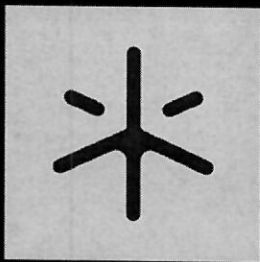


**Vermont
Energy Investment
Corporation**

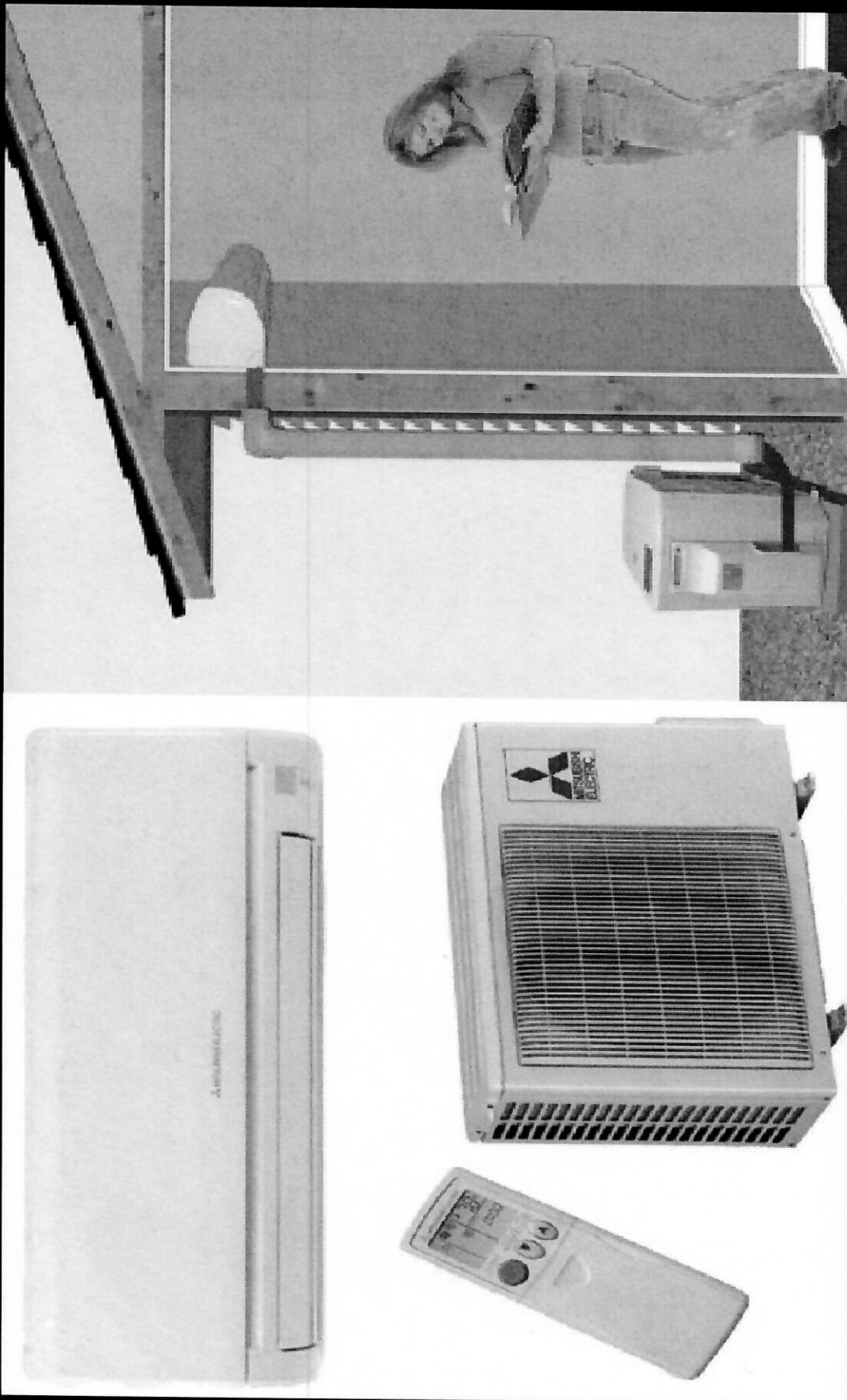


Technology Trends

Cold Climate Heat
Pumps / Mini Splits

EERMC
January 9th, 2014

What is a Ductless Mini-Split?



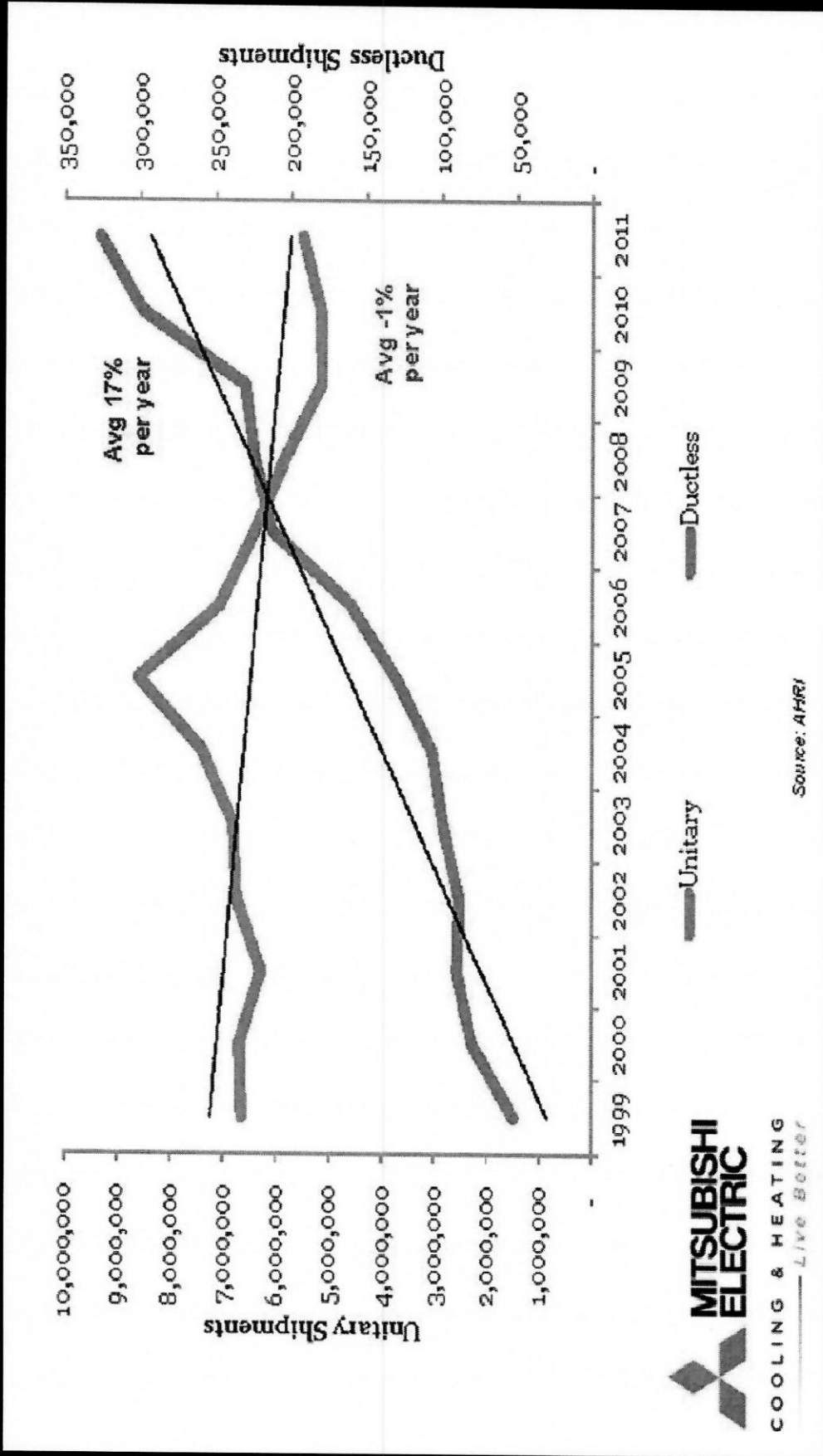
Why Air Source Heat Pumps?

1. They are Very Energy Efficient
 - 3X more energy efficient than combustion.
2. They Provide Substantial Cost Savings to the Customer
 - Many homeowners could reduce their heating bill by \$1,000-\$2,000/yr.
 - Discounted and/or TOU electric rates can further increase this savings.
3. They Offer an Array of Other Benefits
 - They can cool the home more efficiently than a window unit.
 - They are controllable by the utility.
 - They can be financed with an equipment lease.

Key Points About Ductless ASHP Technology

- An ASHP uses the same technology as your window AC unit, your car AC, and your central AC. Except:
 - It can run in reverse to provide both heat and cooling.
 - It uses R410A, a cold-climate capable refrigerant.
 - It uses a variable speed compressor and/or refrigerant flow.
- No duct work is required...flexible tubing is used.
 - Installation is flexible, and does not require difficult retrofits.
 - Ductless mini-splits are zonal, and may have multiple indoor heads per compressor.
- Key Concept = Supplemental Heat
 - Can offset 90% of existing central system.

Nationwide Shipments of Unitary & Ductless Equipment



The trend toward ductless systems is well established.

The Northeast's Heating Fuel Competition (Retail)

Energy Type	Unit	Btu/Unit	Efficiency	\$/Unit	\$/MMBtu
Wood	Cord	22,000,000	60%	\$193.00	\$14.62
Natural Gas	Therm	100,000	90%	\$1.55	\$17.22
Pellets	Ton	16,400,000	80%	\$247.00	\$18.83
Fuel Oil	Gallon	138,200	90%	\$3.72	\$29.91
Kerosene	Gallon	136,600	90%	\$4.19	\$34.08
Propane	Gallon	91,600	90%	\$2.96	\$35.90
Electricity	kWh	3,412	300%	\$0.15	\$14.65

- Fuel prices compete within 3 bands.
- With heat pumps, electricity falls into the 1st band.
- Is heat pump technology making combustion obsolete?

Theoretical Maximum Efficiency (COP)

	Technology	
	Combustion & Resistive	Heat Pump
Present Technology	0.95	2.0 - 4.0
Theoretical Maximum	1.0	6.0 - 17.0

- The efficiency gains for combustion technology have arrived.
- There is still room for improvement in heat pump technology.

Typical Residential Heating Fuel Costs (75 MMBtu/Yr)

Fuel	Volume	Unit	\$/Unit	\$/Yr
Wood (green)	5.7	Cords	\$190	\$1,080
Natural Gas	83	Therms	\$1.59	\$1,325
Pellets	5.7	Tons	\$247	\$1,412
Fuel Oil	603	Gallons	\$3.85	\$2,322
Kerosene	610	Gallons	\$4.26	\$2,599
Propane	910	Gallons	\$3.24	\$2,948
Electricity	21,981	kWh	\$0.17	\$3,737

- Without natural gas (or wood), heating costs run \$2,000 - \$3,000+ per year.

Heating Fuel Cost Savings with an ASHP (COP 3.0)

Type of Energy	Unit	50 MMBtu/Yr	75 MMBtu/Yr	100 MMBtu/Yr
Wood (green)	Cord	\$28	\$41	\$55
Natural Gas	Therm	\$(136)	\$(204)	\$(272)
Pellets	Ton	\$(194)	\$(291)	\$(388)
Fuel Oil	Gallon	\$(800)	\$(1,200)	\$(1,601)
Kerosene	Gallon	\$(985)	\$(1,478)	\$(1,970)
Propane	Gallon	\$(1,218)	\$(1,827)	\$(2,435)
Electricity	kWh	\$(1,744)	\$(2,616)	\$(3,488)

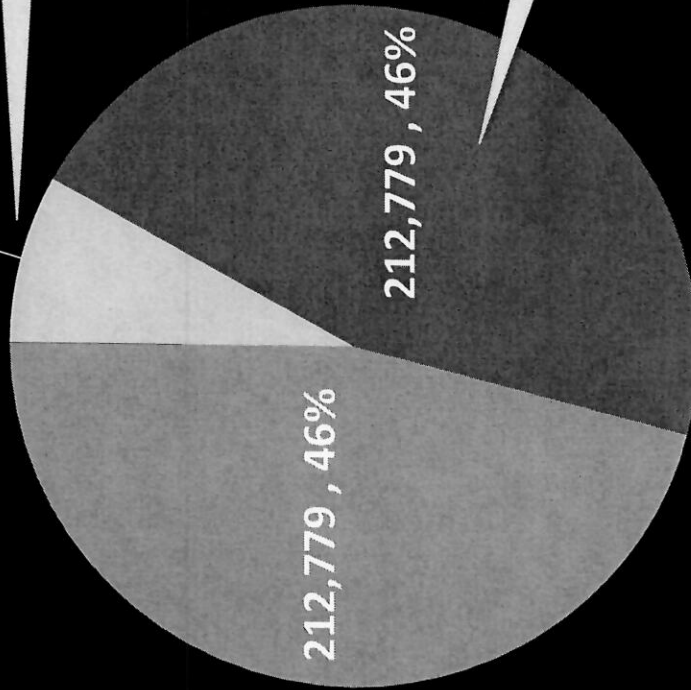
- Many residents can save \$1,000 - \$2,000 year.
- Assumptions:
 - Offset 90% of heating fuel costs.
 - No cooling savings in the summer.

Rhode Island Heating Fuel Mix

Total Homes = 462,564

37,005 , 8%

37,000 Homes
x \$2,000/Home
\$74 Million / Year



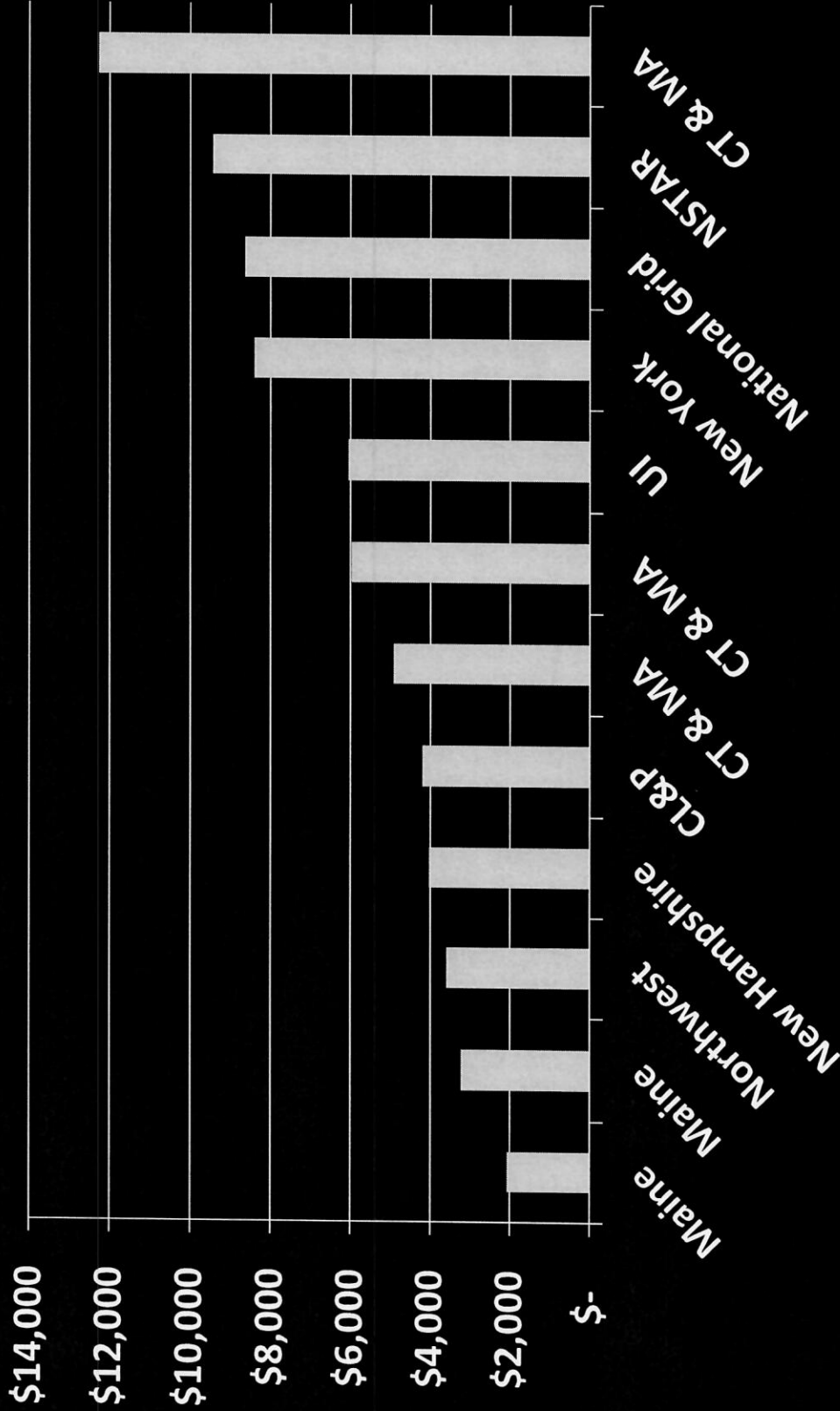
■ Electricity

■ Heating Oil / Propane

■ Natural Gas

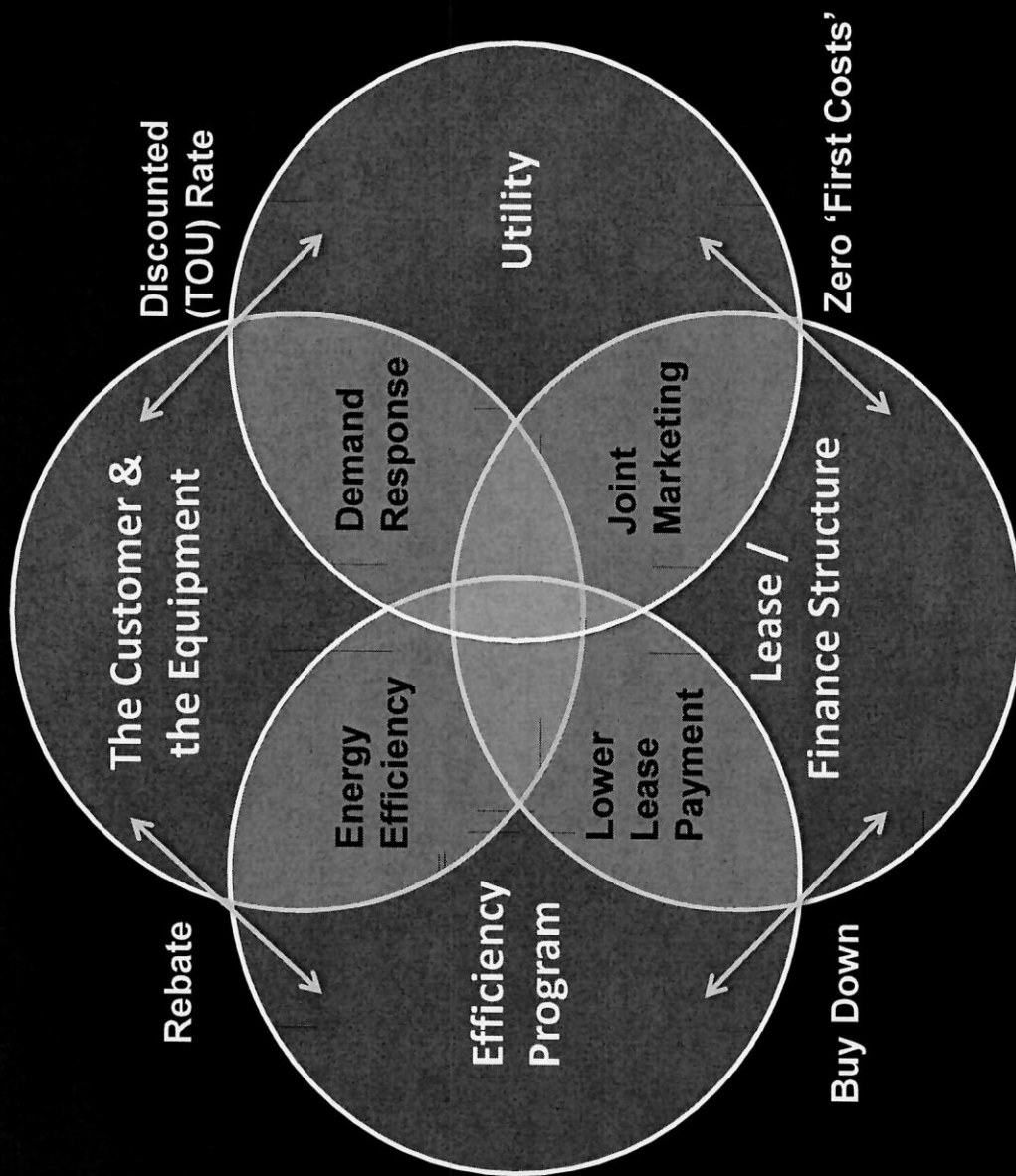
212,000 Homes
x \$1,000/Home
\$212 Million / Year

Installed Costs Per Home



Source: Northeast/Mid-Atlantic Cold Climate Air Source Heat Pump Strategy Report, NEEP, Oct 2013 Draft

Business Model for Equipment Lease Programs



A Win-Win Value Proposition at Multiple Levels

- Customer Level
 - Heating: Large energy and dollar savings on heating fuel.
 - Cooling: Efficient cooling in summer months.
 - Financial: A lease creates immediate cost savings. (No payback period)
- Utility Level
 - Control: ASHPs can be controlled to reduce peak loads if desired.
 - Loadshape: ASHPs have a long, flat loadshape, which reduces costs.
 - Additional kWh Sales: Spreads fixed costs over a larger base, putting downward pressure on overall electric rates.
- Regulatory Level
 - A Safe, Win-Win: Matching the lease and warranty terms creates a program that benefits the customer, the utility and protects nonparticipants.

Concluding Observations

- The technology is viable and continues to mature.
 - Even in a cold climate.
- The customer-level economics are compelling.
 - \$1,000 - \$2,000 annual savings per household.
- The macroeconomics are compelling as well.
 - \$2.86 billion in potential customer cost savings over 10 yrs.
- The existing utility business models are applicable.
 - Rebate and/or Lease = Efficient, Controlled Load Growth

Regional and Rhode Island Context

- State Energy Plan (Navigant Analysis)
 - ‘Energy, Economic & Climate Security Focused’
 - www.energy.ri.gov/energyplan/index.php
- Energy 2030 Report (Alliance to Save Energy)
 - ‘Energy Productivity Focus’
 - www.ase.org/policy/energy2030
- Market Strategies Report (NEEP)
 - ‘Technology-Specific Program & Policy Focused’
 - www.neep.org/efficient-products/emerging-technologies/Air-Source-Heat-Pumps/index
- Heat Pumps as an Alternative to Oil Heat (RMI White Paper)
 - ‘Climate & Fuel Switching Focused’
 - http://www.rmi.org/Knowledge-Center/Library/2013-05_HeatPumps
- EFG Memo to CT & CSG Memo to NYSERDA
 - ‘Cost Effectiveness in Neighboring States & Climate Zones’



STATE OF RHODE ISLAND
**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

MEETING MINUTES

Thursday, March 10, 2016

3:30 PM - 5:30 PM

Conference Room B, 2nd Floor

Department of Administration, One Capitol Hill, Providence, RI

Members Present: Abigail Anthony, Bob Bacon, Joe Cirillo, Roberta Fagan, Jennifer Hutchinson, Michael McAteer, Joe Newsome, Shigeru Osada, Chris Powell, Diane Williamson

Members Absent: Marion Gold, Betsy Stubblefield Loucks, Karen Verrengia

Consultants Present: Mike Guerard

OER Staff Present: Chris Kearns, Rachel Sholly

Others Present: Michael Baer, Leah Bamberger, Tim Faulkner, Rachel Henschel, Jeremy Newberger, Belinda Wong, Chon Meng Wong

1. Call to Order

Chairman Chris Powell called the meeting to order at 3:33 PM.

2. Approval of February Meeting Minutes

Bob Bacon made a motion to approve the February meeting minutes. Joe Cirillo seconded and all approved.

3. Executive Director Report

In Commissioner Marion Gold's absence, Rachel Sholly gave a brief Director report. OER has hired an intern to update and redesign the EERMC website. Any content or layout suggestions should be directed to Ms. Sholly. OER will be collecting headshots of members who have not already provided one, which includes Bob Bacon, Karen Verrengia, Roberta Fagan and Diane Williamson.

The Energy Expo at the Rhode Island Home Show is coming up on March 31 - April 3 at the Rhode Island Convention Center. There are currently 84 energy-related companies and organizations registered to exhibit. There are many more solar companies than last year, probably due to the launch of Solarize Rhode Island, which is coordinated by Shauna Beland in our office. Now over 300 students from 20 career tech schools are engaged in the construction of the three feature energy demonstrations, which are the solar demonstration exhibit, the Cox Communications home technology showcase, and two solar tree houses. The marketing campaign started last week, which includes TV and radio spots that Marion and Michael did, a website, a promo video, social media, and \$2 off coupons in National Grid bills. The opening ceremony will feature Senators Reed and Whitehouse, Representatives Langevin and Cicilline, and Providence Mayor Jorge Elorza and will be held on Thursday, March 31st at 4:00 PM on the show floor. Lastly, the invoice for the Council's \$50,000 sponsorship has been paid.

4. Executive Committee Report

The Executive Committee discussed Rhode Island's participation in the Northeast Energy Efficiency Partnership's (NEEP) Evaluation, Measurement & Verification (EM&V) Forum. Rhode Island has participated for the past few years, however, the value to Rhode Island has been questioned. National Grid, OER and the EERMC are trying to decide together at what level to participate moving forward. In MA and NY, National Grid is no longer contributing. National Grid has allocated up to \$100,000 from its 2016 Energy Efficiency Plan budget for Rhode Island's participation in the EM&V studies. Commissioner Gold has been asked to take Commissioner Paul Roberti's place on the Forum, which is made up of other regulators and energy commissioners from around the region. The Executive Committee agreed that Commissioner Gold should accept the seat on behalf of the EERMC on a trial basis with the goal of better targeting NEEP's priorities to match Rhode Island's priorities.

Additionally, in response to recent questions posed by Betsy Stubblefield Loucks about the Council's legislated responsibilities, specifically resource diversification, the Executive Committee directed the consultant team to develop a dashboard of programs or activities going on in the name of the Council that support EERMC legislated responsibilities. This will be something that Council members can reference to figure out their role for action and what to keep an eye on. A draft will be ready for Council feedback at Executive Committee meeting.

In light of recurring confusion on open meetings laws, the Executive Committee directed Marisa Desautel to create a summary of open meetings requirements related to communications among members. There was also continued discussion of the proposed use of Regional Greenhouse Gas Initiative (RGGI) funds. Abigail Anthony requested that the consultant team prepare the memo that is in member packets for the discussion later in today's meeting.

5. Policy and Planning Issues

a) Finance Update

Consultant Mike Guerard provided an update on recent finance activities, including Dunsky's work and developments at the RI Infrastructure Bank, including Commercial PACE and the Efficient Buildings Fund (EBF) (see attached). Ms. Sholly reported that the EBF received 27 applications - 20 efficiency; 7 renewable energy; 19 municipalities; 8 schools; \$60M requested. All applications were scored and ranked by the OER and the final Project Priority List was sent to the RIIB on March 4th. Michael Baer of RIIB reported that they have begun meeting with applicants and expect to be able to finance all of the projects that want to move forward. Given the high demand seen in round one, RIIB is already starting to think about round two and is evaluating ways to come up with capital that can be used to provide low-cost financing for these projects.

Mr. Guerard reported that Commercial Property Assessed Clean Energy (C-PACE) program has been ramping up with meetings being held weekly to ensure that C-PACE design is fully synched with existing National Grid-administered programs. Mr. Baer also reported regulations are out for public comment until the end of March in preparation for the program launch at the end of April. RIIB has been seeing a lot of interest from stakeholders including energy efficiency vendors and solar installers. Shigeru Osada asked how energy savings will be reported to the public. Mr. Baer explained that SRS, the program administrator, will oversee any measurement and verification (M&V) that will be done. Because most of these projects will receive National Grid incentives, savings will be tracked and reported by National Grid. RIIB will track savings from measures that National Grid does not incentivize, such as windows and

doors. Both C-PACE and EBF participants will be required to track savings post-installation. Residential PACE will follow a similar process but likely will not launch until the end of 2016 or beginning of 2017.

Lastly, Dunsky has provided input to National Grid on two evaluation studies – one on the revolving loan on-bill repayment program and one on the HEAT Loan program. Dunsky is also looking at how all of these financing developments might help inform the savings targets process that is underway. A memo to the finance and targets working groups should be ready by the end of the month.

Joe Newsome asked about outreach to quasi state agencies. Ms. Sholly said that there was not much outreach to that sector in the first round of the EBF, but the suggestion will be taken for the second round.

b) Savings Targets Update

Mr. Guerard said that the Council will need to submit the targets to the Public Utilities Commission (PUC) by the end of September. The consultant team will have a final draft ready by the end of August for approval at the September Council meeting. Related activities currently underway include jurisdictional comparisons, high-level trend analysis to understand recent trajectories, and the key driver analysis. The consultants are looking at major measures in coordination with the savings targets working group. The work will also be reviewed with residential and C&I strategy teams.

To get stakeholder input, Mr. Guerard proposed holding a session in May to garner insights from key constituents to help inform the targets setting process. The Council's role would be to help identify key groups to invite. A memo to better frame the desired outcomes and discussion questions will be developed for the April meeting. Diane Williamson asked what types of constituents should be invited and how many. Ms. Anthony said to think about who members know that has insight into major energy trends. Mr. Newberger added to think about who among member constituents is doing something of significant magnitude that would make a dent in shaping the targets. The Council asked the consultant team to pick some potential dates and send out a doodle poll. Ms. Anthony suggested that, to provide flexibility, there be a process for people to submit comments or schedule individual meetings with the consultant team.

c) EERMC Response to Regional Greenhouse Gas Initiative Allocation Plan

Ms. Anthony explained that OER presented its plan for RGGI allocation last month and the Council heard a lot of public comments. She recommended that the Council decide whether it wants to provide formal written comments and, if it does, the Council should discuss what they should say.

Mr. Osada asked how energy savings from RGGI funded projects are tracked. Ms. Anthony said that if OER uses RGGI funds for energy efficiency projects and leverages National Grid programs then those projects meet all the same criteria that National Grid projects must, which is probably most projects. Mr. Newberger added that OER must adhere to the criteria in the RGGI statute, which says that funds must be used for the most cost-effective available projects.

Mr. Newsome asked what the phrase "consult with" means. Mr. Kearns said that consult means engaging with a party to get feedback. Mr. Newberger noted that OER is now doing two allocation plans per year to get money out more quickly and the Executive Committee discussed developing a better timeline so EERMC has more time to comment.

The consultant team presented a memo requested by the Executive Committee outlining potential comments on the RGGI plan. Mr. Guerard said there is still time to submit written comments before the public hearing on March 17th and 10 days after the public hearing. The Council could also attend the

public hearing and provide either oral or written comments there. Mr. Kearns recommended that any public comments received by the EERMC be submitted separately by those entities.

Ms. Anthony said that is hard to deny that state facilities are in great need of efficiency improvements. She thought it would be productive for the Council to submit any thoughtful, constructive comments to the OER on the best way to deploy that \$4.4 million so that it goes the farthest and achieves the most energy savings. Having heard concerns from a variety of stakeholders, it is incumbent on Council to submit constructive feedback. She received feedback from outside stakeholders that the RIPEP model is a best practice for municipalities to use to leverage customer payments and National Grid funds. Transferring the RIPEP model from municipalities to state could be a good recommendation for Lead by Example.

Chairman Powell said that it is assumed that system benefit charge (SBC) funds will be leveraged with the deployment of RGGI funds, but state dollars and financing should also be leveraged. Creating a revolving loan fund would better capture the savings. RIPEP had a set of rules that were applied to the spending of those funds. The Council could recommend that the state apply that same level of rigor and requirements to the use of these Lead by Example funds.

Mr. Newsome said he would resist submitting comments that will not be taken into consideration by the OER. Ms. Anthony noted that OER used suggestions from the last RGGI public hearing and had a better result. Diane Williamson felt that the Council should comment whether or not OER decides to accept them. She offered a few criteria that could be recommended, including an energy savings target, leveraging as many funding sources as possible, and aligning with planned capital improvements. Ms. Anthony said that maybe all of these best practices have already been encapsulated by RIPEP and maybe the EERMC's recommendation is to point out the most important elements of the RIPEP model and recommend that they be implemented at the state level as well.

Ms. Sholly noted that the Strategic Energy Management Plan (SEMP) that the state is engaging in with National Grid provides a framework for these types of structured criteria. Ms. Williamson said that a recommendation could be to tie the RGGI allocation plan to SEMP action items.

Mr. Newsome observed that nothing in the plan specifically addresses low-income customers. Mr. Guerard said that there is a small amount (\$300,000) allocated to state-owned homeless and behavioral health facilities. He also said that between the federal funding and the National Grid programs low-income customers get a 100% incentive for efficiency projects, which is a challenge. In previous years, OER allocated funds to nonprofits that served low-income, but it is a challenging sector.

Chairman Powell read an email from Ms. Stubblefield Loucks who was absent from the meeting: *"I noted at the Executive Committee meeting that several people asked me questions about the most recent RGGI allocation. It would be helpful to know how those allocation decisions are made. Are they based on a set of criteria? When equal options are presented, who and how is the final selection made? Also, there has been some concern that the \$4.5 M for state buildings could be better structured, perhaps as a revolving loan that the state would pay back. Access to capital is a huge barrier for investments in energy efficiency and climate change mitigation and adaptation, so I would appreciate a better understanding of what options OER weighed, how future decisions will be made, and what role EERMC plays in that process."*

Ms. Anthony moved to authorize the consultant team to develop recommendations to OER on the first 2016 RGGI Allocation Plan based on input received with final review prior to submittal by either the Executive Committee or Chairman. Ms. Williamson seconded and all approved.

d) Public Utilities Commission Docket "Review into Changing Distribution System"

Ms. Anthony reminded the Council that this started when National Grid submitted a rate design proposal to the Public Utilities Commission (PUC). The EERMC was an official party in that proceeding because it had important implications for energy efficiency and other energy issues. National Grid ultimately withdrew that proposal and the docket was closed. Then the PUC issued a solicitation with questions on what kinds of costs and benefits on the energy system should be measured. Last week, the PUC opened a new docket (#4600) based on those questions and issued a 10-page document on the reason for this proceeding, which is essentially to find mechanisms that would allow it to make more strategic decisions and investments on the energy system as a whole. The PUC will look for stakeholders to identify themselves and volunteer to participate in the proceeding. The PUC is also engaging with an expert consultant to facilitate the stakeholder process. The outcome will be guidance to utility for future rate cases. Mr. Newberger said that the PUC will convene meeting in early April, so the Council should decide if it wants to be an official participant in the proceeding. Ms. Anthony said the cost would be pretty low and recommended that the Council at least take the first step of becoming an official participant and then determine its level of involvement going forward.

Ms. Anthony made a motion to direct the Council Attorney to submit the EERMC intervention petition for PUC Docket #4600 when the time comes. Bob Bacon seconded and all approved.

e) EERMC Annual Report

Ms. Sholly reported that OER will again take the lead on developing the EERMC Annual Report, as it has for the past two years. The process has been delayed due to reduced staff capacity, so the report will be submitted in May instead of April. OER will notify the legislature of this delay and does not anticipate any concerns. Development is underway and the first draft will be presented at the April Council meeting. Mr. Guerard suggested that the Council take some more time to review the proposed policy recommendations and strategic principles and send any comments.

6. Rhode Island's Participation in Avoided Cost Study

Mr. Newberger explained that Rhode Island, along with the other New England states, cooperates on a regional avoided energy supply component study that provides us with the values for electric energy capacity, natural gas and fuels that are used in screening programs for cost-effectiveness. The frequency of this study update is up for discussion. Mr. Newberger felt that Rhode Island should subscribe to the update and the update should be done now so it can be used for 2017 and 2018 programs, assessing cost-effectiveness and developing three-year targets and the next three-year plan. VT and ME have expressed interest in participating, NH and MA are on the fence, and CT will likely not participate. Ms. Anthony thought RI should participate because the PUC will want the most updated avoided costs possible. Mr. Newberger said that if RI ends up being the only subscriber and has to pay for the whole study, he would choose a subset of study topics: natural gas costs, electric load forecasts, and capacity retirements and additions. National Grid can cover the cost with its evaluation budget. The Council supported this direction.

7. Council Business

a) EERMC Budget Report & Discussion of Unallocated Funds

Chairman Powell said that there is a \$290,000 unallocated fund balance in the EERMC budget. If excess funds are left with National Grid, they go back to the general fund and are reallocated to other programs. Last year, the Council moved leftover funds to a client fund held with the Council's attorney.

One idea for use of funds was to hire an expert to inform particular pieces of the targets setting process that the existing consultant team could use help on. Another suggestion was to hire a consultant to evaluate moving from the total resource cost test to the societal cost test for screening measure cost-effectiveness. Another idea was holding a Council member workshop, similar to the orientation workshop held last year. Mr. Guerard suggested that any decisions be held for when more members are present and said the consultant team could draft a more substantive list for Executive Committee review.

8. Public Comment

Joe Cirillo referenced bill H770 introduced Representative Handy which minimum energy efficiency and water standards, which proposes detailed enhancements to appliance standards. Ms. Sholly explained that the OER has been involved in this along with Northeast Energy Efficiency Partnerships and National Grid. Mr. Guerard added that this is the third year this bill has been introduced. Chairman Powell suggested a presentation on this at the next Council meeting.

9. Adjournment

Mr. Newsome made motion to adjourn. Mr. Cirillo seconded and all approved. The meeting adjourned at 5:35 PM.

ENERGY EFFICIENCY & RESOURCE MANGEMENT COUNCIL

Minutes-March 14, 2013

Conference Room B, Second Floor, DOA

Call to Order: Chairman Ryan called the meeting to order at 3:35 PM

Members Present: Joe Newsome, Joe Cirillo, Abigail Anthony, Paul Ryan, Marion Gold, Dan Justynski, and Chris Powell

Consultants Present: Mike Guerard and Scudder Parker

Staff Present: Lewis Babbitt, Chris Kearns, Rachel Sholly, and Charles Hawkins

Others Present: Jeremy Newberger, Michael McAteer, Brian Kearney, Vito Buonomano, Rachel Henschel, Angela Li, Karina Lutz, Dave Jacobson, Marsha Garcia, and Karen Bradbury

Acceptance of Minutes: Joe Newsome made a motion to accept the February minutes. It was seconded by Joe Cirillo and passed unanimously.

Public Comment

Paul R. began the meeting by saying he would like to look into having

the minutes of the meeting go on a disc. He asked Marion G. if the state had a blanket purchasing agreement that would allow the Council to purchase a recorder that can produce an audio disc. Marion G. said she would look into it before the next meeting. Marion G. then introduced Marsha Garcia, URI's Campus Sustainability Officer, who has accepted an offer to put her name in for nomination for the residential seat on the EERMC.

Vito B. said that he had a petition he wanted to circulate showing support for recently introduced legislation, sponsored by Rep. Ruggiero, to reinstates renewable energy (RE) tax credits. He said that members of Local 99 of the Electricians' Union have thrown their support begin the legislation and have meet with General Assembly (GA) leaders. He cited how RE tax credits in Massachusetts have stimulated the industry.

Executive Director's Report

OER has finalized the nominations for new Council Members. Marcia G. will replace Marion G. on the residential seat. Jennifer Hutchinson and Michel McAteer will fill the two NGrid ex-officio seats on the council. Marion G. requested Chairman Ryan send a letter to Vic Allienello thanking him for her service as the ex-officio representative from the deliverable fuels sector. Chris Brennen of Superior Oil will replace him on the Council with assistance from the Oil Heat Institute's Julie Gill.

Marion G. then defined the administrative services OER will provide the Council. She has designated Rachel Sholly to assist Charlie H. in the administrative duties of the OER, which include developing the monthly Council agenda, booking meeting rooms, compiling and editing minutes. Rachel will call members before meetings to get feedback on agendas. OER will also review invoices from the C-Team & Dan P. and authorize payment. OER will also assist in developing the Annual Report (AR) and drafting the Council budget and maintain the EERMC website. Chris P. thought it would be good if OER could coordinate the work of Council sub-committees, which Abigail A. mostly does now. Marion G. agreed. Dan J. cited Rachel S.'s coordination of the Energy Expo Sub-committee meeting as an example of this.

Marion G. recently attended a USDOE symposium, held in Baltimore, on the barriers to large scale industrial EE and opportunities for combined heat & power (CHP). Both she & NGrid's Tim Roughan spoke on RI CHP initiatives. RI received kudos for its innovative work on the cost effectiveness (CE) analysis for large scale CHP. The President has set an ambitious goal for the development of CHP. In RI, PUC filed a docket in March for the Toray CHP incentives package and the goal is to have the project come on line by March 2015. Jeremy N. said that NGrid and Toray have agreed on an incentive package and now it has to go in front of the PUC for approval. Scudder P. wanted to give kudos to TEC-RI for the key role they

played in the Toray negotiations. Chris P. said there was concern about big CHP projects putting constraints on the C&I Energy Efficiency Program Plan (EEPP) budget.

A recent Green and Healthy Homes Initiative (GHHI) meeting, hosting by Mayor Taveres, was well attended. GHHI is looking to expand the program beyond Providence and may be assisted by recent public housing bonds. She also wanted to thank Joe C. for briefing her about the challenges that face the Field's Point LNG tank. Marion G. then introduced Rachel S. to give an update on the RI Public Energy Partnership (RIPEP).

Rachel S. said that they are currently in the data collection stage and the goal is to benchmark all of RI's public facilities. They are targeting state buildings, schools and public water suppliers. One challenge on Block Island is that residents and facilities are not eligible for NGrid EEPP incentives. EPA is having a meeting on water facilities with all the Northeast states in Albany. OER is planning on using \$1.4 M in RGGI funding on the RIPEP to supplement this USDOE grant. She also said that the 2012 RGGI Spending Plan is ready to go out for public comment. She wanted to compliment NGrid for their cooperation and said that their point of contact for the RIPEP, Mike Skinner, has been awesome.

sequester has resulted in a 5% reduction in funding. However, DHS had a 10% carryover so this reduction was planned for and should not have a drastic impact. The Coalition of Northeast Governor's (CONEG) is pushing for a 2014 LIHEAP budget of \$4.7B. A second crisis grant for deliverable fuels clients has been authorized. DHS is currently working on uploading an A-60 payment file to NGrid for gas & electric clients. This month's confirmations will be mailed to clients and the hope is that there will not be a gap of more than two weeks between confirmation and payment. That gives NGrid time to apply the payments to client's accounts. There have been no LIHEAP shortfalls and the conversion to the new software system has gone well.

Marion G. has been working with Chris P., Mike M. and the RGGI Sub-committee on using RGGI funding to integrate RE & small distributed generation (DG) with System Reliability (SR). They are looking at the cost effectiveness (CE) of this program and will report their progress at next month's meeting. OER also wants to use ARRA funding for a C&I revolving loan program. Joe N. asked how much ARRA money. Marion G. said it was about \$3.6M but it needs to be obligated by August 31st so she would like to get it into a bank soon. Some of this funding will go to PACE, and some to the revolving loan.

Chris P. said that revolving loans are a good start as long as they are funded. He cited a positive meeting that was held with TEC-RI, NGrid and the C-Team on the C&I financing. The feedback was that

companies can't get funding for large EE projects. You need a six month payback to get companies interested. They would like on-bill financing over a longer term. Abigail A. said that there is confusion over spending RGGI funding on RE and its CE impact. NGrid & the C-Team have asked Dan P. for a legal ruling to answer these two questions: Does CE apply to RGGI? Is there guidance in the RGGI legislation on how to define CE? Dan P. will prepare a summary memo on these two questions by the end of next week in advance of the RGGI public hearing.

Discussion and Vote on the RI Energy Expo

Marion G. said a sub-committee made up of Dan J., Abigail A., Mike G., and Rachel S. has been formed to plan this event. Rachel S. distributed a draft resolution that authorized the council to spend up to \$100,000 on an energy expo. She also compiled a spread sheet that has a low and high end budget chart to calculate compensation for an event organizer. If revenue falls short, the compensation decreases. This gives an upside if the planner generates increased revenue and gives the Council protection if revenue falls short. The sub-committee has put together a list of tasks that require seed money before any revenue comes in. A commitment is needed by the Council to spend this seed money so a strong RFP can be developed. Can Council revenue be used to close the gap between revenues and expenses? If you get \$20,000 from the OER and \$20,000 from the Renewable Energy Fund (REF), what will the Council commit?

Abigail A. said there was \$251,000 in the council's reserve budget. Dan J. said to do it right you need at least \$165,000. If marketing bring in \$84,000 you are \$80,000 light. He feels if the organizer is doing their job the number should be higher than \$84,000. But if the event only garners \$84,000 the Council has to protect the \$80,000 shortfall so the event will proceed. He asked if \$100,000 was a number in excess of what the Council is willing to spend. Marion G. said it is a reserve fund where you could spend up to \$60,000 and use the other \$40,000 as a buffer. Once the funding is approved then OER can build the RFP. She cited the NE Turf Association which runs an event every year that either makes money or breaks even. Chris P. said that the Council would need to know now what percent of any shortfall they would be responsible for. He figures 60%-Council and 20% for the OER & REF. Paul R. asked what would happen if REF or OER could not come up with their end. Joe N. said if seed money was needed to get going the Council could match the \$20,000 from REF & OER to hire an organizer. If you had \$40,000 from Council and \$20,000 from the agencies you would at least have enough to hire a consultant. You don't need to have everything worked out today.

Dan J. said that the Council does not have to commit to the seed money until the RFP is ready. That won't be for 30 days. Dan J. asked if the OER has the ability to open account for the expo. Marion G. said that what is needed is an indication that the Council is willing to put cash on the table. Dan J. said they should change Bullet 3 to

make \$40,000 available to the OER when the event planner is selected. Change bullet 2 to a commitment of \$60,000 or 60% of any deficit. Marion G. said that Ocean State Clean Cities is very interested in the expo and could be another sponsor.

Abigail made a motion that the EERMC approve the draft resolution with the above amendments. It was seconded by Paul Ryan and passed unanimously.

Annual Report Policy Recommendations

These recommendations were discussed in a conference call with sub-committee members (Marion G., Chris P., Mike M., and Dan J.) on 3/12. Joe N. said he was not clear on what Recommendations #3 & 4 mean. They do not seem to be recommendations of such. #7 & 8 are also unclear. Scudder P. suggested listing them in categories.

Chris P. wanted a recommendation included that mentions the financing problems that the C&I sector encounters. There is no financing available and he feels this is a significant issue. Abigail A. suggested grouping them into three separate categories: specific policy recommendations; actions the Council are currently undertaking; and significant statements that sent a clear message to the GA. Joe N. suggested the recommendations come at the beginning of the bullet not at the end like it is with #7. Paul R. feels that #3&4 don't belong in policy but in another part of the AR.

Abigail A. said that the law says recommendations; they do not necessarily need to be policy recommendations. We may want to loosen this. Marion G. said that the Council needs to set priorities for next year. Scudder P. said the Council should convey to the GA and the public what their priorities are. Dan J. said the goal today is to give the sub-committee guidance when they finalize the recommendations for a vote in April. Abigail A. said that the document has to be final before the next meeting so the Council is voting on a final product in April. It goes to the printer right away. The e-version will go out the Tuesday before the next meeting. Chris P. said the sub-committee has to be authorized to finalize the wording to be adopted at the April meeting.

Dan J. felt that No. #5 could take years to get done but it should be put into the AR recommendations. Marion G. agreed and she felt the Council can benefit from work done in other jurisdictions like New York City. Abigail A. asked about multi-state initiatives. Mike G. said that adjourning states are looking at this closely. Dan J. said it appeared #5 was OK with a couple of tweaks. On #6, Dan J. said he wanted to make sure that RGGI benefits ratepayers. Chris P. said it wouldn't benefit ratepayers if it was not CE and he wants it mentioned in the bullet and defined as it is in LCP. Scudder P. said that part of the legal debate is whether the RGGI legislation uses the term CE. It is cited in the legislation but it is not precise. They don't define CE RE. The standard for RI LCP is the TRC. Abigail A. said the Council needs Dan P. to take a look at this.

Dan J. said that #8 was not on the original draft. Chris P. said that by highlighting GHHI they are leaving out other similar initiatives. Mike G. said the key to this recommendation is getting DOH & other agencies involved to maximize EE successes. Leveraging funds accomplishes this. You can get into a home and do comprehensive EE and address other issues in hard to serve areas. Marion G. would like to coordinate EE efforts with recent LI housing bond money to further leverage EEPF funds. It was agreed to go back to last year's language and emphasis coordination. Joe N. would like #8 to be more succinct. He does not like the idea of the Council making recommendations to themselves. He feels the central priorities should be upfront in the Chairman's report. The policy recommendations in the back of the AR should be to the Governor & the GA. Marion G. suggested a section that had Council priorities.

Dan J. said he has prepared a motion which authorizes the AR Policy Sub-committee to accommodate Council member's comments and work with the C-Team to complete the final draft of the 2013 Annual Report recommendations for final approval during the April 2013 meeting. It was moved by Paul R., seconded by Joe C. and passed unanimously.

Overview of the NGrid EnergyWise Procurement Process

NGrid's Angela Li was introduced to give this power point

presentation (attached). NGrid is trying to establish a relationship with customers through EnergyWise, which is their flagship residential program. The Program has two core parts. Home Energy Assessments, which are performed by a lead vendor and includes installing power strips. After the assessment weatherization & air sealing are available and provided by a choice of 20 independent insulation contractors who are BPI certified.

The lead vendor was selected by NGrid's Strategic Sourcing Process. This consisted of sending an RFP to fifty-two suppliers of which three responded and two were brought in for in-depth interviews. On December 11th a multi-year (2012-14) contract was awarded to a lead vendor, RISE Engineering. Marion G. asked if future RFPs could be on their website.

Benefits of the lead vendor model include: cost saving, rapid introduction of new products, and consistent delivery. Dan J. said that the lead vendor model means that RISE is overseeing the contractors and does not do the weatherization work. In the past RISE would have done this work. Joe N. said his concern is that the contractor pool has been tripled from seven to twenty. He fears the pool will get so large that contractors will only be doing about three jobs a year. He asked if RISE was recommending the contractor. Yes, but the customer gets a full list of 20 from which to choose. The list is on the NGrid website.

RISE's Brian K. then introduced himself and distributed the full list of contractors. He said that three new ones were going to be added shortly. It is a merit based system and 100% of the work is reviewed and if the work is not up to standards, contractors can go on a probation list. 1,669 independent contractor jobs were done last year.

Contractors have told NGrid that it is one of the best programs to work and they value the level of inspections.

Scudder P. asked if most of the clients were gas customers or were incentives offered to everyone. Angela L. said yes, it does include deliverable fuels; it is a 25% incentive for oil and 75% for electric up to \$2,000. Marion G. asked if this program was helping NGrid meet its EEPP goals. Angela L. said that NGrid was at 100% of its electric goal and the gas goal was raised to make up for shortfall in other programs and got to 130% of goal. Dan J. suggested identifying minority owned businesses on the list.

Public Comment

Karina L. asked if the RISE contract has been signed and written yet. Angela L. said it was awarded in November 2012.

On RGGI CE, Karina she feels the fact that the law is not precise is an opportunity not a problem. The Council should be looking at what is more CE for climate change and stabilization. You should look at CE in RGGI as helping to get to climate goals. She then demonstrated a

chart to show this. You should use RGGI funding to get at climate goals that can not be reached through LCP. Chris P. said that the goals of the higher RGGI cap are to get at carbon reduction. Dan J. said, that by his definition, you are taking funds away from CE EE and putting it into stuff that is not LCP. He said RGGI funds are not found money but the ratepayers. Chris P. said he was involved when they were trying to convince states to join RGGI and the selling point that got states to sign up was that the funding was going to EE at a rate of at least 90%, because they recognized it is being paid for by the ratepayers. It was meant for EE and that is how it was sold. Marion G. suggested Council members attend a April 24th Boston Roundtable Forum on RGGI that will be hosted by Jonathan Raab.

Paul R. made a motion to adjourn. It was seconded by Chris P. and passed unanimously. The meeting was adjourned at 5:35 PM.

Respectfully submitted
Charles Hawkins
Secretary Pro-tempore



MEETING MINUTES

Thursday, November 12, 2015

3:30 - 5:30 PM

Conference Room B, 2nd Floor

Department of Administration, One Capitol Hill, Providence, RI

Members Present: Abigail Anthony, H. Robert Bacon, Joe Cirillo, Roberta Fagan, Marion Gold, Jennifer Hutchinson, Michael McAteer, Joe Newsome, Shigeru Osada, Chris Powell, Betsy Stubbiefield Loucks, Karen Verranga

Members Absent: Diane Williamson

Consultants Present: Mike Guerd, Scudder Parker

OER Staff Present: Ryan Crowley, Danny Musher, Rachel Sholly

Others Present: Rachel Henschel, David Jacobson, Courtney Lane, Angela Li, Jeremy Newberger, Ben Rivers, Chon Wong, Belinda Wong, Muxi Yang

1. Call to Order

Chairman Chris Powell called the meeting to order at 3:32 PM.

2. Approval of October Meeting Minutes

Chairman Powell noted that Scudder Parker's name was listed twice consecutively. Bob Bacon made a motion to approve the October meeting minutes. Joe Cirillo seconded and all approved.

3. Executive Director Report

Commissioner Marion Gold of the Office of Energy Resources (OER) reported that OER, in partnership with National Grid and Treasury, is working to develop a pipeline of efficiency projects through the Efficient Buildings Fund (EBF). The bond funding will become available in June. A kickoff meeting will be held on December 7 to educate municipalities about the Rhode Island Infrastructure Bank and the process for EBF. She also reported that progress has been made in regards to development of the commercial and residential PACE programs. Bids have been solicited for companies to run the programs on a turnkey basis. She noted that she has been serving on the selection committee. Abigail Anthony asked if there will be a two separate companies for commercial and residential PACE. Commissioner Gold said at this time, it appears that two different vendors will be selected. Chairman Powell emphasized the importance of EERMC members being represented during the process of choosing vendors.

Finally, the Block Island efficiency program is underway to bring efficiency services to the Island for the first time ever. The program is being funded by Regional Greenhouse Gas Initiative (RGGI) dollars. OER is

working in partnership with National Grid and RISE engineering. The pilot program runs through this fall and is expected to see a savings of \$160,000.

4. Executive Committee Report

Chairman Powell reported that the Executive Committee agreed to roll the budget surplus into a reserve account next year to address needs as they may arise. A work plan is received from the consultant team to set up next year's budget. The Executive Committee also discussed how to handle funding requests that come to EERM. Legal counsel and OER each offered input. The group decided that handling such requests would be complex and would likely burden the Council, as someone would need to administer the funding requests and track them. The Executive Committee decided to table the issue for the time being and to not process any requests received. Ms. Anthony added that the issuance of grants does not seem to be within the scope of the Council.

5. Discussion on Executive Committee Membership [VOTE]

Chairman Powell said the Executive Committee reached out to the full Council to ask for a volunteer to serve on the Executive Committee. Betsy Stubblefield Loucks volunteered to serve as the third member. Ms. Anthony made a motion that Betsy Stubblefield Loucks be appointed to the Executive Committee. The motion was seconded by Karen Verrengia and all approved.

6. National Grid Presentation on 3rd Qtr. Report & Forecasted Year-End Results

Courtney Lane, Angela Li and Ben Rivers presented an update on the third quarter report and forecasted year end results. Chairman Powell asked if National Grid anticipated to be over or under budget. Ms. Lane said some residential programs might be slightly over budget while all others are expected to be on target. Shigeru Osada asked if and how the report may be viewed publicly. Ms. Lane said the report is filed with the Public Utilities Commission and are publicly available as part of the docket.

Joe Newsome asked if Rhode Island Housing has been cooperative in identifying areas of need. Ms. Li said that the agency has been very engaged and very active. Mike Guerard added that the multifamily program has struggled this year and it is expected that the taskforce will reconvene to resume its work in hope of regaining momentum. Ms. Li informed the council that EnergyWise has been strong for the company and it is expected that targets will be hit and under budget. Ben Rivers said the RIPEP project met its targets. Rachel Sholly from the Office of Energy Resources added that the 100 building RIPEP target has been exceeded and collectively average 20 percent in savings.

7. Review of Finance Expert Contract [VOTE]

Mr. Guerard presented the proposed contract to engage Dunsky Energy Consulting as the EERM's finance expert. He noted that the EERM must approve the contract before Dunsky may proceed. He stated that Dunsky is ready to move forward and plans to lock at the recommendations made in its previous study to determine which should be pursued. Mr. Newsome made a motion to approve the proposed contract to engage Dunsky Energy Consulting as the EERM's finance expert. The motion was seconded by Mr. Cirillo and all approved.

8. Discussion on Preparing for 2018-2020 Savings Targets Work

Mr. Guerard and Mr. Parker presented an overview of the savings targets requirements needed for submission by September 1, 2016. Chairman Powell reminded Council members that, unlike last time, the council does not have a new study to influence the council's decisions. Ms. Anthony stated that studying the energy savings targets gets to the core of what Least Cost Procurement is and the responsibility of the Council. She added that this is one of the most important tasks of the Council. Mr. Osada stated he is concerned about the amount the ratepayer is paying.

9. Revision to EERMC 2015 Budget [VOTE]

Chairman Powell stated that there is not enough money in the legal fund of the council. It is currently projected to be underfunded by over \$24,491. A vote is needed to move money from the communications fund to the legal fund. The Executive Committee determined \$30,000 may be moved from the communications fund to make up the difference. Joe Cirillo made a motion to reallocate \$30,000 from the communications budget to the legal budget. The motion was seconded by Karen Verrengia and all approved.

Per an Executive Committee discussion, it was proposed that the remaining uncommitted 2015 funds be moved into the attorney's client escrow account for use in 2016 at the Council's discretion. The amount is estimated to be approximately \$138,000. Joe Cirillo made a motion to transfer the remaining uncommitted 2015 funds to the attorney's client fund. Karen Verrengia seconded and all approved.

10. Review of Draft 2016 EERMC 2016 Budget

Mr. Guerard presented the draft 2016 budget, noting that the Council cannot vote on it until the PUC approves the 2016 Energy Efficiency Program Plan. The Council should be prepared to vote in either December or January.

11. Update on Rate Design Docket

Mr. Parker reported that there is a technical hearing next Wednesday (11/18/15). The Commissioners asked the groups in opposition to the tiered demand charge to coordinate their presentations. There was a hearing in which the motion to strike the proposed access fee for standalone generation out of the filing. The Commission decided without prejudice not to approve the motion. Ms. Anthony said it is clear that the Commissioners are reading the testimony and taking it seriously.

12. Public Comment

Danny Musher from OER reminded EERMC members that the SRII working group is holding a public meeting on 11/19/15 at 2:00 PM at the Department of Administration. He noted that OER, National Grid, the EERMC, Distributed Generation Board and the consultant team have worked collaboratively to address system integration. All members are welcome to attend.

13. Adjournment [VOTE]

Mr. Cirillo made a motion to adjourn the meeting. Ms. Stubblefield Loucks seconded and all approved. Chairman Powell adjourned the meeting at 5:34 PM.