

RESIDENTIAL ADVISORY COMMITTEE MEETING



DATE: April 17, 2018
 TIME: 9:30 am – 4:15 pm
 LOCATION: NEEA Offices: 421 SW 6th Ave. Portland, OR 97204
 DIAL-IN: 1-877-890-9502
 Enter the participant code: 826-779-0855
 WEBINAR: <http://neea.adobeconnect.com/racapr2018/>

DESIRED OUTCOMES:

- Robust discussion, feedback and advice on agenda items
- Impart relevant, pertinent information to each other

AGENDA

Time	Topic	Lead	Packet Page
9:30 – 10:00am	WELCOME AND INTRODUCTIONS	Eugene Rosolie	
10:00 – 10:30am	HOUSEKEEPING Follow up on action items from January 30, 2018 notes <ul style="list-style-type: none"> • Packet/Informational Updates (not agenda topics) <ul style="list-style-type: none"> ○ Cover Memo <ul style="list-style-type: none"> ▪ Residential Initiative Memos ▪ Portfolio Overview – Milestone Progress ▪ Market Research & Evaluation Newsletter ▪ Emerging Technology Newsletter 	Eugene Rosolie/Jeff Mitchell	p. 3 Tier 2: p. 3 p. 4 - 12 p. 13 p. 16 p. 17
10:30 – 11:00am	Heat Pump Water Heater Update <i>Desired Outcome: RAC members are informed of 2017 year in review and exciting plans for 2018!</i>	Jill Reynolds	p. 4 - 5
11:00 – 11:05am	Break		
11:05 – 11:50am	Regional Technical Forum (RTF) 101 <i>Desired Outcome: RAC members have additional insight into RTF operations and methodologies</i>	Mark Jerome Jeff Harris	
11:50am – 12:25pm	Lunch (provided)		
12:25 – 12:55pm	Dryers Unit Energy Savings (UES) Update <i>Desired Outcome: RAC members are updated on recent ENERGY STAR® clothes dryers lab testing results and interactions with RTF</i>	Stephanie Baker	p. 6

12:55 – 1:40pm	Next Step Homes Milestone Review <i>Desired Outcome: RAC members are informed of anticipated milestone progress and provided feedback</i>	Jon Belmont	p. 7
1:40 – 1:55pm	Break		
1:55 -3:25pm	Utility Roundtable	All	
3:25 – 4:00pm	2016 -17 Residential Building Stock Assessment Update <i>Desired Outcome: RAC members are briefed on detailed findings</i>	Anu Teja	
4:00 – 4:05pm	OPPORTUNITY FOR PUBLIC COMMENT		
4:05 – 4:15pm	WRAP UP/ADJOURN <ul style="list-style-type: none"> • Meeting feedback • Next meeting/location 	All	

Memorandum

April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Eugene Rosolie, Stakeholder Relations Manager
SUBJECT: RAC Packet Appendices – Q2 2018

PACKET APPROACH

This packet continues the “tiered” approach:

- Tier-1 memo for items on the agenda
- Tier-2 memos for informational updates on items not requiring agenda time
- Tier-3 materials provided as additional detail for those interested

INFORMATIONAL UPDATES

Enclosed please find **Tier-2** informational updates on the following:

- Page 8: Ductless Heat Pump (DHP) memo
- Page 9: Manufactured Homes memo
- Page 10: Retail Products Portfolio (RPP) memo
- Page: 12 Low-E Storm Windows
- Page: 13 NEEA Portfolio Overview: 20 Year View
- Page: 14 Consumer Products Regional Strategies Steering Committee Update
- Page: 15 Conference Coordination memo

ADDITIONAL DETAILS (Tier 3)

Tier-3 materials related to the agenda items and informational updates listed above will be accessible through links in those memos. Additional Tier-3 details are available here:

- Q2 2018 [Market Research & Evaluation Newsletter](#) (includes RBSA update)
- Q2 2018 [Emerging Technology Report](#)
- Q1 2018 [RPAC](#) meeting notes
- Q1 2018 [RAC](#) meeting notes
- Q4 2018/Q1 2018 Residential Workgroup meetings
 - DHP Workgroup met on September 6, 2017 ([Meeting Notes](#))
 - Dryers Workgroup met on April 2, 2018 (Meeting Notes not yet available).
 - HPWH Workgroup met on March 29, 2018 ([Meeting Notes](#)).
 - New Homes/Manufactured Homes Workgroup met on November 16, 2017 ([Presentation](#))
 - Manufactured Homes Workgroup met on March 1, 2018. ([Presentation](#), [Meeting Notes](#)).
 - Retail Product Portfolio (RPP) Workgroup met on December 7, 2017 ([Meeting Notes](#)).

Reminder: NEEA Monthly Residential Sector Report is emailed to you each month (vs posted to Conduit).

Memorandum - Agenda item (Tier 1)



April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Jill Reynolds, Sr. Program Manager
SUBJECT: Heat Pump Water Heater Program – Q2 Update

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Program Lifecycle:



Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RAC meeting.

HPWH MPER #4

Work on the 4th HPWH Market Progress Evaluation Report (MPER) is well underway, and **we need your help!** The next MPER will include a purchaser satisfaction survey and we want to represent utility programs and customers throughout the region – this research is vital to shaping future regional activities. If you have a HPWH program, NEEA requests the following data for customers who received a HPWH incentive in 2016 and 2017:

Required information:

- Purchaser contact name
- Purchaser city and state
- HPWH make and model number
- Installation date (or purchase date)
- Purchaser email address

Optional information:

- Installation location within home
- Incentive amount
- Purchase price
- Installation cost
- Purchaser street address and phone number

If your utility prefers, NEEA will share the survey questions prior to sending the survey to customers. Additionally, utilities may send out the survey. Please contact [Jill Reynolds](#) if you can provide the requested data and thank you in advance.

Contractor Workgroup

To better inform installer engagement and understand installer perspectives, the Hot Water Solutions team facilitated the Contractor Workgroup (the Workgroup) on March 1, 2018. Key objectives for the Workgroup included:

- Increasing understanding of installer challenges to selling and installing HPWHs

- Crowdsourcing solutions to identified challenges
- Identifying high value installer resources and training opportunities

Eleven installing contractors, representing eight different companies, attended the three-hour event held at the Northwest College of Construction in Portland, Oregon.

The key takeaways from the event included:

- Contractors want manufacturers, distributors, the Northwest Energy Efficiency Alliance (NEEA) and utilities to raise HPWH consumer awareness and familiarity to drive product demand and aid in the selling process.
- Contractors feel a lack of confidence selling the product due to perceived weak product support and based on past poor experience, such as AirGenerate product failure and GE's market exit.
- There is a lack of excitement, product champions and robust product knowledge from the distributor level that holds back adoption of the product.

Marketing Update:

We're planning an 8-week consumer awareness campaign throughout the 4-state region, starting July 9.

We plan to run primarily video creative in the following channels:

- Video pre-roll ads in YouTube in contextually relevant content (DIY, water heater replacement, home improvement, etc.)
- Video ads served on premium, relevant websites via DynAdmic (an ad exchange network). Videos are served during site's original content.
- Video ads in cable networks only in Oregon and Washington, in channels like HGTV and DIY network
- Native advertising / media partnerships with DIY / home improvement websites.

Program Workgroup

The HPWH Program Workgroup met in March 2018. Workgroup meeting notes and presentation slides can be found on [Conduit](#). Meeting topics included:

- 2017 Sales Analysis
- 2018 Progress
 - Contractor Workgroup
 - Pro-Deal
- Marketing Developments
- MPER Results
- ACEEE Hot Water Forum recap
- Utility program share-outs

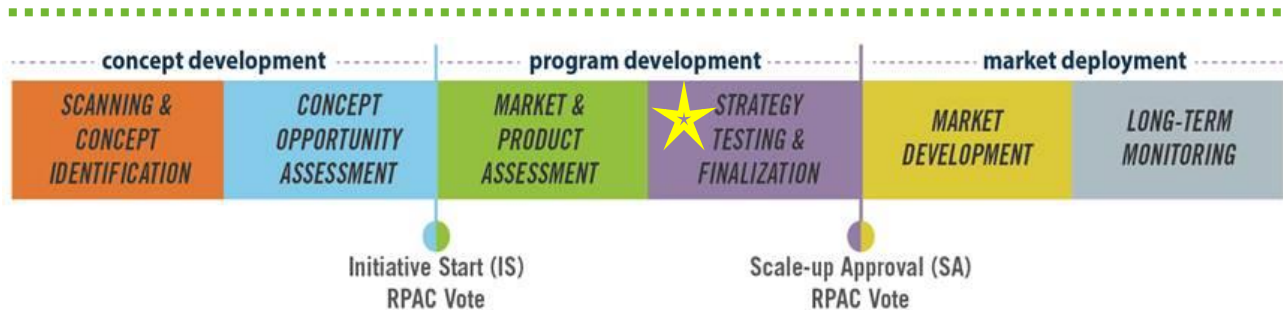
Memorandum – Agenda item (Tier 1)

April 10, 2018

TO: Residential Advisory Committee (RAC)

FROM: Stephanie Baker, Sr. Program Manager

SUBJECT: Super-Efficient Dryer Program – Q2 Update



Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RAC meeting. I will be discussing the ENERGY STAR® savings topic in greater detail as part of the Q2 meeting agenda.

ENERGY STAR Savings:

Lab testing to validate ENERGY STAR savings was completed at the end of 2017. During Q1, NEEA staff completed an initial analysis of the data, which shows there are savings. The data has been shared with the RTF and NEEA staff expects the RTF to update the measure in May 2018.

Multifamily Market Research:

The Residential Multifamily MROC (Market Research Online Community) kicked off during Q1 and recruiting has slowly picked up. The community now has 25 active members, with a total of 50 expected by the end of April. Initial questions have focused on general industry research and will shift to appliance-specific research later in 2018.

CEE Dryer Specification:

CEE has published a draft of their first clothes dryer specification, which aligns CEE with ENERGY STAR and ENERGY STAR Most Efficient. NEEA staff provided input and data to support this draft. Public comments are due May 24th.

Other Program Updates:

Some other notable program updates are as follows:

- Milestone pushed back
 - The Scale-up Approval (SA) milestone planned for Q3 2018 has been pushed back to 2019 to allow time for the initiative to gather findings from retailer pilots and multifamily research.
- Past purchase research
 - NEEA staff recently contacted a small group of previous heat pump dryer purchasers. The purpose of this research was to learn more about the target customer for SEDs. Results will be available later in Q2 and will be shared with the Dryers Workgroup.

Please contact [Stephanie Baker](#) if you have questions about the Super-Efficient Dryer Program.

Memorandum – Agenda item (Tier 1)

April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Jonathon Belmont, Sr. Program Manager
SUBJECT: Next Step Homes Program – Milestone Review

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Program Lifecycle:



Below is an update on the progress of the Next Step Homes Program and a Scale-Up Approval (SA) milestone review announcement, currently scheduled for the 2018 Q3 RAC Meeting.

Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns related to Next Step Homes nearing the SA milestone to the Q2 RAC meeting.

Next Step Home SA: During the 2017 Q4 RAC Meeting last year, NEEA presented on SA for the Next Step Homes Program. Although RAC provided its support, NEEA's internal review determined a deeper dive into cost effectiveness would be beneficial to long term planning and program success. As part of that process, NEEA staff examined what program cost-effectiveness would look like over the next several code cycles. The result led staff to conclude that the program should now concentrate on the integration of code-focused activities.

NEEA is now proposing to restart the SA milestone review in Q3 2018, and will begin with a presentation on the Next Step Homes Program at the upcoming Q2 RAC Meeting in April. The presentation will discuss the continued progress of the Next Step Homes Program and share NEEA's ideas for moving it forward. A discussion will follow the presentation to raise and consider any challenges or concerns regarding SA, and to receive input and guidance from RAC.

Please contact Jonathan Belmont at jbelmont@neea.org if you have questions about the Next Steps Homes Program.

Memorandum – Informational (Tier 2)

April 10, 2018

TO: Residential Advisory Committee (RAC)

FROM: Suzi Asmus, Program Manager

SUBJECT: Ductless Heat Pumps – Q2 Update

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PROGRAM LIFECYCLE STATUS:



Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RAC meeting. The DHP program is not on the Q2 agenda.

Quick Connect Research Results and Presentation

At the Q4 2017 RAC meeting, the Committee indicated they would like a stand-alone webinar to hear more about the quick connect technology research and hear the results of the Cascade Engineering research into the connectors/fittings. These results were presented on March 22. The presentation and audio recording are available here: <http://neea.adobeconnect.com/psohqns99325/>

Market Progress Evaluation Report #7

At the Q1 RAC meeting, Dulane Moran from the Market Research and Evaluation team provided timelines and priorities for the DHP Market Progress Evaluation Report research in 2018. Through the end of Q1, eight of the 15 planned qualitative installer interviews have been conducted. These 15 installers are spread throughout the four states. Due to the need for interviewee anonymity, we cannot let utilities know which installers in their utility territory will be interviewed. Consumer interviews will follow in Q2 and will also be confidential participants. We are excited this year to be interviewing consumers who considered but ultimately decided NOT to buy a DHP and learn more about why they decided against the technology.

RTF Measure Review

On March 27, the RTF voted to extend the DHP Manufactured Home and Single Family Forced Air Furnace measures through November with a research plan to address the deficiencies in the reliability of savings estimates. NEEA will be working with BPA, The Energy Trust, and the RTF to support the work needed to address these deficiencies.

Please contact [Suzi Asmus](#) if you have questions about the Ductless Heat Pump Program.

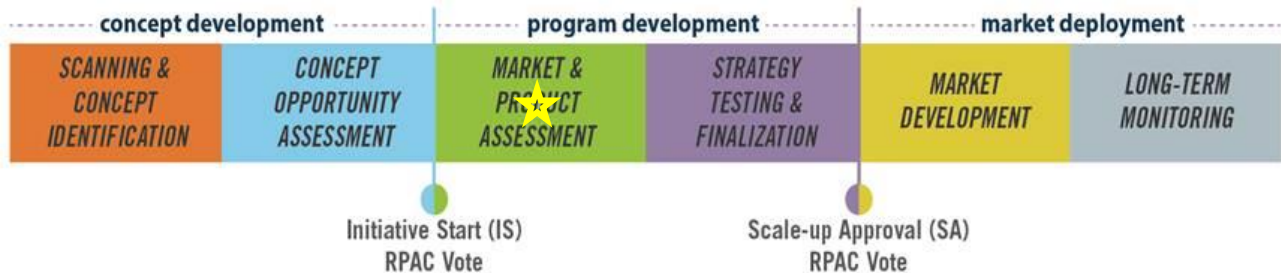
Memorandum – Informational (Tier 2)



April, 10, 2018

TO: Residential Advisory Committee
FROM: Neil Grigsby, Portfolio Program Manager
SUBJECT: NEEM 2.0 update

Program Lifecycle:



Our Ask of You: Please review the memo and contact [Neil Grigsby](#) with any questions or feedback.

Manufacturer Agreements:

NEEA finalized NEEM 2.0 incentive agreements in Q1 and distributed them to the following manufacturers for signature.

- Fleetwood Homes
- Marlette Homes
- Palm Harbor Homes
- Kit Homes

Upon execution, these manufacturers will begin the production of NEEM 2.0 homes that will receive a \$1000 incentive from NEEA upon completion and shipment to permanent address.

Marketing – NEEM 2.0 Naming and Messaging:

After NEEA’s initial research efforts around the homebuying process for manufactured homes and gaining industry input through our partners at Northwest Energy Works (NEW)/NEEM, it became clear that the ENERGY STAR® brand should continue to be the primary market-facing energy efficiency brand. With the introduction of the NEEM 2.0 specification, however, a mechanism is needed to differentiate between the highest tier of energy-efficient homes offered (those built to NEEM 2.0) from those offered at the current ENERGY STAR level (NEEM 1.1) to effectively educate homebuyers on the incremental benefits of the upgrade to NEEM 2.0. ENERGY STAR was unable to accommodate a request to utilize their “Most Efficient” designation for the NEEM 2.0 product.

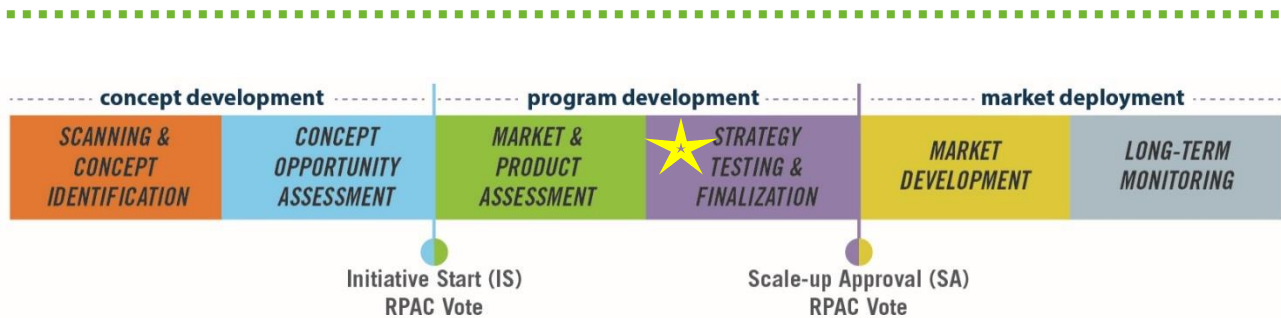
Industry feedback has led us to support repositioning of the NEEM program, administered by NEW, to be more consumer-facing, with an emphasis on educating consumers on NEEM’s role in the certification of ENERGY STAR homes in the Northwest, and the value such third-party verification provides. With this comes a light brand update for NEEM, and the introduction of a persistent “NEEM +” designation, which will always be associated with the highest NEEM specification available in the market at any given time (currently NEEM 2.0). This reduces customer confusion, and allows us to continuously build consumer awareness and understanding of the most energy-efficient offerings in the manufactured homes market while still leveraging the strong ENERGY STAR brand.

Memorandum – Informational (Tier 2)



April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Beth Littlehales, Sr. Program Manager
SUBJECT: Retail Product Portfolio (RPP) Program – Q1 Update



Below are recent updates for the RPP Program, including an update on workgroup activity.

Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the RAC meeting.

2018 Program Updates

- Lowe’s has joined the ENERGY STAR® RPP (ESRPP) program as of April 1.
- NEEA is not adding any products to the portfolio in 2018. Other program sponsors have added dehumidifiers to their incentive offering, but NEEA staff and the RPP workgroup opted not to.
- EmPOWER Maryland (five electric utilities) and Energize Connecticut (two electric utilities) are in the process of joining the ESRPP collaboration in Q2. With those additions, ESRPP will represent almost 20% of US households.

ENERGY STAR Engagement

EPA staff have asked the ESRPP Products Taskforce to support their review of the air cleaner specification, and to share program data regarding market penetration at different efficiency levels. NEEA staff are actively engaged in this work, hoping to encourage ENERGY STAR to develop a revised specification with significantly increased efficiency requirements.

Workgroup Activity

- Workgroup met in person on January 29 for a “deep dive” of program logic, activities, and intended outcomes. The group had a lively discussion regarding the program’s market transformation goals, as well as the key influencers involved, and common barriers and interventions. Workgroup meeting notes and summary memo are available on [Conduit](#).
- Another workgroup meeting will be scheduled this spring to discuss evaluation activities (see next), as well as logic model updates and product strategy roadmaps developed from the sales data provided by participating retailers.

Evaluation Activities

NEEA staff are preparing for research and evaluation activities in 2018, in order to provide more certainty around program efficacy before seeking Scale-up Approval in 2019. The research and evaluation approach were discussed with the Workgroup in the December meeting, and a SOW and RFP are underway. Workgroup members will have an opportunity to review proposals before a contractor is selected.

Note: The Workgroup page on Conduit is marked “private” due to the sensitive nature of some retailer and incentive information. If you do not have access to the files linked above, please contact [Beth Littlehales](#).

Memorandum – Informational (Tier 2)

April 10, 2018

TO: Residential Advisory Committee (RAC)

FROM: Christian Miner, Senior Program Manager

SUBJECT: Window Attachments – Q2 Update

PROGRAM LIFECYCLE STATUS:



Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RAC meeting.

Product Certification and Labeling:

As of March 14, 2018, AERC certification and labeling of products is now accepting applications from product manufacturers to include Low-e Storm Windows. Enrollment will continue through Spring 2018 with testing and certification of products occurring throughout the summer of 2018. Pending approval of the Environmental Protection Agency’s 2019 budget, ENERGY STAR® labeling will occur simultaneously. It is estimated that Low-e Storm Windows displaying both the AERC and ENERGY STAR label will begin to show-up in stores throughout the United States in the Fall of 2018.

Please contact Christian Miner at cminer@neea.org if you have questions about the Window Attachments Program.

NEEA Portfolio Overview: 20 Year View

Portfolio Status as of March 2018

Red text: recent advancement

concept development		program development		market deployment	
SCANNING & CONCEPT IDENTIFICATION	CONCEPT OPPORTUNITY ASSESSMENT	MARKET & PRODUCT ASSESSMENT	STRATEGY TESTING & FINALIZATION	MARKET DEVELOPMENT	LONG-TERM MONITORING
Consumer Products		Heat Pump Water Heater Split System	Retail Product Portfolio Super Efficient Dryers	Heat Pump Water Heaters Ductless Heat Pumps	TVs Residential CFLs White Goods
New Construction (Commercial & Residential)		Manufactured Homes	Next Step Home	Commercial Codes Enhancement <i>Integrated Design Lab</i>	Efficient Homes
Commercial Lighting			Luminaire Level Lighting Control	Reduced Wattage Lamp Repl. <i>Top Tier Trade Ally</i>	
Other Markets	Air Nozzle Dedicated Outdoor Air System	Window Attachments (Comm and Res) Industrial Motor Product Labeling/ XMP	.	Codes & Stds <i>Ind. Tech. Training Comm Real Estate Comm & Ind. SEM</i>	RETA CRES Refrigeration Operator Cert Drive Power BldgOp Cert/Exp Commissioning 80Plus

Memorandum – Informational (Tier 2)

April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Jon Clark, Consumer Products Strategy Manager
SUBJECT: Consumer Products Regional Strategy Update

Our Ask of You: Please review the memo and bring any questions, recommendations, feedback, or concerns to the Q2 RAC meeting. The Consumer Products Regional Strategy work is not on the Q2 agenda.

Consumer Products

During the Q4 meeting, the Steering Committee recognized that the annual targets for heat pump water heaters are aggressive but agree that the goals should be *stretch*. Through implementation of the [Consumer Products Regional Strategic Market Plan](#), the top regional product priority is heat pump water heaters (HPWHs) and the shared, regional goal is: **By 2023, 30% of all electric water heaters sold annually in the region are HPWH.** The Committee feels like this is still the right goal and timeframe.

The Steering Committee reviewed the year-to-date market performance of HPWH indicating the region will likely fall short of the shared target of 17,000 units (current estimate 12-14,000 units). On a positive note there was evidence that the region will double units sold in 2016. The Steering Committee is planning a “deep dive” at the May 2nd meeting to reflect on 2017 as-a-whole. The Steering Committee views this as an important step in the process that will allow the group to learn and make adjustments as needed moving forward. The Steering Committee also confirmed that smart thermostats and lighting are still the “right” #2 and #3 products priorities and will look to leverage existing regional efforts to identify what additional collaboration may be needed in 2018.

NEEA staff, with support from a planning group, hosted a smart thermostat collaboration workshop on 01/11/2018. The workshop was well attended (30-40 people) by funders, industry experts as well as representatives from the Power Council, ENERGY STAR, and other interested parties. The Steering Committee at the May 2nd meeting will review the results of the workshop and determine next steps for the regional smart thermostat strategy work. Also during the meeting, the Steering Committee will also be given an update on work being done by a group of regional stakeholders convened by WSU and BPA’s ET3 group to discuss residential lighting and set priorities.

Please contact **Jon Clark** JClark@neea.org if you have questions about the **Consumer Products Regional Strategy Work**.

Memorandum – Informational (Tier 2)

April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Eugene Rosolie, Stakeholder Relations
SUBJECT: Conference Coordination

BACKGROUND:

In response to a NEEA Board discussion last year about conference/event attendance, NEEA developed a tracking system to improve its management of who's going to what, and criteria that improves NEEA's ability to manage to its annual operations plan and budget.

There is a coordination opportunity here, to ensure we're connecting as appropriate in advance, and sharing out relevant takeaways after, ensuring that the value of these events is shared with the region. This will be a standing housekeeping item for this Advisory Committee moving forward.

OUR ASK OF YOU:

Please review the Upcoming Event agenda(s) linked below and email me (erosolie@neea.org) if you'd like to coordinate with NEEA staff in advance of the event, and/or if there are specific topics/breakouts you'd like to hear about at our next RAC meeting.

UPCOMING EVENTS:

Date	Conference	Report
4/17/2018	Getting to Net Zero	Brown Bag (Internal)
4/25/2018	38th Annual Utility Energy Forum	Conduit Posting
5/6/2018	LightFair 2018	Conduit Posting
7/9/2018	DesignLights Consortium Stakeholder Meeting	Conduit Posting
8/8/2018	Illuminating Engineering Society	Conduit Posting
8/12/2018	ACEEE Summer Study	Brown Bag (Internal)

Memorandum – Informational (Tier 3)

April 10, 2018

TO: Residential Advisory Committee (RAC)
FROM: Dulane Moran, Market Research & Evaluation
SUBJECT: Market Research & Evaluation Update – Q2 2018

This memo provides information and links to several NEEA Market Research and Evaluation (MRE) documents.

MRE Q2 Newsletter

This newsletter provides a snapshot summary of projects in planning or underway for a variety of NEEA initiatives. Brief descriptions of research scope and contact information for the MRE project manager are also provided. To access, please click [here](#).

Residential Building Stock Assessment (RBSA)

NEEA has published summary reports and detailed databases for the three residential segments covered by the RBSA: single family, multifamily, and manufactured homes. Access to these documents is available on NEEA.org on the Regional Data Resources page. Click [here](#) to access this page.

Water Heating Market Characterization

NEEA recently completed a broad market characterization report focused on understanding components of the supply and demand for water heating equipment in the Northwest. This report sought to update water heater market research completed in 2011.

Notable findings include:

- Installers are positioned to have the greatest influence on end use customer equipment decisions.
- “Like for like” purchases are the most common. Changing equipment type or configuration is limited by potential installation challenges and uncertainty in servicing.
- Both installers and residential customer report purchasing units via retail. High volume installers will purchase from distributors or manufacturers.
- Among residential customers that had replaced their water heater in the past two years:
 - Thirty-seven percent reported having to do so because their existing unit “suddenly failed,” while 32% reported the unit was getting old and needed to be replaced.
 - Forty percent called a professional as their first step in the replacement process.
 - Fifty-two percent purchased their new water heater via retail, but 71% reported having it professionally installed.

Click [here](#) to access this report.

Memorandum – *Informational (Tier 3)*

April 10, 2018

TO: Residential Advisory Committee (RAC)

FROM: Mark Rehley, Senior Manager Product Management & Emerging Technology

SUBJECT: Summary of Emerging Technologies – Q2 2018



Our Ask of You:

- Please let us know if you have any additional emerging technologies that you would like us to investigate.
- Please give us feedback on our new format for the quarterly emerging technology report. This is a work in process. The report provides a list of products by sector and with an assessment of their readiness levels.

Click [here](#) for a copy of the full Q2 2018 Emerging Technology Report posted on NEEA.org (all sectors).