

IMPLEMENTATION MODEL: RHODE ISLAND

RHODE ISLAND PUBLIC ENERGY PARTNERSHIP

Rhode Island’s state energy office, the Office of Energy Resources (OER), is tasked with promoting energy efficiency across the public sector. While administering projects funded through the American Recovery and Reinvestment Act (ARRA), OER gained greater awareness of the challenges facing public entities as they worked to lower operating costs in the face of tightening budgets. Some municipalities and schools used Energy Efficiency and Conservation Block Grants (EECBG) and State Energy Program (SEP) funds to implement relatively minor projects, leaving many opportunities for deeper savings unrealized. Guided by the philosophy that if it’s not measured, it can’t be managed, OER launched the Rhode Island Public Energy Partnership (RIPEP) with the support of a U.S. Department of Energy State Energy Program Competitive Award.

Goal

**20% ENERGY SAVINGS
IN 100 PUBLIC FACILITIES**

To empower public entities to make smart energy decisions to achieve an average of 20% energy savings in at least 100 public facilities, to include state and local government, universities and K-12 public school facilities.

Barrier

**PUBLIC SECTOR
DATA**

Lack of public sector data infrastructure to accurately measure energy consumption, prioritize projects, and verify savings.

Solution



The state established the RIPEP, an unprecedented collaboration of key state agencies, municipal governments, utilities, and state university partners, whose mission was to create a comprehensive inventory of energy performance data for state and local public sector buildings that would be used to identify and prioritize energy efficiency upgrade projects. RIPEP was also charged with implementing energy efficiency measures and helping to identify and mitigate barriers to further public sector efficiency improvements.

Outcome



Rhode Island officials were able to use the new inventory to rank the energy use of facilities in order to prioritize and implement energy efficiency projects. The RIPEP team’s goal was to implement 100 energy efficiency projects with average energy savings of 20%. The team exceeded the goal by implementing 123 energy efficiency projects in three years, which resulted in average savings of 28.6% per project or 4,748 MMBTU.

POLICIES

In 2006, Rhode Island became a national leader in energy efficiency due to its “[least-cost procurement](#)” mandate. The [Comprehensive Energy Conservation, Efficiency, and Affordability Act](#) requires the two primary utilities in the state to prioritize investments in cost-effective energy efficiency measures over investments in new electric and natural gas supply. The Act provided a framework for RIPEP – not only by highlighting the value of energy efficiency, but also by establishing the Energy Efficiency and Resource Management Council (EERMC), a stakeholder body with the



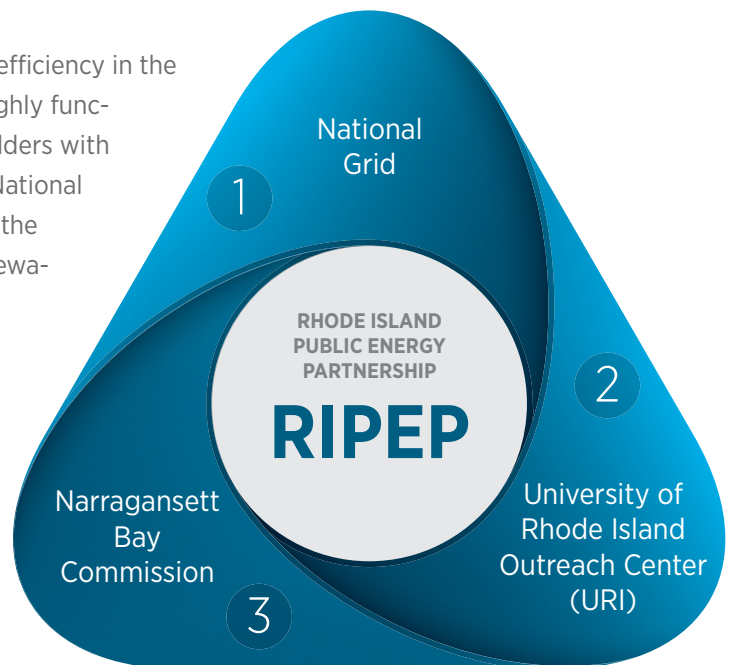
statutory responsibility to oversee the energy efficiency goals of National Grid, the state’s primary electric and gas utility. The EERMC and its consultant team played a key role in developing the RIPEP concept of creating an active data infrastructure for achieving deep energy savings in the public sector. As overseers of Rhode Island’s primary electric and gas utility’s work, it is the EERMC’s responsibility to maintain a strategic view of the state’s energy portfolio and ensure that ratepayer dollars are being utilized as efficiently as possible.

PROCESS – PROGRAM DESIGN

Rhode Island’s OER created RIPEP in 2012 to accelerate energy efficiency in the public sector. RIPEP succeeded in large part because it was a highly functional partnership. OER selected public and non-public stakeholders with an interest in creating a public sector data inventory, including National Grid, the University of Rhode Island Outreach Center (URI), and the Narragansett Bay Commission, which operates large-scale wastewater treatment facilities that serve a large portion of the state.

OER supported RIPEP’s work by allocating the staff time necessary to complete the energy data collection process for public facilities throughout the three-year initiative. Each RIPEP member, however, was able to leverage its own unique portfolio of resources for the project, as described below.

National Grid’s active engagement in RIPEP was one of the core partnerships that led to the success of the data collection effort. OER already had an effective working relationship with the utility because the work of the two organizations overlaps extensively. Because National Grid is required to achieve high levels of energy savings, it viewed RIPEP as a mutually beneficial arrangement. National Grid included significant in-kind support in its 2013 Energy Efficiency Program Plan and budget for RIPEP and created a new internal position to serve both as the single point of contact for public sector efficiency work and as RIPEP’s primary National Grid representative. The utility also hired a consultant to devise and implement creative strategies to overcome any obstacles to the initiative. The consultant applied her extensive experience in energy data to help the team work through any challenges as they arose. National Grid’s existing Municipal & State Program,



which uses ratepayer system benefit funds to offer incentives to implement energy efficiency measures, was enhanced and served as the funding mechanism for the 123 energy efficiency projects.

The URI Outreach Center conducted the energy data collection and analysis effort. The Outreach Center, under contract with OER, assembled a team that included one full-time staff member and several part-time students. The full-time staffer, who spent about half of her time on RIPEP, acted as the data team manager, and participated in weekly or biweekly calls with OER to monitor progress and troubleshoot

as needed. The URI Outreach Center utilized its Energy Fellows Program, which hires URI students to work on real-world energy projects while they receive robust technical and professional development training. Three to six students spent 10 hours per week during the academic year and 30-

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35 hours per week during the summer on RIPEP-related work. The keys to the team's success were experience, regular communication, attention to detail, and quality control. Finally, to collect state agency energy data, OER formed a State Energy Team, consisting

of OER, National Grid, and Rhode Island's Department of Administration, which oversees State Facilities Management, Accounts and Control, Central Business Office, and the Department of Information Technology. The State Energy Team, led by an OER staff member, met monthly to establish and execute a methodology for tracking and verifying the accuracy of state-level energy data.

PROCESS – IMPLEMENTATION

With staffing needs met and project partners in place, RIPEP began creating the public sector energy data inventory.

1

ASSESS OPTIONS FOR DATA MANAGEMENT



The State Energy Team initially assessed its options for energy monitoring tools before deciding to use EPA's ENERGY STAR® Portfolio Manager® for RIPEP. The team chose Portfolio Manager primarily because it is the industry standard, it interfaces with many other tools, and was one of the few no-cost options.

2

UTILITY ENGAGEMENT

With the monitoring tool chosen, Rhode Island needed to overcome one more hurdle before it could begin the data collection phase of the project. The URI team knew from experience that it was much easier to request the data directly from the utility, rather than asking public entities to make copies of three years of utility bills. OER initiated discussions with its utility contacts, who agreed to collaborate on a mechanism for sharing the utility's public sector energy consumption data. Both parties engaged their respective legal representatives to develop a non-disclosure agreement (NDA) between OER and the utility. The NDA stipulated that URI, as a subcontractor to OER, would also have access to the data for analytical purposes. Negotiation and final execution of the NDA took several months, despite a strong level of cooperation among all parties.

3

RIPEP OUTREACH

The RIPEP team promoted the project at meetings of appropriate local organizations, such as the Association for School Maintenance Directors and the Town Managers Association, but the primary means of outreach to communities was direct contact to set up meetings. In some cases, a RIPEP team member had existing professional relationships with someone at the entity, while in other cases the team made cold calls or sent emails to key community representatives. The RIPEP team also met individually with each entity to request account and building information.

Once entities "signed on" to RIPEP, they were asked to fill out two forms with the information needed to complete their baselines in Portfolio Manager. The process usually involved some back-and-forth communication with one or two key contacts, which helped to foster valuable personal relationships.

4

COLLECT DATA, VERIFY ACCOUNTS, AND COMPLETE INVENTORY



National Grid queried its database for all public sector data once the NDA was in place. The team set up Portfolio Manager accounts for the state agencies and local

governments and entered the utility data as it was collected from National Grid. The URI data team then met with representatives of the town, school, or agency to review and explain the data, and prioritize facilities needing an energy assessment. The data team used simple, easy-to-understand graphics to illustrate the energy usage and expenditure of each facility over time and the potential operational savings associated with a 20% reduction in energy consumption. The URI data team also explained the function and benefits of Portfolio Manager and encouraged state agency and local government representatives to continue tracking their data.

OER soon found that collecting accurate and comprehensive state agency data would require additional effort. Many state agencies did not have access to their account numbers or to other energy related information, because energy bills in Rhode Island are centrally paid. Therefore, the RIPEP team had the additional challenge of first matching account numbers to their respective buildings. To overcome these challenges, the RIPEP team first collected and compared available utility data from National Grid queries and the state's financial accounting database. While all accounts were included in the inventory and attributed to a particular agency, many accounts were not matched with their actual facilities, which meant that they could not be entered into Portfolio Manager. In order to match the accounts to their facilities, the team then spent many hours conducting onsite surveys of 57 Department of Administration buildings to verify meter numbers and addresses on record.

OER established National Grid online electric and natural gas accounts for each agency once the onsite survey process was complete, not only to distribute the work of matching account numbers to buildings among the agencies (thus reducing the burden on RIPEP), but also to empower the agencies to track their energy use.

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5

TRAINING PUBLIC SECTOR STAFF/ STAFF ENGAGEMENT

The URI data team aimed to conduct individual trainings with each state agency, town, and school that agreed to take on the responsibility of continuing to track its energy data. During the trainings, the URI data team demonstrated how to log in to Portfolio Manager, how to enter energy information, and how to produce reports. Each partner was asked to identify a person on staff responsible for keeping its facility's energy consumption up-to-date by choosing how often (e.g. monthly, quarterly) to enter information. The RIPEP team could then check in with the point person at the agreed upon frequency to provide additional support.

The RIPEP team found that in general, public entities were overcommitted and understaffed, which made it difficult to convince communities that tracking energy data should be a priority. For these reasons, OER decided to retain its contract with URI to provide ongoing Portfolio Manager account setup and training for local public entities that had not yet taken advantage of RIPEP. The URI data team will continue to offer one-on-one trainings and possibly group workshops at various locations throughout the state. The URI team will also check in regularly with each entity that has committed to continue tracking in order to hold the entity accountable and to offer assistance when needed.

6

PROJECT IMPLEMENTATION

Following its work on the RIPEP initiative, National Grid hired a designated public sector representative to enhance the utility's municipal and state program, which offers incentives for eligible efficiency measures. Incentives are available as either a direct rebate or on-bill repayment (OBR) that allows customers to fund measures by paying for them over time through their utility bills. National Grid's program also offers no-cost energy audits, as long as the customer implements at least half of the recommended measures.

These utility programs offered a strong foundation from which RIPEP launched "going deeper" efforts. In addition to National Grid's offerings, OER increased the incentive with \$2.5 million in Regional Greenhouse Gas Initiative (RGGI) proceeds to provide rebates for projects that meet a 20% energy reduction goal. The RGGI funds effectively reduced the cost of projects, allowing for a greater number of projects completed using OBR. OER sent the additional \$2.5 million in rebate funds directly to National Grid, making the rebate process a seamless experience for participating public entities.



Outreach

Once several public entities had baseline data regarding their energy use and understood how to interpret the data, energy retrofits could begin. National Grid and OER staff gave presentations promoting the utility rebate and on-bill repayment program to several local organizations. The National Grid sales representative worked with each partner through every stage, beginning with scheduled energy audits. As potential retrofit projects were identified, National Grid and OER worked together to determine the best package of incentives. OER determined a rebate amount to come from the RGGI fund and signed a customized form for each project that authorized National Grid to use the agreed upon amount. The National Grid sales representative then assisted the customer through the procurement process and saw the projects through to completion.

Measuring Success

RIPEP's ultimate goal of this work was to empower public entities to make smart energy decisions by equipping them with an easy way to track energy data, and use it to effect substantial energy savings.

The metrics used to evaluate success towards reaching the goal include the following:

Proportion of
MUNICIPALITIES
included in the data
inventory

Proportion of
**SCHOOL
DISTRICTS**
included in the data
inventory

Proportion of
STATE AGENCIES
included in the data
inventory

Number of
FACILITIES
in the data inventory

Number of
**ENERGY
EFFICIENCY
PROJECTS**
motivated by the
information in the
data inventory

In order to determine the proportion of municipalities, school districts and state agencies included in the data inventory, the team created a list of all municipalities, school districts, and state agencies and tracked it against how many had made it into the inventory. An Excel workbook was developed to track meetings held, information submitted and status of data analysis. The team reviewed the spreadsheets and discussed progress and strategies on regular phone calls. The team employed data cleansing

activities after the data had been fully collected and entered into Portfolio Manager to ensure that the data sets were as accurate as possible. This process involved systematically reviewing the data, looking for and correcting anomalies, inconsistencies or other possible errors. Measuring progress along the way allowed the team to continuously improve the RIPEP process and data collection approaches that were not working were quickly identified and addressed.

Outcomes

The RIPEP team successfully created the data infrastructure necessary to empower municipalities, school districts, and state agencies to make informed energy decisions that led to 123 energy efficiency upgrades, which resulted in savings of 28.6% in implemented projects or 4,748 MMBTU.

RIPEP established an energy data inventory of Rhode Island's 18.3 million square feet of public facilities that includes 100% of all municipalities, school districts, and state agencies, and institutes of higher education. Seventy-eight % of school districts and 69% of municipalities "signed on" to RIPEP and received a complete benchmark in Portfolio Manager. School districts and municipalities that chose not to engage in RIPEP were provided with a more basic inventory that was created using Microsoft Excel. RIPEP used the energy data inventory to establish a baseline for Rhode Island's public sector, which consists of at least three years of energy consumption and expenditure data for municipalities, public school districts, and state agencies. RIPEP was also highly successful in identifying and addressing barriers to implementing energy efficiency in the public sector.

STAFFING

OER and National Grid both hired full-time employees with dedicated time to advancing public sector energy projects. The additional staff creates the capacity to improve existing program offerings and to build relationships with public entities.

PROCUREMENT

OER worked with the state's purchasing department to address procurement challenges and create a Master Price Agreement (MPA) that allows public entities to more easily procure energy efficiency services. MPA 508 features a list of pre-qualified vendors that can be hired for projects under \$600,000 without issuing a request for proposals (RFP), and is already being put to use by several agencies and municipalities. OER also extended the expired MPA 436, which enables public entities to engage in performance contracts for energy efficiency projects.

FINANCING

National Grid, as a RIPEP partner, agreed to extend the maximum term of its on-bill financing program from two to five years to allow for deeper efficiency measures to be covered, and expanded the program to natural gas, as well as electric projects.

OER also assumed the responsibility to pay the state's energy bills and to maintain an accurate database of energy usage information. OER now provides monthly statements to each agency representative summarizing their agency's energy usage information. With the establishment of the energy data infrastructure and continued energy data tracking, Rhode Island's public sector is empowered to maintain its momentum of smart energy decisions, which will lead to persistent long term energy savings.

RIPEP LED TO
123
ENERGY
EFFICIENCY
UPGRADES

WHICH RESULTED IN
28.6%
SAVINGS



Tools and Resources

[Rhode Island Comprehensive Energy Conservation, Efficiency, and Affordability Act](#)

[Implementation Model: Least Cost Procurement Strategy](#)