



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

MEETING AGENDA

Thursday, May 12, 2016

3:30 PM - 5:30 PM

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

1. Call to Order

2. Approval of April Meeting Minutes

3. Executive Director Report (10 min)

4. Executive Committee Report (10 min)

5. Presentation on Energy Expo Results (20 min)

Representatives of the Rhode Island Builders Association will present on the results of the 2016 Energy Expo at the Rhode Island Home Show.

6. Presentation and Vote on Final EERMC Annual Report (20 min)

The OER and consultant team will present the final 2016 EERMC Annual Report for approval to submit to the General Assembly and Governor and to distribute to key stakeholders.

7. Updates on Energy Efficiency Programs and System Reliability Procurement (20 min)

a) First Quarter Energy Efficiency Program Results (20 min)

National Grid will present the results of its energy efficiency programs for the first quarter of 2016.

8. Policy and Planning Issues (35 min)

a) PUC Review into Changing Distribution System (10 min)

The consultant team will update the Council on the status of PUC docket #4600 and the EERMC's engagement.

b) Savings Targets Process Update (15 min)

The consultant team will update the Council on the savings targets development work including stakeholder engagement.

c) Update on Synapse Contract for Demand Response Consulting Services (10 min)

The consultant team will update the Committee on the status of hiring Synapse to assist the EERMC with demand response issues.

9. Public Comment

10. Adjournment



MEETING MINUTES

Thursday, May 12, 2016 3:30 PM - 5:30 PM

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

Members in Attendance: Abigail Anthony, Bob Bacon, Joe Cirillo, Roberta Fagan, Marion Gold, Michael McAteer, Shigeru Osada, Chris Powell, Betsy Stubblefield Loucks, Karen Verrengia, Diane Williamson

Members Absent: Jennifer Hutchinson

Others Present: Brian Buckley, Kat Burnham, Mike Guerard, Alice Hourihan, Rachel Henschel, Chris Kearns, Ryan Mulcahey, Jeremy Newberger, Matt Ray, Laura Rodormer, Paul Ryan, Brigid Ryan, Rob Sherwood, Rachel Sholly, Raquel Webster, Chon Meng Wong

1. Call to Order

Chairman Chris Powell called the meeting to order at 3:39 PM.

2. Approval of April Meeting Minutes

Joe Cirillo made a motion to approve the April meeting minutes. Betsy Stubblefield Loucks seconded and all approved.

3. Executive Director Report

Commissioner Marion Gold reported that the final roster of nominees to the Council has been submitted. They are awaiting advice and consent from the Senate. The Governor has nominated two existing Council members – Ms. Anthony and Ms. Stubblefield Loucks – for re-appointment. Joe Newsome decided that he did not wish to be re-appointed, therefore, there are three new appointments pending advice and consent from the Senate. Anthony Hubbard of YouthBuild Providence has been nominated as the low income representative. Kat Burnham from People’s Power & Light has been nominated as the small non-profit representative. Tom Magliocchetti of Rhode Island Hospital has been nominated as the large non-profit representative. They should be onboard by mid-June.

4. Executive Committee Report

Abigail Anthony reported that the Executive Committee has executed the contract with Synapse to study demand response in Rhode Island. Work on that has begun and Doug Hurley will likely present to the Council at an upcoming meeting. Additionally, the consultant team is working to finalize a matrix that outlines the various activities of the Council including those not directly related to energy efficiency. The matrix and an associated memo will be available soon. In addition, it was brought to the attention of the Executive Committee that there are some questions about how energy savings are measured and verified. There will be a presentation on evaluation, measurement and verification (EM&V) to the Council at either the June or July meeting. Lastly, a meeting on PUC Docket #4600 was convened and the PUC is expecting that the outcome of this process to be guidance for regulators and utilities on how to think about rate design.

5. Presentation on Energy Expo Results

Representatives of the Rhode Island Builders Association presented on the results of the 2016 Energy Expo at the Rhode Island Home Show (*see attached*).

6. Presentation and Vote on Final EERMC Annual Report

The OER and consultant team presented the final 2016 EERMC Annual Report for approval to submit to the General Assembly and Governor and to distribute to key stakeholders (*see attached*). Shigeru Osada expressed concern about the authenticity of the energy savings numbers reported and referenced data from the Energy Information Administration. Mr. Guerard noted that the consultant team has looked at these numbers and the upcoming EM&V presentation will be a useful context in which to continue this discussion. Ms. Anthony said that it will be good to get Mr. Osada's input on the agenda for the EM&V presentation to ensure that his questions are addressed in that meeting. **Ms. Stubblefield Loucks made a motion to approve the final EERMC Annual Report. Karen Verrengia seconded and all approved.**

7. Updates on Energy Efficiency Programs and System Reliability Procurement

a) First Quarter Energy Efficiency Program Results

National Grid representatives presented the results of its energy efficiency programs for the first quarter of 2016 (*see attached*).

8. Policy and Planning Issues

a) PUC Review into Changing Distribution System

Mr. Guerard noted that Ms. Anthony gave a good update on Docket #4600 proceedings during the Executive Committee report. He added that the consultant team is continuing to monitor and contribute to the process on behalf of the Council.

b) Savings Targets Process Update

Mr. Guerard updated the Council on the savings targets development work including stakeholder engagement (*see attached*). Chairman Powell asked how delivered fuels are addressed in this process. Mr. Guerard explained that Regional Greenhouse Gas Initiative (RGGI) funds were used to develop a white paper on delivered fuels, so the scale and potential is known. The real challenge is a lack of funding.

c) Update on Synapse Contract for Demand Response Consulting Services

Mr. Guerard reiterated that the Synapse contract has been executed and added that the consultant team is supporting some of the data analysis.

9. Public Comment

There was no public comment.

10. Adjournment

Joe Cirillo made a motion to adjourn. Bob Bacon seconded, all were in favor and the meeting adjourned at 5:30 PM.

66TH ANNUAL HOME SHOW AND ENERGY EXPO MARCH 31ST – APRIL 3RD | RI CONVENTION CENTER

The Ultimate Solar Powered Tree House | Home Technology & Solar Showcases

LEARN

energy expo

Energy Savings Programs

NO-COST
Home Energy Assessment
nationalgrid
HERE WITH YOU. HERE FOR YOU.

STATE OF RHODE ISLAND
Energy Efficiency & Resource Management Council

The graphic features a green grass background. On the left, a green circle contains the word 'LEARN'. In the center, a large white circle contains the text 'energy expo' with a plug and leaf icon. To its right, a smaller white circle says 'Energy Savings Programs'. On the right side, a circular inset shows a green piggy bank with a glowing lightbulb on top, positioned above a roof with blue solar panels. Text to the right of the piggy bank reads 'NO-COST Home Energy Assessment nationalgrid HERE WITH YOU. HERE FOR YOU.' At the bottom left of the main graphic is the State of Rhode Island Energy Efficiency & Resource Management Council logo.

nationalgrid
HERE WITH YOU. HERE FOR YOU.



STATE OF RHODE ISLAND
ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL

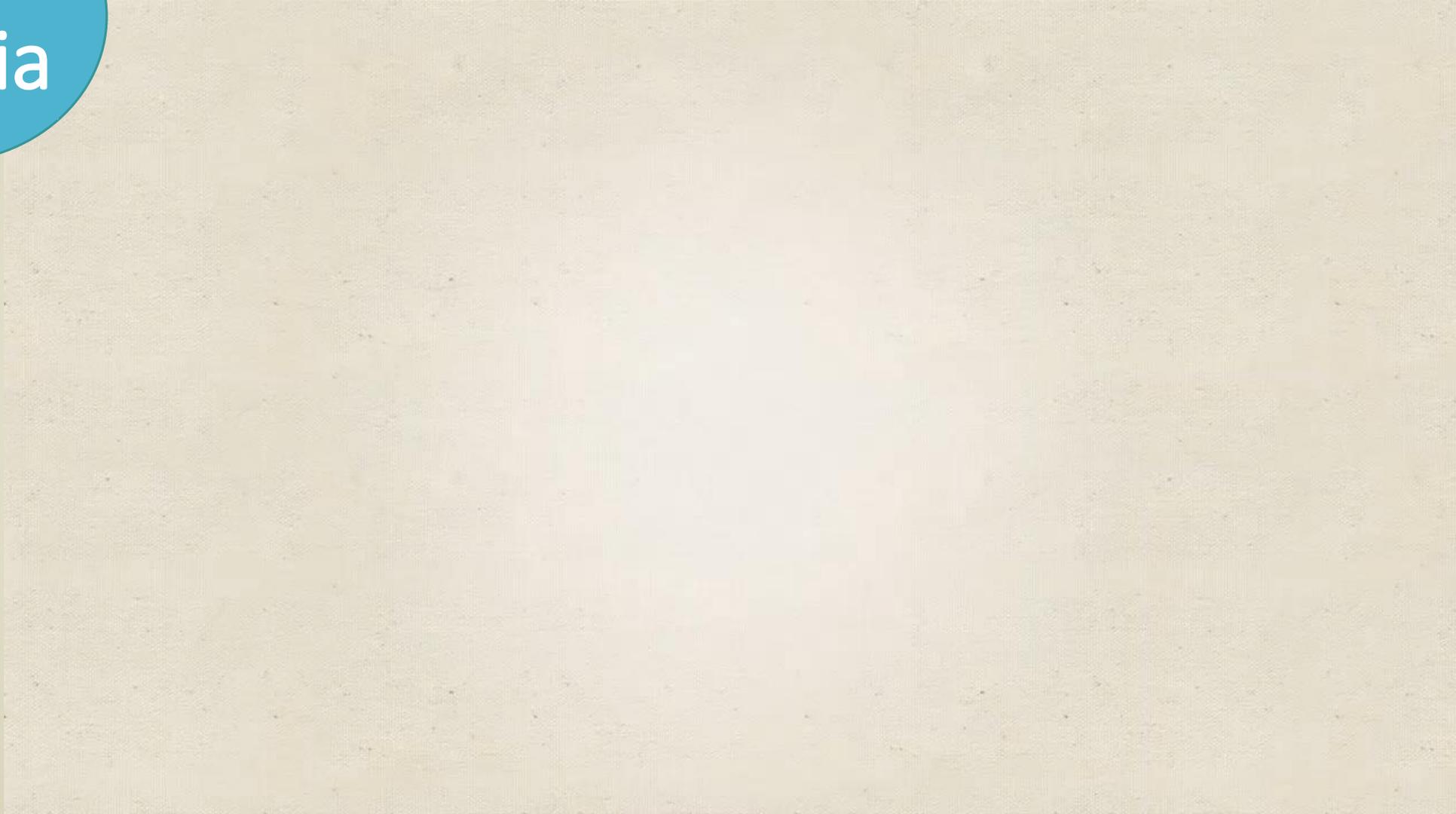
THE
HOME
SHOW
Rhode Island Convention Center
March 31-April 3, 2016



RI BUILDERS
ASSOCIATION
BUILDING PROFESSIONALS | SINCE 1945

The Media

2016 Promo Video Energy @ 3:20



Participating Schools in 2016 Home Show

Bristol High	Carpentry	Westerly High	Carpentry
Warwick Tech	Carpentry	East Providence	Carpentry
	Electrical/Solar	Smithfield	Carpentry
Youth Build Prov.	Carpentry	Ponaganset	Carpentry
PCTA Providence	Carpentry		Horticulture
	Electrical/Solar	West Warwick	Carpentry
	Culinary	Tollgate Warwick	Carpentry
Woonsocket	Carpentry		Broad Casting/Media
	Electrical/Solar	Westerly	Carpentry
Davies Voc Lincoln	Carpentry	Coventry	Welding
	Electrical/Solar	Cranston West	General help
	Culinary	Central Falls	General help —
Newport	Carpentry	Narraganset	Horticulture assistance
Chariho High	Carpentry	Prov. Nathanael Green	—General Help
	Electrical/Solar		

*All above mentioned schools also have many students from other programs that are participating in help and not a specific trade. **Over 280 students received OJT!**

The 66th Annual RI Home Show will be uniquely different this year. The Rhode Island Builders Association has partnered up with RI's finest schools and students to design, build and install all of the home show features. Students will be working along side RIBA and R.I. Nursery and Landscape Association members.

The intent is to show how the State of R.I. and ALL these schools can come together at the same time to create and experience something amazing. student involvement will include various programs within our schools including:

Carpentry	Welding
Horticulture	Broadcast
Culinary	Graphic Design
Masonry	Painting
General Labor	*Electrical

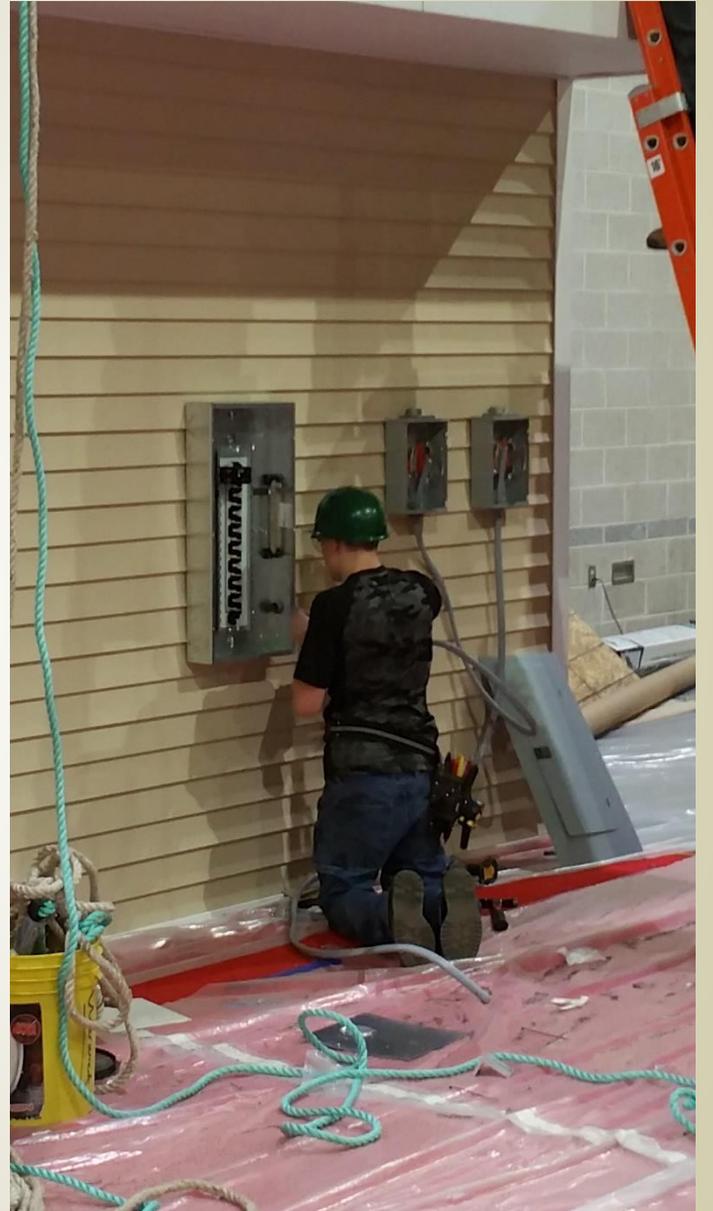
*Electrical - We have done field trips, education seminars and promotion videos. The students have been trained and will work the show to educate consumers on benefits and saving of using solar.

All show features were pre-constructed in over 45 sections at Over 20 schools and on March 25th everything was delivered to the convention center by partner lumberyards and assembled to completion by the students and member partners.

This experience will allow students to work along side member companies to make students more confident in their abilities, show their talent, and open doors for potential internships and future employment.



RESTROOMS



Solar

Solar Energy Education Showcase



**BALLASTED FLAT ROOF MOUNT
SOLAR ARRAY**

Ecolibrium ECOFOOT 2+ System
Roof pitch: 0 to 7°
Material: White Plastic Resin
Inter-row Spacing: 18.5"
Array Tilt: 10° (landscape)
5° (Portrait)
Ballast Block: 16"x8"x4" (31.5 lbs)
Warranty: 25 years
Wind rating: up to 150 MPH



The Media

Marion Gold | The Rhode Show



The Stats

- 20,000 Consumers
- 332 National Grid Passes Redeemed
- 681 home energy assessments assigned a 68.5% increase

Past Stats

Slightly higher than the 2014 show. Last year we hit 22,000 - we were a month earlier and had no snow.

404 home energy assessments were signed up for at the 2015 show (68.5% increase) and 323 home energy assessments were signed up for at the 2014 show (111% increase).

The Stats

- 37.7% increase in total number of companies identified as Energy Expo participants
- 111% increase in home energy assessments
- 14 solar installers, up from 2 in 2014

Past Stats

Energy Expo Exhibitors:

- 2016 - 84 Companies
- 2015 - 70 Companies
- 2014 - 61 Companies

Solar Exhibitors:

- 2016 - 14 Solar Companies
- 2015 - 4 Companies
- 2014 - 2 Companies

The Sales

- 1,516 Kits - 6 LEDs & Desk Lamp
- 81 Advanced Power Strips
- 424 - 6 BR30 Indoor LED Flood Light
- 130 Candelabra (small base)









NPTRE
Newport Renewables
PU REG. # 00219

nationalgrid
New Payment Due \$ 0.00
Please do not send payment
to this account. Payment should be made to your account.

ZERO ENERGY HOME BUILDER



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ADVANTAGE WINDOW
SIMPLE 401-249-9200 AFFORDABLE

Mosaic Collection
Bruce Armstrong
HARDWOOD FLOORING

ALTERNATE
GIVE THE LOOK TO A
WORLD OF COLORS
WITH NO MAINTENANCE

Advantage Window
• Low cost
• Superior Performance, Lifetime Warranty
• Advantage Offer - Labor Included
• Free Installation!

ADVANTAGE WINDOW 1303

energy

EXIT

EMERGENCY EXIT ONLY

EMERGENCY EXIT ONLY







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HERE WITH YOU. HERE FOR YOU.

NO-COST

Home Energy Assessment

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energy expo

INFORMATION

energy expo

INFORMATION

energy expo

Rhode Island Builders Association
communities since 1945

Professionalism

PARADISE
Grilling Systems
America's LARGEST Outdoor Kitchen Manufacturer

1000

DT

RATH

KE

WITH FRIENDS



Bay Coast BANK™

HOW SOLAR ELECTRIC WORKS



Save Money with Solar

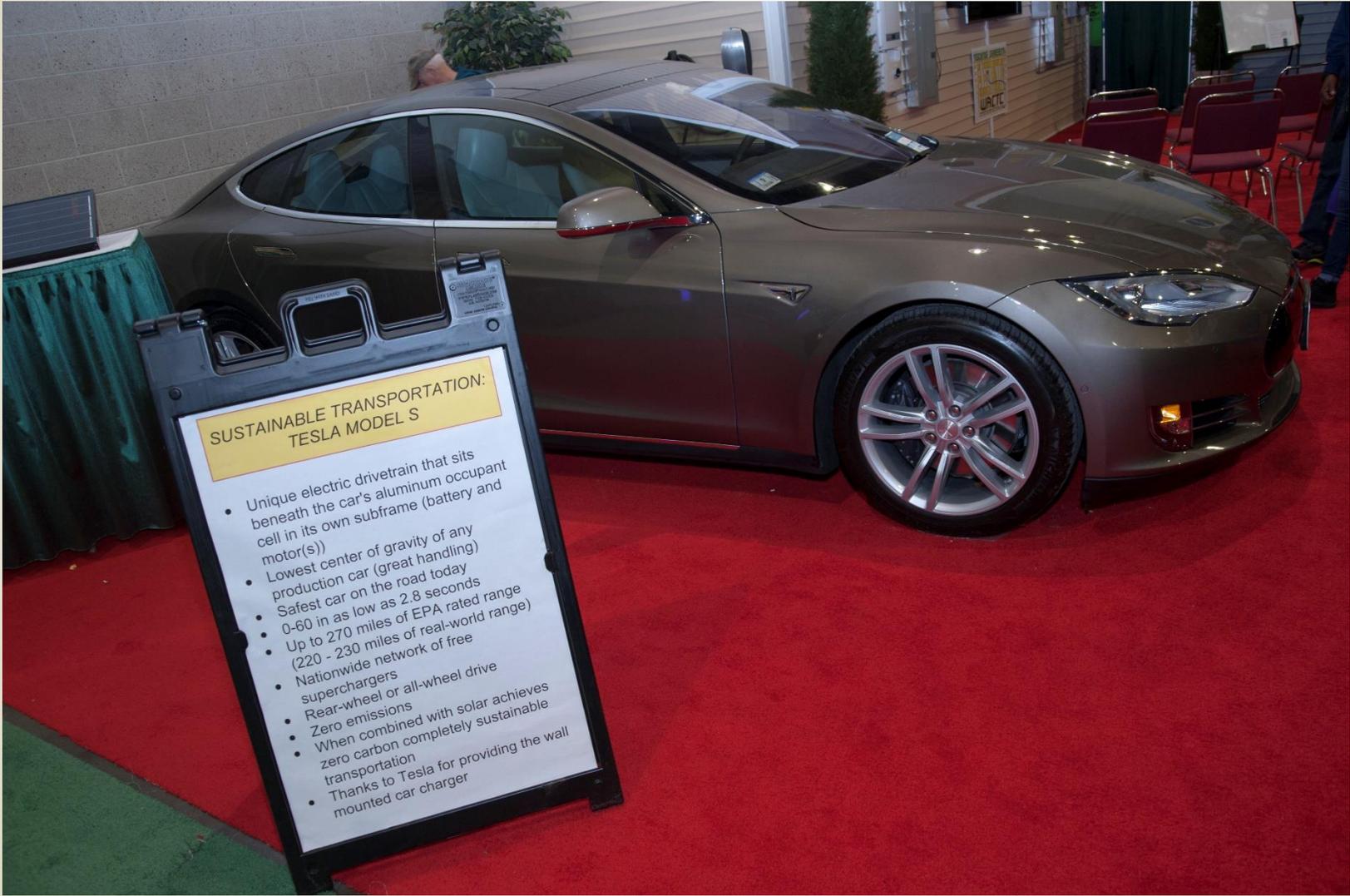
NEW ENGLAND Clean Energy

DELIVERING SOLAR—the better alternative

NEW ENGLAND Clean Energy
DELIVERING SOLAR—the better alternative

NEW ENGLAND Clean Energy
DELIVERING SOLAR—the better alternative

energy expo



SUSTAINABLE TRANSPORTATION: TESLA MODEL S

- Unique electric drivetrain that sits beneath the car's aluminum occupant cell in its own subframe (battery and motor(s))
- Lowest center of gravity of any production car (great handling)
- Safest car on the road today
- 0-60 in as low as 2.8 seconds
- Up to 270 miles of EPA rated range (220 - 230 miles of real-world range)
- Nationwide network of free superchargers
- Rear-wheel or all-wheel drive
- Zero emissions
- When combined with solar achieves zero carbon completely sustainable transportation
- Thanks to Tesla for providing the wall mounted car charger





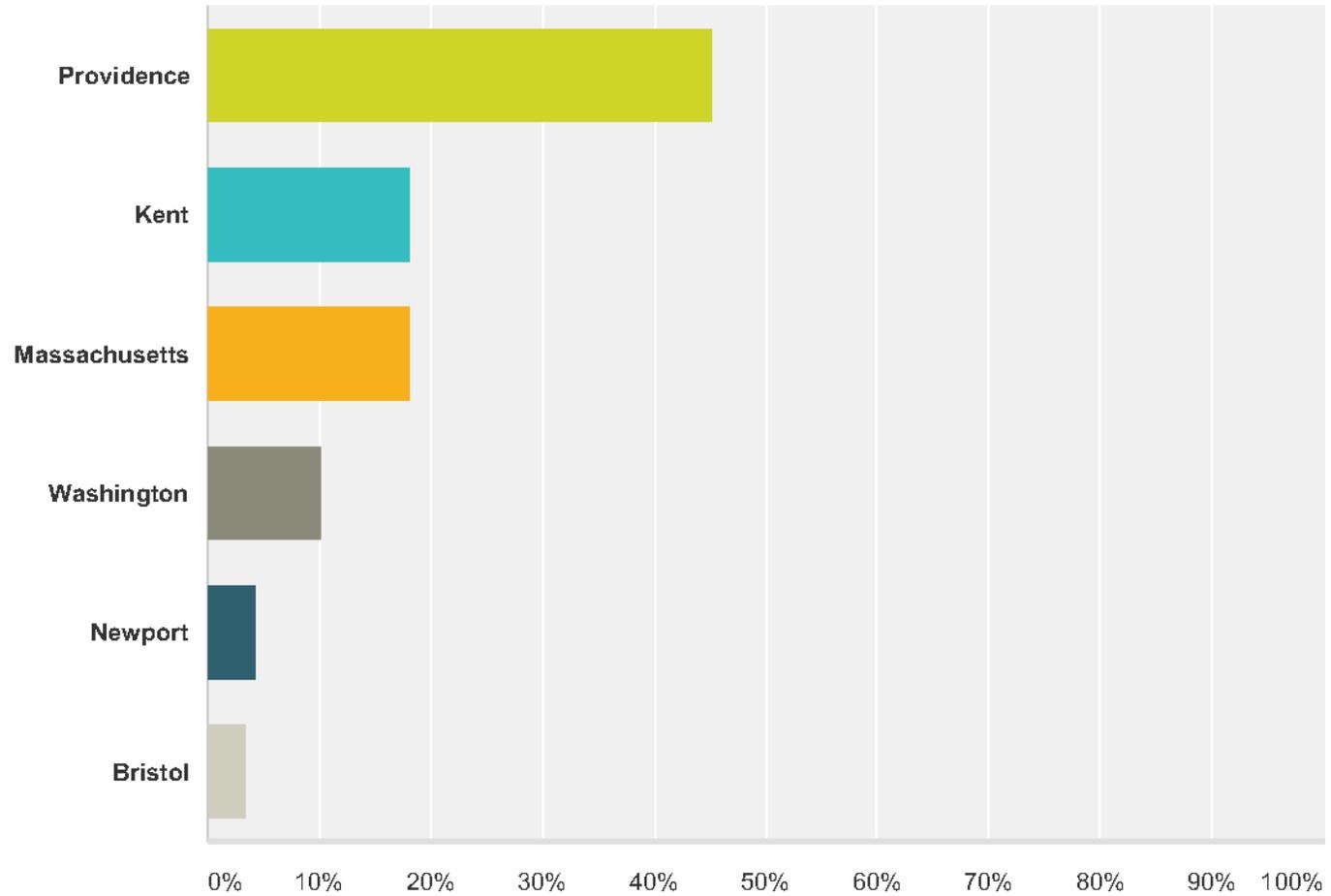




2016 RI Home Show

Q1 What county in RI are you from?

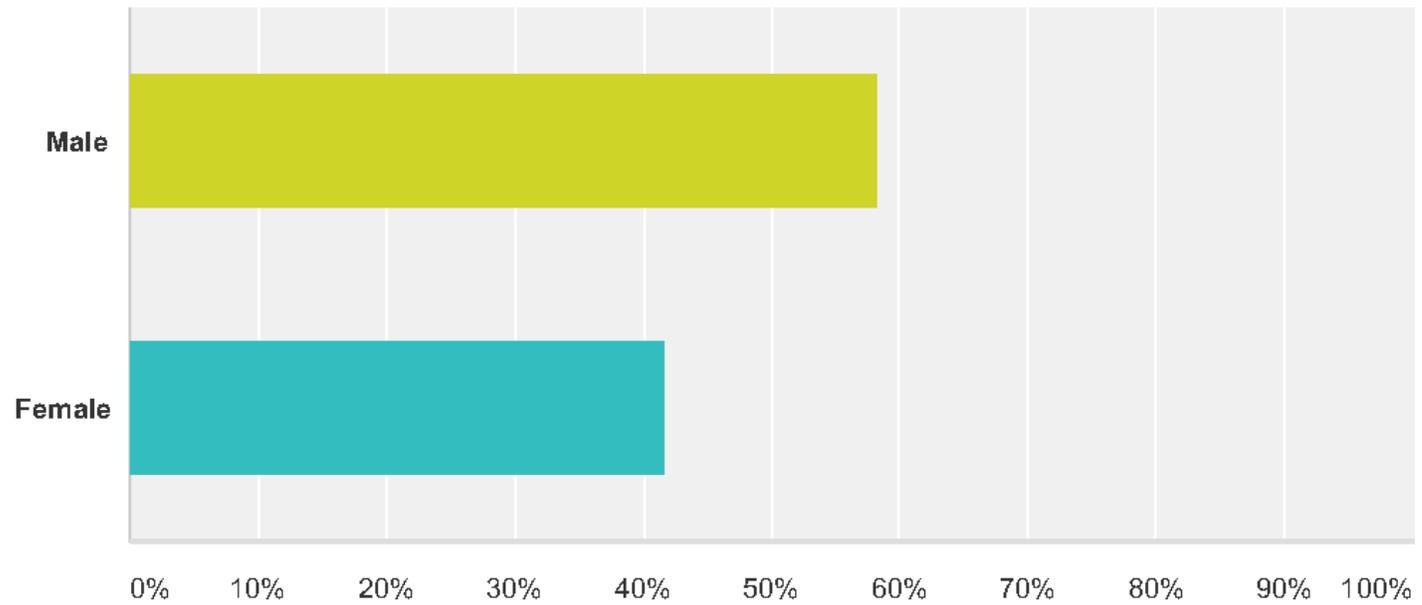
Answered: 137 Skipped: 7



Survey Says

Sex

2016 RI Home Show

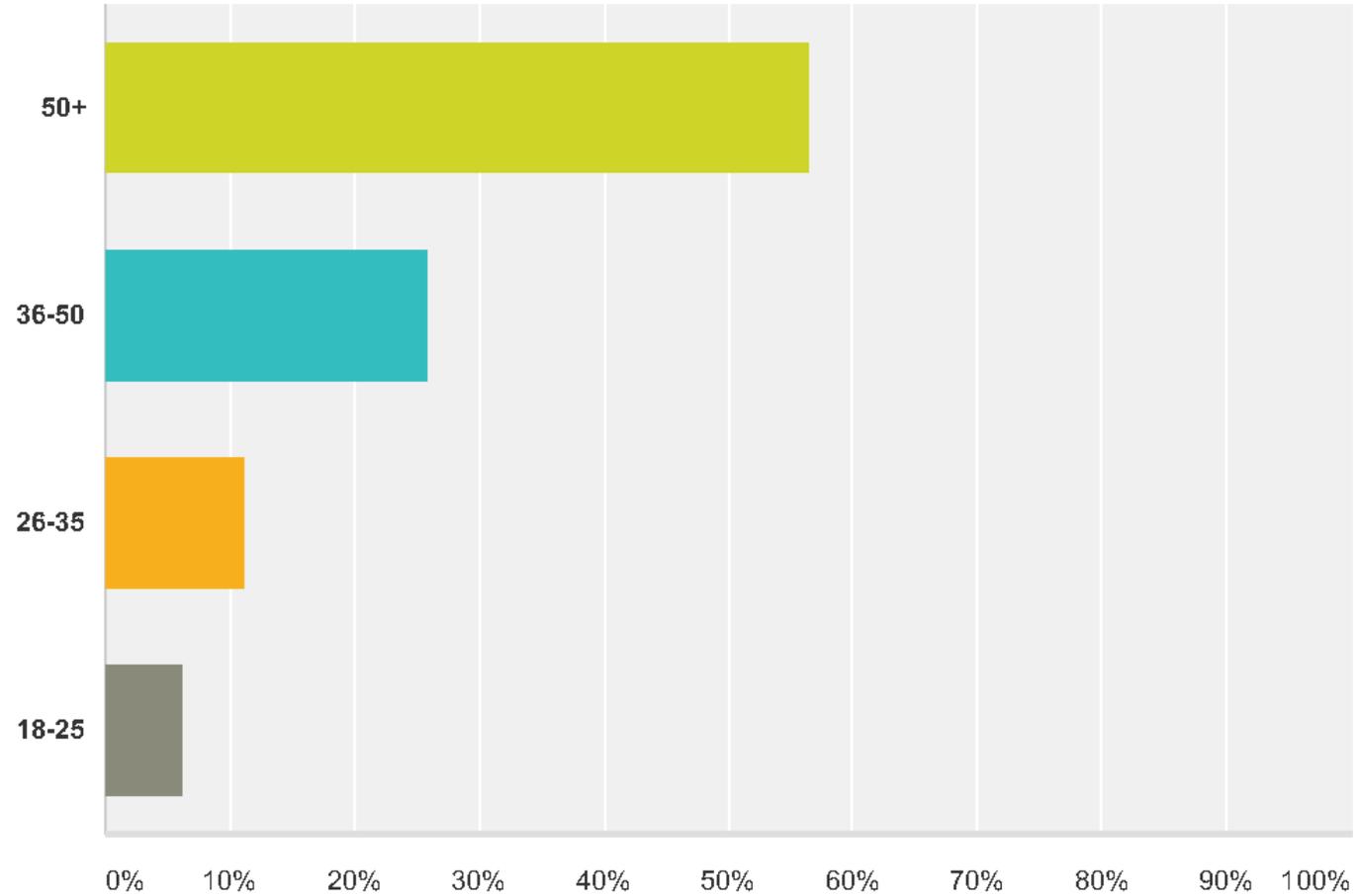


Survey Says

Age

Q3 Age?

Answered: 143 Skipped: 1



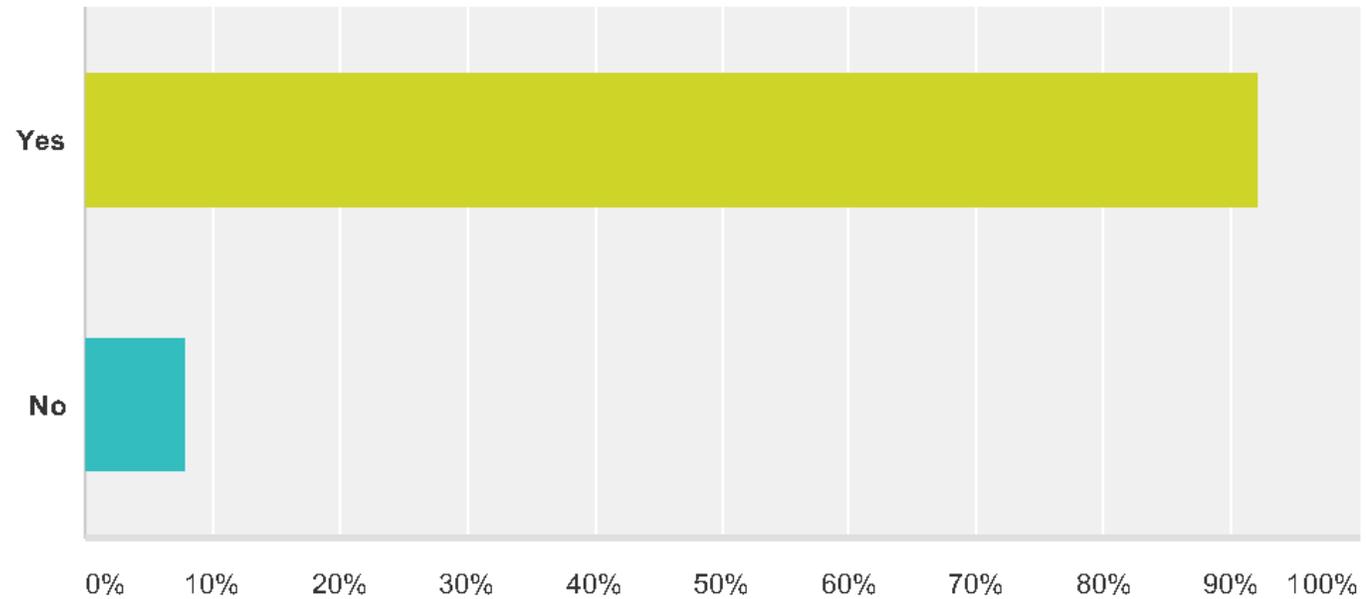
Survey Says

Expectations

2016 RI Home Show

Q4 Did the show meet your expectations?

Answered: 140 Skipped: 4

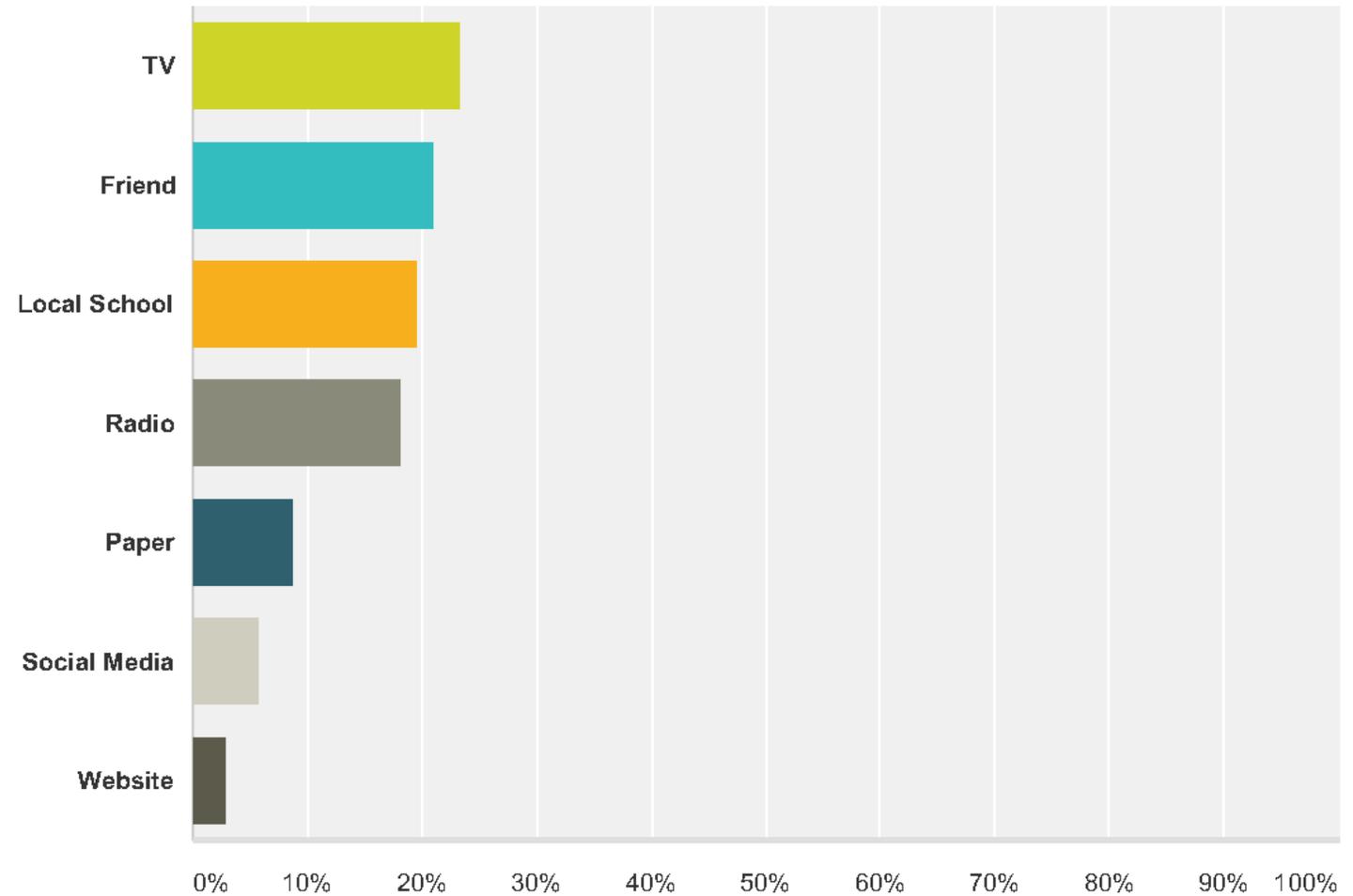


Survey Says

Heard of expo via...

Q5 How did you hear about the show?

Answered: 137 Skipped: 7



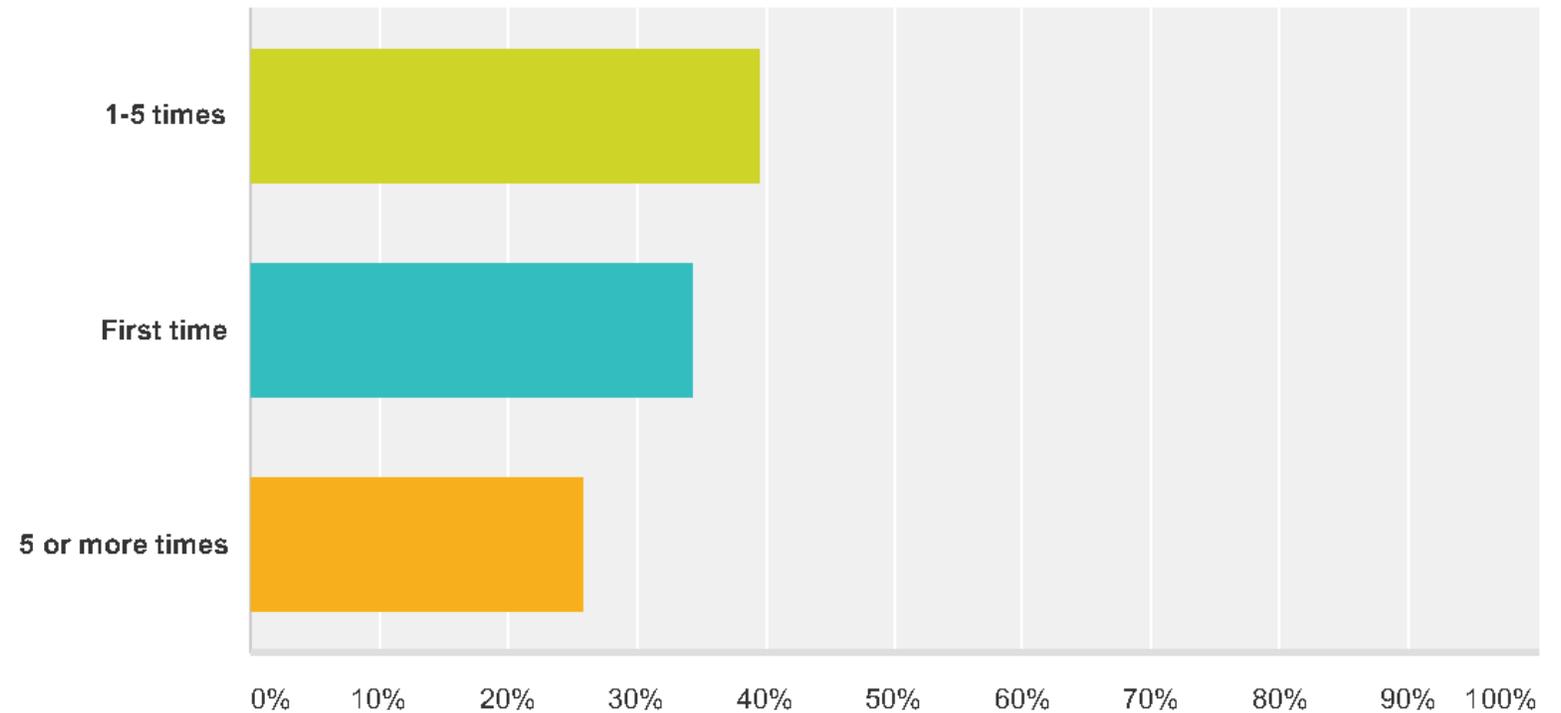


Survey Says

Frequency attending

Q6 How many times have you come to this show?

Answered: 139 Skipped: 5



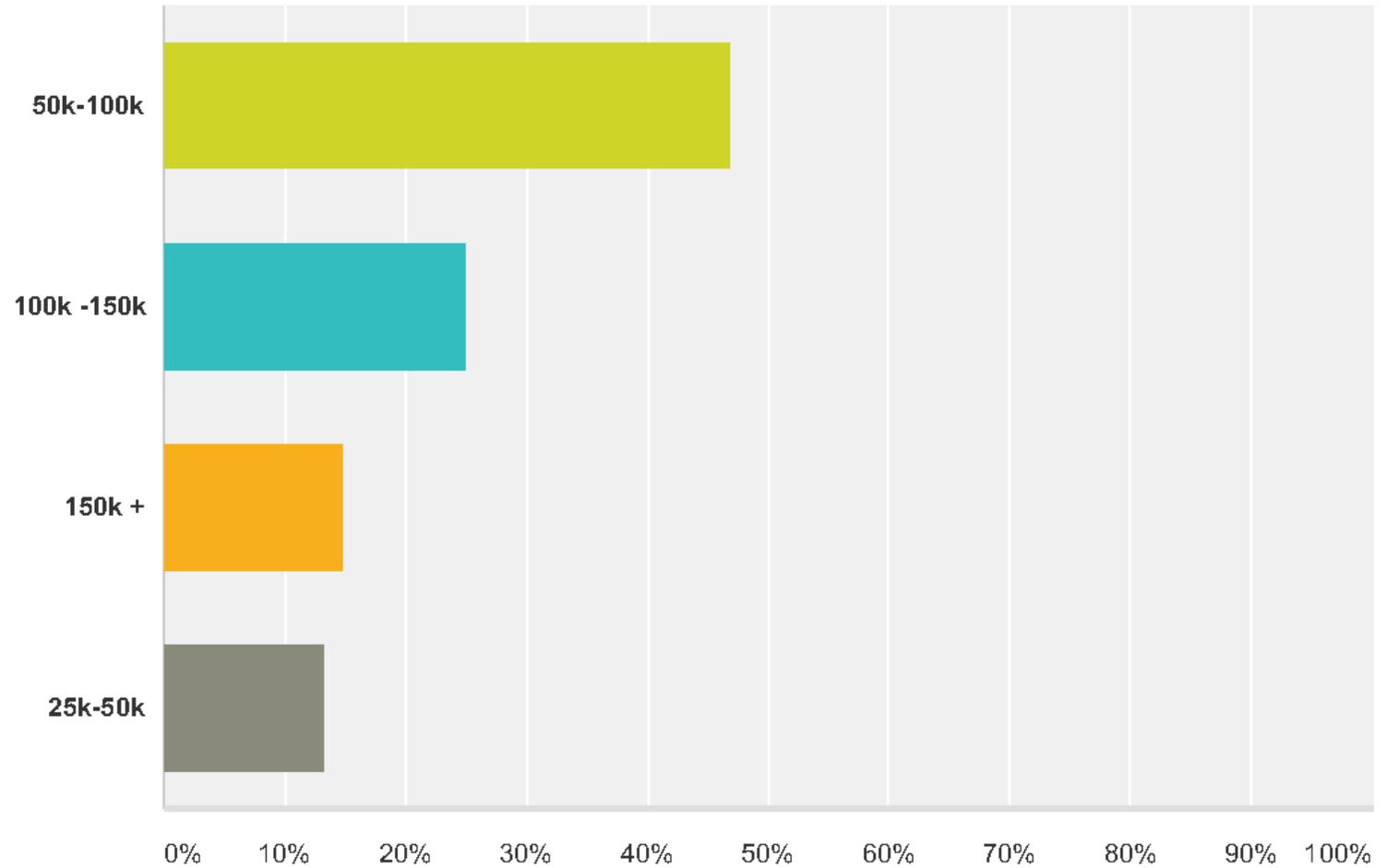
Survey Says

Household Income

Q7 What is your household income?

Answered: 128 Skipped: 16

2016 RI Home Show



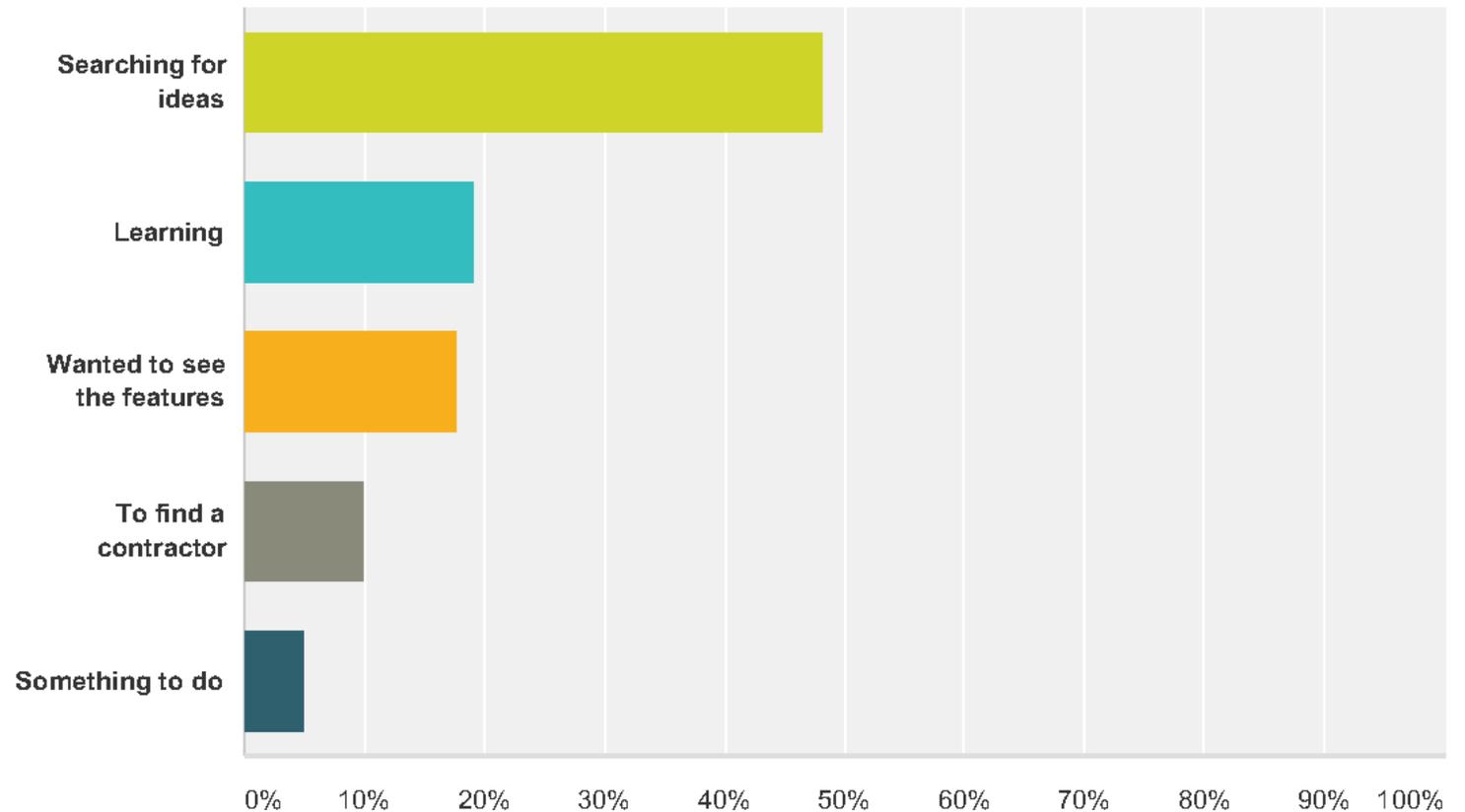
Survey Says

Reason for attending

Q9 What was your main reason for coming to the show?

Answered: 141 Skipped: 3

2016 RI Home Show

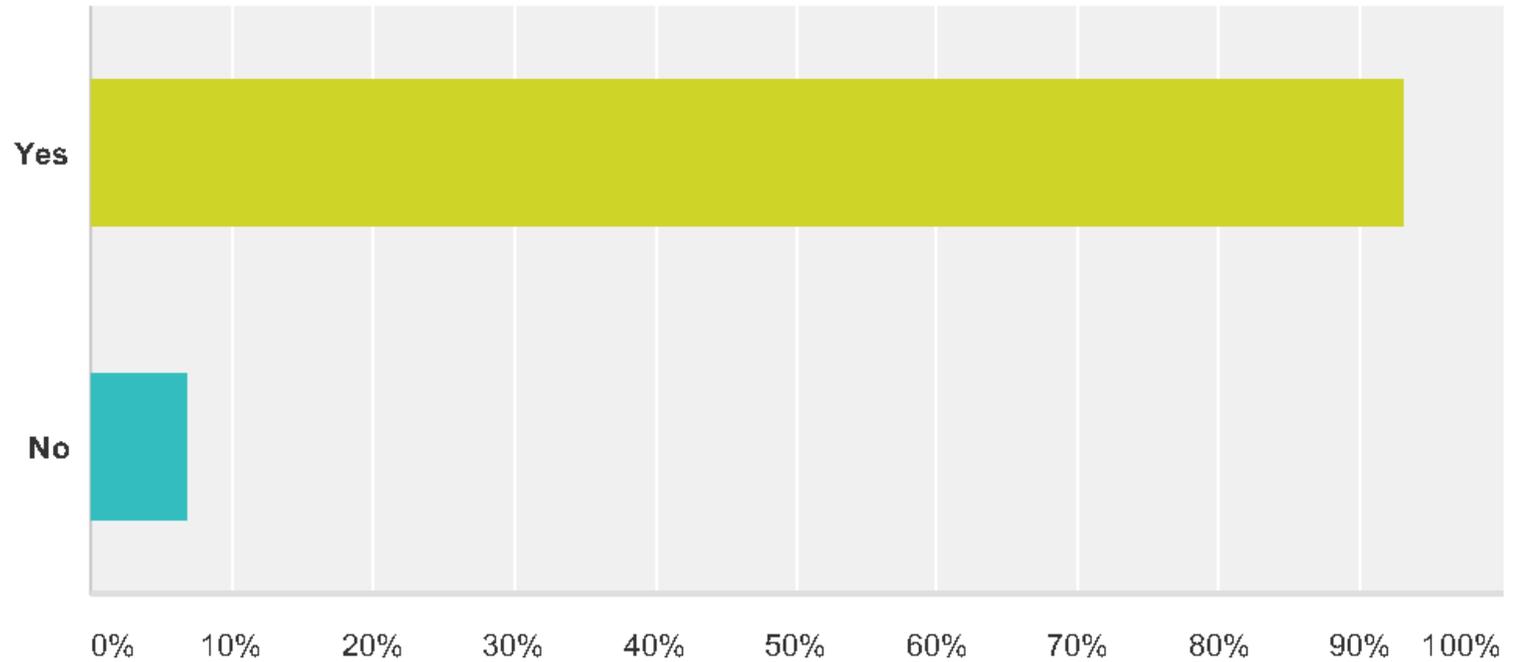


Survey Says

Ticket Price

Q10 Do you feel the ticket price was fair?

Answered: 143 Skipped: 1



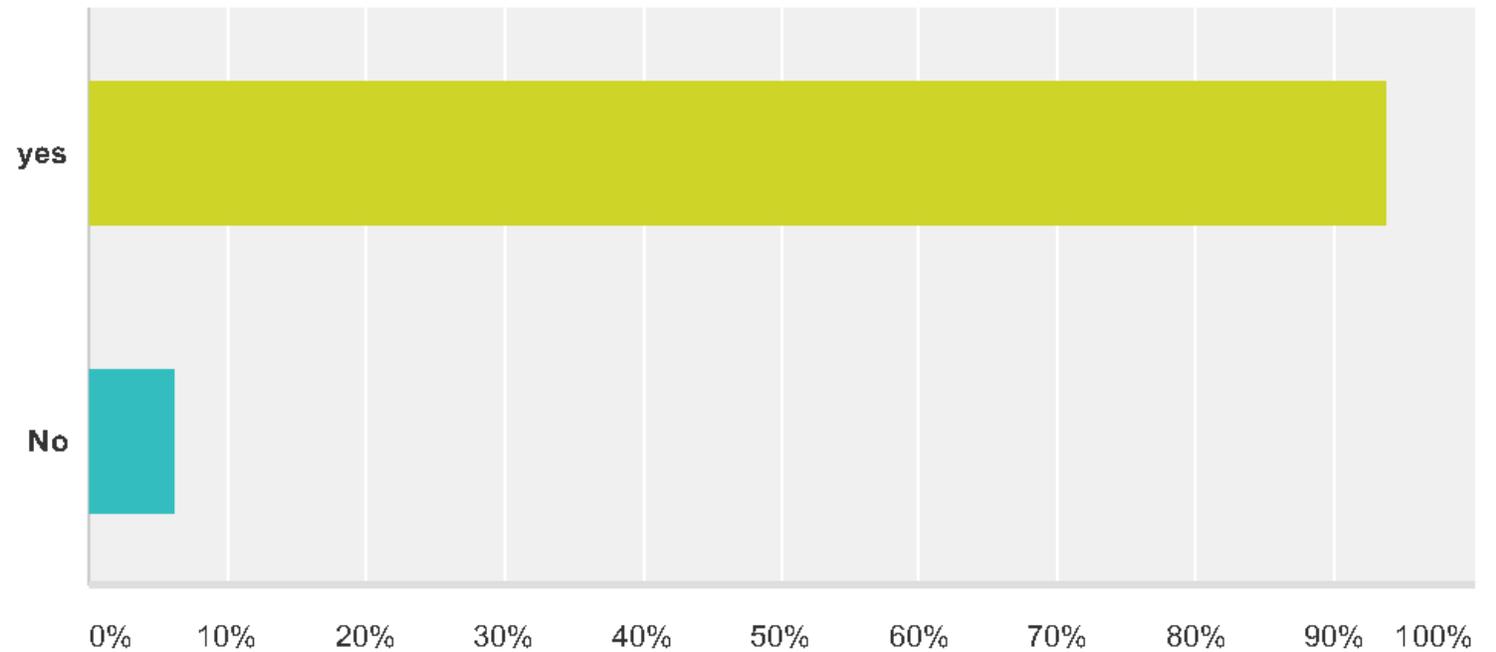
Survey Says

Recommendation

2016 RI Home Show

Q11 Would you recommend the show to a friend?

Answered: 144 Skipped: 0

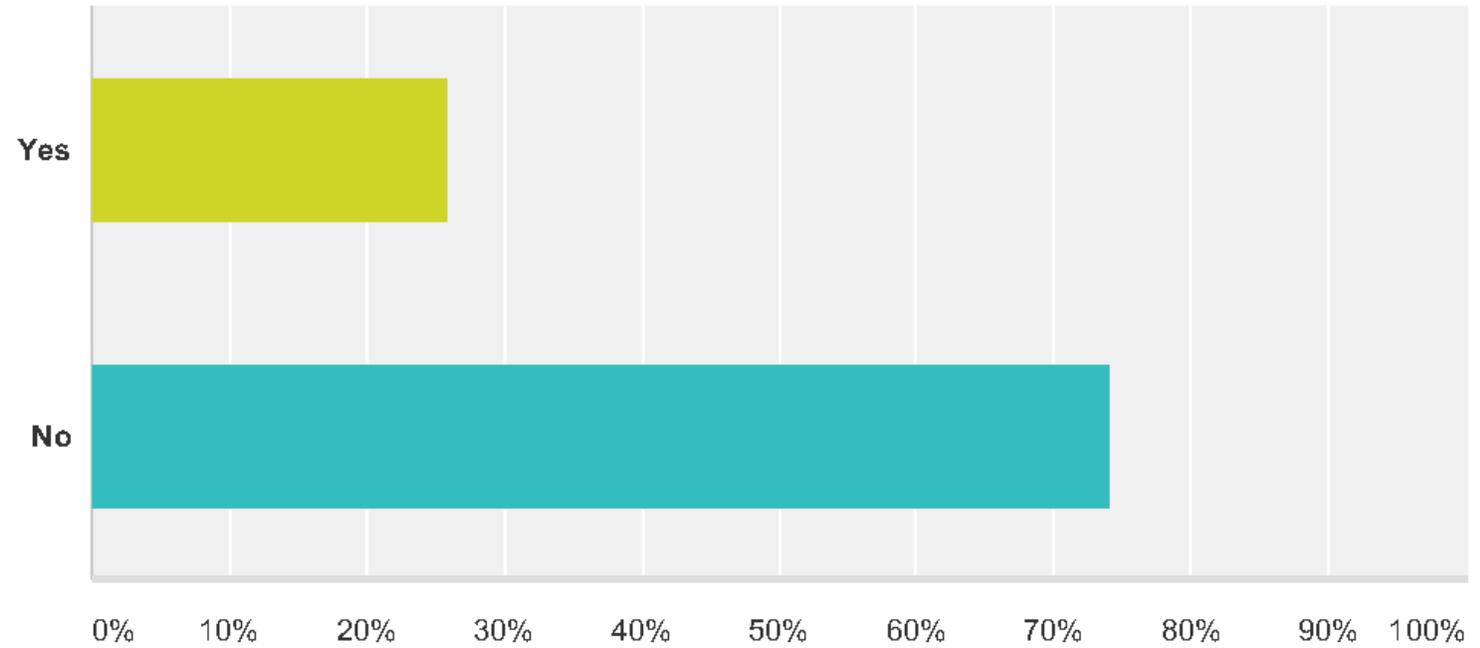


Survey Says

Looking for contractor

Q12 Were you looking for a contractor?

Answered: 143 Skipped: 1



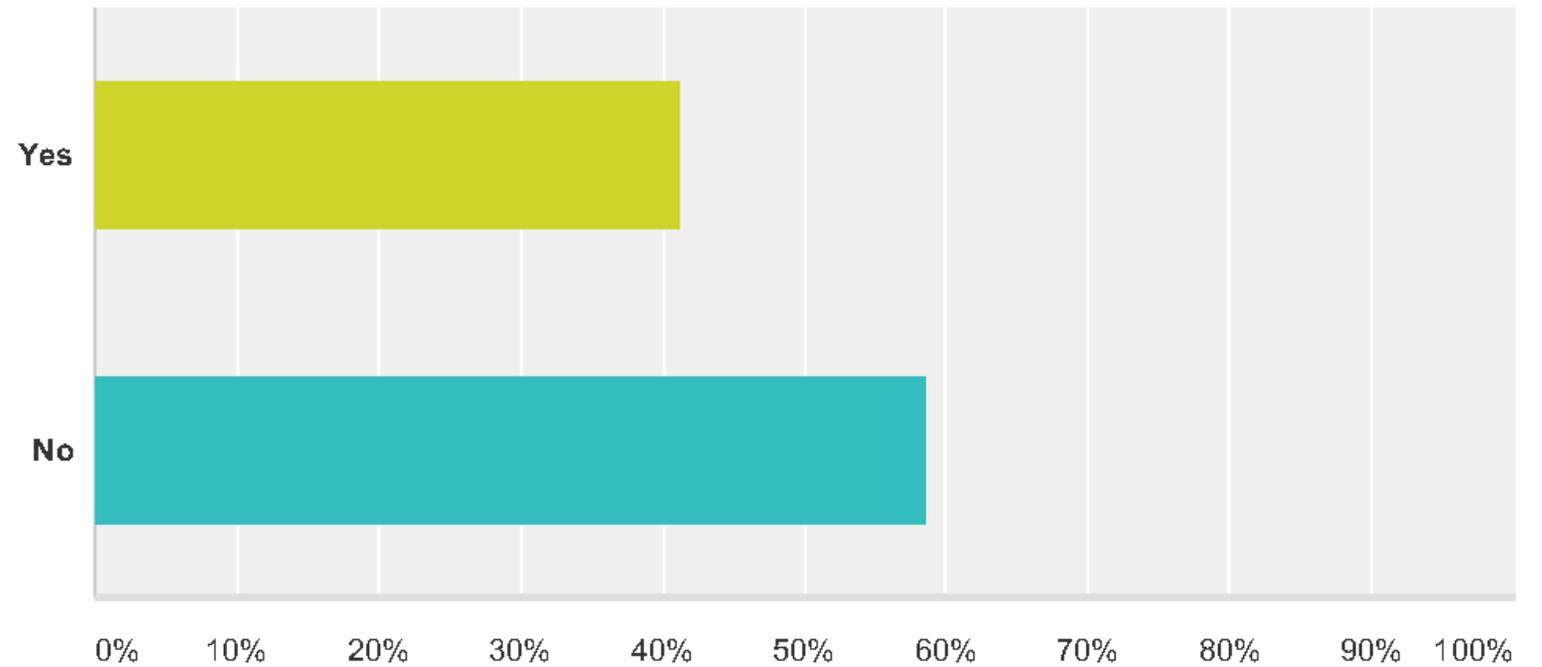
Survey Says

Found contractor

Q13 Did you find a contractor?

Answered: 97 Skipped: 47

2016 RI Home Show



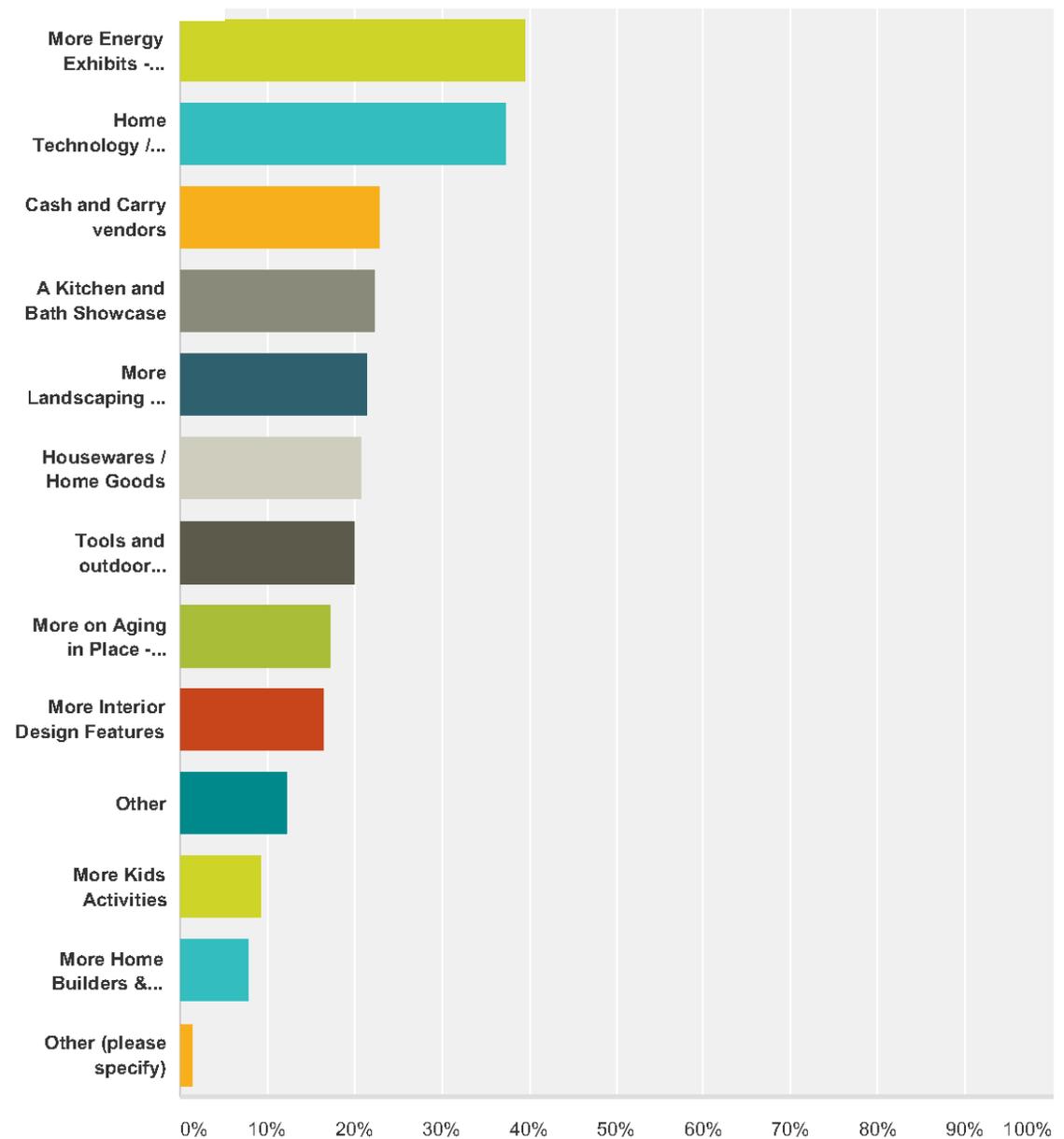
Survey Says

Like to see more of

Q14 What would you like to see more of at a future RI Home Show?

Answered: 139 Skipped: 5

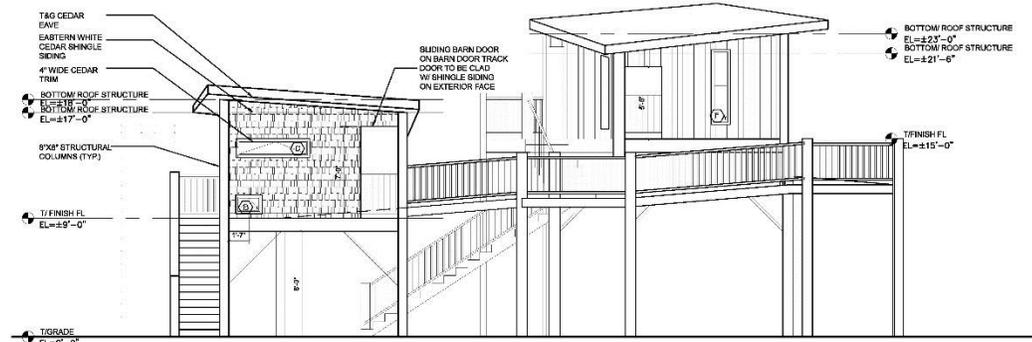
2016 RI Home Show



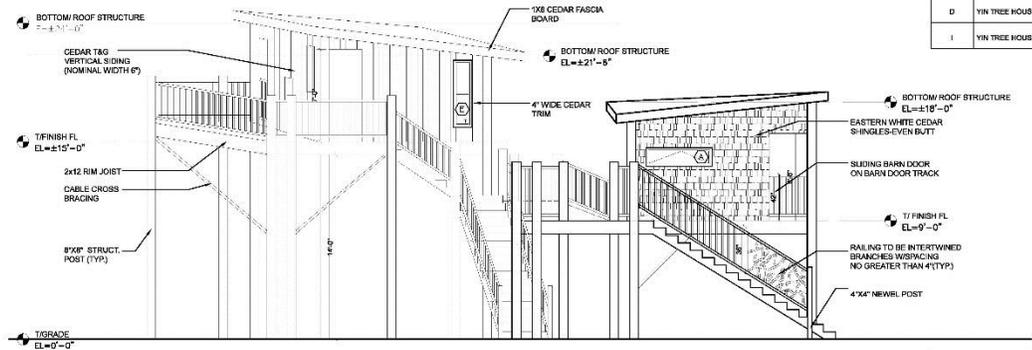
Show Highlights

- Two GIANT solar tree houses with elevator (ADA)
- Natures garden landscape around tree houses
 - Constructed by horticulture students and RINLA
- Designers Challenge showcase 1,543 sf.
 - Theme – Coastal Living 7 rooms 7 designers from R.I. and RISD
- Solar energy educational showcase 1,520 sf.
 - Electrical students are educating consumers at show
- Home technology education showcase
- Culinary students to prepare food during show set-up days for volunteers
- Outdoor Living cooking showcase featuring Unilock Products
- Broadcasting students participate in live radio broadcasts during show
- Jobs Bank live registration event including all CTE Schools
having information tables to promote and help recruitment
- Re-build of tree houses at Providence Boys & Girls Club in May 2016
- Over 20K attendees expected

Solar Tree Houses

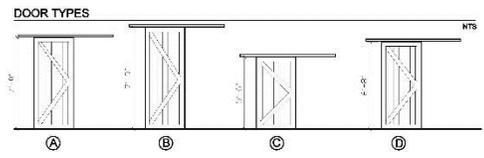


① EAST ELEVATION
1/4" = 1'-0"

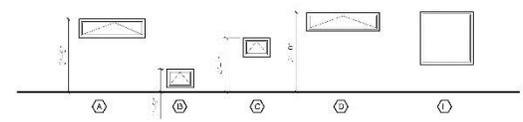


② SOUTH ELEVATION
1/4" = 1'-0"

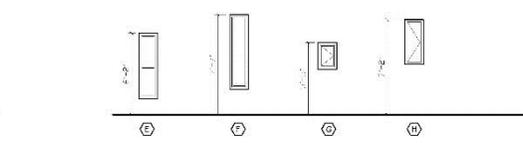
DOOR SCHEDULE						
KEY	LOCATION	SIZE	TYPE	DOOR FINISH	HARDWARE	NOTES
FIRST FLOOR						
1	BARN DOOR	3'-0" x 7'-0" x 2"	A	NATURAL	3	
	BARN DOOR	3'-0" x 7'-0" x 2"	B	NATURAL	3	
	BARN DOOR	3'-0" x 5'-0" x 2"	C	NATURAL	3	
	BARN DOOR	3'-0" x 6'-0" x 2"	D	NATURAL	3	



WINDOW SCHEDULE (YIN)							
KEY	LOCATION	OPENING (w x h)	OPERATION	MFR. #	CUSTOM SIZE	TEMPERED	HEAD HEIGHT
FIRST FLOOR							
A	YIN TREE HOUSE	5'-0" [X] 1'-6" R.O. 4'-11" [X] 1'-8" UNIT SIZE	AWNING	ANDERSON CR 15			5'-6"
B	YIN TREE HOUSE	2'-0" [X] 1'-8" UNIT SIZE	AWNING	ANDERSON CR 12		X	1'-9" TEMPERED
C	YIN TREE HOUSE	2'-0" [X] 1'-6" UNIT SIZE	AWNING	ANDERSON CR 12			4'-1"
D	YIN TREE HOUSE	5'-4" [X] 7'-2" R.O. 5'-4" [X] 7'-2" UNIT SIZE	AWNING	ANDERSON CR 156			6'-0"
I	YIN TREE HOUSE	4'X4'	FIXED SKYLIGHT	VELUX VSS-508-004			



WINDOW SCHEDULE (YANG)							
KEY	LOCATION	OPENING (w x h)	OPERATION	MFR. #	CUSTOM SIZE	TEMPERED	HEAD HEIGHT
FIRST FLOOR							
E	YANG TREE HOUSE	1'-8"X2'-0" R.O. 1'-7" [X] 4'-11" UNIT SIZE	DOUBLE HUNG			X	6'-2" TEMPERED
F	YANG TREE HOUSE	1'-8"X2'-0" R.O. 1'-7" [X] 2'-2" UNIT SIZE	DOUBLE HUNG	ANDERSON ADDRESS			7'-7"
G	YANG TREE HOUSE	1'-5"X2'-2" UNIT SIZE	CASEMENT	ANDERSON CR 12			5'-9"
H	YANG TREE HOUSE	1'-4" [X] 3'-11" R.O. 1'-5"X3'-11" UNIT SIZE	CASEMENT	ANDERSON CR 13			7'-2"



NOT FOR CONSTRUCTION

ANN CLARK ARCHITECTS
533 W Chestnut St #205 | Chicago IL 60642
312.550.3557 | annclarkarch.com

RIBA 2016 HOME SHOW TREE HOUSE

NOTE: These drawings may have been reproduced or in a less different form than the original design. Owner and Architect assume no responsibility for the use of, in whole or in part, without the written permission and consent of Ann Clark Architects. Any published photographs of the building should credit Ann Clark Architects as the sole designer.

DATE	ISSUED FOR:
11.20.2015	FOR SCHOOL REVIEW

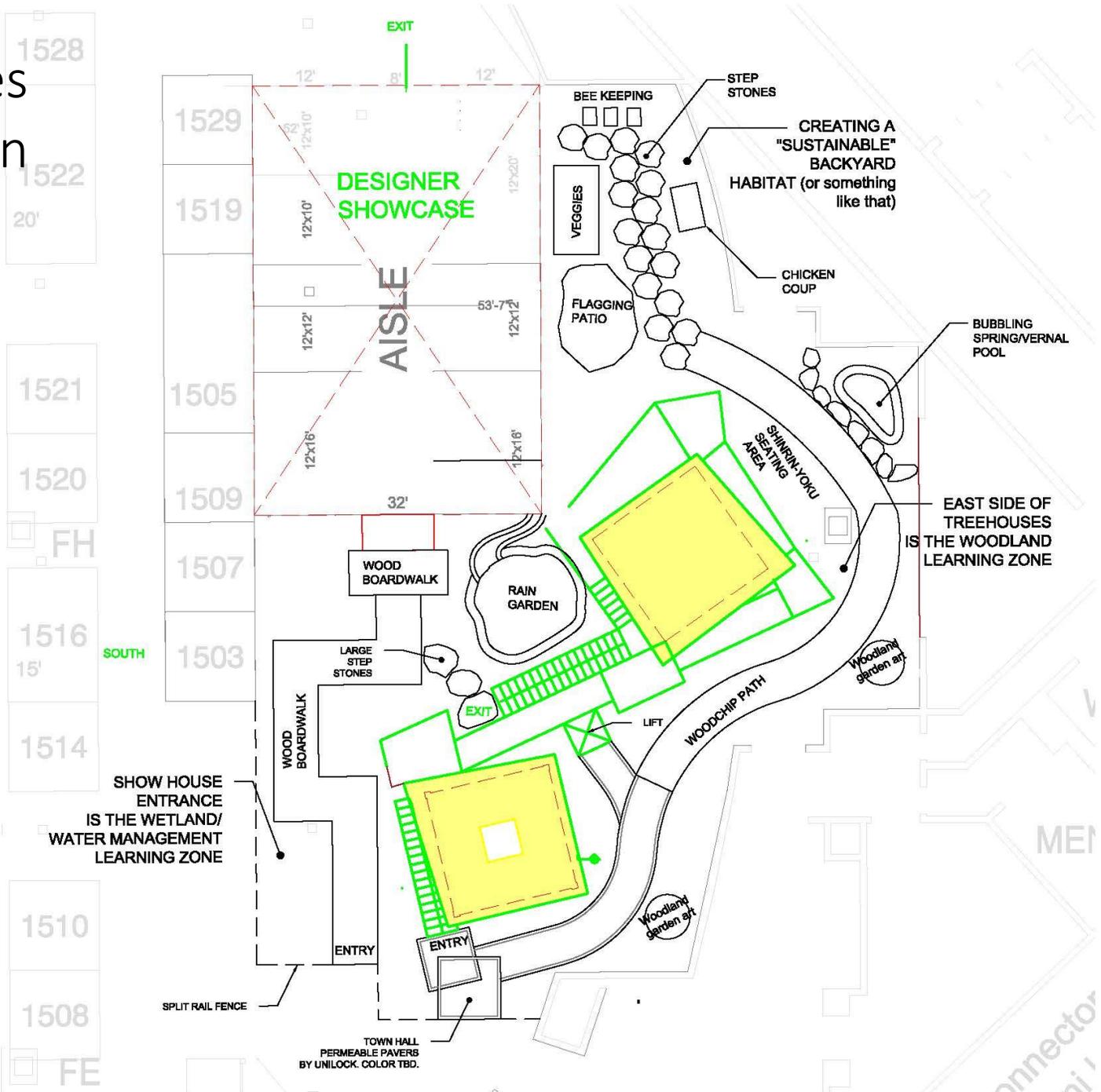
These drawings were prepared under my license and to the best of my knowledge conform to the codes and ordinances of Providence RI.
Ann F. Clark, Registered Professional Architect
6892

A2-1

DRAWN BY: ACA PROJECT NO: A2-1
SCALE: As Noted

A2-1

Solar Tree Houses Landscape Design



Documentary on CTE by Lawrence Kraman

The
Media

















































2016

2016 Designer's Showcase Competition
Best Coastal Theme



66th Annual
Rhode Island Home Show
March 31 - April 3, 2016
Rhode Island Convention Center



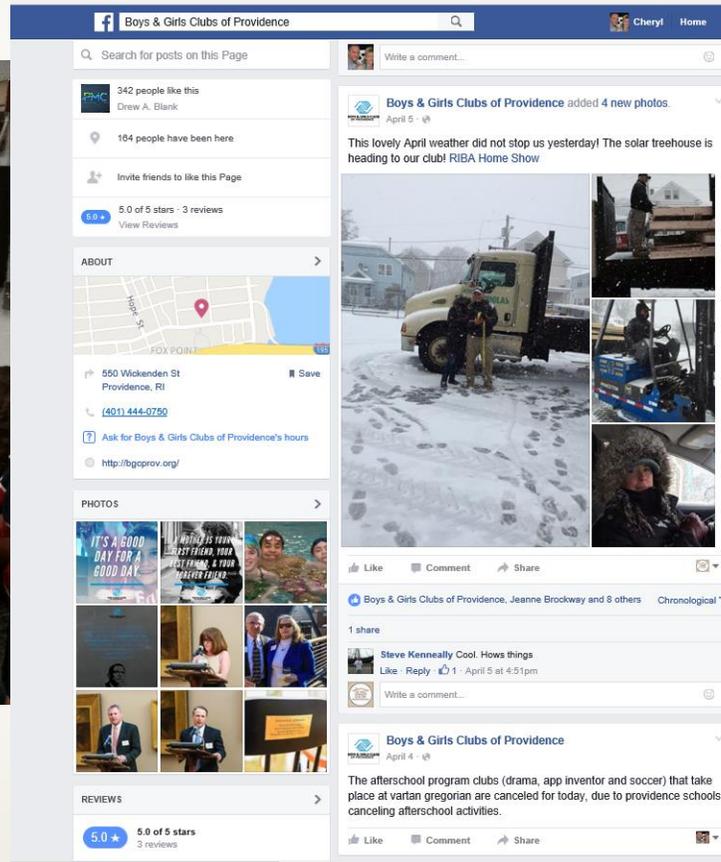
RI BUILDERS
ASSOCIATION

DeCristo Design
INTERIORS

Solar Tree House donated to Boys & Girls Club Providence

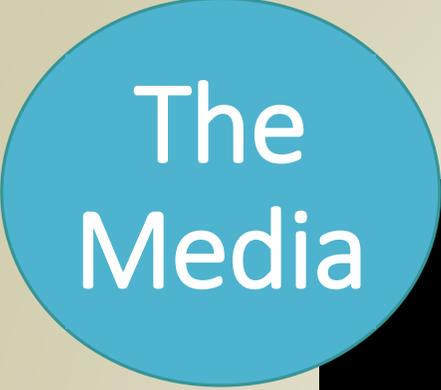
Nicole Dufresne-Executive Director at the Boys and Girls Club of Providence shows plans of the tree house to some of the students.

CTE students next experience is re-assembly!



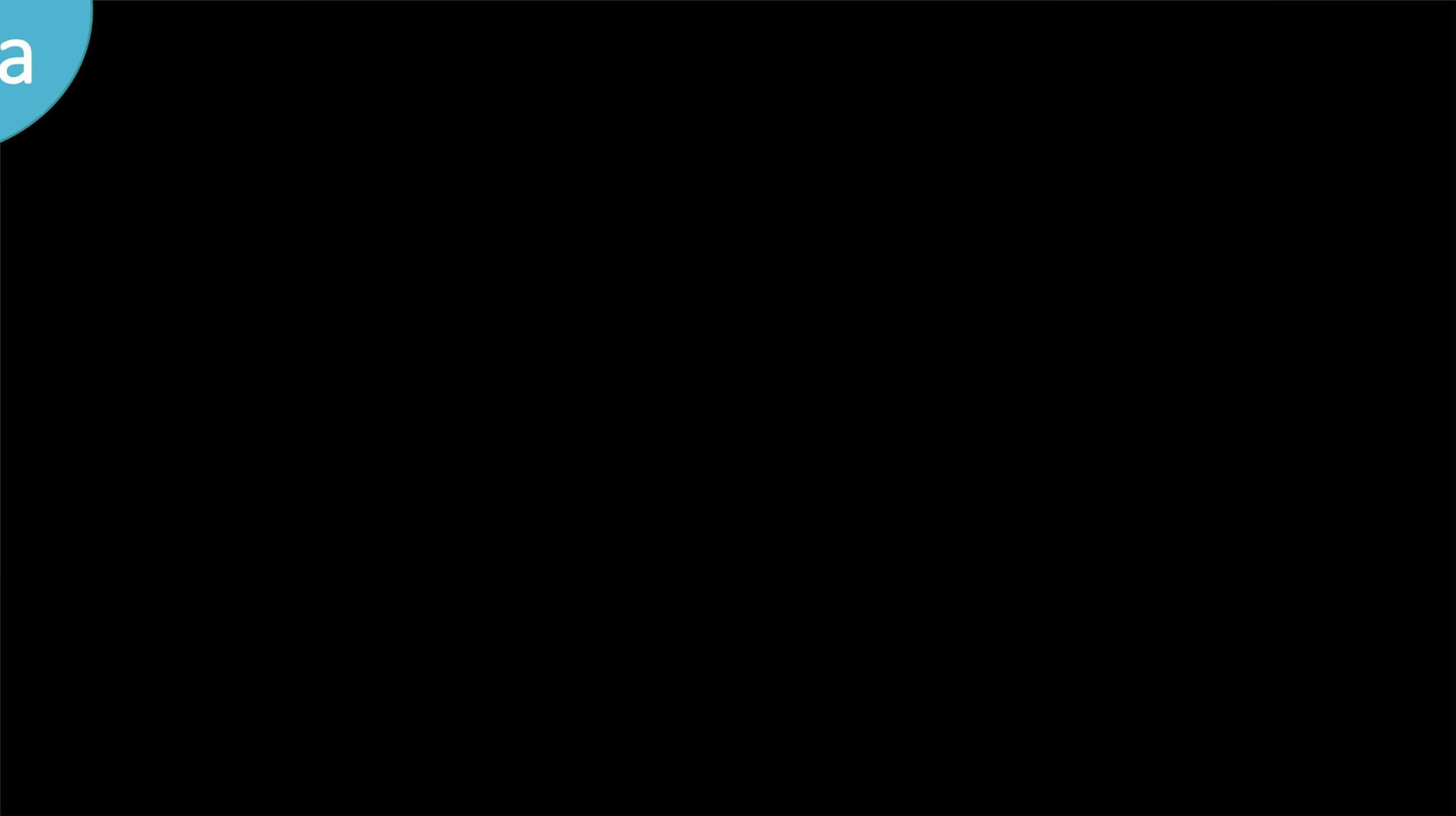
JOBS BANK REGISTRATION





The Media

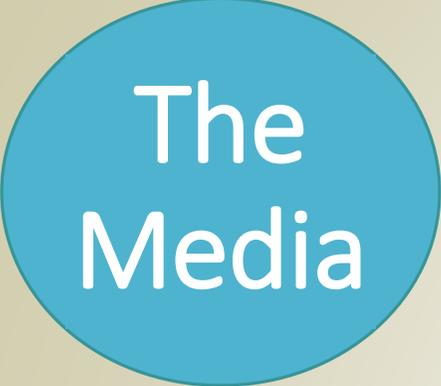
2016 Time-lapse Video



THE RHODE ISLAND BUILDERS
ASSOCIATION
THANKS
YOU!



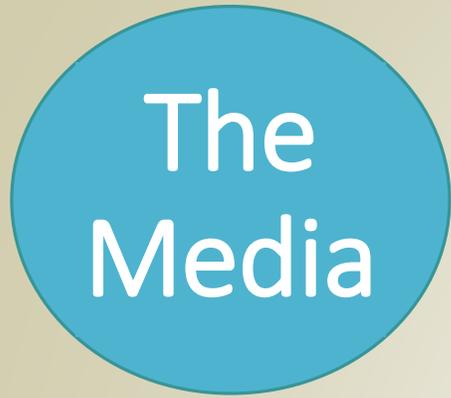


The Media

2016 Marketing & Public Service Announcements

Results of Public Relations Efforts

- Providence Business News – online story 3/24
 - http://pbn.com/Home-Show-coming-to-Convention-Center,113043?search_filter=home+show&sub_type=stories,packages
- NBC-10 – 2 live broadcasts plus stories on the turnto10.com website
 - <http://turnto10.com/news/local/rhode-island-home-show-features-amazing-treehouse-built-by-students>
- ABC6 – 1 live broadcast
- EcoRI – online story on 3/30
 - <http://www.ecori.org/calendar/2016/3/22/551seeb3b7b2aka1ktwzaku1f1m14l>
- RI Monthly – online story on 3/30
 - <http://www.rimonthly.com/Blogs/ridaily/March-2016/Five-Cant-Miss-Events-of-the-Week-March-31April-6/>
- ProJo – cover story in print on 3/26 plus online story
 - <http://www.providencejournal.com/article/20160325/ENTERTAINMENTLIFE/160329675>
- ProJo – Going Out section 3/31
- RI Public Radio (NPR) – Clips played 3/30
- Warwick Beacon – <http://warwickonline.com/stories/two-toll-gate-students-take-to-air-waves-at-home-show,111155>
<http://warwickonline.com/stories/warwick-student-built-solar-tree-house-featured-at-home-show,110816>
- NAHB – National Association of Home Builders Newsletter
http://nahbnow.com/2016/04/student-built-solar-tree-house-opens-job-opportunities/?utm_source=newsletter&utm_medium=email&utm_campaign=mmb0418



2016 Marketing & Public Service Announcements

Radio Ad's and PSA's



15 GENERAL rev.mp3



30 GENERAL rev.mp3



60 GENERAL rev.mp3



30 STUDENTS rev.mp3



RI BUILDERS HOME SHOW PSA(1).mp3

WADK interview with Bruce Newbury is attached



john marcantonio 3-29-16 WADK interview.mp3

Rhode Island Energy Efficiency

First Quarter 2016 | National Grid

May 5th, 2016

Overview

National Grid is off to a great start for the first quarter of 2016. The Company focused on promoting program participation and improving customer experience to create a solid foundation for reaching energy savings and participation targets in 2016. At the end of the first quarter the Company achieved 19% of the electric savings goal and 16% of the gas savings goal.

To promote participation, National Grid designed a plan to reenergize the heating and cooling programs through enhanced trade ally engagement and a more unified HVAC offering to increase consumer awareness. On the commercial side, National Grid officially launched new LED luminaries in the upstream lighting initiative to expand the current line-up of upstream products. With appropriate incentives, the Company expects to see rapid uptake by the middle of the third quarter.

For the third year in a row, National Grid partnered with the RI Office of Energy Resources (OER) and the RI Energy Efficiency and Resource Management Council (EERMC) to host the Rhode Island Energy Expo at the 2016 RI Home Show on March 31st through April 3rd. With over 20,000 attendees, the Company aggressively promoted the EnergyWise Home Energy Assessment and received a remarkable 681 on-site requests for assessments.

National Grid also focused on improving customer experience in the first quarter. Efforts included upgrading email Home Energy Reports and developing a digital promotional module on online audits and new features of the recently-launched National Grid US Retail Website. In the commercial sector, the Company's partnership with Leidos in the industrial initiative is helping customers to optimize industrial and manufacturing water heating systems as well as identify other energy savings opportunities.

EnergyWise was awarded the 2016 ENERGY STAR Partner of Year for Program Implementation, which recognizes the work in operating productive energy efficiency programs, achieving outstanding customer relations, and working closely with state and local governments.

The 2015 Jobs Study was also finalized in the first quarter. The study found that National Grid's 2015 energy efficiency programs supported 695.8 full-time equivalent (FTE) workers. Most of the jobs created as a result of the energy efficiency investments were local because they were tied to installation of equipment and other materials. In fact, of the 1,009 companies and agencies involved in National Grid's 2015 EE programs, 79% were located in Rhode Island.

Based on the strong first quarter results, National Grid believes 2016 will be another innovative and successful year to come.

2016 Program & Initiative Updates

Residential New Construction

- Residential New Construction had a strong first quarter with 88 completed units.
- 65% of completed homes were new construction and 35% were renovation-rehabilitation. 34% of homes served were Income Eligible.
- 62 homes achieved Tier II savings (a minimum of 25% savings over the program baseline).
- 4 homes in North Kingstown, Warren, Bristol, and Charlestown achieved Tier III savings (a minimum of 45% savings over the program baseline).
- 232 units enrolled in the Program. These newly enrolled projects have aggressive timelines and their progress may confirm whether these initial signs represent a potential turnaround in the market.
- Success story on Affordable Housing Projects:
 - Ashton Village enrolled in the Program in 2014 with the last unit completed in February 2016. In total, 53 units participated, with 42 renovations and 11 new constructions. These units achieved an average of 31.8% savings over the Program savings baseline, and scored an average HERS Index of 65. The project consisted of a set of millworker cottages located next to the recently reclaimed Ashton Mill and is considered to be one of the most intact mill villages in the region. Valley Affordable Housing purchased 10 of these buildings with the intent to both restore and preserve the buildings and to provide affordable housing.



Income Eligible

- Rhode Island Department of Human Services (DHS) Management Team, National Grid, and CLEAResult met to discuss the integration of budgets based on funding from the federal Department of Energy (DOE) and the Low Income Home Energy Assistance Program (LIHEAP) programs, and National Grid energy efficiency funds. Budget integration allows programs to maximize the leveraged funds, match funding to capacity, and build a reliable funding stream for the Community Action Program (CAP) agencies.
- Two Weatherization Technical Committee meetings were held in the first quarter. Topics discussed include updates on kneewall options, enclosed space test equipment selection, Hancock training, Residential Energy Dynamics (RED) calculations for ASHRAE implementation, and Chimney Liners and recurring Hancock software issues.

- DHS, contractors, and CLEAResult participated in OSHA Enclosed Space training.
- The RI Income Eligible Services Operations Manual will be finalized and distributed to 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 first quarter. CLEAResult has contacted every contractor on the State's roster and is working with CAP agencies to smoothly integrate the Background Check policy. DHS has collaborated with CLEAResult and will be requiring all contractors implementing DHS funded projects to meet the requirements of the National Grid Background Check program, effective May 20, 2016.

EnergyWise

- EnergyWise was awarded the 2016 ENERGY STAR Partner of Year for Program Implementation.
- 2,235 home energy assessments were completed in the first quarter. In general, the program activity, aside from the Home Show, has been slower than in recent years. Much of this is attributed to a warm winter and low energy prices. The Company will be actively marketing the program in the upcoming quarter.
- There will be no more compact fluorescent lamps purchased for this program, so when the existing supply is depleted, EnergyWise will be installing primarily LEDs.
- 320 HEAT loans were in completed in the first quarter for a total of \$1.78 million loan.
- 520 gas weatherizations were completed through the first quarter.

EnergyWise and Income Eligible Multifamily

- The first meetings of the new energy efficiency Multifamily Working Group took place at National Grid and included stakeholders from OER, Green and Healthy Homes Initiative (GHHI), RI Housing, Optimal Energy, and RISE Engineering. These meetings will continue to take place once a month through the planning of the 2017 program plan.
- National Grid along with RISE Engineering presented at the Community Association's Institute Annual Condo Hero event on the Multifamily retrofit Program. The presentation was well received and an article was written for Condo Media Magazine highlighting National Grid's efforts.
- National Grid's Marketing, Strategy, and Implementation team worked together to create a multi-page Case Study of the Wethersfield Condominium complex retrofit to use in the recruitment of new and interested condominium complexes. An apartment case-study is underway.
- Income eligible electric is off to a good start with impressive work in the pipeline. There is a slower start on the gas side, so the strategy team is in the process of developing a plan with marketing, execution and RISE to address any concerns and bring in more projects.

ENERGYSTAR® Lighting and Appliances

- ENERGY STAR has a specification revision in effect which will result in lower cost and shorter measure life for ENERGY STAR qualified bulbs that will be offered as early as July, 2016. The shorter lifespan bulbs will compete against low priced non-ENERGY STAR qualified products. National Grid will encourage all products to support full lines of ENERGY STAR lighting products and not just the lower cost items.
- Educational tables were featured at The Home Depot in Coventry and Lowe's in Cranston in March, The Home Depot in Middletown and Westerly in February, and The Home Depot in Warwick and North Kingstown in January to promote efficient lighting and products.
- Pool Pump trainings began with dealers, installers, distributors and manufacturers. Buying groups will be the next target to learn about the upstream incentives that are being offered for high efficiency pool pumps.
- Refrigerator and freezer recycling has a tentative launch date of June 1, 2016.

ENERGYSTAR® HVAC (Heating and Cooling)

- The Company and the lead vendor designed a plan to reenergize the Gas and Electric Heating and Cooling Programs through enhanced trade ally engagement and a more unified HVAC offering to increase participation and consumer awareness of the Company's commitment to energy efficiency.
- The Electric HVAC program released an announcement to partners which included the 2016 rebate forms and internal program operational documents. Field representatives have been corresponding and interacting regularly with trade ally partners, including installation contractors, distributors and manufacturers, to articulate the benefits of program participation and incentives for customers.
- There was one classroom training conducted for Airflow and Charge Check (AC Check) technicians in preparation for the 2016 summer cooling season. A new online training 'Airflow basics' was made available to contractors coming through the training, as well as some other trade ally partners.

Home Energy Reports

- During the first quarter of 2016, the Home Energy Report program helped customers save 7,758 MWh and 24,419 MMBtu.
- Digital engagement was particularly high compared to previous quarters, with an email open rate of over 33%.
- First quarter enhancements to the customer experience included the migration to the second-generation email Home Energy Report, and a digital promotional module encouraging customers to complete the online audit and explore the new features of the recently-launched National Grid US Retail Website.

Community Initiative

- Charlestown and Narragansett joined the RI Energy Challenge. Town officials sent emails to over a 1,000 residents in Charlestown while materials have been distributed through community centers, the clerk's office, the library, and chamber of commerce in Narragansett.
- Efforts in the City of Providence wrapped in late January with a final tally of 3,370 residents signing up to take the pledge to be more efficient. The city, along with Johnson & Wales University, was celebrated on April 1st at City Hall for this successful effort.
- The CAP agencies continue to speak with clients and have placed posters and materials in their lobbies. Special meetings were held with South County CAP to ask for increased communication while working in the area for the Challenge.
- The vendor for the program, SmartPower, hired an intern from Johnson & Wales University's Sustainability Office to focus on the RI Energy Challenge Efforts and help with communications to students statewide.

Codes Initiative

- In the first quarter, National Grid Procurement awarded a new contract to CLEAResult for 2 years through December 31, 2017. This award was made after a National Grid team solicited proposals via an RFP and then conducted a thorough review of the 5 proposals received and conducted interviews of 4 candidate firms.
- 7 residential and 1 commercial classroom energy code trainings were conducted in the first quarter. The residential trainings drew 202 attendees and the commercial training drew 8 attendees. Residential attendance was boosted by conducting two sessions at the Rhode Island Building Officials Association (RIBOA) Expo, which drew 160 attendees.
- The initiative also fielded 10 residential and 1 commercial Circuit Rider phone calls in the 1st quarter, and conducted 4 residential on-site Circuit Rider field visits.

Large Commercial New Construction

- Both the electric new construction program and the gas new construction program are on target to meet 2016 goals.
- Upstream initiatives:
 - After a brief pilot in 2015, the Company officially launched 1x4, 2x2, and 2x4 LED luminaries in the upstream lighting initiative. National Grid believes that this will be a great addition to the current line-up of upstream products. If the incentive is set correctly, the Company expects to see rapid uptake by the middle of the third quarter.
 - National Grid and the Massachusetts Program Administrators (PAs) have begun work on an RFP for an administrator for the upstream HVAC initiative.
- Standardized testing to meet international standards began January 1st. The next Building Operator Certification (BOC) Level I class will begin in Providence on May 3rd. This class runs through July, with the test scheduled for Sep 13th.

- Several municipalities have expressed interest in purchasing their own street lights and replacing them with LEDs. The City of Providence will be the first to buy lights. Providence expects to have all of street lights converted to LEDs with controls by the end of the summer.

Large Commercial Retrofit

- The Company's partnership with Leidos in the industrial/manufacturing sector is producing great projects.
 - Working with Jeff Dunham (Commercial Sales) and a local newspaper, the National Grid Industrial Initiative team identified four 50 kW hot water tanks in process that are used to supply hot water to the plate making machines for washing purposes. The team metered the electricity usage on the tanks for one week and was able to determine that approximately 603,111 kWh of electricity was used annually to provide the hot water used in the washing process. The industrial initiative has proposed replacing the tanks with three 150,000 btu/hr on demand natural gas domestic hot water heaters to be installed in line before the electric hot water heaters. The incoming city water will be heated to the required 135 degrees and stored and maintained in the existing electric hot water tanks. It is estimated that 20% of the existing usage will be required to maintain water temperature when the process is not in use.
- National Grid is actively working with municipal buildings that are currently participating in the Efficient Building Fund through RI Infrastructure Bank (RIIB). The Company is also providing dedicated project management support to several municipalities. The municipalities have indicated this as a high value service in addition to incentives and technical support that National Grid currently offers.
- On March 16th EnergySmart Grocer and National Grid presented an award for the 'EnergySmart Grocer of the Year' to a Rhode Island Food Dealer Association member who showed a strong commitment to energy conservation and participation in energy efficiency programs. The awarded grocer, Dave's Marketplace, was a leader in Rhode Island and completed comprehensive projects in both lighting and refrigeration at multiple locations across their nine store chain.

Small Business Direct Install

- The Small Business Direct Install program has started out the year with a very strong first quarter performance. The Company believes this is due to the effect of increased marketing amongst the customer group.

Finance

- The Company, in partnership with RIIB, OER and the program manager SRS, have been working diligently to bring the Commercial Property Assessed Clean Energy (C-PACE) program to commercial customers in Rhode Island. The first months have been very busy and have involved process mapping, educating towns and vendors, creating procedural and technical documents, and collaborating on marketing materials. The

Company expects the program to officially launch in the second quarter and see the first projects shortly after.

Pilots

- The Company has been preparing for the residential demand response pilot. Outreach to customers should begin in May.

Evaluation

- Site visits and measurements were taken for the C&I Prescriptive Compressed Air (CAIR) study. The report is being produced, with the expectation of completion in the second quarter.
- On the C&I Prescriptive Chiller study, final touches were being added. The completed report is expected in the second quarter.
- The evaluation sample was drawn for the C&I Custom Process study. Tracking information was conveyed and site visits will be scheduled in the second quarter.
- For the C&I Custom HVAC study, the evaluation sample was drawn, tracking information was conveyed, and site visits will be scheduled prior to the summer metering season.
- For the C&I Custom Gas study, metering was installed and picked up during the first quarter. Site reports have begun and draft final report is expected in the second quarter.
- Site visits for the C&I Energy Code Compliance Study has begun. The study is expected to be completed by the end of the second quarter.

Energy Expo:

- The Energy Expo at the RI Home Show from March 31 to April 3 had over 20,000 attendees. National Grid was a co-sponsor along with OER. Through aggressive promotion of the EnergyWise Home Energy Assessment, National Grid received 681 on-site requests for assessments.
- 2,154 product packs were sold by Techniart, the lighting and products pop up retailer which resulted in sales of 13,304 lamps from multipack and individual sales.

Upcoming Events:

- ACEEE Finance Forum will be held in Newport May 22-24, 2016.
- Energy Summit at Gillette Stadium is scheduled for October 13, 2016.

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
Table 1. Summary of Electric 2016 Target and Preliminary 1st Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Demand Reduction (Annual kW)			Energy Savings (Annual MWh)			Customer Participation			Expenses (\$ 000)			Lifetime savings, MWh	Planned \$/kWh	Planned \$/kWh
Commercial and Industrial	Target	Year To Date	Pct Achieved	Target	Year To Date	Pct Achieved	Target	Year To Date	Pct Achieved	Budget	Year To Date	Pct Achieved			
Large Commercial New Construction	1,540	204	13.3%	15,728	706	4.5%	209	62	29.8%	\$6,864.1	\$1,126.1	16.4%	10,899	\$ 0.103	\$ 0.030
Large Commercial Retrofit	13,906	1,620	11.6%	67,030	8,245	12.3%	3,540	484	13.7%	\$22,545.5	\$2,147.5	9.5%	88,886	\$ 0.024	\$ 0.053
Small Business Direct Install	2,507	649	25.9%	12,165	3,516	28.9%	905	251	27.8%	\$8,745.9	\$1,933.4	22.1%	38,626	\$ 0.050	\$ 0.085
Community Based Initiatives - C&I										\$49.6	\$6.8	13.6%			
Commercial Demonstration and R&D										\$296.2	\$1.1	0.4%			
Finance Costs										\$3,000.0	N/A	N/A			
SUBTOTAL	17,953	2,473	13.8%	94,922	12,467	13.1%	4,654	797	17.1%	\$41,501.2	\$5,214.8	12.6%	138,411	0.038	\$ 0.055
Income Eligible Residential															
Single Family - Income Eligible Services	554	134	24.3%	4,061	881	21.7%	2,500	713	28.5%	\$8,656.1	\$1,725.2	19.9%	9,194	\$ 0.188	\$ 0.213
Income Eligible Multifamily	366	31	8.4%	2,830	387	13.7%	5,100	819	16.1%	\$2,531.3	\$287.2	11.3%	4,628	\$ 0.062	\$ 0.102
SUBTOTAL	920	165	18.0%	6,891	1,267	18.4%	7,600	1,532	20.2%	\$11,187.4	\$2,012.5	18.0%	13,822	\$ 0.146	\$ 0.170
Non-Income Eligible Residential															
Residential New Construction	83	16	18.8%	1,213	91	7.5%	512	88	17.2%	\$736.9	\$208.7	28.3%	1,167	\$ 0.179	\$ 0.071
ENERGY STAR® HVAC	235	91	38.5%	1,011	381	37.7%	902	500	55.4%	\$1,219.0	\$314.2	25.8%	4,435	\$ 0.071	\$ 0.138
EnergyWise	1,701	511	30.0%	11,729	3,792	32.3%	8,890	2,942	33.1%	\$9,007.7	\$2,259.7	25.1%	35,295	\$ 0.064	\$ 0.095
EnergyWise Multifamily	579	22	3.7%	4,061	396	9.8%	4,400	1,329	30.2%	\$3,319.1	\$315.3	9.5%	4,139	\$ 0.076	\$ 0.095
ENERGY STAR® Lighting	3,620	1,303	36.0%	43,098	11,202	26.0%	233,992	91,525	39.1%	\$7,362.1	\$1,595.1	21.7%	101,052	\$ 0.016	\$ 0.030
Residential Consumer Products	696	93	13.4%	4,647	526	11.3%	14,095	3,717	26.4%	\$2,085.0	\$202.6	9.7%	3,485	\$ 0.058	\$ 0.080
Home Energy Reports	3,759	1,189	31.6%	32,186	7,758	24.1%	294,013	273,677	93.1%	\$2,796.7	\$681.1	24.4%	7,758	\$ 0.088	\$ 0.087
Energy Efficiency Educational Programs										\$40.1	\$40.0	99.8%			
Residential Demonstration and R&D										\$488.1	\$9.8	2.0%			
Community Based Initiatives - Residential										\$284.4	\$41.5	14.6%			
Comprehensive Marketing - Residential										\$534.0	\$22.1	4.1%			
SUBTOTAL	10,673	3,224	30.2%	97,947	24,146	24.7%	556,804	373,778	67.1%	\$27,873.1	\$5,689.9	20.4%	157,331	\$0.036	\$ 0.055
Regulatory															
EERM										\$793.1	\$69.6	8.8%			
OER										\$793.1	\$128.6	16.2%			
RI Infrastructure Bank										\$1,441.5	\$0.0	0.0%			
SUBTOTAL										\$3,027.7	\$198.2	6.5%			
TOTAL	29,545	5,863	19.8%	199,760	37,880	19.0%	569,058	376,107	66.1%	\$ 83,589.4	\$ 13,115.4	15.7%	309,564	\$ 0.042	\$ 0.061
RGGI										\$ 2,331.2	\$ 8.3	0.4%			
System Reliability Procurement										\$ 441.1	\$ 82.0	18.6%			

NOTES
(1)(4)(7) 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 correct kW goal should be 5,049 kW. This would make the percent achieved 25.8%. In turn, the correct kW goal for the Residential Sector should be 12,102 kW and the current percent achieved would be 26.6%. The Company will use the corrected Residential Sector kW goal for its year-end incentive calculation.
(6) Pct Achieved is Column (5)/ Column (4).
(7) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(9) Pct Achieved is Column (8)/ Column (7).
(10) Approved Budget includes Implementation and Evaluation budgets from Docket 4580, Attachment 5 Table E-2 (electric).
(11) 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.
(12) Pct Achieved is Column (11)/ Column (10).
(14) \$/lifetime kWh = Column (11)/Column (13)
(15) 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 1st Quarter Results

GAS PROGRAMS Sector and Program	(1) (2) (3) Energy Savings (MMBtu)			(4) (5) (6) Customer Participation			(7) (8) (9) Expenses (\$ 000)			(10)	(11)	(12)
	Approved Target	Year To Date	Pct Achieved	Approved Target	Year To Date	Pct Achieved	Approved Budget	Year To Date	Pct Achieved	Lifetime savings, MMBtu	\$/Lifetime MMBtu	Planned \$/Lifetime MMBtu
Commercial and Industrial												
Large Commercial New Construction	43,424	2,207	5.1%	152	14	8.9%	\$1,694.7	\$203.3	12.0%	47,917	\$ 4.24	\$ 2.99
Large Commercial Retrofit	133,613	1,321	1.0%	234	15	6.2%	\$4,871.1	(\$151.6)	-3.1%	14,471	\$ (10.48)	\$ 6.39
Small Business Direct Install	3,667	612	16.7%	133	11	8.6%	\$282.4	\$51.6	18.3%	4,037	\$ 12.79	\$ 8.29
Commercial & Industrial Multifamily	9,490	289	3.0%	1,611	78	4.8%	\$754.7	\$26.3	3.5%	3,823	\$ 6.88	\$ 6.52
Commercial Demonstration and R&D							\$97.3	\$3.1	3.2%			
Community Based Initiatives - C&I							\$6.4	\$0.9	13.2%			
Finance Costs							\$500.0	N/A	N/A			
SUBTOTAL	190,194	4,429	2.3%	2,131	118	5.5%	\$8,206.6	\$133.6	1.6%	70,248	\$ 1.90	\$ 5.32
Income Eligible Residential												
Single Family - Income Eligible Services	9,368	2,962	31.6%	500	149	29.8%	\$3,285.5	\$741.4	22.6%	59,240	\$ 12.52	\$ 17.54
Income Eligible Multifamily	19,915	480	2.4%	3,000	367	12.2%	\$2,063.3	\$56.0	2.7%	6,474	\$ 8.65	\$ 5.80
SUBTOTAL	29,283	3,442	11.8%	3,500	516	14.7%	\$5,348.8	\$797.4	14.9%	65,714	\$ 12.13	\$ 9.85
Non-Income Eligible Residential												
EnergyWise	68,117	25,987	38.2%	2,710	887	32.7%	\$6,929.5	\$1,835.9	26.5%	586,506	\$ 3.13	\$ 5.45
Energy Star® HVAC	26,064	3,619	13.9%	2,099	348	16.6%	\$1,619.2	\$301.2	18.6%	61,807	\$ 4.87	\$ 10.19
EnergyWise Multifamily	17,208	397	2.3%	2,625	222	8.5%	\$1,978.6	\$43.2	2.2%	5,835	\$ 7.40	\$ 8.24
Home Energy Reports	53,989	24,419	45.2%	135,689	137,133	101.1%	\$436.6	\$132.5	30.4%	24,419	\$ 5.43	\$ 8.09
Residential New Construction	10,907	1,189	10.9%	375	72	19.2%	\$836.9	\$86.8	10.4%	29,731	\$ 2.92	\$ 4.61
Residential Demonstration and R&D							\$81.3	\$0.2	0.2%			
Comprehensive Marketing - Residential							\$69.8	\$2.3	3.3%			
Community Based Initiatives - Residential							\$25.8	\$3.5	13.8%			
SUBTOTAL	176,284	55,612	31.5%	143,498	138,662	96.6%	\$11,977.7	\$2,405.7	20.1%	708,298	\$ 3.40	\$ 6.65
Regulatory												
EERMC							\$233.3	\$20.6	8.8%			
OER							\$233.3	\$37.5	16.1%			
RI Infrastructure Bank							\$429.0	\$0.0	0.0%			
SUBTOTAL							\$895.5	\$58.1	6.5%			
TOTAL	395,760	63,483	16.0%	149,129	139,295	93.4%	\$ 26,428.6	\$ 3,394.8	12.8%	844,260	\$ 4.02	\$ 6.66

NOTES
(1)(4) Targets from Docket 4580 - Attachment 6, Table G-7 (gas).
(3) Pct Achieved is Column (2)/ Column (1).
(4) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(6) Pct Achieved is Column (5)/ Column (4).
(7) Approved Budget includes Implementation and Evaluation budgets from Docket 4580, Attachment 6 Table G-2 (gas).
(8) Year To Date Expenses include Implementation and Evaluation expenses.
Large Commercial Retrofit shows negative spend due to a credit being applied to the program in 2016 for incentives paid out for loans in 2015. Actual incentives paid out in Q1 2016 equal \$21,027.
\$500,000 in finance funds were transferred as authorized to the C&I Gas Revolving Loan Fund. Please see Table 3.
(9) Pct Achieved is Column (8)/ Column (7).
(10) \$/lifetime MMBtu = Column (8)*1000/Column (10)
(12) Planned \$/lifetime MMBtu - Attachment 6, Table G-5 (gas).

**Table 3
National Grid
Revolving Loan Funds**

Large C&I Electric Revolving Loan Fund			Small Business Electric Revolving Loan Fund		
	FB				
(1)	2016 Funds Available	\$14,115,728	(1)	2016 Funds Available	\$2,242,136
(2)	2016 Loan budget	\$11,000,000	(2)	2016 Loan Budget	\$2,870,000
(3)	Committed	\$2,833,902	(3)	Committed	\$523,144
(4)	Paid	\$584,387	(4)	Paid	\$934,328
(5)	Number of loans	15	(6)	Participants	270
(6)	Participants	7	(7)	Savings (MWh)	3,516
(7)	Savings (MWh)	1,869	(8)	Available	\$1,412,528
(8)	Available	\$7,581,711			
Rhode Island Public Energy Partnership (RI PEP)			C&I Gas Revolving Loan Fund		
(9)	2016 Funds Available	\$993,365	(1)	2016 Funds Available	\$1,682,732
(10)	Committed	\$339,487	(2)	2016 Loan budget	\$1,600,000
(11)	Paid	\$205,285	(3)	Committed	\$230,172
(12)	Repayments	\$78,963	(4)	Paid	\$442,861
(13)	Participants	2	(6)	Participants	5
(14)	Savings (MWh)	769	(7)	Savings (MMBtu)	1,006
(15)	Available	\$527,557	(8)	Available	\$926,968

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 March 31, 2016
- ⁴ As of March 31, 2016
- ⁵ As of March 31, 2016
- ⁶ Unique customer names for large business and unique customer accounts for small business (not adjusted for net-to-gross).
- ⁷ As of March 31, 2016
- ⁸ Available funds as of March 31, 2016 not including repayments.
- ⁹ Funds available as of January 1, 2016
- ¹⁰ As of March 31, 2016
- ¹¹ As of March 31, 2016
- ¹² As of March 31, 2016
- ¹³ As of March 31, 2016 - 2 entities with 9 applications.
- ¹⁴ As of March 31, 2016
- ¹⁵ Available funds as of March 31, 2016

Table 4
2016 RGGI Budget and Spend

Initiative	2016 Budget	Spend
RI Public Energy Partnership Incentives	\$ 600,000	\$ -
Residential Delivered Fuels	\$ 1,300,134	***
Agricultural Delivered Fuels	\$ 255,446	\$ 3,320
Heat Pump Study	\$ 175,585	\$ 5,025
Total	\$ 2,331,165	\$ 8,345

Notes

1. *** As of March 31, 2016 National Grid spent \$552,485 on Residential Delivered Fuels from the EnergyWise Single Family Electric budget since RGGI funds were not yet received. This is currently shown as an expense in Table 1 under the EnergyWise Single Family Electric program. Once the Company receives the RGGI funds it will credit the \$552,485 back to the EnergyWise program.
2. 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.
3. 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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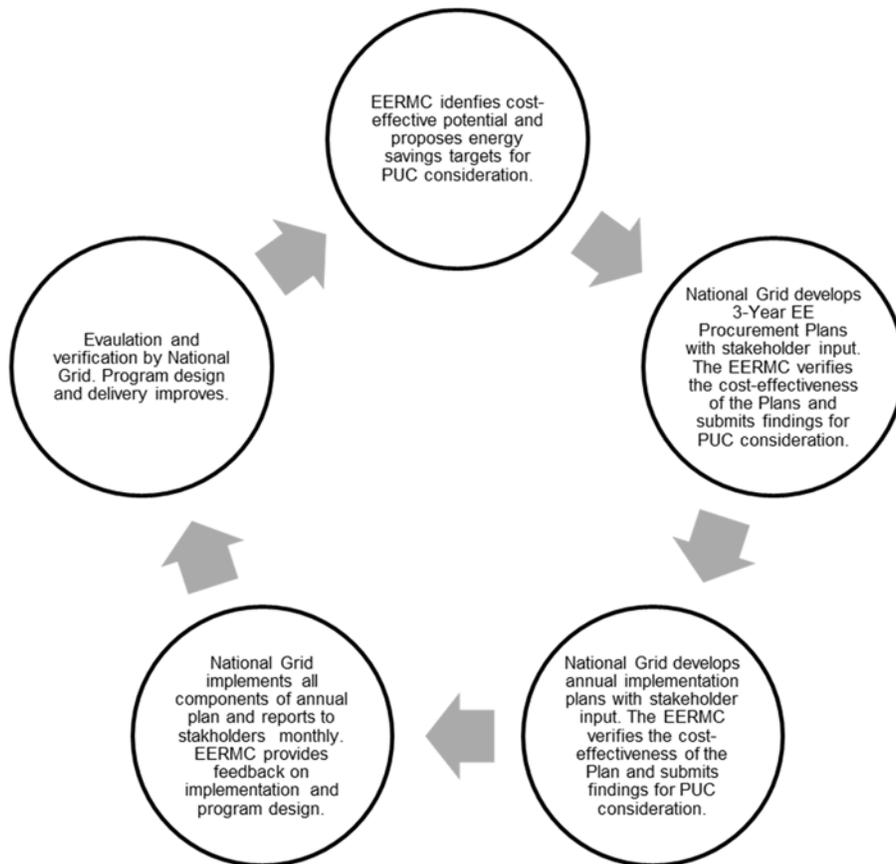
Energy Savings Targets for 2018-2020

Every three years, the Energy Efficiency and Resource Management Council (EERMC) estimates the amount of cost-effective electric and natural gas energy efficiency in Rhode Island’s homes, businesses, manufacturing processes, commercial buildings, municipalities, etc. Based on these targets, program implementation plans are developed to cost-effectively achieve the targets, which are then implemented by National Grid with EERMC oversight. The result is that since 2008, Rhode Island has invested \$558 million in energy efficiency and consumers have realized \$1.99 billion in economic benefits. Rhode Island has reduced its electric demand by 12% through low-cost efficiency and is on track to meet 17% of its electricity consumption through efficiency by 2017.

The EERMC is in the process of developing the next set of targets that would cover 2018 – 2020, and is seeking input from key stakeholders who are able to provide relevant insights to inform these targets.

How are the energy savings targets used?

The EERMC proposes energy savings targets to the RI Public Utilities Commission (PUC). If approved by the PUC, the energy savings targets become the foundation for National Grid’s 2018-2020 Energy Efficiency Plan and related annual Energy Efficiency Procurement Plans. The diagram below illustrates this process.





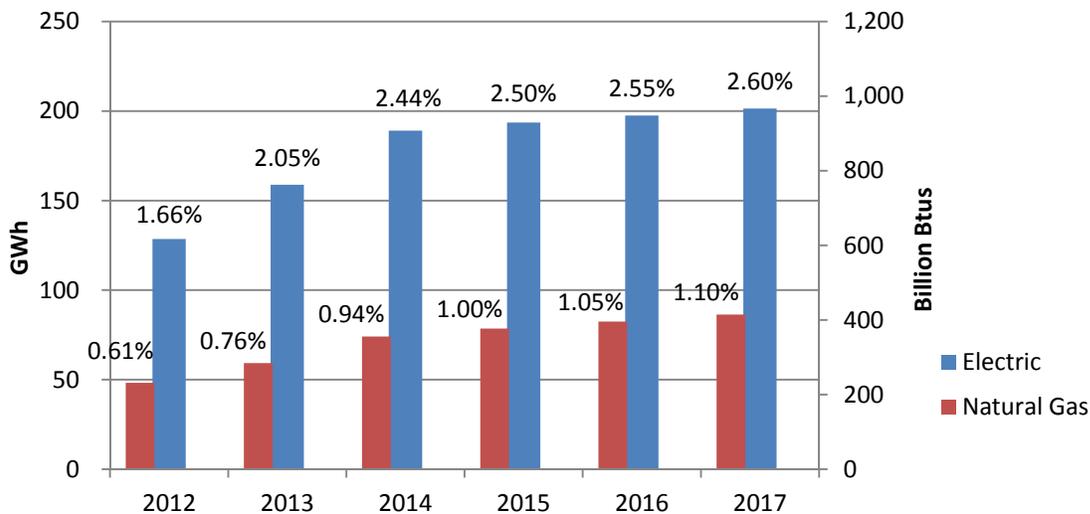
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Who is involved in developing the energy savings targets?

Developing the energy savings targets is a responsibility of the EERMC and the EERMC involves a range of stakeholders in the process. In past years, groups including the Office of Energy Resources, the Division of Public Utilities and Carriers, People’s Power & Light, TEC-RI, Acadia Center, and the Attorney General’s Office have played an active role in developing the energy savings targets. These stakeholders participate in a long-standing group called the “DSM Collaborative.” This year, the EERMC is taking a more active role in seeking input from additional stakeholders.

What are RI’s previous energy savings targets?

The figure below illustrates the targets proposed by the EERMC and approved by the PUC. Energy savings targets are measured as a percentage of annual electric or natural gas consumption. For example, in 2016 Rhode Island seeks to save 2.55% of 2012 electricity consumption. The annual savings are additive, so in 2017 the state will save an additional 2.6%.



What information is used to develop the energy savings targets?

The primary analysis to determine the potential for cost-effective electric energy efficiency savings that is cheaper than the cost of supply is the [2010 KEMA Opportunity Report](#). The KEMA report identified levels of technical, economic, and achievable energy efficiency potential in Rhode Island over the years 2011 through 2020 using the Total Resource Cost (TRC) test.¹

To develop the targets for 2018-2020, the EERMC is undergoing a process to review key assumptions of the 2010 study to determine what developments may be negatively and/or positively impacting projections, as well as

¹ The development of the targets in the 2010 filing relied upon the in-depth, lengthy study commissioned by the EERMC and conducted by KEMA – *Phase II of the Opportunity Report* – which included more than 450 surveys and on-site visits with Rhode Island electric and natural gas customers over the course of 18 months in order to identify the size of the cost-effective efficiency resource that is cheaper than supply that exists in Rhode Island.



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generally reviewing and analyzing developments in market conditions. This was also done to inform the 2015-2017 targets. Attachment 1 (below) illustrates the major issues that were identified as having positive or negative impacts on original estimates.

What kind of valuable input is needed?

The EERMC seeks to gain input from Rhode Island stakeholders, residents and businesses to help inform the setting of electric and natural gas energy efficiency targets. Stakeholder input on these three key questions would support the target setting:

- Are there specific market segments that are underserved?
- Are there new and evolving energy efficiency *measures* that will be ready for “primetime” at some point during the 2018 – 2020 timeframe?
- Are there new and evolving energy efficiency *services* that will be ready for “primetime” at some point during the 2018 – 2020 timeframe?

For more information or questions, contact:

Mike Guerard, Optimal Energy, technical consultant to the EERMC
guerard@optenergy.com or 401-378-7422



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Attachment 1

Potential Estimate (% of 2012 retail sales)	2015	2016	2017	3-Year Total
<i>Base Potential Estimate</i>				
KEMA Opportunity Report (2010)				
Existing Programs	1.7%	1.4%	1.3%	4.4%
Behavioral	0.5%	0.6%	0.7%	1.8%
Price Response	0.1%	0.2%	0.3%	0.5%
New Technologies	0.5%	0.5%	0.5%	1.6%
Total	2.8%	2.7%	2.8%	8.3%
<i>Adjustments to Base Potential</i>				
Codes and Standards	0.1%	0.1%	0.0%	0.2%
Combined Heat and Power	0.2%	0.2%	0.2%	0.5%
Residential Behavioral	-0.1%	-0.2%	-0.3%	-0.5%
Residential CFLs	0.2%	0.2%	0.1%	0.5%
Residential LEDs	0.0%	0.2%	0.2%	0.5%
LED Street Lighting	0.1%	0.1%	0.1%	0.2%
Avoided Energy Supply Costs	-0.1%	-0.1%	-0.1%	-0.2%
Price Response	-0.1%	-0.2%	-0.3%	-0.5%
New Technologies	0.0%	0.0%	0.0%	0.0%
Net-to-Gross Factors	-0.2%	-0.2%	-0.2%	-0.5%
<i>Revised Potential Estimate</i>				
Base Potential Estimate + Adjustments	2.9%	2.9%	2.7%	8.5%



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2018-2020 Rhode Island Energy Savings Target Setting Process Update

Presented by:
EERMC Consultant Team

May 12, 2016



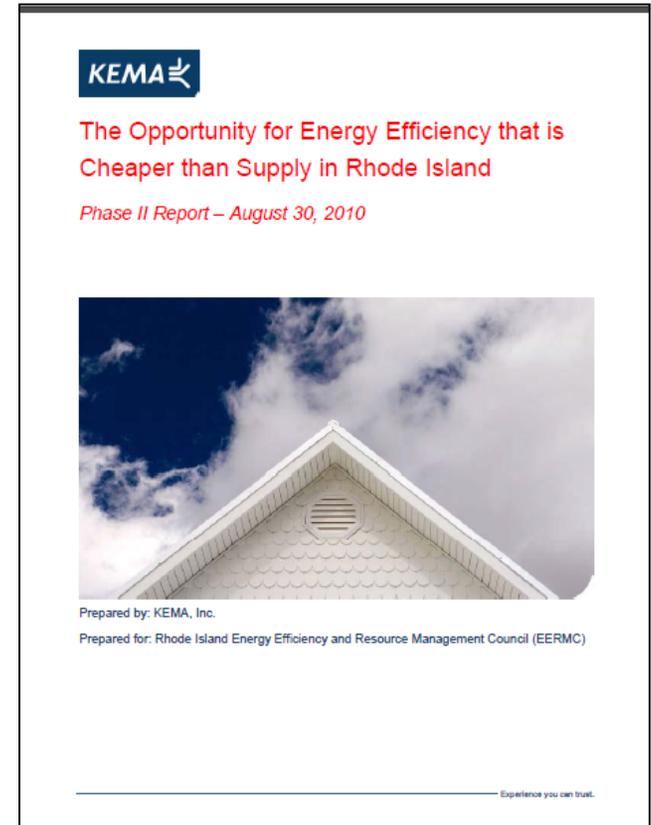
Purpose of setting Targets

- Guideposts for 3 year plan, which will start development early next year leading to September 1, 2017 filing with PUC
- The energy efficiency industry is evolving rapidly, which presents unique challenges for this round of target setting



Primary reference for electric target setting process

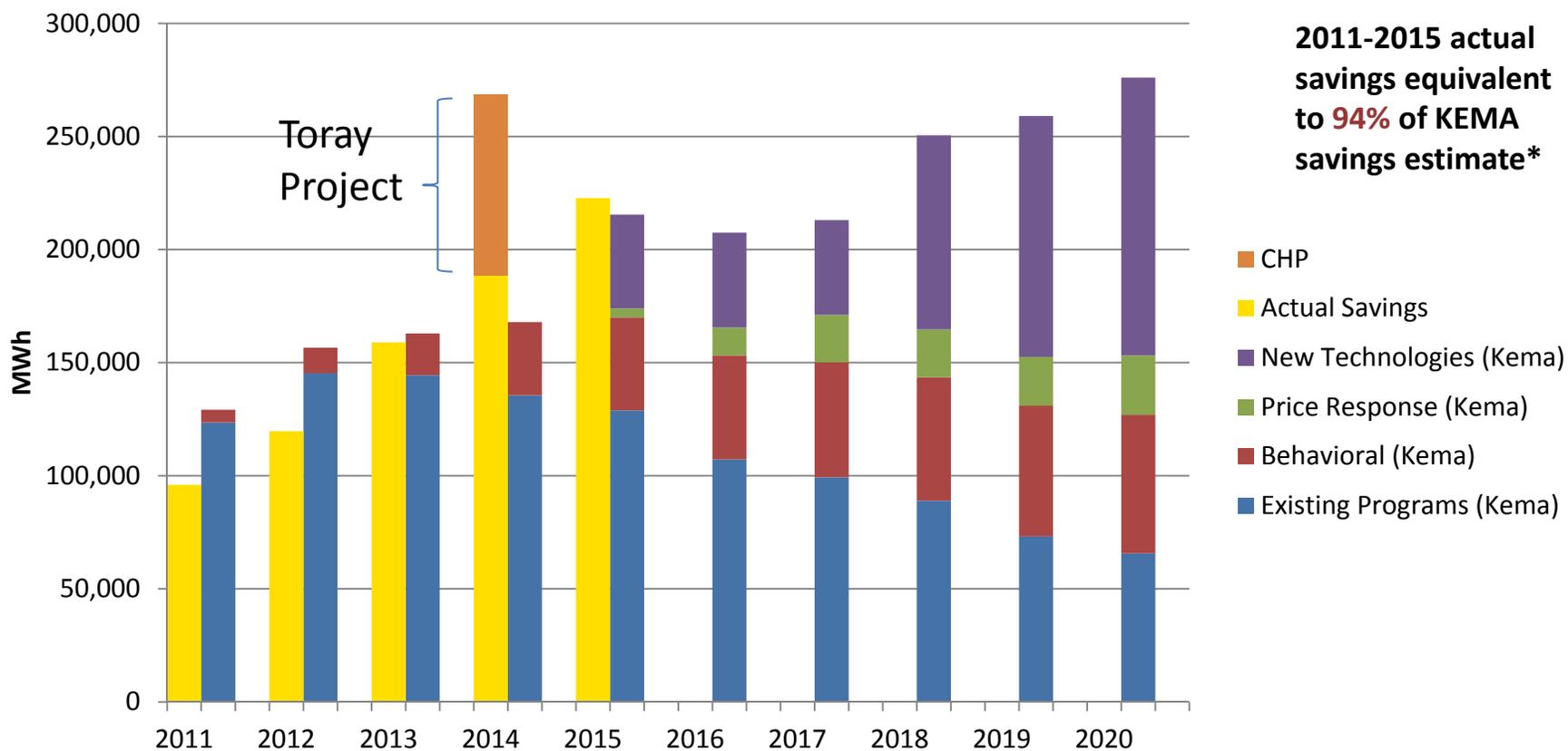
- The 2010 KEMA potential study estimated achievable potential in RI from 2011-2020
- As in previous years, the potential study serves as a key resource for target setting
- Key assumptions will be revisited and historical performance considered to adjust remaining potential
- Estimated 10-year achievable potential of 27%, or 2,046 GWh





Projected vs actual savings 2011-2015; Projected savings through 2020 from KEMA

Actual Savings vs. Estimated Potential Savings



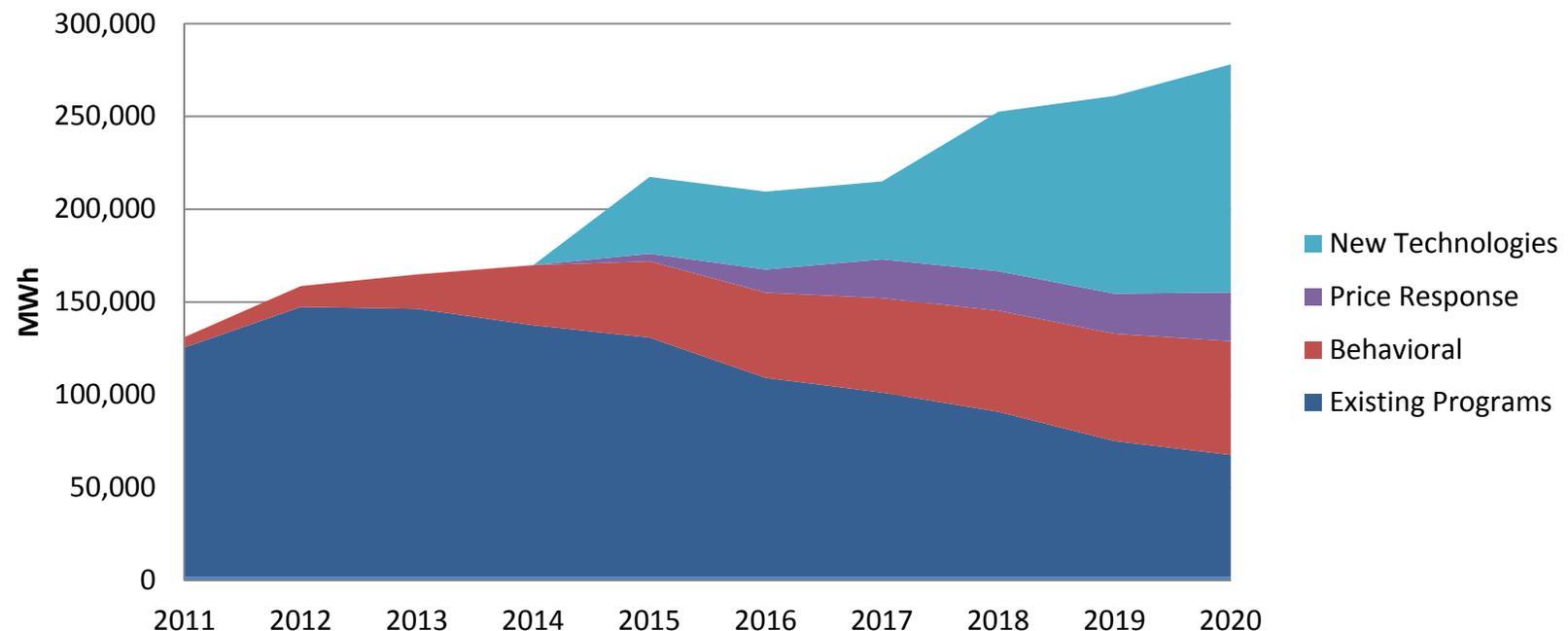
*Excluding savings from the Toray CHP project



“Wedges” of Potential Change Over Time

- Study identified “wedges” of savings that contribute to potential
- Over time, increasing savings predicted from new technologies and decreasing savings from existing programs
- Some assumptions/predictions have changed since 2010, but experience suggests EE is a resource that replenishes itself

KEMA Potential Study - New Net Energy Savings





Savings Targets Development Process – Key Activities

- Jurisdictional/Potential Study Comparison
 - *Quick review completed*
- Trend Analysis
 - *Analysis of historical trajectories completed. Used as a reference point to gauge key driver impacts on future curves*
- Stakeholder Sessions
 - Ongoing; input feeds into Key Driver consideration
- Key Drivers Analysis
 - Ongoing data sourcing; Reviewed EM&V schedule
 - Lighting in both residential and C&I is a primary focus
 - Research being conducted by Dunsky on potential impact of financing on targets



Jurisdictional/Potential Study Comparison

Quantitative Summary of Recent Potential Study Meta-Analyses

Report	Author	Publication Date	Average Annual Achievable Potential		
			Min	Max	Median
Electric					
Cracking the TEAPOT: Technical, Economic, and Achievable Energy Efficiency Potential Studies	Neubauer, M. (ACEEE)	2014	0.3%	2.9%	1.3%
The Technical, Economic, and Achievable Potential for Energy Efficiency in the United States: A Meta-Analysis of Recent Studies	Nadel, S. et al (ACEEE)	2004	0.6%	3.1%	1.2%
Gas					
Cracking the TEAPOT: Technical, Economic, and Achievable Energy Efficiency Potential Studies	Neubauer, M. (ACEEE)	2014	0.1%	2.4%	0.9%
The Technical, Economic, and Achievable Potential for Energy Efficiency in the United States: A Meta-Analysis of Recent Studies	Nadel, S. et al (ACEEE)	2004	0.4%	1.0%	0.5%



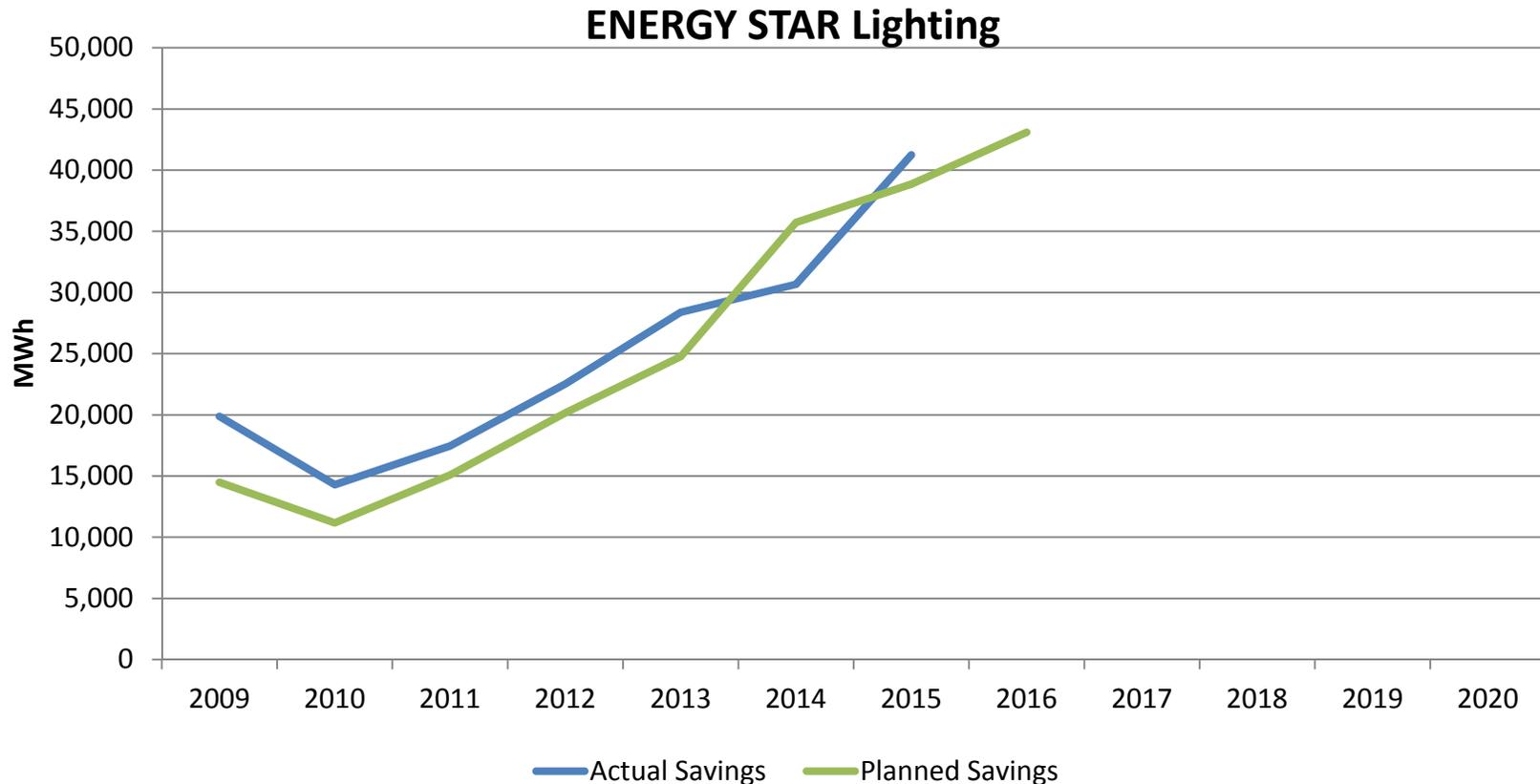
Key Drivers / Dial Turners

- Changes in markets, prices, and standards will impact potential lighting savings from programs in the future
- Other technologies, delivery models, and savings attributions may provide additional savings
- Specific key drivers include:
 - Lighting, lighting, lighting... and lighting
 - Financing
 - Combined Heat & Power
 - Evolving program designs (DI, MF, Income Eligible, SEM)
 - Codes and Standards



Trend Analysis and Potential Residential Lighting “Key Driver” Impact

- Significant upward trajectory since 2011 likely to decline sharply by 2020





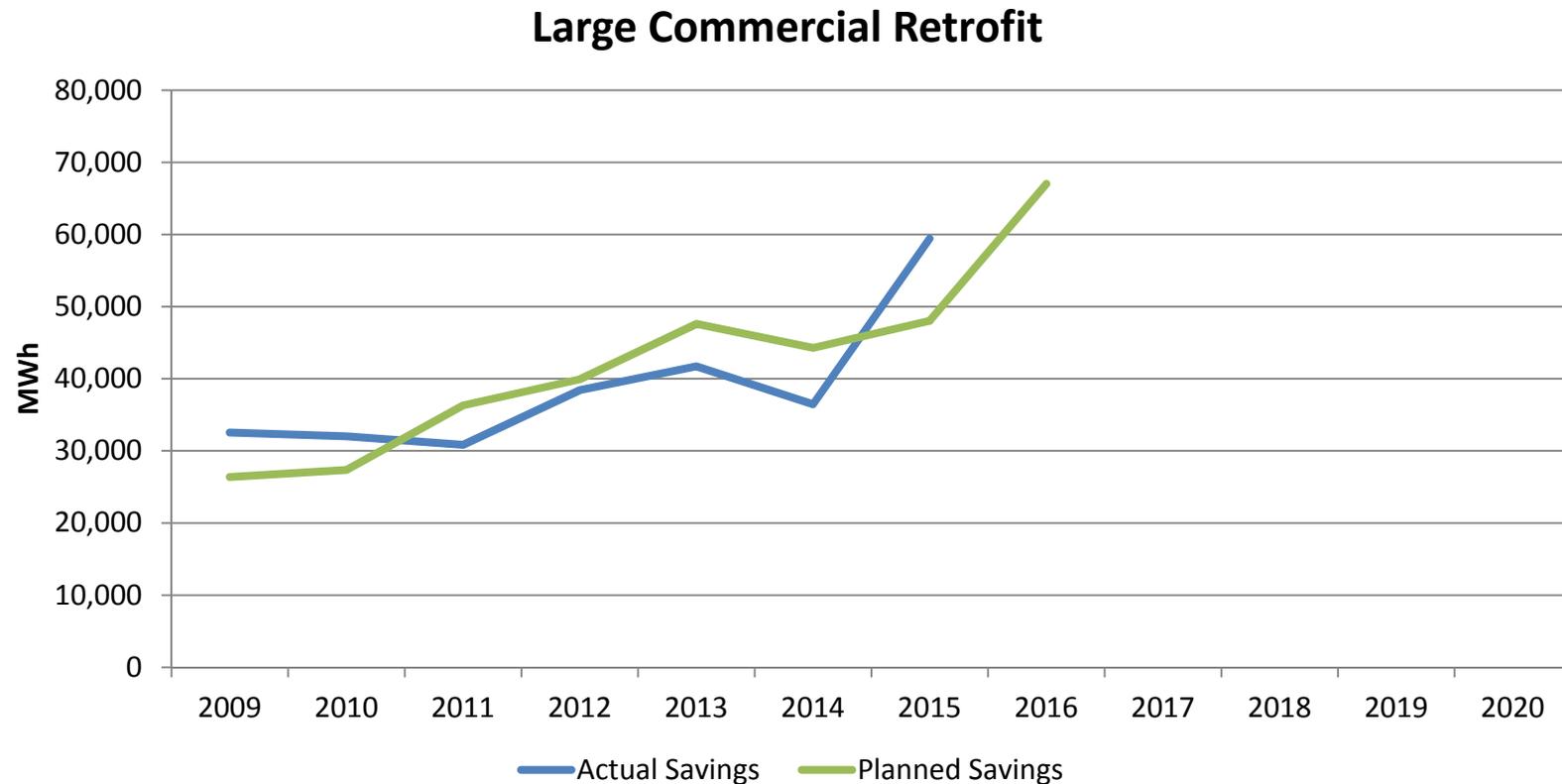
Key Driver Analysis – Res and LI Lighting

- In 2016, residential and low income lighting savings contribute a significant portion of planned portfolio and sector savings, approximately 30%
- The Energy Independence and Security Act (EISA) of 2007 was passed with the intention of moving the United States toward greater energy security.
 - Requires roughly 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.
 - LEDs have already accelerated market penetration at rapidly declining cost.
 - Declining NTG ratios for non-LI programs
 - Increased saturation of efficient sockets with each successive year



Trend Analysis and potential “Key Driver” Impact

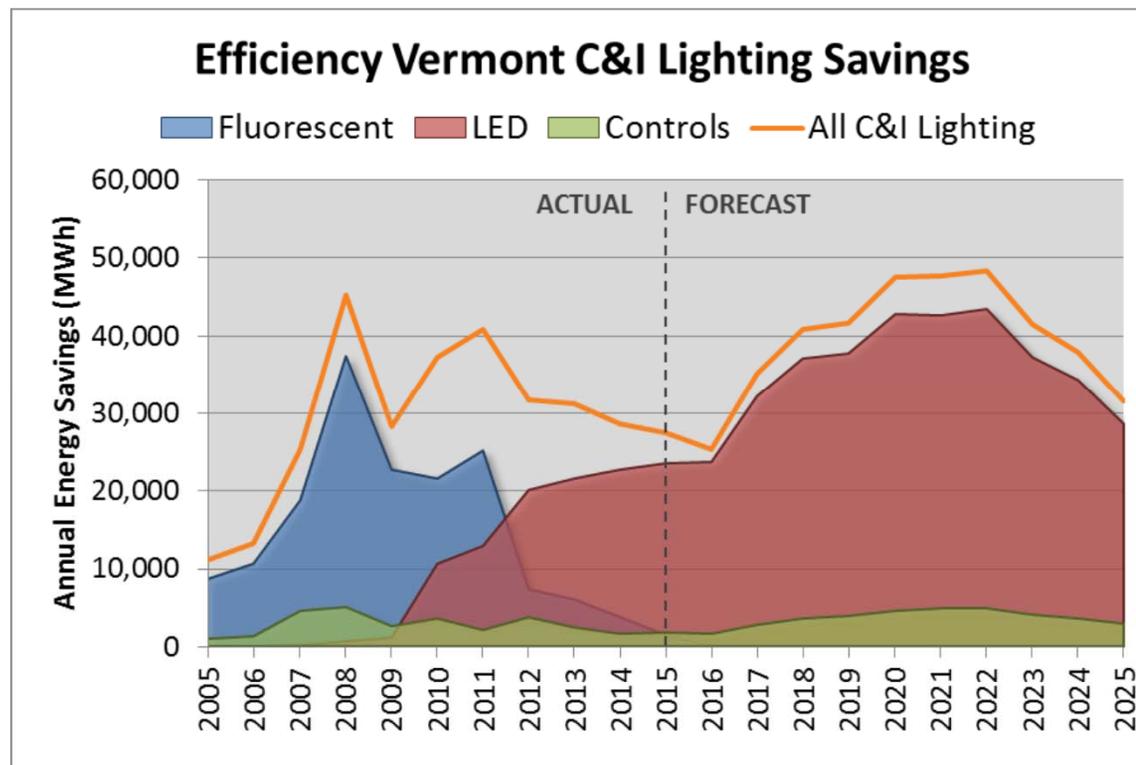
- Key Drivers: CHP, SEMP, Upstream products, DR, etc. are likely to support upward trends





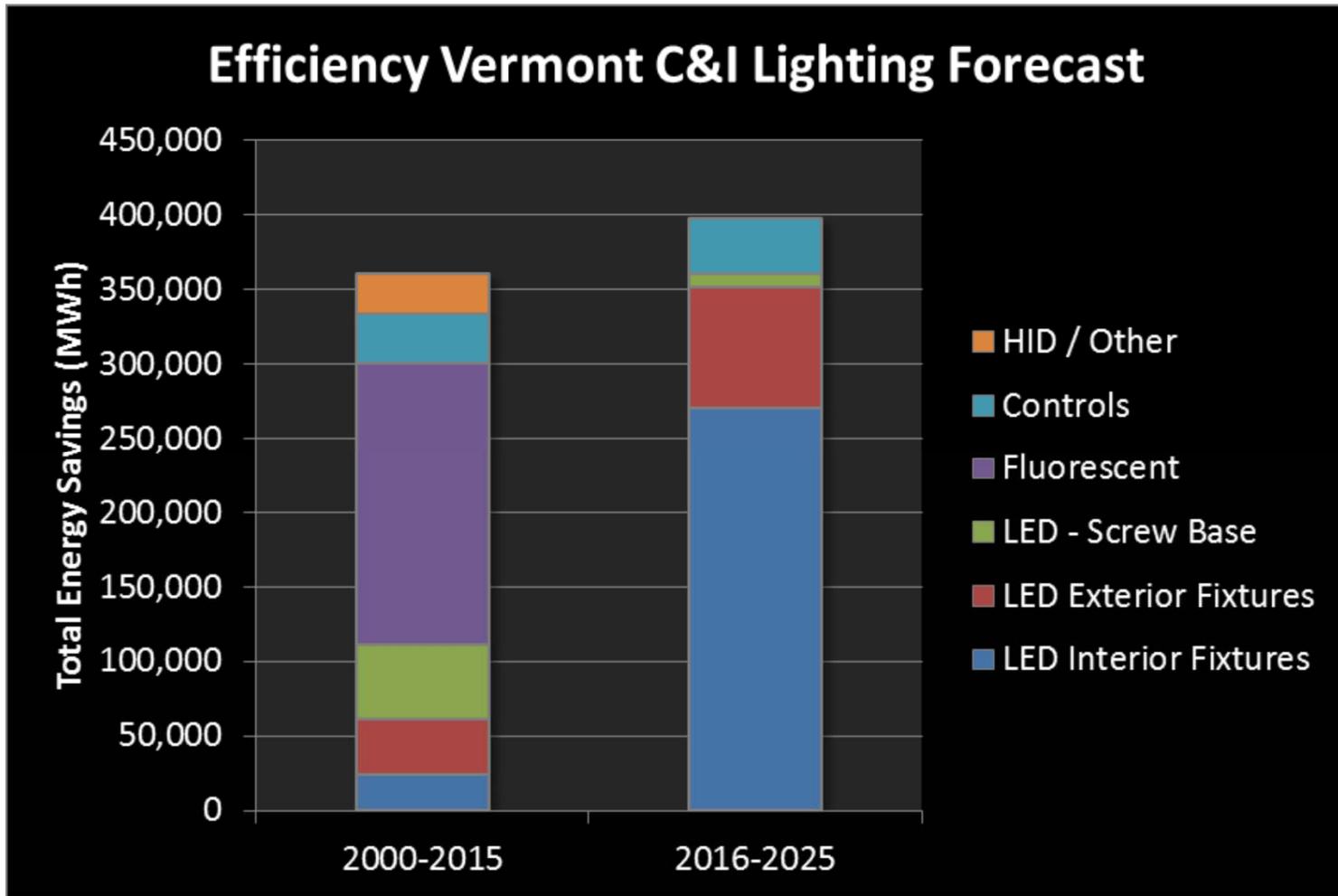
Key Driver Analysis – C&I Lighting

- Increased C&I lighting savings have been predicted in some jurisdictions (see VT example below)
- National Grid is hiring DNV GL to use MA site visit data in order to estimate RI C&I lighting potential.





Key Driver Analysis – C&I Lighting





Example of last KEMA report update

Potential Estimate (% of 2012 retail sales)	2015	2016	2017	3-Year Total
<i>Base Potential Estimate</i>				
KEMA Opportunity Report (2010)				
Existing Programs	1.7%	1.4%	1.3%	4.4%
Behavioral	0.5%	0.6%	0.7%	1.8%
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Price Response	-0.1%	-0.2%	-0.3%	-0.5%
New Technologies	0.0%	0.0%	0.0%	0.0%
Net-to-Gross Factors	-0.2%	-0.2%	-0.2%	-0.5%
<i>Revised Potential Estimate</i>				
Base Potential Estimate + Adjustments	2.9%	2.9%	2.7%	8.5%



Next Steps

- Key Driver analysis ramps up, including holding Stakeholder sessions and accommodating suggestions from them
- At June meeting, initial estimates of impact from some of the key drivers will be reported

AGREEMENT FOR CONSULTING SERVICES

This AGREEMENT FOR CONSULTING SERVICES (“Agreement”) is executed by and between Synapse Energy Economics, Inc. (“Synapse”), a business entity organized under the laws of the Commonwealth of Massachusetts, and the Rhode Island ENERGY EFFICIENCY AND RESOURCE MANAGEMENT COUNCIL (“EERMC”), a council created by R.I. Gen. Law §42-140.1-3, for consulting services to be provided by Synapse for the benefit of the EERMC and for the EERMC’s payment therefor. This Agreement is executed in accordance with EERMC’s authority under R.I. Gen. Law §42-140.1-6(b). EERMC and Synapse hereby agree as follows:

1. On April 14, 2016, at its regularly scheduled monthly meeting, the EERMC voted to authorize the EERMC Consultant Team¹ to negotiate a final scope of work with Synapse for an analysis of the current state of Demand Response activity in New England and Rhode Island. Consistent with guidance provided by the EERMC, the Consultant Team negotiated a final scope of work and budget, and as specified in the vote taken by the EERMC “not to exceed \$20,000” for completion of this work. That Scope of Work (SOW) defines the tasks and deliverables and the budget for work to be done by Synapse, and is appended hereto as ATTACHMENT A.
2. Synapse will provide the consulting services described in ATTACHMENT A under the guidance of the Consultant Team, as instructed by the EERMC.
3. Synapse shall submit a monthly invoice to EERMC for actual time-and-materials incurred, on or around the beginning of the following month. The EERMC agrees to fully pay invoices within 30 days of receipt. In no event shall the total sum of these payments exceed \$20,000. Invoices shall be submitted to: Scudder Parker (sparker@veic.org) and Rachel Sholly (Rachel.sholly@energy.ri.gov).
4. Synapse shall be solely responsible for the payment of all its employees, agents, servants, and independent contractors, in furtherance of this Agreement. Synapse hereby agrees to indemnify and hold EERMC harmless from and against any and all claims, damages, penalties, or expenses, including attorneys’ fees, incurred on account of any claim made by any employee, agent, servant, or independent contractor of Synapse with respect to services provided or work performed in connection with this Agreement.

¹ The Consultant Team is composed of Vermont Energy Investment Corporation and Optimal Energy and is under contract to provide services to the EERMC. It is led by Scudder Parker and Mike Guerard.

5. This Agreement shall be exclusively governed by and construed in accordance with the laws of the State of Rhode Island.

6. If either party to this Agreement brings against the other party any proceeding arising out of this Agreement, that party shall bring that proceeding only in the United States District Court for the District of Rhode Island or, only if there is no federal subject matter jurisdiction, in any Rhode Island Superior Court, and each party hereby submits to the exclusive jurisdiction of those courts for purposes of any such proceeding. Synapse hereby consents to personal jurisdiction under the terms of this Paragraph for resolution of any dispute arising hereunder.

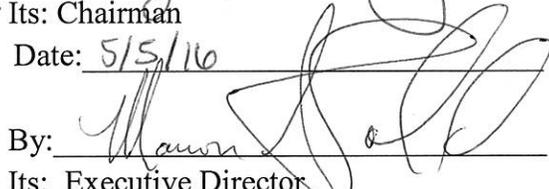
SYNAPSE ENERGY ECONOMICS, INC. ENERGY EFFICIENCY AND RESOURCE
MANAGEMENT COUNCIL

DocuSigned by:

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By: _____
Its: Director, Finance and Administration
Date: 5/6/2016 | 10:51 AM PT

By: 
Its: Chairman
Date: 5/5/16

By: 
Its: Executive Director
Date: May 5, 2016

Synapse Proposal

TO: RHODE ISLAND ENERGY EFFICIENCY AND RESOURCE MANAGEMENT COUNCIL

FROM: DOUG HURLEY

DATE: APRIL 26, 2016

RE: PROPOSAL FOR DEMAND RESPONSE SERVICES TO THE RHODE ISLAND EERMC

Background

Rhode Island has a highly collaborative set of stakeholders that work together to maximize the benefits of energy efficiency, conservation, and resource management to the people of Rhode Island. With the U.S. Supreme Court's decision on FERC Order 745 confirming the participation of demand response in wholesale markets, the EERMC and other Rhode Island stakeholders are now beginning to explore how they might best encourage demand response, and the potential benefits of doing so in their next Least Cost Procurement Plan.

Synapse, led by Principal Associate Doug Hurley, proposes to provide technical expertise to the EERMC to ensure Rhode Island stakeholders are positioned to understand and take advantage of demand response opportunities.

Expertise

Throughout its 20-year existence, Synapse has consistently maintained that encouraging customers to participate in demand-side activities such as demand response, energy efficiency, and distributed generation will have several benefits. Encouraging these measures to the extent that they are cost effective and less expensive than supply from central-station power plants will achieve a more reliable electric system that is cleaner and cheaper to operate.

Doug Hurley was the lead representative of a coalition of demand-side resource providers that worked to include demand response, distributed generation, and energy efficiency into the design of the newly formed Forward Capacity Market in late 2005 and early 2006. He then went on to become the NEPOOL officer for the Alternative Resources sector for five years. In that role, he represented owners of demand-side and renewable energy resources in the stakeholder process to the ISO New England executive staff, and their Board of Directors. Throughout this time, he has kept in close contact with the major demand response providers in New England to ensure that he fully understands their opportunities and challenges.

Scope of Work

Synapse proposes to help inform the EERMC and other stakeholders with a brief report that summarizes demand response in New England over the past six years. This brief background report will detail: (1) the participation of demand response in the FCM since 2010, (2) the major demand response providers working with customers to provide that service to the wholesale markets, (3) the customers who typically benefit from that partnership, (4) how the ISO-NE accounts for demand response in the capacity market and transmission planning processes, and (5) how distributed generation is accounted for and treated. This report will include a brief overview of the recent U.S. Supreme Court decision on FERC Order 745—a landmark decision for demand response and all demand-side measures in the United States—and how this legal process has affected demand response providers and customers over the past several years.

With this summary of the current state in hand, Synapse will assist the EERMC in scoping the issues that it should address with its stakeholder group. A scoping report will address customer classes, various roles for private demand response providers participating in the wholesale market and state-funded initiatives through the program administrators, and benefits that can be achieved for participating customers and the New England electric grid as a whole, and options for pilot project design. Given the context of LCP, the scoping report will include how demand response and energy efficiency are related and if they should be considered in tandem.

Doug will then offer to attend up to four meetings with the EERMC and its fellow stakeholders to discuss the current state of demand response in New England, the scoping issues, and opportunities for demand response in Rhode Island, and the role that National Grid – the program administrator in Rhode Island – might play to benefit Rhode Island customers.

Tasks Not Included

The topic of demand response is one that is inherently closely integrated with numerous other topics that can, and should, be discussed in tandem. While Doug will gladly participate in these discussions during stakeholder meetings, it is important to note those areas that will not be included in the scope of the brief reports being proposed. Under the proposed budget, we will not be able to:

- prepare testimony before the Rhode Island or any other commission;
- address or recommend specific technology choices;
- prepare a formal review of pilot programs undertaken elsewhere or currently being designed;
- perform electric system modeling efforts or analysis of costs and benefits of demand response in New England or elsewhere; or
- formally address the other valuable demand-side measures such as energy efficiency or distributed generation.



Additional tasks can be added to the original scope of work upon mutual agreement of budget and expanded scope.

Budget and Timeline

Our proposed budget for this project is \$19,960, beginning April 20, 2016 and ending no later than July 1, 2016. This is a good faith time-and-materials estimate based upon our current understanding of the requirements to complete the project. However, there are several factors that could impact the level of effort required, including changes in scope, availability of source materials, communication requirements, or other factors. If for any reason we anticipate that the level of effort required will exceed the estimated budget, Synapse will inform the EERMC as soon as reasonably possible, so that we can discuss an appropriate modification to the scope and/or budget.

The hourly billing rates for our project team are as follows: Doug Hurley \$190/hour, Spencer Fields will assist Mr. Hurley with the report on the state of demand response in New England at a rate of \$165/hour. The table below presents our estimated labor days and labor cost per task.

Tasks:	Total Costs	Total Days	\$190 Hurley	\$165 Fields
State of DR in New England	\$5,480	4.0	1	3
Scope of Issues	\$7,600	5.0	5	
Stakeholder Meetings	\$6,080	4.0	4	
Total Labor Days	---	13.0	10.0	3.0
Total Labor Costs	\$19,160	---	\$15,200	\$3,960
Travel Expenses	\$800	---	---	---
Total Costs	\$19,960	---	---	---

In keeping with our standard business practices, the EERMC will only be invoiced for actual effort expended and actual expenses incurred.

Project Team

Principal Associate Doug Hurley will lead the Synapse project team for this work and be the Project Manager. Mr. Hurley was the lead advocate for the inclusion of energy efficiency in the FCM during settlement discussions in 2005-2006, and has been actively involved in ISO-NE and NEPOOL proceedings ever since.

Mr. Hurley will be supported by Associate Spencer Fields. Our team is ready to begin work immediately, and has sufficient time available throughout the project timeframe to conduct the scope of work discussed in this proposal.

Brief bios for each team member are provided below. Resumes for all proposed team members can be found at <http://synapse-energy.com/our-team>.



Doug Hurley, Principal Associate

Doug Hurley joined Synapse in 2004. He assists Synapse's clients in navigating the labyrinth of ISO and RTO market rules, especially regarding the participation of energy efficiency, demand response and distributed generation in wholesale capacity markets. His work includes representing the interests of consumer advocate, environmental, and renewable resource clients at numerous ISO-NE and PJM stakeholder meetings.

Mr. Hurley was the lead client representative for three members of the New England Power Pool's (NEPOOL's) Alternative Resource (AR) sector in the Forward Capacity Market Settlement Conferences, which, with help from other parties, successfully included demand response and energy efficiency in the design of New England's capacity market. He served for five years as the vice-chair of NEPOOL's AR sector and has spent nine years actively advising numerous clients participating in the Forward Capacity Market with energy efficiency, demand response and distributed generation resources.

Mr. Hurley's other activities include analyzing the economics and environmental impacts of diesel backup generation units; preparing expert testimony on the forward-going economics of coal-fired units; analyzing economic dispatch models; analyzing economic and environmental implications of renewable portfolio standards and clean energy policy scenarios; and investigating electricity market price trends. He has testified before the New Hampshire Public Utilities Commission regarding their most recent Least Cost Integrated Resource Plan, and before the Massachusetts Department of Public Utilities regarding utility mergers and energy efficiency plans.

Prior to joining Synapse in 2004, Mr. Hurley was the head of the West Coast research arm of a website hosting company, and spent seven years as a technology consultant for Ernst & Young. Mr. Hurley holds a BS in electrical engineering from Cornell University.

Spencer Fields, Associate

Spencer Fields is a consultant and researcher who focuses on New England wholesale market planning, energy efficiency plans, and the role of demand-side or distributed resources in various markets. He assists in writing testimony and reports on a wide range of issues, including employment impacts of investments in renewable and traditional energy projects, state-specific impacts and planning requirements of the Clean Power Plan, and utility integrated resource planning (IRP) practices.

Relevant Experience

Synapse will be the sole contracting organization for the proposed work and will conduct all the tasks described. Synapse provides research, testimony, reports, and regulatory support to consumer advocates, environmental organizations, regulatory commissions, state energy offices, and other public interest institutions. The company was founded in May 1996 to specialize in consulting on electric industry regulatory, restructuring, and environmental issues.



Synapse has extensive experience providing expert services to support our clients' involvement in with demand-side resources. Over the past several years, Synapse has provided information and representation services to several FCM participants managing demand resources, state consumer advocate organizations, and public interest and environmental entities. The following project descriptions represent a small sample of our ongoing and recent work that is related to the EERMC's current need.

Demand Response as a Power System Resource

Client: Regulatory Assistance Project

Synapse prepared a report for RAP in response to the expressed interest of European policymakers, including the electric power team at Europe's Agency for the Cooperation of Energy Regulators (ACER). The report focuses on the ways that demand response resources effectively participate in and improve the performance of coordinated electric systems in the United States. Additionally, the report reviews the many types of services that demand response can provide, and the early history of demand response programs in the United States. The bulk of Synapse's research examined the specific applications of demand response in several U.S. regions. This report includes numerous examples of demand response successfully providing reliable system services at competitive prices, and ends with lessons learned and key challenges for the near future.

Based upon the report, Synapse's Doug Hurley prepared materials for and then presented at two events with European Regulators. The first was a workshop in Ljubljana with the staff of the ACER, and the second was a demand response symposium in Brussels.

New England Markets Services for NEPOOL Alternative Resource Sector Clients

Clients: CLEAResult, Energy Federation Inc., Vermont Energy Investment Corporation

Since 2005, Synapse has provided monitoring and representation services for clients in NEPOOL's Alternative Resources (AR) sector, which is comprised of providers of energy efficiency, renewable, distributed generation, and demand response resources. Our clients in the AR sector have included CLEAResult (formerly Conservation Services Group), Energy Federation Inc., Vermont Energy Investment Corporation, EnerNOC, and Innovative Energy Systems.

Support Rhode Island Consumer Advocate on Energy Efficiency

Client: Rhode Island Division of Public Utilities and Carriers

Synapse provides technical and policy support to the Rhode Island Division of Public Utilities and Carriers. Much of the support includes full participation in the RI Energy Efficiency Collaborative. The work includes all aspects of energy efficiency program design, implementation, and review related to the Narragansett Electric programs, which are some of the most aggressive and successful efficiency programs in the United States. It also includes a comprehensive analysis of the rate, bill, and participation impacts of the energy efficiency programs.

