Case Study

The Rhode Island Infrastructure Bank’s Efficient Buildings Fund

Jake Reznick
Farrukh Zaman
Acknowledgments

This work was supported by Yale Center for Business and the Environment.

The authors are Jake Reznick, Yale MBA and MEM Candidate 2018, and Farrukh Zaman, MEM 2017.

The authors were advised by Jeffrey Schub, Executive Director at the Coalition for Green Capital, and Stuart DeCew, Program Director at Yale Center for Business and the Environment. The report was edited by Kat Friedrich, News Editor at Clean Energy Finance Forum at Yale Center for Business and the Environment. The graphic design was created by Henk van Assen, Senior Critic at Yale University School of Art, together with Kelly Bryan and Igor Korenfeld, Designers at HvADESIGN. The authors thank these individuals for their valuable insights, support, and assistance.

Copyright

For permission to reprint, reproduce or redistribute any of the contents of this report in a way that goes beyond fair use, please email Jake Reznick (jake.reznick@yale.edu) or Farrukh Zaman (farrukh.zaman@yale.edu).

June 30, 2017
# Table of Contents

Acknowledgments ................................................................. 2
Copyright .............................................................................. 2

## Key Terms ........................................................................ 4

## Executive Summary .......................................................... 5

## Problem: Energy Efficiency Financing after the Recession .......... 6

## Solution: The Efficient Buildings Fund (EBF) ...................... 8

### CONCEPT: A VISION FOR A GREEN BANK ....................... 8

### PROCESS: BLUEPRINT FOR THE INFRASTRUCTURE BANK ... 9

First Steps ................................................................. 9
Combined Infrastructure Bank and Green Bank ...................... 10
Structural Legislation ....................................................... 11
New Leadership .......................................................... 11
Structural Refinements .................................................... 11
Scope Definition .......................................................... 12
Demand Creation and Management ..................................... 12
Review Process ........................................................... 12
Financing Strategy ........................................................ 13
Results Measurement ..................................................... 15

## SECOND ROUND: PROJECT APPLICATIONS .................. 15

## Recommendations: Iterations Can Build on Lessons Learned .... 16

## Appendix ........................................................................ 17

### APPENDIX 1: FIGURES .................................................. 17

### APPENDIX 2: KEY DOCUMENTS .................................... 19

### APPENDIX 3: DEAL-FLOW DIAGRAM .............................. 21
Key Terms

**CWFA:** Clean Water Finance Agency  
**EBF:** Efficient Buildings Fund  
**ESCO:** Energy Service Company or Energy Savings Company  
**MRBRF:** Municipal Road and Bridge Revolving Fund  
**OER:** Office of Energy Resources  
**PACE:** Property-Assessed Clean Energy  
- **C-PACE:** Commercial Property-Assessed Clean Energy  
- **R-PACE:** Residential Property-Assessed Clean Energy  
**RFP:** Request for Proposals  
**RGGI:** Regional Greenhouse Gas Initiative  
**RIIB:** Rhode Island Infrastructure Bank  
**RIPEP:** Rhode Island Public Energy Partnership  
**SBC:** Systems Benefit Charge  
**DOE:** United States Department of Energy
Executive Summary

After the recession, the Rhode Island Infrastructure Bank (RIIB), a quasi-public state entity, sought to bring much-needed clean-energy finance into the state market. This case study describes how this bank set up the Efficient Buildings Fund (EBF) and is iteratively improving it.

This bank, which combines the features of a green bank and an infrastructure bank, was developed under new political leadership. The recently-elected state treasurer, Seth Magaziner, proposed the EBF to Gina Raimondo, the new state governor.

The state already possessed a Renewable Portfolio Standard and a Systems Benefit Charge, which it leverages to support clean-energy activities. The Rhode Island Public Energy Partnership (RIPEP) was temporarily accelerating utility energy-efficiency efforts.

The new state leadership created the RIIB. It was built by renaming and restructuring the preexisting Clean Water Finance Agency (CWFA). Three other programs—Commercial Property-Assessed Clean Energy (C-PACE), Residential Property-Assessed Clean Energy (R-PACE), and the Brownfield Revolving Fund—were brought into the agency.

The RIIB administers a number of financial-assistance programs for environmental projects in the state. One of these programs is the EBF, a financing program designed to accelerate energy-efficiency and clean-energy upgrades to municipal buildings such as schools, firehouses, and offices.

Launched in the summer of 2015, the EBF has already seen positive results – deploying $17.2 million towards municipal-building clean-energy upgrades across 17 projects in 6 municipalities. It accomplished this by publicizing a widely-distributed RFP.

All of these projects are net cash flow-positive, meaning they generate more savings than the total cost of the project and debt service. Over the project lifetime and after debt service, these communities will have $20 million in net-cash-flow savings.

After over a year of operation, the EBF has yielded action recommendations that decision makers can use to refine and iterate the program.

The EBF is an innovative structure to lower energy costs and tax burdens. In the following case study, we walk through the creation of the EBF and some of the factors that have led to its success.
Rhode Island’s economy was hit particularly hard by the 2008 recession. Growth since the recession trailed behind the country. According to Kate Bramson, “As of 2014, employment levels were still below pre-recession levels in manufacturing, construction, government, trade, transportation and utilities, information and financial services.”

On top of these financial struggles, the state’s infrastructure was ailing and many municipal buildings were overdue for repair. As Rhode Island is located in the frigid East Coast corridor, there was ample demand for energy-efficiency retrofits for these aging buildings. Accordingly, the state has begun to address that demand with a series of demand-side-management (energy-efficiency) incentive programs.

Rhode Island is unique, in part due to its relatively small size, in that it only has one public utility, National Grid. In 2010, Governor Donald Carcieri signed a bill decoupling electricity and gas prices. This step was integral to creating a retrofit market. By separating revenues from kilowatt-hour sales, the state aligned incentives with National Grid and was able to bring it in as a partner on energy-use reduction projects.

Another enabling factor for energy efficiency in the state was the establishment of a Systems Benefit Charge (SBC) in 1997. The SBC is a non-bypassable volumetric public benefits fee collected by National Grid specifically for demand-side management and renewable-energy programs.

Some of the programs that utilize the SBC include:

- The Commerce Corporation Renewable Energy Fund (REF), which used funds from the SBC and Alternative Compliance Payments to offer low-interest loans and repayable grants to finance small-scale solar, commercial development, pre-development feasibility studies, and early-stage commercialization projects.

- National Grid also offers a number of direct energy savings programs such as no-cost energy assessments for residential customers (paid for through the SBC) and discounts on energy-efficient hardware.

---

• Rhode Island has an RPS with a target of 16% renewable energy by 2019. To meet that goal, the state created a number of renewable-energy programs, including grants for both commercial and small-scale solar projects and a Distributed Generation Contracts Program which requires National Grid to enter a 15-year feed-in-tariff agreement with private landowners, businesses, and municipalities that have qualifying solar-PV, wind-power, and anaerobic-digestion technologies. The state also allows net metering (up to 125% of on-site consumption) and has created a Sales and Use Tax Exemption for renewable-energy materials.²

However, many of these projects and incentives were focused on private retrofits and renewables. In 2012, Rhode Island launched its first collaborative (utility and state) program targeted at municipal and public energy-efficiency projects—Rhode Island Public Energy Partnership (RIPEP).

Led by the State’s Office of Energy Resources (OER) and backed with United States Department of Energy (DOE) funding, RIPEP was a three-year collaborative effort to:

• Create a comprehensive inventory of energy consumption in the public sector;
• Implement energy-efficiency measures in approximately 100 facilities to attain an average of 20% energy-use reduction;
• Identify and mitigate barriers to efficiency improvements in the public sector.

While RIPEP delivered positive outcomes for Rhode Island, it also identified some key barriers for energy-efficiency project implementation at the municipal level. In particular, officials observed that municipalities were unwilling to invest larger sums of capital required for “deep” energy retrofits with longer payback periods, such as HVAC systems.

Given economic concerns across the state, many municipal leaders were wary of adding debt that could exceed their political lifetime. When the RIPEP team performed energy retrofits, dubbed “scoping studies,” the only projects municipalities chose to finance were lighting retrofits – low-cost projects with the quickest payback period.

**RIPEP RESULTS**

- Established energy data baseline inventories for all public facilities including 546 municipal facilities, 331 school facilities, and approximately 900 state facilities, for a total of about 1,777 facilities.
- Performed 39 energy audits covering over 1.8 million square feet.
- Implemented 123 energy-efficiency projects for total energy savings of 28.6% or 4,748 MMBTU.
- Utilized over $5 million in rebates and on-bill repayment funds, including $2.5 million in RGGI funds, to support project implementation.
- Identified barriers to implementing energy efficiency in the public sector. Then, addressed these barriers through master price agreements, expanded and enhancing financing and incentive options, and extensive technical assistance.

Solution: The Efficient Buildings Fund (EBF)

CONCEPT: A VISION FOR A GREEN BANK

The idea for the Rhode Island EBF emerged in mid-2013 as a core campaign issue raised by Seth Magaziner, a Democrat running for state treasurer. Magaziner, a 30-year-old VP at the Boston-based socially-responsible investment firm Trillium Asset Management, was vying to take the place of then sitting treasurer and fellow Democrat Gina Raimondo, who was poised for an anticipated run for governor.

Born and raised in Rhode Island, Magaziner said he “wanted to use the public office and public finance to help make a difference and bring the state economy back.” With colleagues at the Connecticut Green Bank, along with his experience overseeing Trillium’s energy and financial sectors, he was familiar with the potential to draw private capital into public energy-efficiency and renewable-energy projects.

In his campaign document “A Blueprint for Rhode Island,” Magaziner brought to light the challenges of the state’s energy-efficiency programs:

Rhode Island currently has an energy-retrofit program managed by National Grid, but this program has yet to achieve its full potential. The range of building improvements covered in the program is limited and many consumers do not see cost savings right away.

To address these issues, he proposed using his role as treasurer to establish a green bank that would “bolster the state’s retrofit program so that more improvements can be covered.”

In the blueprint, Magaziner also proposed establishing an infrastructure bank which “will provide cost-effective and efficient financing solutions to municipalities and agencies looking to undertake infrastructure projects.”

The infrastructure bank and the green bank were two of Magaziner’s five central campaign tenets.

Targeting Rhode Island’s struggling economy, Magaziner made the case that these banks, and the role of the treasurer in general, can play a key role in stimulating growth.

Magaziner’s campaign for a green bank was complimented by the sitting treasurer, Gina Raimondo, in her gubernatorial campaign. A green bank was one of Raimondo’s four principal campaign agenda items to accelerate Rhode Island’s economy. Raimondo made innovative finance a central part of her campaign from the beginning, even citing social Impact bonds as a tool for lifting the state up. This alignment of interests was incredibly important in creating the bank once both Magaziner and Raimondo were elected.

---

The treasurer, along with the governor and his policy advisor, Kelly Rogers, determined that the most strategic way to establish these financing programs was to include them in the governor’s budget.

“In Rhode Island, the governor’s budget can include legislation that does not get funded by the state budget. The governor’s budget looks like a package of legislation that reflects the governor’s priorities,” Magaziner said.

“That was a strategic decision on our part because every bill and budget gets vetted by the legislature. Generally speaking, most of the governor’s budget ends up passing, so [Kelly and I] decided to include [the eventual infrastructure bank bill] in the budget,” Magaziner reflected. “We could have done infrastructure bank as a standalone bill. It was primarily a matter of political strategy to include it in the budget.”

The treasurer’s office staff had two and a half months to shape the infrastructure bank bill and gather support if they wanted it included in the governor’s budget.

According to Magaziner, the majority of the initial work of shaping the bill was outreach:

[Kelly and I] talked to every environmental, labor, and business group in the state, spoke to any energy expert we could find, and reached out to partners in other states such as the Coalition for Green Capital and the Connecticut (CT) Green Bank.

In that first round of outreach, the treasurer’s office had two important observations:

1. RIPEP had already created a framework for interagency collaboration on energy efficiency, including establishing two full time roles focused on state-wide energy-efficiency-project implementation: one at National Grid and one at OER. Given that these organizations were already working in tandem, there was a valuable framework in place for future collaborations to happen.

2. The office wanted to determine if there was a case for “additionality,” ensuring that a public financing program would not simply be replacing private investment. While talking with mayors, the team members determined that yes, there was a financial case for a public program. They found that municipalities were frequently getting offers on deep retrofits from private capital actors, but the deals were often not attractive. While some deals did get done through these private contracts, most fell through, as owners and managers felt like they were being ripped off by the Energy Service Company (ESCO), which required 18% of a 20% return on energy savings.

As a result of these observations, the treasurer’s office began to structure the EBF.
**Combined Infrastructure Bank and Green Bank**

Magaziner envisioned a revolving loan structure for the EBF. The question was how and where to implement the program.

In his campaign “Blueprint for Rhode Island,” Magaziner outlined the creation of both an infrastructure bank and a green bank. After the election, the treasurer’s team considered a few agencies within the state government for management of these entities, including the Rhode Island Commerce Corporation (formerly the Rhode Island Economic Development Corporation) and the Clean Water Finance Agency (CWFA).

After evaluating options in more detail, the team decided it would be most efficient to consolidate as much energy finance as possible. It decided to do so in the CWFA.

The CWFA was an excellent match for the now consolidated green/infrastructure bank. The agency had over a 20-year history of successful loan management for municipal infrastructure. It primarily managed two revolving loan funds for municipal drinking water and sewage infrastructure. Those loans were capitalized primarily by United States Environmental Protection Agency (EPA) grants, with the state matching up to an additional 20% of the EPA grant amount. The CWFA then issued loans to borrowers and eventually issued to the public market. Repair fees on drinking water covered the debt service.

Recently, the CWFA received the responsibility of managing the Municipal Road and Bridge Revolving Fund (MRBRF). The MRBRF offers low-interest loans to cities and towns for road and bridge infrastructure. The agency’s success with the MRBRF demonstrated that it could replicate its prudence in managing loans that functioned similarly for different types of products. Therefore, the treasurer’s office felt it would be a strong fit for taking on the additional green bank and infrastructure bank proposed by the treasurer and governor.

In the infrastructure bank bill, the treasurer’s office staff did not change the legal structure of the CWFA. Rather, they simply changed the name of the agency to the Rhode Island Infrastructure Bank (RIIB) to represent its widened scope of responsibilities.

As a result of strong performance in financing traditional infrastructure, the CWFA had a AAA credit rating and an excellent reputation within both state and local governments. This allowed RIIB to be built on an existing credible institution instead of as a new project.

Magaziner reflected on selecting the CWFA:

> If we had tried to start our own agency, [the Infrastructure Bank] might have been met with suspicion, especially since I was brand new and had not proven myself yet. If we tried to do this through an agency that might have been politically controversial, then [the project] might have also been a non-starter. CWFA was perfect because they already ran similar kind of projects, not in terms of energy, but with local municipalities. They were fairly well-liked, non-controversial, scandal-free, and generally highly regarded.
Structural Legislation

Once the initial framework for the RIIB was in place, the next step for Magaziner’s team was to gather broad support to ensure that the bill would pass. The team determined that they could gather support from three key constituencies: business, environmental, and labor.

A selling point for labor groups was a promise of in-state construction jobs. Environmental groups supported the deployment of renewable-technology and energy-reduction incentives. And the business community was swayed by the ease of allowing banks to lend for renewable energy due to PACE programs and the fact that the projects would be funded without any increase in taxes.

Magaziner’s team put together a bill and included it in the budget vote. Due to intensive prior outreach, the bill garnered unanimous support from all three groups present during the hearing. The budget was one of the quickest to pass in the recent history of Rhode Island state government.4

The newly passed legislation added four programs to the CWFA and formally changed the agency name to the Rhode Island Infrastructure Bank (RIIB). Those programs included the EBF, a Commercial Property-Assessed Clean Energy (C-PACE), Residential Property-Assessed Clean Energy (R-PACE), and the Brownfield Revolving Fund.

New Leadership

The treasurer’s office identified that it needed to bolster the financial skillset at RIIB to ensure success. To do this, it brought in Merrill Sherman as board chair. She is a veteran banker who previously served as the CEO of four different banks. It also brought on Jeff Diehl, another experienced banker, as Executive Director.

Structural Refinements

After the EBF was signed into the budget, OER, the treasurer’s office, RIIB staff, RIIB lawyers, and the Office of Business Regulations met regularly to create the rules and regulations for the program. This process was fairly lengthy and took over six months. Key questions revolved around what the program would look like, how people would apply, and how the project priority list would work.

OER determined the rules and regulations for the priority list, while RIIB put together the rules and regulations for the EBF and other programs. A public response period followed. The program was launched in the fall of 2015.

Scope Definition

OER staff were responsible for determining which projects to prioritize under the EBF. On the energy-efficiency side, they determined criteria for projects that were cost-effective.

For renewables, they developed criteria for wind and solar projects. They determined that it was inefficient to create criteria for other renewable technologies as municipalities were unlikely to propose projects with them. They could review those few proposals case-by-case.

Demand Creation and Management

There were three key steps in creating sufficient demand for the EBF.

The first was creating a very transparent Request for Proposals (RFP) and a very detailed application. These documents were created largely by the OER and RIIB and included very clear metrics for project priorities. OER also offered to help municipalities with submitting applications by commissioning a consultant for them, if needed. The documents highlighting project criteria are included in the appendix of this case.

The second was following up on the RFP with frequent, in-person meetings at the municipalities. The OER, RIIB, and National Grid performed this task jointly.

Presentations were given to every municipality, informing stakeholders of the EBF application requirements and deadlines. During the presentations, OER staff talked about project criteria while RIIB staff walked through the financing mechanics.

Finally, given that this was a new project that was not yet financially proven, other incentives were required to encourage municipalities to invest their time in applying for project funding. EBF achieved this by offering free energy-efficiency audits for municipal buildings. These audits were performed by National Grid and capitalized by untapped American Recovery and Reinvestment Act (ARRA) stimulus funds. This was a pool of capital the treasurer discovered had been granted to the state for energy audits but never used. Ultimately, 54 public buildings were audited with all costs covered.

All together, these steps resulted in the submission of over 250 different project applications, representing over $60 million in project funding. Nearly all buildings that received a free audit came in through project applications.

Review Process

Once the application deadline passed, projects were reviewed by the OER. This process took 10 days, a notably quick turnover achieved by a very transparent application framework that enabled quick comparative review and diligent work by the OER reviewers and staff. (See Figure 1 in Appendix 1.)
Top applications were those that included a robust baseline, had combined renewable-energy and demand-side-management projects, and were part of a clearly defined municipal energy plan.

The baseline qualification for project approval was projected financial performance. If the proposed project was not net cash flow-positive, OER would not advance it to RIIB. When evaluating financial feasibility, OER incorporated all available state clean-energy incentives into their calculations.

OER also then used the EBF application as a proxy for an application to other incentive programs, fast-tracking qualifying projects. For example, if an EBF application had a renewable-energy project that qualified for the Distributed Generation Contracts Program, a program run by OER, then OER would simply use the EBF application as a proxy for an application to the Distributed Generation Contracts Program, ultimately minimizing paperwork for the municipality.

### Financing Strategy

**INITIAL PLAN**

The financing objective of the EBF was to finance as many projects as possible with little to no impact on the state budget. All of this had to be done within the lending capacity of RIIB while also meeting RIIB’s underwriting criteria.

The initial planned structure of the deal was for municipalities to underwrite their projects by issuing a general-obligation bond. RIIB would then purchase and aggregate those bonds, funding the purchase by issuing its own general-obligation bond.

Given RIIB’s AAA credibility as the “renamed” CWFA, RIIB’s general-obligation bond would be written at a lower cost of capital than the municipal bonds. RIIB could then pass down the difference in capital costs to the underlying municipalities, creating an otherwise unavailable aggregation benefit.

**BOND DELAY**

When RIIB had selected its final list of projects and was near closing, staff were informed by their financial advisor that there was not significant diversity of municipalities in their pool to achieve a high credit rating on their bond.

While RIIB selected 17 projects, those projects were backed by only 6 municipalities. At least 10 were needed for a AAA rating.

The decision to select projects from only 6 municipalities was not intentional. Rather, it was the byproduct of the project-selection process.

Of the total $60 million of submitted project applications, $17 million was picked up by the private sector. Given the bank’s role as a complement to the private market, while the EBF may have accelerated these projects by encouraging municipalities to explore project opportunities, financing these projects would not have created “additionality.”
Of the remaining $43 million in proposed projects, many projects were not a fit for EBF, mostly due to issues with funding timing or project scope. For example, some projects qualified as “light-touch” retrofits and could use SBC programming, while others were not ready to move forward at the time EBF would have financed them. Some projects were cut at the municipal level.

Michael Baer, Senior Advisor at RIIB, reflected on how this may have been prevented:

There [was] also lack of communication on our part to the city councils who ultimately had to pass borrowing resolution [at] the local level. We did not do a great job in educating the city councils who were passing the borrowing resolutions [about the mechanics of EBF].

RIIB was told that if its staff wanted a AAA bond and could not diversify, they would need to provide significant capital in reserve. RIIB determined that putting a large sum of cash in reserve was against the purpose of the bank, as it was an inefficient use of public funds.

Staff also determined that issuing debt at a lower rating, A or AA, would not only cost them the aggregation benefit from a lower cost of capital, but also might not generate enough interest in the market given that the $17-million transaction was relatively small. Still, RIIB was determined to move forward with financing the approved projects and met to discuss alternative options.

RIIB quickly issued an RFP to local banks it had partnered with as the CWFA. The staff gave prospective lenders their list of borrowers, told them the anticipated close date, and communicated that the structure and security behind the loans would be general-obligation security.

The staff let the market tell them what it was willing to offer. Within a week, they had three responses. Ultimately, they ended up negotiating with two banks and settled on a private placement that was more short-term in scope. (See Figure 2 in Appendix 1.)

They hoped that within one year of the loan they would accept a second round of projects, yielding sufficient diversity to refinance the private placement and finally issue their AAA general-obligation bond on the public market.

The private placement was financed with a 15-year final maturity, no reserve requirement, and a hedging mechanism to protect against rate fluctuations. While it was not a requirement to do so, RIIB opted to put a small amount of capital from its original allocation in reserve on its balance sheet for prudent risk management.

For RIIB staff to be so flexible in their financing approach, they needed full legislative support since, for nearly a year, the RIIB board and other key stakeholders had understood the EBF to be ultimately financed by a RIIB-backed general-obligation bond.

**CAPITALIZATION LEVERAGE**

RIIB was capitalized by a combination of public sources for a total of $7 million. This included $3 million of RGGI proceeds, $1.8 million from the National Grid Systems Benefit Charge, and an extra $2 million of ARRA funds for energy-efficiency upgrades that the Treasurer discovered had been allocated but never used.
While some criticized the reallocation of existing state energy-efficiency funds, RIIB determined that the “multiplier effect” of using those funds to bring in private capital and the fact that so many big buildings (with large energy-savings potential) were not being funded by current programs made the reallocation well worth it.  

Magaziner said:

We didn’t raise the benefit charge, we rerouted some of the proceeds to the infrastructure bank because we felt there was an unmet need [for large buildings]... The $2 million and $5 million that we got from RGGI and ARRA was used to pull in capital from bond investors to help float a bond. Hence, there’s a multiplier effect. That $7 million turned into $17 million and we were able to raise leverage. Programs with National Grid are good, but are not revolving funds. The only capital that’s being put into work is the capital being pulled in from the charge.

According to RGGI, the 2.4x multiplier effect is on the low end. The bank hopes to achieve 5x leverage on public capital in future rounds. $5 million in public capital will raise $25 million in total investment.

**Results Measurement**

In Round 1, RIIB financed 17 projects across 6 communities amounting to $17.2 million. All projects are net-cash-flow positive. Funding for projects was split with 57% allocated to energy-efficiency projects and 43% allocated to renewable-energy projects. The projects are estimated to generate a total $20 million in net-cash-flow savings (after debt service) which can be rerouted directly to the public. More than 260 in-state jobs were directly supported by Round 1 projects. Collectively, these projects resulted in a 26% reduction in energy usage.

RIIB staff were not able to issue a general obligation bond at their preferred credit rating, they were able to leverage their strong credit standing in the private placement. Thus, RIIB was able to lower capital costs for underlying projects by at least 15%. That savings is net of the 1% origination fee and 0.5% annual fee charged by RIIB to the municipalities.

**SECOND ROUND: PROJECT APPLICATIONS**

RIIB closed its second round of project applications on December 21, 2016. The solicitation period lasted 112 days. Staff received qualifying project applications from a large pool of municipalities. This allowed them to bundle Round 1 and Round 2 projects together so they could qualify for a highly-rated long-term bond. In Round 2, the program expanded its outreach activities to include wastewater and drinking-water utilities and quasi-state agencies. In contrast, in Round 1, outreach was limited to municipally-owned buildings. During the last round, the Rhode Island Department of Education (RIDE) audits revealed that the energy-efficiency and renewable-energy needs in school facilities amounted to $727 million. A third round of soliciting applications ended on April 12, 2017. Municipalities that have elections were still able to participate in the latest round.

---

There were a number of key lessons learned in Round 1 that RIIB plans to build on in future rounds.

1. The OER learned in Round 1 that several municipalities were submitting applications for renewable-energy projects that were not fully conceptualized in order to maximize gains from a scoring system that rewarded renewable-energy plus energy-efficiency projects. To prevent this, in Round 2, the OER has asked municipalities to submit advance bids for proposed renewable projects, thus ensuring those applications are high-quality.

2. RIIB was able to pay for National Grid audits through an unused pool of ARRA funds. Rather than pay for audits moving forward, which would be expensive and unsustainable, RIIB is requesting that towns use their own energy partners for audits, with the premise that these partners will then be positioned to complete the projects themselves. To ensure consistency across projects, RIIB has retained the services of an engineering firm who will provide guidance to all participating municipalities.
Appendix

APPENDIX 1: FIGURES

Figure 1: Project Evaluation Process

Municipalities Submit Project Proposals to OER (Renewable Energy/Energy Efficiency)

OER Evaluates and Ranks Projects Based on Energy Performance

RHODE ISLAND OFFICE OF ENERGY RESOURCES (OER)
Figure 2: Round 1 – Eventual Financing Structure

Private lender finances RIIB municipal bond purchase

RIIB buys/aggregates municipal bonds
APPENDIX 2: KEY DOCUMENTS

A Blueprint for Rhode Island
http://sethmagaziner.com/blueprint-ri/

EBF Application – December 1st, 2015
Accessed via the previous Rhode Island Infrastructure Bank website

EBF Application – Efficiency – Round 2
http://www.energy.ri.gov/RIEBF/

EBF Application – Renewables – Round 2
http://www.energy.ri.gov/RIEBF/

EBF Example – Barrington Energy Plan
http://www.energy.ri.gov/RIEBF/

EBF FAQ (v3)
http://www.energy.ri.gov/RIEBF/

EBF Guidance – Round 2 Baseline Data & Narrative
http://www.energy.ri.gov/RIEBF/

EBF Guidance – Round 2 Energy Management Plan Template
http://www.energy.ri.gov/RIEBF/

EBF Guidance – Round 2 Energy Management Plan
http://www.energy.ri.gov/RIEBF/

Accessed via the previous Rhode Island Infrastructure Bank website

EBF Project Summary Excel Form for Efficiency Projects – Round 2
http://www.energy.ri.gov/RIEBF/

EBF Round 1 Announcement
Accessed via the previous Rhode Island Infrastructure Bank website

EBF Round 2 Information Session Presentation – September 7, 2016
Provided to Jake and Farrukh by OER

EBF Round 2 Notice
http://www.energy.ri.gov/RIEBF/

EBF Scoring Sheet Efficiency Projects – Round 2
http://www.energy.ri.gov/RIEBF/
EBF Scoring Sheet Renewable Projects – Round 2
http://www.energy.ri.gov/RIEBF/

Accessed via the previous Rhode Island Infrastructure Bank website

EMP Letter of Intent Template
http://www.energy.ri.gov/RIEBF/

Guidelines for Energy Management – Energy Star
http://www.energy.ri.gov/RIEBF/

History and Structure of the RIIB

OER Rules and Regulations for the EBF Project Priority List
http://www.energy.ri.gov/RIEBF/

Rhode Island Department of Education Support Letter
http://www.energy.ri.gov/RIEBF/ RIIB Round 2 Press Release

Rhode Island Infrastructure Bank 2016 Annual Report
Accessed via the previous Rhode Island Infrastructure Bank website

RIIB EBF Clipbook
Provided to Jake and Farrukh from the RI State Treasurers Office

RIIB Webpage Screenshot
http://www.energy.ri.gov/RIEBF/

RIPEP Factsheet
http://www.energy.ri.gov/pep/
APPENDIX 3: DEAL FLOW DIAGRAM

RHODE ISLAND INFRASTRUCTURE BANK (RIIB) EFFICIENT BUILDINGS FUND (EBF)

Transaction Steps

1. RIIB initially capitalized through various public funding sources.
2. RIIB submits a RFP to municipalities for renewable-energy/energy-efficiency (RE/EE) projects.
3. National Grid provides free energy audits for municipal buildings; municipalities develop projects using guiding documentation provided by RIIB and OER.
4. Municipalities submit project applications to OER during application period.
5. OER reviews and ranks projects, sends top ranked projects to RIIB. Some projects are picked up by other private funding sources.
6. RIIB aggregates municipal bonds, issues its own general-obligation bond at AAA credit rating, lowering capital costs for underlying projects.
7. RIIB uses bond proceeds to purchase underlying municipal bonds for top ranked projects (e.g. projects 1-4).
8. Municipalities use savings to pay RIIB; RIIB pays private lenders.