DOE. “Combined Heat and Power Technical Potential in the United States.” 2016.

In 2012, the Rhode Island General Assembly modified the Least-Cost Procurement statute by further stipulating that annual energy efficiency procurement plans must contain “a plan for identifying and recruiting qualified combined heat

and power projects, incentive levels, contract terms and guidelines, and achievable megawatt targets for investments in combined heat and power systems.” As of 2015, when the state deployed “Energy 2035: Rhode Island State Energy Plan,” the scenario modeling estimated an aggressive upper bound target for CHP market penetration of 400 MW by 2035. Rhode Island currently has 29 CHP sites representing approximately 133 MW of installed CHP capacity, according to the DOE CHP Installation Database.

Policy Outcomes

Rhode Island supported the construction of a major new CHP installation in 2014 at Toray Plastics, with a \$15.9 million incentive package from the state’s energy efficiency program and Advanced Gas Technology Program. Toray Plastics is manufacturer of polypropylene, polyester, and polyolefin products with two facilities in Rhode Island, where the company is headquartered.

The new CHP system is designed to work in tandem with a previously installed CHP system onsite, resulting in an estimated electric capacity of 20 MW and CO₂ reduction of 25,000 tons per year. The system also provides system reliability for the plastic manufacturing plant during power outages, which would experience huge losses if systems were to go down for even a short period of time.



Toray Plastics (America), Inc. in North Kingstown, Rhode Island

Photo Courtesy of Toray Plastics (America), Inc.

Lessons to Share

According to National Grid’s experience, some of the main market barriers to adoption of CHP in Rhode Island are:

- Insufficient payback periods to meet customer economic requirements
- Poor consumer awareness and understanding of CHP technology and benefits
- Lack of gas distribution infrastructure to provide access to fuel for CHP systems

As noted in the 2015 state energy plan, meeting the 2035 goal of 400 MW will require significant acceleration of CHP market adoption in the state. The energy plan includes recommendations for policy makers that could help support the pace of deployment:

- “Consider the suitability of adding CHP as an eligible technology under an expansion and carve-out of the Renewable Energy Standard (RES) or under the Distributed Generation Standard Contracts Program.”
- “...explore ways to promote district heating and cooling systems, which can serve as a platform not only for CHP, but also for renewable thermal energy technologies.”

For More Information

**U.S. DOE NEW ENGLAND CHP TECHNICAL ASSISTANCE
PARTNERSHIP (CHP TAP)**
www.nechptap.org

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