



MEETING MINUTES

Thursday, August 11, 2016 | 3:30 - 5:30 PM

Conference Room B, 2nd Floor, Department of Administration, One Capitol Hill, Providence, RI

Members in Attendance: Abigail Anthony, Joe Cirillo, Roberta Fagan, Anthony Hubbard, Tom Magliocchetti, Michael McAteer, Shigeru Osada, Chris Powell, Karen Verrengia, Raquel Webster (for Jennifer Hutchinson)

Members Absent: Bob Bacon, Carol Grant, Betsy Stubblefield Loucks, Diane Williamson

Others Present: Brian Buckley, Kat Burnham, Linda George, Mike Guerard, Courtney Lane, Angela Li, Aubrey McDonough, Brian McCowan, Danny Musher, Jeremy Newberger, Michael Rossacci, Brigid Ryan, Rachel Sholly, Becca Trietch, Puja Vohra, Chon Meng Wong, Muxi Yang

1. Call to Order

Chairman Chris Powell called the meeting to order at 3:31 PM.

Karen Verrengia made a motion to move the EnergyWise agenda item from 6c to 5. Abigail Anthony seconded and all approved.

2. Approval of Meeting Minutes

Joe Cirillo made a motion to approve the July meeting minutes. Ms. Anthony seconded and all approved.

3. Executive Director Report

There was no report.

4. Executive Committee Report

a) Finance Update

Alex Hill from Dunskey attended the Executive Committee meeting and provided an update on their activities coordinated by consultant team. Activities include engaging with the Rhode Island Infrastructure Bank (RIIB) to discuss its program development and implementation plans; providing input on evaluations of finance offering from Grid including the HEAT Loan, and commercial and industrial (C&I) on-bill repayment; supporting discussion and analysis with the Collaborative on proposed allocations to support financing in 2017 Energy Efficiency Program Plan; and reviewing potential impact of financing on 2018-2020 savings targets.

b) Savings Targets & Standards Revision

The Executive Committee was updated on the status of the proposal to link standards revision and target setting with a combined filing in December, presumably with a draft to be brought to EERMC meeting in early December. Consultant Team, with Abigail Anthony, will be meeting August 16, with Public Utilities Commission (PUC) commissioners and staff and Division representatives, and OER staff to discuss with them the reasons for this approach and to conduct a preliminary discussion of the underlying reasons for this proposal and the issues that may be at play. A subsequent call of the

“Targets Committee” outlined a preliminary agenda for the meeting and Abigail has shared that with PUC staff, inviting their feedback.

c) Member Retreat Planning

Betsy, Rachel, and the consultant team have been working together to plan the member retreat which is scheduled for the afternoon of Wednesday, September 14th. All members should have received a calendar invitation. The objectives of the retreat are to ensure that all EERMC members have a clear understanding of key efficiency policies, the EERMC's responsibilities, Efficiency programs, Special Topics/Working Groups, EERMC Council members understand their individual role and responsibilities, feel empowered to be actively engaged as an EERMC council member. An agenda will be presented at the September 8th Council meeting.

5. EnergyWise Lead Vendor Update

Angela Li and Mike Rossacci of National Grid gave a brief overview of the EnergyWise program, which delivers energy efficiency services to residents (*see attached*). Shigeru Osada asked how the Home Energy Report selects similar homes to compare usage. Ms. Li explained that it is an assumption based primarily on energy usage and square footage; however, it is possible to change your information online to be more accurate. Anthony Hubbard asked how renters are handled in this program. Mike Guerard added that there is a separate program for the low income population. Ms. Verrengia asked if solar opportunities are integrated into the EnergyWise program. Ms. Li said that the state is working to bring Residential PACE online in 2017, which will be able provide financing for solar. National Grid has also established the SolarWise program and has worked with OER on the Solarize program. Michael McAteer added that the goal is to better integrate efficiency and renewable energy programs.

For a variety of reasons, National Grid plans to keep RISE Engineering as the lead EnergyWise vendor instead of going out to bid. Ms. Anthony suggested that, because this situation provides some leverage for National Grid to negotiate the new contract with RISE, the Council should consider whether there are high priority things that the EERMC should advocate for to offer the highest quality programs. Mr. Guerard noted that the evaluation of the EnergyWise program is almost complete and opens up some new areas that, with a more flexible lead vendor contract build, will be easier adapt. Chairman Powell asked about women and minority owned business goals and tracking. Mike Rossacci said he would check and follow up. Chairman Powell asked Mr. Guerard to follow up on this question as well. Mr. Osada asked if National Grid felt that the number of customers currently being served is a good pace. Mr. Rossacci said that it is a good pace - they have decreased customer wait time and are doing a lot of marketing to maintain a queue. Ms. Anthony asked of Grid will work with RISE on creative ways to deliver savings at low costs in terms of the next iteration of savings targets. Mr. Rossacci said that having a vendor with more experience in this jurisdiction, as opposed to introducing a new vendor that may be more costly, will allow for quicker program evolution. Ms. Verrengia added that she has seen first-hand that RISE is constantly trying new technologies.

6. Policy and Planning Issues

a) Vote on Draft Regional Greenhouse Gas Initiative Allocation Plan Comments

Mr. Guerard summarized the memo drafted by the consultant team outlining potential comments on the RGGI Plan (*see attached*). Ms. Anthony thought it was important for the Council to provide some sort of feedback to the OER whether good, bad or neutral. Roberta Fagan asked about the lack of funding for the delivered fuels program. Chairman Powell suggested including in the comments that the Council would like to see delivered fuel allocations in the future if there are no other viable alternatives.

Ms. Verrengia made a motion to authorize the consultant team to develop a letter based on last four bullets of the memo page two plus a comment in support of future allocations for delivered fuels and submit to Chair to submit to OER. Ms. Anthony seconded and all approved.

b) Presentation and Vote on Stretch Code Development Process

Brian McCowan of ERS (National Grid consultant), Puja Vohra of National Grid and Becca Trietch of OER presented a scope of work and process proposal for the developing the commercial stretch code (*see attached*). Funds for the code development were approved at the last meeting. Mr. Osada asked how to balance the code so that it is progressive but still attainable enough for people to go after it. Mr. McCowan replied that Grid has decades of experience in finding that balance. Mr. Powell asked if building labeling is being integrated into the code effort. Mr. McCowan said that building labeling is not currently incorporated but it is something that has been discussed. Being able to offer recognition that a building has met a certain standard provides an incentive to utilize stretch codes. Tom Magliocchetti asked if there is a posterchild for stretch codes that Rhode Island can learn from. Mr. McCowan noted that the City of Portland and the State of Massachusetts have been leaders in this area. Mr. Magliocchetti felt that economic impacts should be conveyed, especially to large building developers, as early in the process as possible to foster their engagement. Ms. Trietch said that National Grid has a stakeholder process as well as the stretch code working group. Once the code is drafted, it would be useful to hold a larger stakeholder meeting to get feedback from a broader audience. Mr. Cirillo expressed concern about cities and towns adopting different codes and how the contractors and subcontractors would have to manage different codes. Ms. Trietch explained that Rhode Island does not allow cities and towns to adopt a different code than the state code. The stretch code will be voluntary for individual projects. Mr. McCowan said that one of the goals of this year's base code adoption is to reduce the number of variances so that there is more regional consistency. Mr. Magliocchetti asked which task in the scope of work includes looking at the economic impacts to builders. Mr. McCowan referred to task #5, noting that the optional nature should help to mitigate cost concerns.

Ms. Verrengia made a motion to approve the proposed scope of work for the consultant. Mr. Cirillo seconded and all approved.

7. Energy Efficiency Programs and System Reliability Procurement Issues

a) National Grid Second Quarter Program Results

Courtney Lane, Angela Li and Puja Vohra of National Grid presented the 2017 second quarter results of the energy efficiency programs (*see attached*). Chairman Powell asked if there is a plan to catch up on the C&I sector. Ms. Lane said that C&I lags behind every year and the program is actually on track to meet 100% of goal. Ms. Vohra added that there is always a hockey stick effect for the C&I sector, with most of the savings coming in toward the end of the year. Mr. Guerard recalled that last year the savings goal was exceeded significantly and asked why the projected savings for 2016 are not higher given that precedent. Ms. Lane explained that National Grid does not expect to exceed goals every year, but it tries to get as much savings as possible within the approved budgets.

b) EERMC Meeting Calendar and 2017 Plan Development

Jeremy Newberger of National Grid summarized key dates and key areas of interest and innovation in relation to 2017 Energy Efficiency and System Reliability Procurement Plans (*see attached*). Ms. Osada referenced the last Collaborative meeting where RIIB requested system benefit funds and asked why this is not an EERMC matter. Mr. Newberger said that it would be part of the budget that National Grid will present to the Council next month. Chairman Powell asked to see the potential impacts of this

allocation on the program budget. Ms. Verrengia noted that the October Council meeting is the same day as National Grid's Summit. The Executive Committee will discuss changing the meeting date.

8. Public Comment

There was no public comment.

9. Adjournment

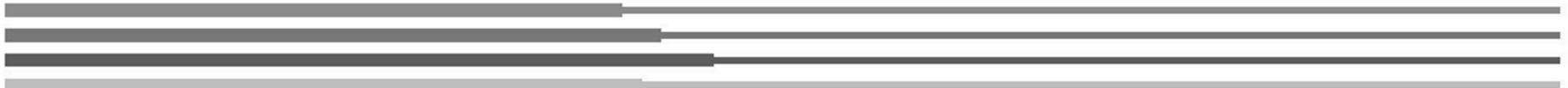
Mr. Cirillo made a motion to adjourn the meeting. Mr. Osada seconded and all approved. The meeting was adjourned at 5:42 PM.

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EnergyWise Lead Vendor Update

August, 11 2016



Residential Energy Efficiency

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awareness

consideration

purchase

retention

advocacy

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Don't let the summer heat keep you from enjoying the great indoors. Make your home more comfortable with energy upgrades. To learn more, connect with us at ngrid.com/save

This is life on the grid.

These programs are funded by the energy efficiency charge on all customers' gas and electric bills, in accordance with Rhode Island law.
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National Grid RI Home Energy Reports
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Westborough, MA 01581-1088

Home Energy Report
Account number: [REDACTED]
Report period: 11/15/12-12/17/13

We are pleased to provide you periodic, personalized Home Energy Reports to help you make smart energy saving decisions.

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Last Month Neighbor Comparison | You used **13% more** energy than your efficient neighbors.

Category	Value
Efficient Neighbors	3,743*
YOU	4,243
All Neighbors	5,660

How you're doing: **GOOD** (More than average)

* This energy index combines electricity (kWh) and natural gas (therms) into a single measurement.

Who are your Neighbors?

- All Neighbors:** Approximately 100 occupied nearby homes that are similar in size to yours (avg 2,118 sq ft) and have gas heat
- Efficient Neighbors:** The most efficient 20 percent from the "All Neighbors" group

Personal Comparison

How you're doing compared to last year:

Year	Value
YOU JAN - NOV 2012	60,666*
YOU JAN - NOV 2013	50,105

So far this year, you used **17% less** energy than last year.
* You're on pace to use less in 2013.

Looking for ways to save even more? Visit Ngrid.com/rebatesRI

* This energy index combines electricity (kWh) and natural gas (therms) into a single measurement.

Turn over for savings →

Save \$5 when you upgrade your outdoor lighting with CFL bulbs

National Grid is offering its residential electric customers **\$5 off 2-packs of ENERGY STAR® certified exterior CFL flood lamps.**

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Energy Wise

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- Flagship direct install program
- 50,000 customers received home energy assessments since 2009
 - Lighting, advanced power strips, appliances, heating system, insulation, solar opportunities, water saving measures
- 25+ network of independent insulation contractors to insulate home
- Lead Vendor – Rise
 - Intake, scheduling, audit, quality control
- Introduction to energy efficiency experience

The Masters Family
A better home with energy upgrades

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Jane and Dean Masters moved into their 95-year-old Providence home 14 years ago and have been restoring it ever since. They knew the two-story Cape had little insulation, and their winter heating bills were high. "It's a small house, but some months we were spending \$450 on oil," said Jane.

So when the Masters decided to convert their home from oil to natural gas, they reached out to National Grid for help making their home more energy efficient. The first step was a no-cost home energy assessment. An Energy Specialist did a whole home inspection, provided them with instant energy saving measures including LED bulbs and advanced power strips, and recommended air sealing, insulation in their exterior walls and attic, and a high efficiency heating system.

With the help of contractors and National Grid, the Masters made all the improvements. "Everyone was really efficient, very professional, and clearly experienced. They guided us through the process very well," said Jane. Incentives from National Grid covered more than half the cost of weatherization, and a 0% interest HEAT Loan made the remaining cost of heating upgrades and weatherization more manageable.

"In the winter, we used to wear extra layers, plus we used an electric blanket and heated mattress pad at night. We kept the house at 58° to save on heating. Now, we're so much more comfortable and energy costs us much less." In fact, the Masters are saving \$480 a year from weatherization work alone.

"Now, we're so much more comfortable and energy costs us much less."

There are benefits the Masters never expected, too. "We hear less noise from the street thanks to the insulation. Plus, our home has increased in value, and we feel like it's a better investment. We love our house now," shared Jane.

"To anyone who's considering having a home energy assessment, do it. Your house will be more comfortable, saving energy can save you money and it's good for the environment, and there are people here to help you."

To sign up for a no-cost energy assessment and learn more about our financing options and savings opportunities, visit ngrid.com/ri-home or call 888-633-7947.



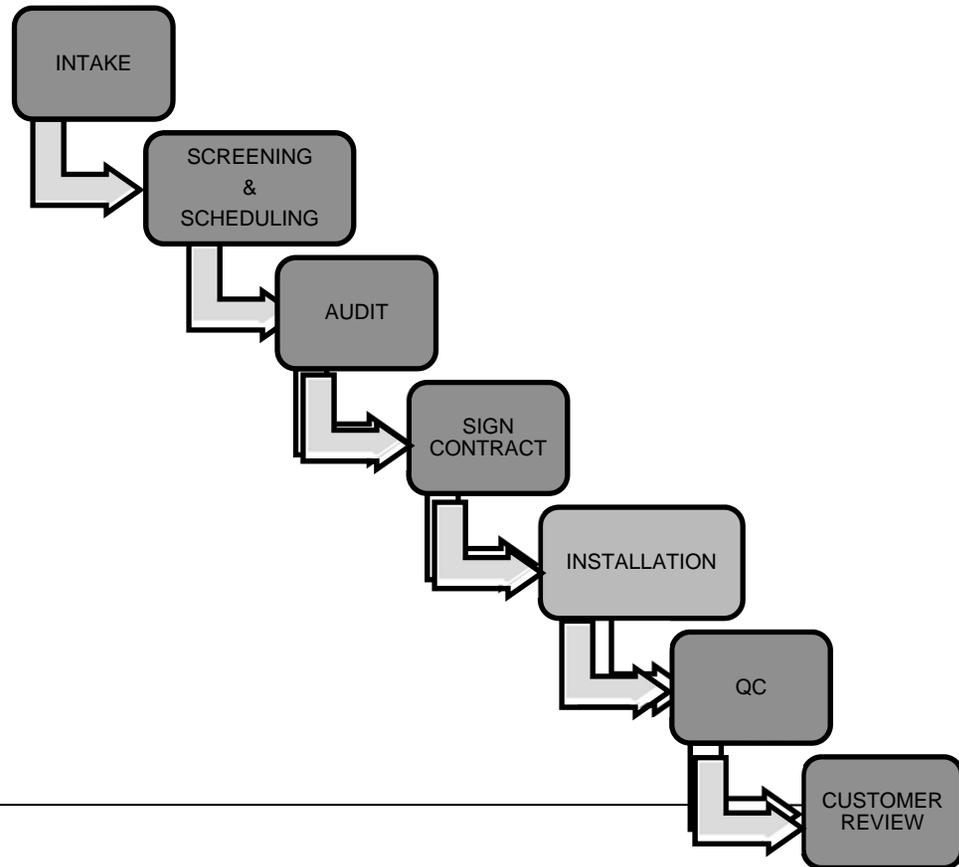
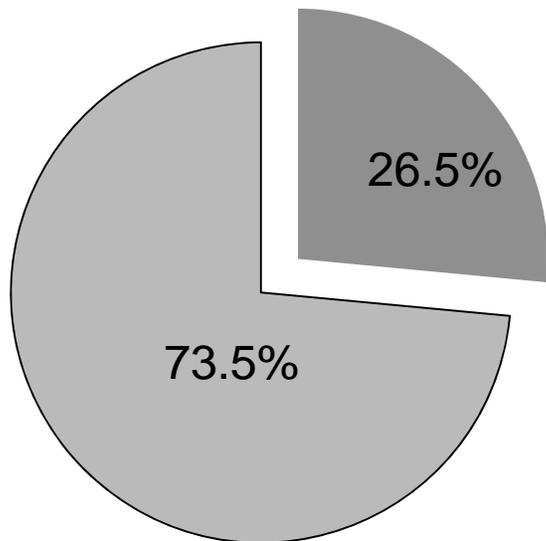
Home
Two-story Cape built in 1919
Efficiency Measures
<ul style="list-style-type: none">• Air sealing• Exterior wall and attic insulation• Two heating systems• LEDs and advanced power strips
Project Cost
\$3,952 for weatherization \$2,321 covered by National Grid incentives
0% HEAT Loan for remaining weatherization and heating system costs (\$20,398) \$242.83 a month
Estimated Weatherization Savings
\$480 per year
Estimated Heating Savings
\$310 per year

EnergyWise LV fees

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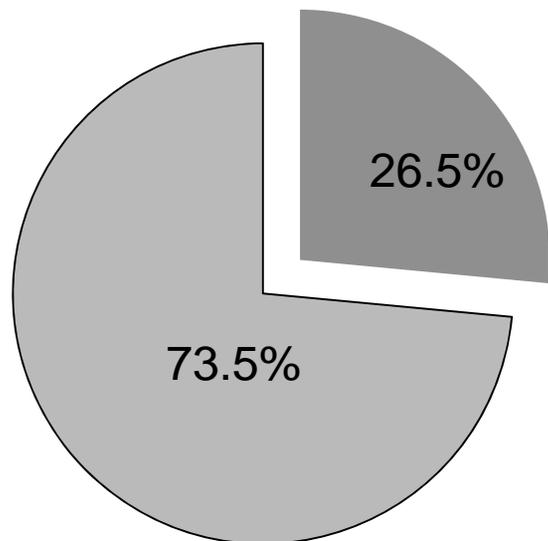
RI EW Program Spend



- LV RFP Addressable
- Not Addressable in LV RFP

EnergyWise LV addressable spend

RI EW Program Spend



- Majority of EnergyWise's costs not addressed by new lead vendor RFP
- 73.5% of the program will not be addressed by doing a traditional lead vendor RFP
- Procurement has already started to address this bucket of spend with a high degree of success, most recently with the lighting and smart strips bulk procurement MOU (EFI – selected supplier)
- Weatherization is **49.8%** of the program by spend, National Grid is constantly looking at ways to reduce costs overall to serve more customers

- LV RFP Addressable
- Not Addressable in LV RFP

EnergyWise LV Summary

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- The Program team understands that it is very important to maintain competition in the marketplace, especially when it relates to ratepayer funds
- After recent market review, the current plan is to keep the existing lead vendor for the next three years. Benefits Include:
 - Proven track record of delivering superior customer satisfaction, contractor favorability, and cost containment
 - 2017 – 2020 – energy efficiency undergoing constant change and the Company looks to partner with Vendors that will accommodate both growth or reductions within the programs as required
 - Will keep Jobs in RI – *Incumbent is a large employer in the state.*
 - Cost Effectiveness – Low overhead, proven track record for competitive proposals, supports RI community initiatives such as Solarize
 - Program continuity and customer approval

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ADMINISTRATION
OFFICE OF ENERGY RESOURCES



2016-B PLAN FOR THE ALLOCATION AND DISTRIBUTION OF REGIONAL
GREENHOUSE GAS INITIATIVE AUCTION PROCEEDS

Auctions Held March 9, 2016 & June 1, 2016

July 2016

1.0 Authority

The 2016-B Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds (Plan) is authorized by Rhode Island General Laws (RIGL) §23-82-1 et seq. and 42-140-9 and the “Rules and Regulations for the Allocation and Distribution of Regional Greenhouse Gas Initiative Proceeds,” effective August 2011.

2.0 Definitions

For the purposes of this Plan, the terms defined in RIGL §23-82-1 et seq. and the “Rules and Regulations for the Allocation and Distribution of Regional Greenhouse Gas Initiative Proceeds,” effective August 2011 shall be given the same meaning as provided in the statute and regulations.

3.0 Auction Proceeds included in this Plan

3.1 RGGI, Inc. conducted auctions on behalf of the State of Rhode Island on March 9, 2016 (Auction #31) and June 1, 2016 (Auction #32).

3.2 These auctions resulted in the following Auction Proceeds for the State of Rhode Island:

Auction #31	\$2,359,922.25
Auction #32	\$2,136,959.55
Total	\$4,496,881.80

4.0 Adoption of the Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds

4.1 The Rhode Island Regional Greenhouse Gas Initiative Act provides for the use of Auction Proceeds. RIGL §23-82-6 requires that the Auction Proceeds be used for the benefit of energy consumers through investment in the most cost-effective available projects that can reduce long-term consumer energy demands and costs. The annual auction proceeds proposal shall be designed to augment and coordinate with existing energy efficiency and renewable

energy programs, and shall not propose use of auction proceeds for projects already fully funded under other programs.

4.2. The Rhode Island Office of Energy Resources (OER) is authorized to allocate the auction proceeds for the following purposes, in a proportion to be determined annually by OER in consultation with the Rhode Island Department of Environmental Management (DEM) and the Rhode Island Energy Efficiency and Resources Management Council (EERMC):

- (1) Promotion of cost-effective energy efficiency and conservation in order to achieve the purposes of section 39-1-27.7;
- (2) Promotion of cost-effective renewable non-carbon emitting energy technologies in Rhode Island as defined in RIGL §39-26-5 and to achieve the purposes of chapter 39-26 entitled “Renewable Energy Standard”;
- (3) Cost-effective direct rate relief for consumers;
- (4) Direct rate relief for low-income consumers;
- (5) Reasonable compensation to RGGI, Inc.; and
- (6) Reasonable costs of the OER and the Department of Environmental Management (DEM) in administering this program.

4.3 OER concludes that this Plan is consistent with the applicable statutes and regulations. Public notice of the proposed Plan was provided on XXX XX, 2016. A copy of the Notice is attached hereto. A public comment hearing was held on XXX XX, 2016 at the Department of Administration, One Capitol Hill, Providence, Rhode Island. The public was allowed additional time to submit written comments until XXX XX, 2016.

4.4 OER has responded to all substantive comments received on the Plan and are provided in the attached document entitled Response to Comments.

4.5 OER and DEM agree that the Plan was adopted in accordance with RIGL §23-82-6; “Rules and Regulations for the Allocation and Distribution of Regional Greenhouse Gas Initiative Proceeds” and Chapter 42-35, the Administrative Procedures Act.

5.0 Allocation of Auction Proceeds

5.1 Compensation to RGGI, Inc.

5.1.1 RIGL §23-82-6(a)(5) authorizes the reasonable compensation of an entity to administer the auction on behalf of the State of Rhode Island. RGGI, Inc. is the entity that conducted the auctions listed in Section 3.0.

5.1.2 Wherefore, RGGI, Inc. was compensated \$37,741.29 from auction proceeds.

5.2 Administrative expenses

5.2.1 RIGL §23-82-6(a)(6) authorizes the reasonable costs of OER and DEM in administering the RGGI program. The total reimbursement to both entities shall not in any year exceed Three Hundred Thousand Dollars (\$300,000.00) or ten percent (10.0%) of the proceeds, whichever is greater.

5.2.2 Ten percent (10.0%) of total auction proceeds from the two auctions conducted in 2016 and subject to this Plan equals \$449,688.18. This value is greater than \$300,000. Therefore, as specified in RIGL §23-82-6(a)(6), OER and DEM shall each be reimbursed a total of \$224,844.09.

5.3 Allocation of Net Auction Proceeds

5.3.1 Total Auction Proceeds for the RGGI auctions listed in Section 3.0 were \$4,496,881.80. After deducting the compensation for RGGI Inc. and the administrative expense reimbursement to OER and DEM, as specified in Sections 5.1 and 5.2, the balance remaining is **\$4,009,452.33**.

5.3.2 OER finds that allocating the balance of the Auction Proceeds set forth in Paragraph 5.3.1 herein for the promotion of cost-effective energy efficiency and conservation; and the promotion

of cost-effective renewable non-carbon emitting energy technologies in an integrated manner shall be best accomplished by disbursements as follows:

5.3.2.a **\$2,009,452.33 (Two Million, Nine Thousand, Four Hundred Fifty-Two Dollars and Thirty-Three Cents)** shall be leveraged with ratepayer funds and allocated to support energy efficiency programs, incentives, financing, and/or other services delivered through National Grid-administered programs. Support for these energy efficiency programs is consistent with Least Cost Procurement mandates; helps achieve lowest cost, carbon-free energy savings; reduces the amount of ratepayer funds that will need to be collected through the Systems Benefit Charge to achieve energy efficiency plan goals; and supports local economic investment and job growth in Rhode Island's clean energy economy. The specific programs and process for distribution of the funds will be developed by OER working in coordination with the EERMC and National Grid (Utility). Any funds allocated to the Utility shall be tracked and managed in a shadow account.

5.3.2.b **\$2,000,000.00 (Two Million Dollars)** shall be allocated to support public sector energy efficiency and/or renewable energy financing transactions conducted through the Efficient Buildings Fund within the Rhode Island Infrastructure Bank, as established under Rhode Island General Laws Section 46-12.2-4.2.

5.4 Tracking and Reporting

5.4.1 The Utility shall prepare quarterly programmatic and financial reports, and an annual report, for programs managed by the Utility that utilize RGGI funding according to the terms of the Plan. The reports shall include, at minimum, a detailed description of: (1) program components; (2) project costs; and (3) program benefits, including, but not limited to, energy savings, jobs/job hours and types of jobs associated with RGGI-funded projects.

5.4.2 The Utility shall prepare a report which shall include a list with the names of the entities receiving funding. This information shall be public information. The report shall be submitted to OER.

5.4.3 Consistent with OER's reporting requirement under RIGL 23-82-6(d), all recipients of RGGI funding are required to comply with OER data and reporting requests, including, but not limited to, those reporting requirements specified in procurement documents and/or any memoranda of understanding.

DRAFT

EERMC CONSULTANT TEAM



Memorandum

To: RI Energy Efficiency & Resource Management Council (EERMC)
From: EERMC Consultant Team (C-Team)
Date: August 8, 2016
Subject: EERMC options for comment on Regional Greenhouse Gas Initiative (RGGI) Plan

<i>Relevance of Topic</i>	The Council reviewed the proposed RGGI allocation plan (RGGI Plan) from the RI Office of Energy Resources (OER) at the July EERMC meeting, which was subsequently posted for public comment on July 15 by OER. The EERMC Executive Committee requested that the C-Team advise the Council on possible responses and related process.
<i>Content of memo</i>	The memo provides recommendation on the remaining opportunities to provide input, and options and context.
<i>Expected Outcome</i>	The EERMC will decide what, if any, official input they want to provide on the proposed RGGI Plan, and to support a potential vote at the August 11 EERMC meeting on how that would be achieved, including potential assignment to the C-Team.

Status and remaining process for RGGI Plan

The RGGI Plan that was reviewed by the EERMC at the July 14, 2016 meeting and was subsequently posted on July 15, 2016 by the OER. It can be found at:

<http://www.energy.ri.gov/documents/rggi/2016%20Plan%20Items/2016-B%20Draft%20RGGI%20Allocation%20Plan%207-11-16.pdf>

There are three opportunities for input that the EERMC can consider:

- The 30-day written comment period, which is open until August 14, 2016
- A public hearing will be held on August 15 at 10 am in DOA's Conference Room B
- Finally, the public record will be kept open for 10 calendar days following the conclusion of the public hearing to allow additional time for the submission of written comments.

Options for the Council to consider include providing written comments on the plan, or :

- Decide to not make any formal submittal of comments (written or at public hearing)
- Decide to provide comment at the public hearing
- Decide to submit written comments on the RGGI Plan, with possible recommendations

If the Council decides to choose the second or third bullet (or other options), the vote should also consider any specific direction it requires of the C-Team to support the action.

EERMC CONSULTANT TEAM



C-Team Notes and Comments for Consideration

The proposed allocations are from the proceeds of the two most recent quarterly auctions and are labeled the 2016-B Plan. Historically, RGGI allocations have been proposed for full annual auction proceeds. The 2016-A Plan provided support a variety of objectives:

- Governor Raimondo's "State Agencies to Lead by Example in Energy Efficiency and Clean Energy" via funding for energy efficiency and renewable projects at State facilities
- Delivered Fuels weatherization incentives offered through the EnergyWise program administered by National Grid
- Expansion of the Solarize program for community-level small scale solar
- A microgrid demonstration project

The 2016-B Plan builds on these efforts to expand the annual plan portfolio by proposing to split ~\$4 million between:

- The 2017 Energy Efficiency Program Plan (EEPP) to "be leveraged with ratepayer funds and allocated to support energy efficiency programs, incentives, financing, and/or other services delivered through National Grid-administered programs."
- The Rhode Island Infrastructure Bank (RIIB) to support public sector energy efficiency and/or renewable energy financing transactions conducted through the Efficient Buildings Fund (EBF)

The C-Team offers that when taken as a whole, the "A" and "B" Plans provide a broad portfolio of offerings. Additional comments include:

- Although 2016-A was weighted toward state-owned buildings, 2016-B balances out the annual portfolio with funding for the broad services to be offered through the 2017 EEPP and for municipal and quasi-governmental projects through EBF.
- Support for the 2017 EEPP was provided, although the \$2 million allocation is appreciably lower than the anticipated \$5.5 million that was estimated for 2017 when the 3-Year Plan (2015-2017) was developed in 2014. It should be noted, however, that the ~\$6 million allocated to support the Lead by Example and RIIB Efficient Building Fund will indirectly provide significant support to achieving the 2017 savings goals.
- While 2016-A plan included funding for delivered fuels weatherization to go into the 2016 EEPP, 2016-B plan does not include delivered fuels funding for the 2017 EEPP. For the last few years, some RGGI funds have been used to provide a portion of the funds offered for this service. However, it was a clear position of the OER that such funding was only temporary to fill the gap for an interim period. For 2017, the Collaborative is exploring other funding options to continue providing this service through the energy efficiency programs.
- Generally, the C-Team finds this Plan to be consistent with previous allocations in its design and objective to provide cost-effective support for energy efficiency implementation and support of associated planning and policy, as well as support to renewables.



Stretch Codes

Becca Trietch, OER

Puja Vohra, National Grid

Brian McCowan, ERS



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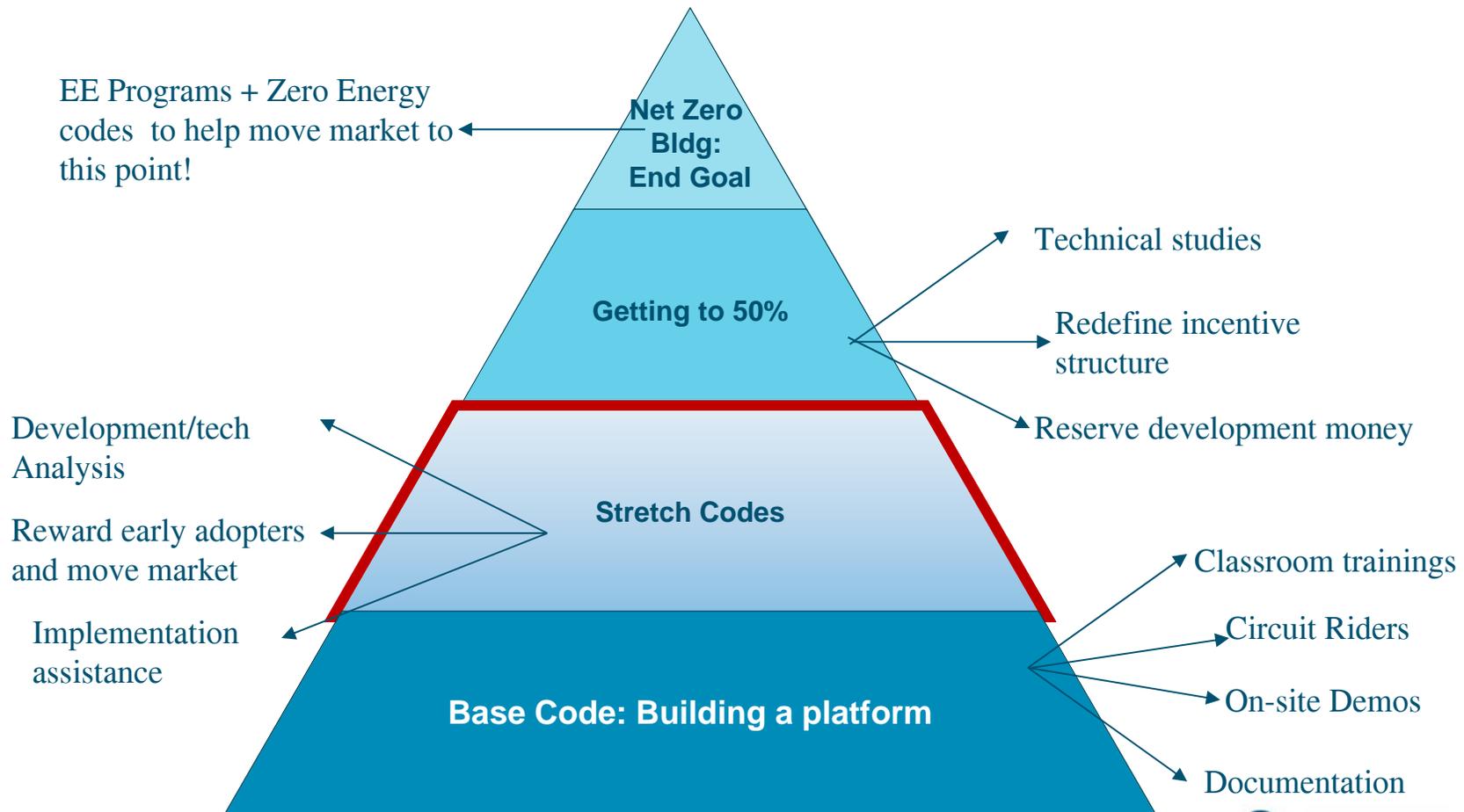
Purpose

- OER has undertaken the development of a stretch code as directed by Executive Order 15-17
- The EERMC has voted to financially support this work (\$50,260 approved last month)
- Today, Brian McCowan from ERS is here to present the work plan/process for completing the commercial stretch code
- We will be asking the EERMC to vote to approve the work plan/process after this presentation

Presentation Overview

1. **Alignment of Stretch Code with EE Programs**
2. **Brief History of Codes and Stretch Codes**
3. **Overview of work to be accomplished**
 1. Research Model Codes
 2. Engage Stakeholders & Review Model Codes
 3. Select & Amend Primary Model Code
 4. Review & Catalog Provisions
 5. Assess Practical Implementation of Provisions
 6. Perform Comparative Analysis
 7. Recommend Compliance Paths
4. **Project Timeline**
5. **Discussion/Q&A - Any amendments required?**
6. **Vote**

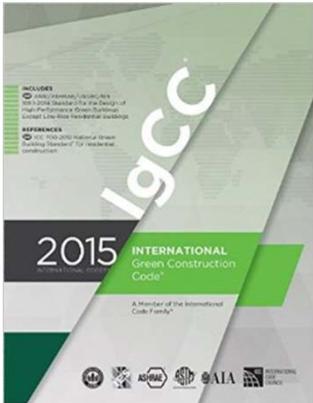
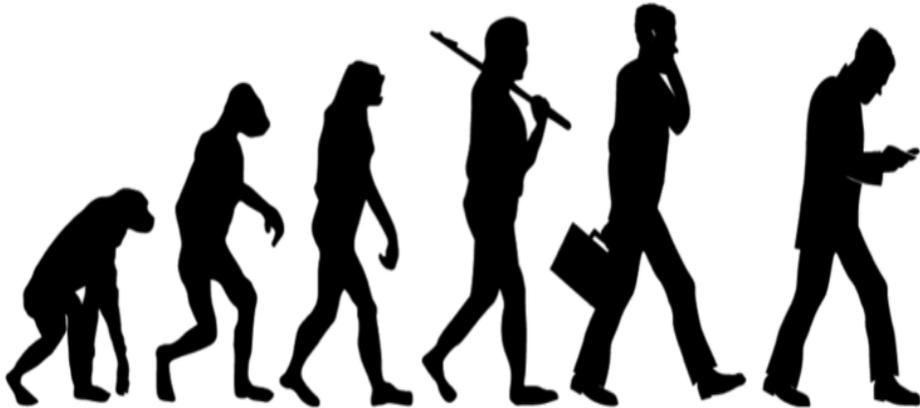
National Grid EE Programs: Role in the Codes Pyramid



EE Program Support for Stretch Code

- Technical expertise in development of stretch code
- Existing “code compliance initiative” to add a ‘stretch code’ compliance pathway in our trainings and technical support
- New Construction (above code) incentive programs to support portion of ‘incremental’ costs of stretch code and additional tech support
- Evaluation program can support a ‘process and impact’ evaluation study of the stretch code once its available.

RHODE ISLAND STRETCH CODE DEVELOPMENT



1990.....2000.....2010.....2017...>

Minimal requirements
Code mirrors standard practice
New construction only

Codes become more aggressive
Major renovations
Many exceptions for existing buildings

Simple commissioning
Daylighting
Renewable energy options

Comprehensive
Repairs and replacement
Enhanced building performance
Stretch codes



RESEARCH MODEL CODES



Model Codes – Codes/standards/protocols that serve as building blocks for state codes

Potential model codes:

- **ASHRAE standards**
- **International Code Commission Codes**
 - Reference ASHRAE & other standards
 - Includes International Green Construction Code
- **LEED protocols**
- **Collaborative for High Performance Schools protocols**
- **New Buildings Institute's Advanced Buildings protocols**

ENGAGE STAKEHOLDERS – REVIEW MODEL CODES



Monthly stakeholder meetings, includes:

- R.I. Office of Energy Resources
- EERMC Consultant Team
- R.I. Building Code Commission
- R.I. Green Building Advisory Committee
- National Grid
- Northeast Energy Efficiency Partnerships (NEEP)

Select model code(s), featuring:

- Energy efficient, best practice, design/construction approaches
- Renewable energy utilization
- Water conservation
- Health and environmental concerns
- Cost-effective improvement upon base codes
- Compliance with executive branch directives

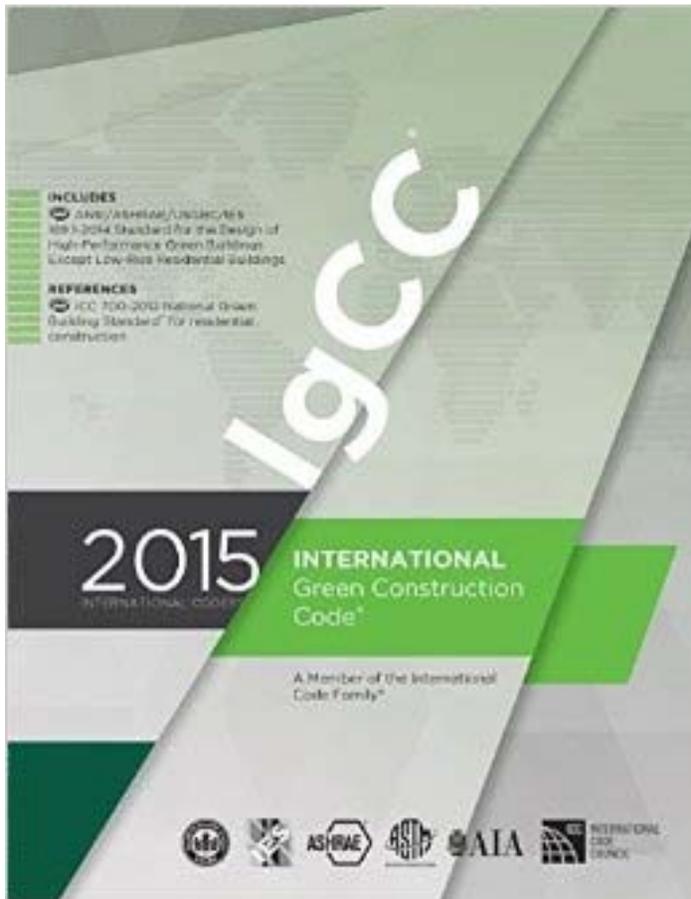
ENGAGE STAKEHOLDERS – SELECT & AMEND PRIMARY MODEL CODE



Commercial construction

- **IGCC preliminarily selected as primary model code**
 - Adjust for compatibility with R.I. base code
 - Customize as needed for climate zone
 - Modify for R.I. market conditions
 - Amend with features from other model codes and stakeholder generated provisions

RHODE ISLAND STRETCH CODE DEVELOPMENT



“Clear and specific requirements with provisions that promote safe and sustainable construction in an integrated fashion with the ICC Family of Codes”

REVIEW AND CATALOG PROVISIONS



Primary energy provisions

- Site orientation and features
- Insulation levels
- Air sealing & testing
- Fenestration performance
- HVAC design, equipment & controls
- Lighting design & controls
- Daylighting
- Plug loads
- Systems commissioning
- Renewable energy

Secondary energy provisions

- Transportation access
- Indoor air quality
- Local materials
- Water conservation
- Construction management

ASSESS PRACTICAL IMPLEMENTATION OF PROVISIONS



Factors

- Initial costs
- Maintainability
- Material and equipment availability
- A&E community and contractor knowledge
- Code officials support
- Availability of training and design assistance
- Documentation burdens
- Code provision maintenance (ex. IGCC reviewed annually and updated on 3 year cycle)
- **And!** compliance & enforceability



PERFORM COMPARATIVE ANALYSIS



Compare proposed provisions with:

- Rhode Island base codes
 - Performance levels
 - Compliance approaches
- National Grid incentive programs
 - Prescriptive HVAC & lighting
 - Custom analysis paths
 - Whole building performance paths
- Other incentive programs – tax incentives, grants, loans
- Other relevant regulations and codes
 - Compatibility with RI regulations

RECOMMEND COMPLIANCE PATHS

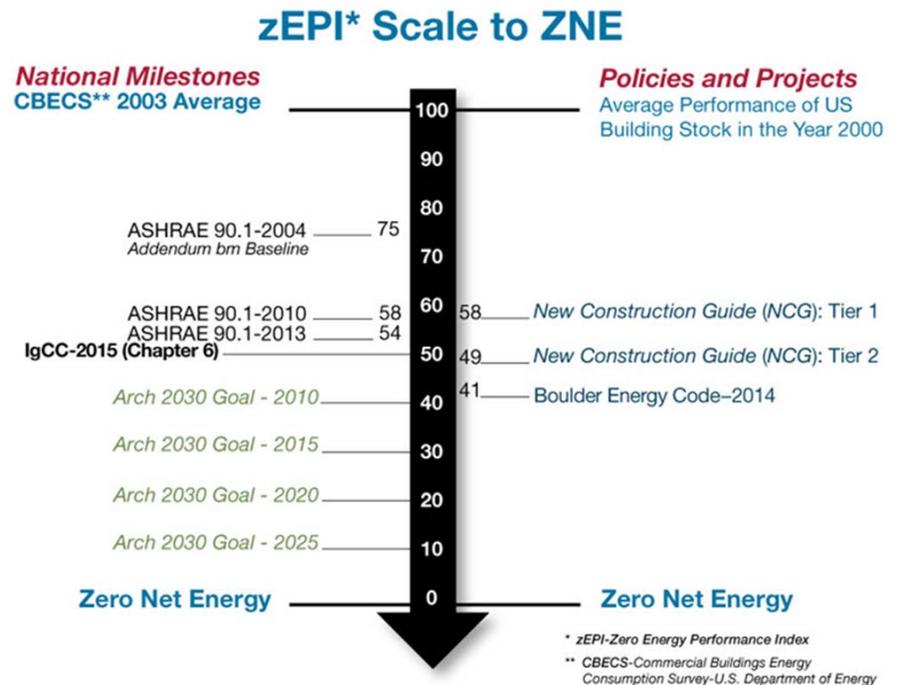


Prescriptive Paths

- Envelope
- Mechanical
- Lighting
- Plug loads
- Commissioning
- Renewable energy systems

Building Performance Path

- Comparative performance modeling
- Post construction actual metered performance (outcome based compliance)
- Zero Energy Performance Index (AEPI)



TIMELINE



RI Stretch Code Development Activity	2016					2017
	August	Sept	Oct	Nov	Dec	July
Monthly meetings of stakeholders	17th	21st	19th	16th	21st	
Stretch Code Program Assistance Project						
- Research Model Codes						
- Engage Stakeholders – Review Model Codes						
- Review and Catalog Provisions						
- Assess Practical Implementation of Provisions						
- Perform Comparative Analysis						
- Recommend Compliance Paths						
Complete a draft commercial building stretch code and identify a funding source for future stretch code updates					by Dec. 31	
Formally adopt the commercial stretch code and complete a draft residential building stretch code						by July 1

Payment Schedule	% Paid
- Completion of Comparative Analysis	20%
- Delivery of draft provision recommendations	30%
- Delivery of compliance methodology	30%
- Completion of All Tasks	20%

QUESTIONS & DISCUSSION



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Rhode Island Energy Efficiency

Second Quarter 2016 | National Grid

August 4th, 2016

Overview

During the second quarter, National Grid built upon its strong first quarter foundation with continued focus on growing customer participation and savings.

Residential programs continued to excel during the second quarter. Residential New Construction had 105 new units enrolled in the Program, bringing total enrollments this year to 337, which is 61% of the overall goal, and completed units to 160. In addition, the EnergyWise program completed 2,317 audits and 394 gas weatherization jobs. The income eligible program also continues to make great progress on process. The new field Operations Manual was finalized and distributed to Community Action Program (CAP) agencies. Another achievement was that the RI Energy Challenge: Find Your Four! was awarded the Environmental Protection Agency's National Clean Air Excellence Award for outstanding education and community outreach program.

The Commercial and Industrial sector programs also had strong performance in the second quarter. The Company signed the System Energy Management Project (SEMP) with the state and moved into the project identification and planning phase. The Small Business Direct Install program continued its strong start to the year in the second quarter. The Company's best projections indicate that Small Business will meet 100% of the electric and gas goals assigned to it.

The Company's collaboration with the RI Infrastructure Bank (RIIB) promoted 18 million dollars of financing. Over 10 million dollars was awarded for energy efficiency to the following five communities for street lights and municipal building projects: Providence, Cranston, Pawtucket, West Warwick and Westerly.

At the halfway point, the Company is projecting that we will reach 99% of the electric savings goal and 101% of the gas savings goal. The Company is looking forward to building off the momentum gained in the first two quarters to ensure a strong finish in the second half of the program year.

2016 Program & Initiative Updates

Residential New Construction

The residential new construction program had a strong second quarter.

- 72 units were completed, with new construction equaling 97% of the total and income eligible equaling 49%.
- 51 homes achieved Tier II savings (a minimum of 25% savings over the program baseline).
- 105 new units were enrolled in the Program, bringing total enrollments this year to 337, which is 61% of the overall goal.
- There was a significant increase in enrollments of electric heat and delivered fuel projects, which is a significant change. Over the past decade approximately 90% of projects have had gas heat. This will affect budget allocations for 2017 and beyond.
- Customer success case study:
 - Homeowner Driven Project in Grand View Drive, Warwick
 - The homeowner took advantage of the initial modeling consultation provided through the RNC Program. The homeowner not only followed advice on building enclosure, they also installed solar on this all electric home. They scored a HERS Index of 11, and achieved 88% savings over the User Defined Reference Home (UDRH), 38% from the building enclosure and mechanical systems and 50% from solar. A variety of energy efficiency measures were installed, including Air source heat pump, efficient heat pump water heater, Energy Star appliances, and LED lighting.

Income Eligible

- Two Weatherization Technical Committee (WTC) meetings were held in the second quarter. Topics included updates on Background Checks, Hancock training, BPI Heating Professional Training (to begin in the third quarter), Residential Energy Dynamics (RED) calculations and ASHRAE implementation.
- Rhode Island Department of Human Services (DHS), Contractors, and CLEARResult participated in RED Calc training with Paul Raymer, ASHRAE 62.2 Committee Secretary.
- The program Operations Manual Final Draft was distributed at the WTC meeting. The final Operations Manual will be distributed to Community Action Programs (CAP) agencies on July 1, 2016. The manual contains all policies and procedures for the program as well as all forms, appendices and client information documents.
- The implementation of the National Grid Background Check program continued in the second quarter. CLEARResult has contacted every Contractor on the states roster and is working with CAP agencies to smoothly integrate the Background Check policy. The Rhode Island Dept. of Human Services has collaborated with CLEARResult and requires all

contractors implementing DHS funded projects to have met the requirements of the National Grid Background Check program, effective May 20, 2016.

- The program vendor, CLEAResult, participated in several Energy Expo's around RI. The purpose of the expos was to help the neediest customers to understand how to reduce their energy bills and manage their energy expenses. CLEAResult also presented an overview of the Weatherization program to trainees at the Groundworks project in Providence.

EnergyWise

- 2,317 audits were completed in the second quarter. Numerous marketing efforts are underway including radio adds, information on Home Energy Reports, email, and bill inserts to generate interest in the program. Low fuel prices have impacted consumer interest in reducing their energy use and saving money.
- 16 companies were given the Century Club Award by ENERGY STAR for completing 100 or more weatherization projects in 2015.
- 153 HEAT loans were completed in the second quarter for a total of \$791 in funding.
- 394 gas weatherization projects were completed in the second quarter.



EnergyWise and Income Eligible Multifamily

- National Grid took part in NEEP's Multifamily Leader's conference at the Boston EPA headquarters in June where best practices were reviewed and brainstorming on the future of Multifamily was undertaken.
- The RI Multifamily Working Group held meetings in the second quarter on process and program flow and suspended meetings for the summer to focus on the drafting of the 2017 Energy Efficiency Plan.
- Benchmarking of an additional 75 Low Income buildings was designed in June of 2016. Benchmarking will take place through the rest of the calendar year.
- Both gas and electric standard income multifamily programs have strong pipelines for projects and there are no updates or concerns at this time.
- Income Eligible gas remained a bit slow during the second quarter but begun a rebound due to the targeting of "triple decker" sites and a growing pipeline of projects. The vendor has used benchmarking data from the 2014-15 program years to address this. The electric portfolio is strong with over half of the year's savings achieved through the second quarter.
- While behind in the first quarter, Gas C&I is now seeing very strong performance with savings tracking ahead of budget and almost 60% of the year's saving goal already met. Pipeline for more projects remains active.

ENERGYSTAR® Lighting and Appliances

- Many manufactures have lighting products tested and pre-certified that meet the ENERGY STAR version 2.0 specification which will begin in January, 2017. In preparation for the new products, retail stores have had the existing version of ENERGY STAR products selling at discounted prices.
- The Refrigerator Recycling program relaunched in June, 2016. The number to call for recycling is 877-889-4762.
- Independent appliance retailers were recruited for a markdown opportunity on room air conditioners that began in early June.

ENERGYSTAR® HVAC (Heating and Cooling)

- The first of two planned contractor networking and training took place during the second quarter. The training included a recap of the previous years' performance, updates to the 2016 programs and a review of the planned marketing activity.
- Three classroom trainings were conducted for Airflow and Charge Check (AC Check) technicians in preparation for the 2016 summer cooling season. An online training session 'Airflow basics' was made available to contractors to supplement their classroom trainings. This online training tool was also used as part of the program outreach and education with trade ally partners, including supply houses, distributors and manufacturers.

Home Energy Reports

- In the second quarter, National Grid ran a module on promoting Home Energy Assessments through the digital and print version of the Home Energy Report.
- The team designed a "Summer Coach" program to launch in the third quarter with the goal of educating customers via email and phone call about the importance of setting your thermostat to 78* during unusually hot days.
- National Grid continued roll out of HER 2.0, a more comprehensive energy report.

Community Initiative

- The towns of Narragansett and Charlestown wrapped their campaigns during the second quarter. Both towns were successful in reaching the goal of signing up over 5% of households for the Challenge, thus making them eligible for \$5,000 in energy efficiency upgrades at a public building.
- Little Compton and Tiverton kicked off promotions for the RI Energy Challenge. Supporting efforts of the company's DemandLink Program, a focus of Tiverton and Little Compton will be to increase the number of Home Energy Assessments through the summer.
- The RI Energy Challenge: Find Your Four! was awarded the Environmental Protection Agency's National Clean Air Excellence Award for outstanding education and community outreach program.

Codes Initiative

- Adoption of the new energy code in 2016 has come to a standstill due to a recently enacted Executive Order that requires all sections of the code to undergo an economic analysis by the Office of Regulatory Reform (ORR).
- National Grid and CLEAResult met with the Building Commissioner in July. He recommended that we proceed with training on 2015 IECC in the fall. While the adoption date is not set, he believed that the energy code was more or less final.
- While classroom trainings were not held during the second quarter CCEI continued to promote and support Circuit Rider services and infield trainings. 15 Circuit Rider phone calls were received (11 residential and 4 commercial), 5 site visits took place (4 residential and 1 commercial), and 2 residential infield duct blaster trainings with 10 attendees were scheduled.
- The University of Rhode Island recently completed construction on a new chemistry building. Two tours will be conducted on this project on August 24th, one during the day, which is easier for code officials to attend, and one during the evening. The date coincides with the monthly Rhode Island Building Officials Association (RIBOA) meeting, which will be held at URI prior to the first tour. This event provides a perfect opportunity to educate attendees about upcoming changes to the commercial code. A one hour overview presentation has been developed addressing key changes. This training will be delivered immediately after the first tour.

Large Commercial New Construction

- The Company has seen an increasing flow of 1x4, 2x2, and 2x4 luminaires come through the upstream path. However, the company was not satisfied with the total volume. After consulting with various market players, the Company decided to increase the incentive slightly to drive more participation in the initiative. Currently, the initiative is project to reach 90% of its aggressive goals.
- The RFP for a new vendor on upstream HVAC was released on July 12th and is expected to close on August 2nd.
- The Building Operator Certificate Level I class in Providence was wrapped up on July 13th.
- Providence, Bristol, and Barrington purchased their street lights. Providence is in the process of replacing all of their street lights with LEDs and controls.

Large Commercial Retrofit

- The state System Energy Management Project (SEMP) has been signed. Projects are being identified and planned. Since new construction was included in the SEMP, two new construction projects at the Pastore campus have signed commitments and proceeded along the whole building approach. These projects, a new building for the Attorney General's offices and a renovation of the Virks building, have overall energy saving targets of 15% beyond the energy code.

- On Combined Heat and Power (CHP), one Large Commercial and Industrial (LCI) manufacturer witnessed the testing and debugging heat recovery of a 75 KW system in July. Post inspection is scheduled for August. One LCI manufacturer proceeded and started the installation of a 1,250 KW system, with the goal for post-inspection in December. One more LCI manufacturer approached the Company for a 7.5 MW system to be up and running in the first quarter of 2018.

Small Business Direct Install

- The Small Business Direct Install (SMB/DI) program continued its strong start to the year in the second quarter. The Company's best projections indicate that the program will meet 100% of the electric and gas goals assigned to it. Customer success stories will start up again in the third quarter after the second draft of the 2017 plan is complete.

Finance

- RI Infrastructure Bank (RIIB) closed \$18M of financing on July 8. Over \$10M was awarded for energy efficiency to the following five communities for street lights and municipal building projects: Providence, Cranston, Pawtucket, West Warwick and Westerly. The remaining approximately \$8M was awarded for renewable energy. The goal is for towns to utilize the funding within the next fiscal year ending June 30, 2017.

Pilots

- The Connected Solutions pilot began in June and will test consumer's experience with connected Wifi thermostats. Initial recruitment began by email with over one-hundred customers enrolled.

Evaluation

- The C&I Prescriptive Compressed Air (CAIR) report was completed and provided new deemed savings values, which generally increased based on finding more run hours than previously assumed.
- The C&I Prescriptive Chiller study was completed, and increased deemed savings values slightly.
- On the C&I Custom Process study, site metering is on-going after having some difficulty getting into a few customer sites.
- For the C&I Custom HVAC study, several sites have had metering installed, with remaining sites in process.
- For the C&I Custom Gas study, the Custom Gas report was completed with an improvement in the realization rate over the former value.
- The C&I Energy Code Compliance Study is in the analysis phase. The study is expected to be completed by mid September.
- The C&I On-Bill Repayment evaluation began during the second quarter. Results are expected by early September.

Upcoming Events:

- Senator Whitehouse's Energy & Environmental Leadership Day will be on September 30, 2016.

- Energy Summit at Gillette Stadium is scheduled for October 13, 2016.
- High Performance Schools Conference at Rhode Island College is scheduled for October 21, 2016.

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND

Table 1. Summary of Electric 2016 Target and Preliminary 2nd Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1) (2) (3) (4) Demand Reduction (Annual kW)				(5) (6) (7) (8) Energy Savings (Annual MWh)				(9) (10) (11) Customer Participation			(12) (13) (14) Expenses (\$ 000)			(15)	(16)	(17)
	Year To Target	Date	Pct Achieved	Pct Projected	Year To Target	Date	Pct Achieved	Pct Projected	Year To Target	Date	Pct Achieved	Budget	Year To Date	Pct Achieved	Lifetime savings, MWh	\$/kWh	Planned \$/kWh
Commercial and Industrial																	
Large Commercial New Construction	1,540	683	44.3%		15,728	3,198	20.3%		209	95	45.6%	\$6,864.1	\$2,434.3	35.5%	47,885	\$ 0.051	\$ 0.030
Large Commercial Retrofit	13,906	3,519	25.3%		67,030	17,358	25.9%		3,540	1,197	33.8%	\$22,545.5	\$4,789.6	21.2%	181,901	\$ 0.026	\$ 0.053
Small Business Direct Install	2,507	1,312	52.3%		12,165	6,933	57.0%		905	502	55.5%	\$8,745.9	\$4,226.3	48.3%	75,920	\$ 0.056	\$ 0.085
Community Based Initiatives - C&I												\$49.6	\$20.3	40.9%			
Commercial Demonstration and R&D												\$296.2	\$40.6	13.7%			
Finance Costs												\$3,000.0	N/A	N/A			
SUBTOTAL	17,953	5,513	30.7%	98.0%	94,922	27,489	29.0%	100.0%	4,654	1,794	38.5%	\$41,501.2	\$11,511.0	27.7%	305,706	\$ 0.038	\$ 0.055
Income Eligible Residential																	
Single Family - Income Eligible Services	554	362	65.4%		4,061	2,091	51.5%		2,500	1,457	58.3%	\$8,656.1	\$3,536.6	40.9%	21,744	\$ 0.163	\$ 0.213
Income Eligible Multifamily	366	92	25.1%		2,830	1,417	50.1%		5,100	1,928	37.8%	\$2,531.3	\$1,004.8	39.7%	15,920	\$ 0.063	\$ 0.102
SUBTOTAL	920	454	49.4%	80.0%	6,891	3,508	50.9%	100.0%	7,600	3,385	44.5%	\$11,187.4	\$4,541.4	40.6%	37,664	\$ 0.121	\$ 0.170
Non-Income Eligible Residential																	
Residential New Construction	83	30	36.1%		1,213	193	15.9%		512	160	31.3%	\$736.9	\$251.2	34.1%	2,834	\$ 0.089	\$ 0.071
ENERGY STAR® HVAC	235	167	70.9%		1,011	611	60.4%		902	854	94.6%	\$1,219.0	\$588.1	48.2%	7,386	\$ 0.080	\$ 0.138
EnergyWise	1,701	1,158	68.1%		11,729	7,851	66.9%		8,890	5,439	61.2%	\$9,007.7	\$3,773.3	41.9%	72,197	\$ 0.052	\$ 0.095
EnergyWise Multifamily	579	105	18.1%		4,061	1,772	43.6%		4,400	4,590	104.3%	\$3,319.1	\$1,272.8	38.3%	19,437	\$ 0.065	\$ 0.095
ENERGY STAR® Lighting	5,049	2,892	57.3%		43,098	24,929	57.8%		233,992	186,016	79.5%	\$7,362.1	\$3,468.9	47.1%	237,033	\$ 0.015	\$ 0.030
Residential Consumer Products	696	177	25.4%		4,647	1,016	21.9%		14,095	8,592	61.0%	\$2,085.0	\$572.1	27.4%	6,601	\$ 0.087	\$ 0.080
Home Energy Reports	3,759	1,278	34.0%		32,186	13,950	43.3%		294,013	275,145	93.6%	\$2,796.7	\$1,363.2	48.7%	13,950	\$ 0.098	\$ 0.087
Energy Efficiency Educational Programs												\$40.1	\$40.0	99.8%			
Residential Demonstration and R&D												\$488.1	\$26.2	5.4%			
Community Based Initiatives - Residential												\$284.4	\$123.2	43.3%			
Comprehensive Marketing - Residential												\$534.0	\$210.9	39.5%			
SUBTOTAL	12,102	5,806	48.0%	98.0%	97,947	50,320	51.4%	98.0%	556,804	480,795	86.3%	\$27,873.1	\$11,689.8	41.9%	359,438	\$ 0.033	\$ 0.055
Regulatory																	
EERMC												\$793.1	\$190.0	24.0%			
OER												\$793.1	\$327.6	41.3%			
RI Infrastructure Bank												\$1,441.5	\$0.0	0.0%			
SUBTOTAL												\$3,027.7	\$517.6	17.1%			
TOTAL	30,975	11,773	38.0%	98.0%	199,760	81,318	40.7%	99.0%	569,058	485,974	85.4%	\$ 83,589.4	\$ 28,259.9	33.8%	702,808	\$ 0.040	\$ 0.061
<i>RGGI</i>												\$ 2,155.6	\$1,099.6	51.0%			
<i>System Reliability Procurement</i>												\$ 441.1	\$190.9	43.3%			

NOTES
(1)(5)(9) Targets from Docket 4580 - Attachment 5, Table E-7 (electric)
(3) Pct Achieved is Column (2)/ Column (1).
An error was found in kW planning for the ENERGY STAR® Lighting program. The filed goal was 3,620 kW and the filed Residential Sector goal was 10,673 kW. The correct kW goal should be 5,049 kW and is reflected in the tables above. The Company will use the corrected Residential Sector kW goal for its year-end incentive calculation.
An error was found in kW planning for the multifamily programs. The corrected EnergyWise Multifamily goal is 185 kW, making progress to date 56.5% of goal. The corrected Income Eligible Multifamily goal is 117 kW, making progress to date 78.5% of goal.
(7) Pct Achieved is Column (6)/ Column (5).
Savings from the Codes and Standards initiative are not counted until year-end. Therefore, savings in the Commercial and Residential New Construction Programs may track lower each quarter.
(9) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(11) Pct Achieved is Column (10)/ Column (9).
(12) Approved Budget includes Implementation and Evaluation budgets from Docket 4580, Attachment 5 Table E-2 (electric).
(13) Year To Date Expenses include Implementation and Evaluation expenses.
\$3,000,000 in finance funds were transferred as authorized to the Large C&I Electric Revolving Loan Fund. Please see Table 3.
RGGI Expenses are counted separate as those funds were not part of the approved 2016 budget. Details on RGGI spend are found in Table 4.
(14) Pct Achieved is Column (13)/ Column (12).
(16) \$/lifetime kWh = Column (13)/Column (15)
(17) Planned \$/lifetime kWh - Attachment 5, Table E-5 (electric)
System Reliability Procurement targets from Docket 4581, not included in Expenses Total

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
Table 2. Summary of Gas 2016 Target and Preliminary 2nd Quarter Results

GAS PROGRAMS Sector and Program	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Energy Savings (MMBtu)				Customer Participation			Expenses (\$ 000)			Lifetime savings, MMBtu	\$/Lifetime MMBtu	Planned \$/Lifetime MMBtu
	Approved Target	Year To Date	Pct Achieved	Pct Projected	Approved Target	Year To Date	Pct Achieved	Approved Budget	Year To Date	Pct Achieved			
Commercial and Industrial													
Large Commercial New Construction	43,424	4,021	9.3%		152	29	19.3%	\$1,694.7	\$258.9	15.3%	83,235	\$ 3.11	\$ 2.99
Large Commercial Retrofit	133,613	17,020	12.7%		234	51	21.8%	\$4,871.1	\$831.2	17.1%	145,548	\$ 5.71	\$ 6.39
Small Business Direct Install	3,667	693	18.9%		133	19	14.3%	\$282.4	\$69.5	24.6%	4,975	\$ 13.97	\$ 8.29
Commercial & Industrial Multifamily	9,490	5,697	60.0%		1,611	410	25.4%	\$754.7	\$138.5	18.3%	84,121	\$ 1.65	\$ 6.52
Commercial Demonstration and R&D								\$97.3	\$10.7	11.0%			
Community Based Initiatives - C&I								\$6.4	\$2.6	39.7%			
Finance Costs								\$500.0	N/A	N/A			
SUBTOTAL	190,194	27,431	14.4%	100.0%	2,131	509	23.9%	\$8,206.6	\$1,311.3	16.0%	317,879	\$ 4.13	\$ 5.32
Income Eligible Residential													
Single Family - Income Eligible Services	9,368	6,844	73.1%		500	325	65.0%	\$3,285.5	\$1,687.5	51.4%	136,888	\$ 12.33	\$ 17.54
Income Eligible Multifamily	19,915	3,807	19.1%		3,000	819	27.3%	\$2,063.3	\$281.5	13.6%	55,315	\$ 5.09	\$ 5.80
SUBTOTAL	29,283	10,652	36.4%	93.0%	3,500	1,144	32.7%	\$5,348.8	\$1,969.0	36.8%	192,203	\$ 10.24	\$ 9.85
Non-Income Eligible Residential													
EnergyWise	68,117	42,605	62.5%		2,710	1,604	59.2%	\$6,929.5	\$3,286.2	47.4%	954,322	\$ 3.44	\$ 5.45
Energy Star® HVAC	26,064	7,729	29.7%		2,099	715	34.0%	\$1,619.2	\$570.6	35.2%	130,792	\$ 4.36	\$ 10.19
EnergyWise Multifamily	17,208	3,928	22.8%		2,625	1,106	42.1%	\$1,978.6	\$256.8	13.0%	61,889	\$ 4.15	\$ 8.24
Home Energy Reports	53,989	44,665	82.7%		135,689	136,327	100.5%	\$436.6	\$264.9	60.7%	44,665	\$ 5.93	\$ 8.09
Residential New Construction	10,907	1,904	17.5%		375	135	36.0%	\$836.9	\$322.1	38.5%	47,519	\$ 6.78	\$ 4.61
Residential Demonstration and R&D								\$81.3	\$0.2	0.2%			
Comprehensive Marketing - Residential								\$69.8	\$31.3	44.8%			
Community Based Initiatives - Residential								\$25.8	\$11.9	46.1%			
SUBTOTAL	176,284	100,830	57.2%	103.0%	143,498	139,887	97.5%	\$11,977.7	\$4,743.9	39.6%	1,239,187	\$ 3.83	\$ 6.65
Regulatory													
EERMC								\$233.3	\$55.9	24.0%			
OER								\$233.3	\$95.1	40.8%			
RI Infrastructure Bank								\$429.0	\$0.0	0.0%			
SUBTOTAL								\$895.5	\$151.0	16.9%			
TOTAL	395,760	138,913	35.1%	101.0%	149,129	141,540	94.9%	\$ 26,428.6	\$ 8,175.1	30.9%	1,749,269	\$ 4.67	\$ 6.66

NOTES
(1)(5) Targets from Docket 4580 - Attachment 6, Table G-7 (gas).
(3) Pct Achieved is Column (2)/ Column (1).
Savings from the Codes and Standards initiative are not counted until year-end. Therefore, savings in the Commercial and Residential New Construction Programs may track lower each quarter.
(4) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(7) Pct Achieved is Column (6)/ Column (5).
(8) Approved Budget includes Implementation and Evaluation budgets from Docket 4580, Attachment 6 Table G-2 (gas).
(9) Year To Date Expenses include Implementation and Evaluation expenses.
\$500,000 in finance funds were transferred as authorized to the C&I Gas Revolving Loan Fund. Please see Table 3.
(10) Pct Achieved is Column (9)/ Column (8).
(12) \$/lifetime MMBtu = Column (9)*1000/Column (11)
(13) Planned \$/lifetime MMBtu - Attachment 6, Table G-5 (gas).

**Table 3
National Grid
Revolving Loan Funds**

Large C&I Electric Revolving Loan Fund

(1)	2016 Funds Available	\$14,115,728
(2)	2016 Loan budget	\$11,000,000
(3)	Committed	\$3,463,087
(4)	Paid	\$1,264,908
(5)	Number of loans	30
(6)	Participants	16
(7)	Savings (MWh)	4,754
(8)	Available	<u>\$6,272,005</u>

Small Business Electric Revolving Loan Fund

(1)	2016 Funds Available	\$2,242,136
(2)	2016 Loan Budget	\$2,870,000
(3)	Committed	\$424,476
(4)	Paid	\$1,712,051
(6)	Participants	734
(7)	Savings (MWh)	6,933
(8)	Available	<u>\$733,473</u>

Rhode Island Public Energy Partnership (RI PEP)

(9)	2016 Funds Available	\$993,365
(10)	Committed	\$270,321
(11)	Paid	\$274,451
(12)	Repayments	\$157,272
(13)	Participants	2
(14)	Savings (MWh)	1,364
(15)	Available	<u>\$605,866</u>

C&I Gas Revolving Loan Fund

(1)	2016 Funds Available	\$1,682,732
(2)	2016 Loan budget	\$1,600,000
(3)	Committed	\$320,000
(4)	Paid	\$536,230
(6)	Participants	7
(7)	Savings (MMBtu)	14,292
(8)	Available	<u>\$743,770</u>

Notes

- 1 Amount available as of January 1, 2016, including 2016 fund injections detailed in Table E-10 and G-10. The C&I Gas Loan Fund also includes the injection of \$300,000 as approved by the EE Collaborative on March 21, 2016.
- 2 Budget adopted by Sales Team for 2016 operations. Budget includes projections of repayments made during 2016.
- 3 As of June 30, 2016
- 4 As of June 30, 2016
- 5 As of June 30, 2016
- 6 Unique customer names for large business and unique customer accounts for small business (not adjusted for net-to-gross).
- 7 As of June 30, 2016
- 8 Available funds as of June 30, 2016 not including repayments.
- 9 Funds available as of January 1, 2016
- 10 As of June 30, 2016
- 11 As of June 30, 2016
- 12 As of June 30, 2016
- 13 As of June 30, 2016 - 2 entities with 12 applications.
- 14 As of June 30, 2016
- 15 Available funds as of June 30, 2016

Table 4
2016 RGGI Budget and Spend

Initiative	2016 Budget	Spend
RI Public Energy Partnership Incentives	\$ 600,000	\$ 254,824
Residential Delivered Fuels	\$ 1,300,134	\$ 839,619
Agricultural Delivered Fuels	\$ 255,446	\$ 5,167
Total	\$ 2,155,580	\$ 1,099,610

Notes

1. Budgets may differ from quarterly and annual RGGI reports delivered to the Office of Energy Resources as they represent funds available for program year 2016, net of previous year's spend.
2. Table only includes RGGI funds for specific initiatives. Does not include funds allocated to lowering the energy efficiency program charge or those allocated to loan funds.

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National Grid Second Quarter Results 2016

EERMC Meeting

8/11/16



Overview of Quarterly Reports

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- Distributed approximately one month after the quarter ends.
- Purpose is to provide high-level detail on program performance, savings, and spend to-date compared to filed annual plan.
 - Annual and lifetime savings
 - Customer participation
 - Expenses
 - \$ per lifetime of energy saved
 - Revolving Loan Fund payments and commitments to-date.

Electric Sector Results

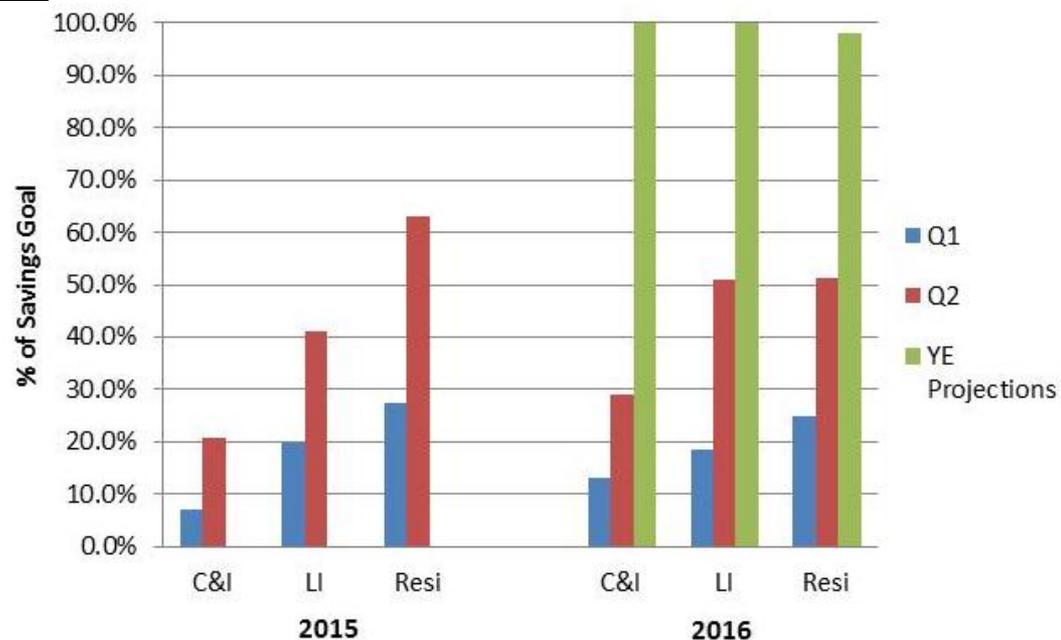
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Progress Towards Filed 2016 Goal

	kW	KWh	Participation	Expenses
C&I	30.7%	29.0%	38.5%	27.0%
IE	49.4%	50.9%	44.5%	40.6%
Resi	48.0%	51.4%	86.3%	41.9%
Total	38.0%	40.7%	85.4%	33.8%

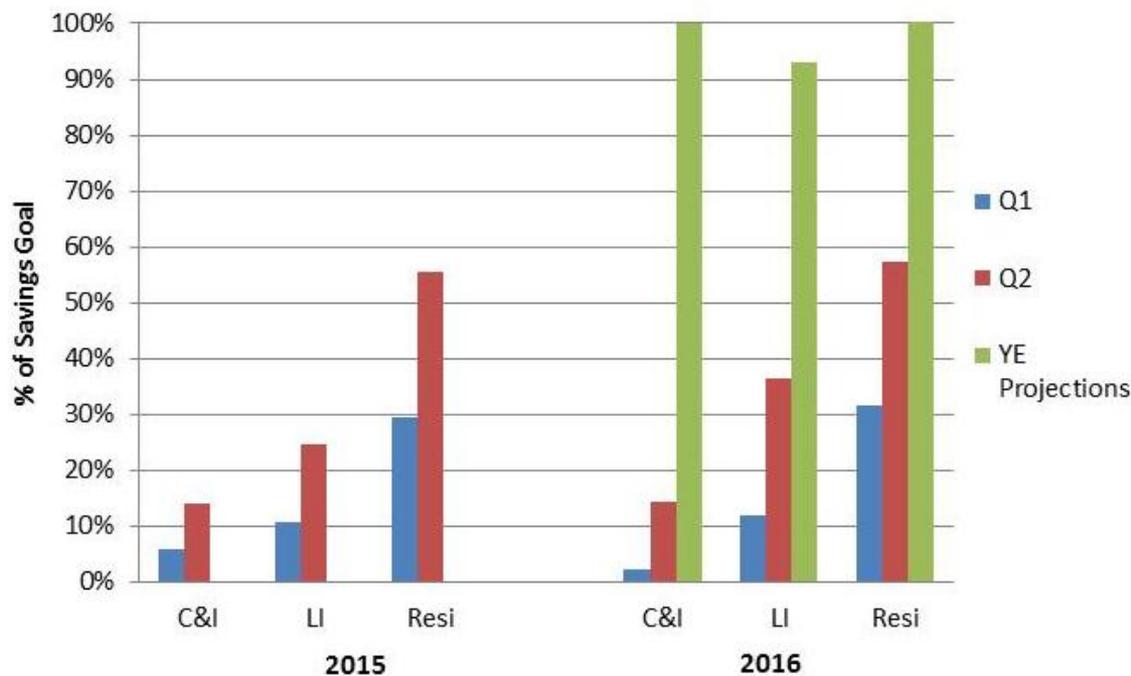
Progress Towards Electric Goals 2015 & 2016 by Quarter



Gas Sector Results

Progress Towards Filed 2016 Goal			
	MMBtu	Participation	Expenses
C&I	14.4%	23.9%	16.0%
IE	36.4%	32.7%	36.8%
Resi	57.2%	97.5%	39.6%
Total	35.1%	94.9%	30.9%

Progress Towards Gas Goals 2015 & 2016 by Quarter



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RI 2017 Energy Efficiency Plan

August 11, 2016



Key Dates

August

- 17th – First draft of 2017 Plan circulated for external review
- 24th – Collaborative meeting to get feedback
- 25th – Executive Committee guidance for Sept. 8th EERMC meeting
- 26th – Any written comments on plan due to Company

September

- 8th – EERMC meeting: presentation on innovations, preliminary budgets and EE charges
 - 19th – Final draft distributed
 - 21st – Collaborative meeting
 - 22nd – Highlights to Executive Committee, and guidance for Sept. 29th EERMC meeting
 - 29th – EERMC meeting to vote on 2017 Plan
- 

Main topics

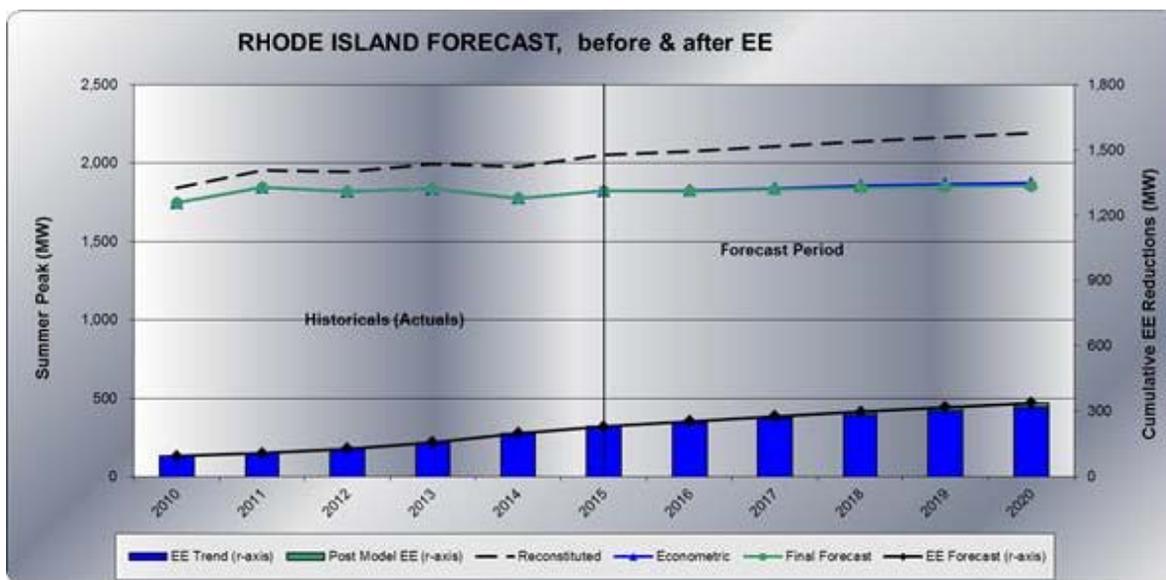
- Final year of 3 year plan
- Areas of interest and innovation
 - Finance
 - Funding
 - Oil weatherization
 - Demand response
 - Pilots and demonstrations

MEMORANDUM

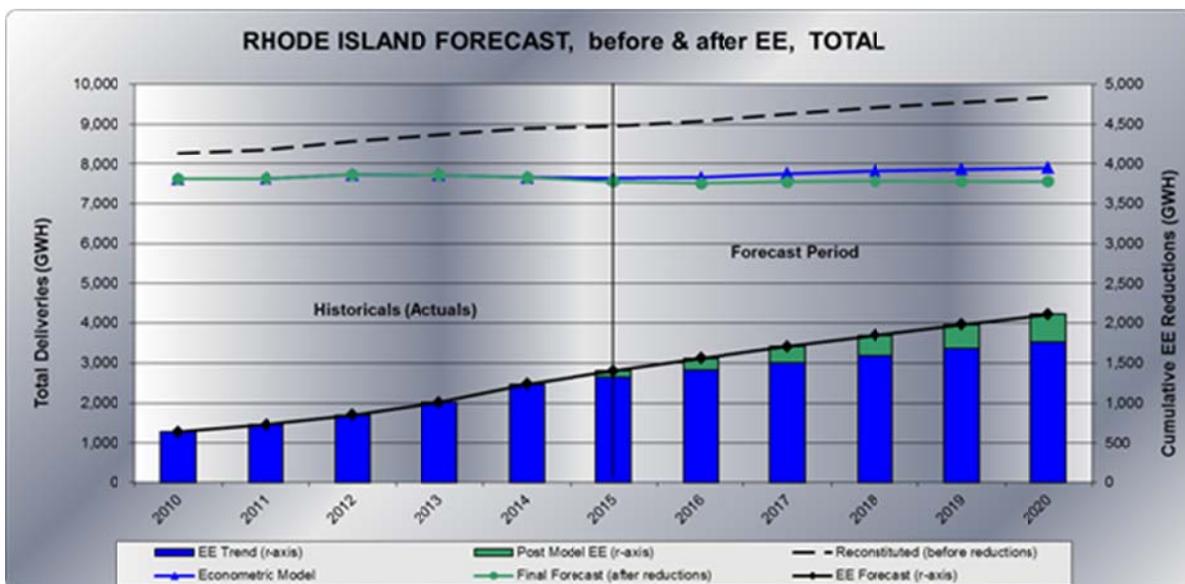
To: EERMC members
 From: Jeremy Newberger, National Grid
 Date: August 4, 2016
 Re: Load Forecast question

At the EERMC meeting on July 14, we were asked to explain why one of the graphs we presented showed level loads when we have achieved 10% reduction in load over a recent period. This memo addresses the question and provides clarity to the observed load trend.

The graph included in the presentation to the EERMC showed MW (see below), and the reference to 10% over 10 years was the reduction of peak load MW. It also included actuals through fall 2014. I apologize for not making this clear.



Below is the comparable graph for energy, updated through fall 2015.



In the second graph, you can see a slight decrease in MWh from 2011 to 2015. According to Load Forecasting, the decline after taking into account the effects of EE averages about 0.2%/year over the five year period (green line). If there would have been no EE, according to their calibrated models (black line) load growth would have been about 1.6%/year. In other words, over the five year period, there was an observable 1% load decrease. Without EE, there would have been an 8% increase over the same period. Therefore, there is a 9% decrease in actual loads due to energy efficiency.

The difference between the 9% observed in the load data in the graph and the approximately 11% we have reported over the same five year period can largely be attributed to the following factors:

- Half Year vs Full Year – In EE reporting, because of the way our annual savings goals are defined, we adopt the convention that we count annual savings no matter when the projects were installed during the year. In the Load Actuals, the assumption is that savings are installed throughout the year; essentially this leads to only ½ of the savings being counted in the year of installation, and a lag of a ½ year in the graphic presentation. Since we reported savings of 222 GWh in 2015, this means that over 100 GWh, or about 1.3% of savings, are not included in the graph.
- kW vs. kWh – historic kW growth is less affected by energy efficiency because of the factors we discussed at the EERMC meeting. In other words, there is more air conditioning, more household equipment, and more connected loads. These drive the peak load. Increased consumption associated with this equipment will erode some of the load reduction achieved by efficiency. We are not able to quantify precisely how much.
- Denominator – Once we focus on kWh (instead of kW) in our percentage calculations, percentages may also be different because the denominator is different between EE and load forecasting. EE uses a base year actual energy load (for example, 2012 actual is the base year for the 2015-17 targets); Load Forecasting calculations are based on loads from each year individually before the post model energy efficiency reduction is made. Load forecasting denominators are therefore higher and the calculated percentages are lower. (The lag in the EE calculation between the base year and the year of interest complicates this calculation.)

Together, these three factors explain the relatively modest downward tilt of the actual kWh graph over the past five years.