

RESIDENTIAL ADVISORY COMMITTEE MEETING



DATE: October 12, 2017
 TIME: 10:00 am – 4:00 pm
 LOCATION: Chelan PUD: 327 N. Wenatchee Ave, Wenatchee WA
 DIAL-IN: 1-866-398-2885
 Enter the participant code: 520-479
 WEBINAR: <http://neea.adobeconnect.com/racocct2017/>

DESIRED OUTCOMES:

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

AGENDA

Time	Topic	Lead	Packet Page
10:00 – 10:15	WELCOME AND INTRODUCTIONS	Eugene Rosolie	
10:15 – 10:45	HOUSEKEEPING <ul style="list-style-type: none"> • Follow up on action items from August 10, 2017 notes • RAC 2017 work plan • Residential/Mass Markets Portfolio Updates • Packet/Informational Updates (not agenda topics) <ul style="list-style-type: none"> ○ Cover Memo <ul style="list-style-type: none"> ▪ Retail Product Portfolio (RPP) Memo ▪ Heat Pump Water Heater (HPWH) Memo ▪ Portfolio Overview – Milestone Progress ▪ Emerging Technology Memo w/ Report ▪ Market Research & Evaluation Q4 Newsletter (link) 	Eugene Rosolie Jeff Mitchell	3 10 - 11 12 - 13 14 15
10:45 – 11:15	DUCTLESS HEAT PUMPS UPDATE <i>Desired Outcome: Bring RAC up to date on 2017 DHP activities, including Quick Connect, and gather feedback from RAC on program strategy and direction.</i>	Suzi Asmus	4 - 5
11:15 – 12:00	HOT WATER SOLUTIONS MEDIA CAMPAIGN <i>Desired Outcome: Review digital marketing trends, best practices and examples from recent Hot Water Solutions digital campaign</i>	Kyle Stuart	6
12:00 – 12:30	<i>Lunch (provided)</i>		
12:30 – 2:00	UTILITY SHARE OUTS/ROUND ROBIN <ul style="list-style-type: none"> • Updates since August meeting 	All	
2:00 – 2:15	<i>Break</i>		

2:15 – 3:00	<p>SUPER EFFICIENT DRYERS UPDATE</p> <p><i>Desired Outcome: Review recent RTF decision regarding Energy Star dryers, discuss NEEA’s response, proposed research plan, and possible next steps.</i></p>	Stephanie Baker	7 - 8
3:00 – 3:45	<p>NEXT STEP HOMES UPDATE</p> <p><i>Desired Outcome: Review Next Step Homes initiative progress and update RAC on most current thinking regarding the Scale-Up Milestone</i></p>	Neil Grigsby	9
3:45 – 3:50	OPPORTUNITY FOR PUBLIC COMMENT		
3:50 – 4:00	<p>WRAP UP/ADJOURN</p> <ul style="list-style-type: none"> • Meeting feedback • Next meeting/location 	All	

Memorandum



October 5, 2017

TO: Residential Advisory Committee (RAC)
FROM: Eugene Rosolie, Stakeholder Relations Manager
SUBJECT: RAC Packet Appendices – Q4 2017

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 10: Retail Product Portfolio (RPP) memo
- Page 12: Heat Pump Water Heater (HWPW) memo
- Page 14: NEEA Portfolio Overview: 20 Year View
- Page 15: Q3 2017 Emerging Technology Report

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:

- Q4 2017 [Market Research & Evaluation Newsletter](#) (includes RBSA update)
- August 31, 2017 [RPAC](#) meeting notes
- August 10, 2017 [RAC](#) meeting notes
- Q3 2017 Residential Workgroup meetings
 - New Homes/Manufactured Homes Workgroup met on September 2, 2017 ([Meeting Notes](#))
 - Retail Product Portfolio (RPP) Workgroup met on October 2, 2017 ([Meeting Notes](#)).
 - DHP Workgroup met on September 6, 2017 ([Meeting Notes](#))
 - HPWH Workgroup met on September 18, 2017 ([Meeting Notes](#)).
 - Dryers Workgroup met on August 31, 2017 ([Meeting Notes](#)).

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

Northwest Energy Efficiency Alliance
421 SW Sixth Avenue, Suite 600, Portland, OR 97204
503.688.5400 | Fax 503.688.5447
neea.org | info@neea.org

Memorandum – Agenda item (Tier 1)

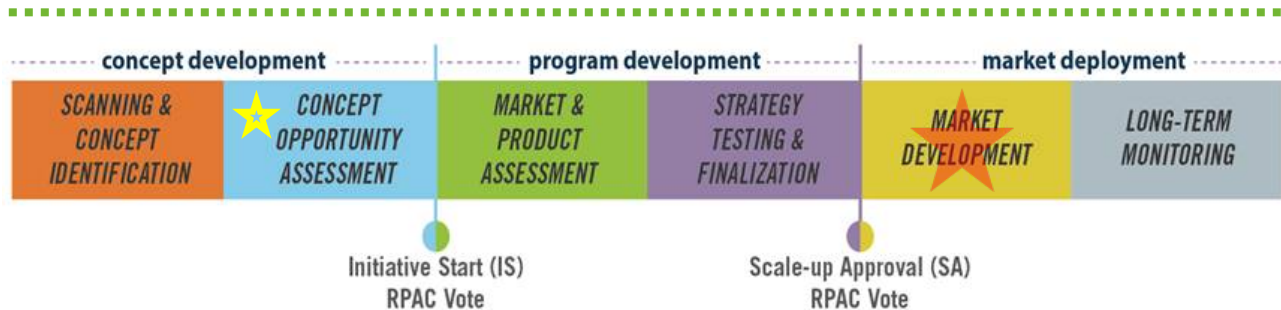


October 5, 2017

TO: Residential Advisory Committee (RAC)

FROM: Suzi Asmus, Program Manager

SUBJECT: Ductless Heat Pumps – Q4 Update



Below are recent updates for the Ductless Heat Pump 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 Q4 RAC meeting. I will be discussing the Quick Connect research in greater detail as part of the Q4 meeting agenda. There is a link to the Quick Connect Phase 2 report below.

Market Progress Evaluation Report MPER #6 Findings

In October, NEEA will published the Market Progress Evaluation Report (MPER) #6, prepared by Cadmus. The MPER findings include: 1) DHP price is the dominant factor in purchase intent for consumers with functioning existing HVAC systems and additional market intervention will be needed to reduce DHP costs 2) Without new or compelling market intervention, the market share of 1:1 displacements is not likely to increase in the future 3) Cooling is the second most powerful benefit of those offered to respondents Although total annual DHP installations have increased each year since 2008, substantial growth in each of the target markets is needed to meet NEEA’s market saturation goals. The DHP team is incorporating these findings into 2018 and 2019 planning. The full report, as well as a summary memo prepared by NEEA staff, will soon be available on NEEA.org.

Quick Connect Study

The NEEA team leading the DHP research on “quick connect” technologies (also referred to as “DIY” units) has issued the Phase 2 report and has launched Phase 2b. Suzi Asmus will be presenting more on the Quick Connect Study results at the Q4 RAC meeting.

Cost Containment

Suzi Asmus and Christopher Dymond have continued to gather feedback from Workgroup members, RAC members and market actors for proposed activities, structure and implementation of regional approaches to DHP cost containment. Next steps for RAC and Workgroup approval will be coming later in Q4.

Program Workgroup

The DHP Program Workgroup met in September of 2017. The group reviewed marketing updates, reviewed results of the Market Progress Evaluation Report #6, and discussed 2018 Operations Planning. Workgroup meeting notes and slides are available on the [DHP Workgroup Conduit page](#).

On September 25, the Workgroup was invited to participate in NEEA's Request for Proposals process to choose a DHP program implementer for 2018-2020. Interested utilities should contact [Suzi Asmus](#).

Note: The Workgroup page on Conduit is marked "private" due to the sensitive nature of some manufacturer development plans. If you do not have access to the files linked above, please contact [Suzi Asmus](#).

Memorandum – Agenda Item (Tier 1)

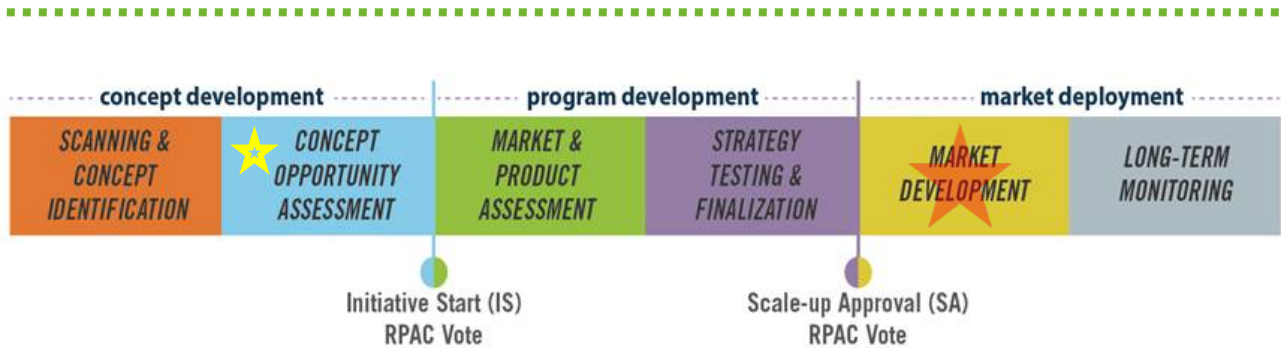


October 5, 2017

TO: Residential Advisory Committee (RAC)

FROM: Kyle Stuart, Marketing Manager

SUBJECT: Digital Marketing Trends and Best Practices



In this presentation, I'll be discussing current trends and best practices in digital marketing that will provide insight into how to plan, execute and optimize a marketing campaign in digital channels relevant to a target audience. To illustrate the concepts covered, I'll provide an overview of [Hot Water Solutions](#) consumer digital campaign currently in market, followed by a question and answer session.

The purpose of this presentation is to educate RAC members about the digital tactics being deployed to educate target audiences about heat pump water heaters and other efficient products, and to answer any questions about digital marketing trends and how we leverage them. Contact [Kyle Stuart](#) for more information.

Memorandum - Agenda Item (Tier 1)



October 5, 2017

TO: Residential Advisory Committee (RAC)
FROM: Stephanie Baker, Program Manager
SUBJECT: Super-Efficient Dryers Program – Q4 Update



Below are recent updates for the Dryers 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 Q4 RAC meeting. I will be discussing the RTF topic in greater detail as part of the Q4 meeting agenda.

RTF Measure Update – NEEA Response

Following the RTF’s July decision to decrease savings for ENERGY STAR dryers, NEEA acquired lab test data from EPA showing the actual performance of ENERGY STAR qualified machines. NEEA Staff has analyzed this data and found indications that ENERGY STAR dryers have greater savings than the current RTF UES value of 8 kWh.

To validate this, NEEA Staff is developing a draft research plan to collect additional data on both ENERGY STAR and non-ENERGY STAR machines. NEEA Staff has shared with RTF Staff the early thinking about how this research plan should be structured, and has already received two rounds of input. This coordination will continue and lab testing of the machines is expected to begin in mid-October and complete in early November. Results should be available before the end of 2017 and will be shared with the Dryers Workgroup.

Multifamily Market Research

In June 2017, NEEA’s Dryers initiative team asked OWL Research Partners to conduct a rapid assessment of the current and projected multifamily market in the four-state region. The main research questions we asked was: *Where is growth in the multifamily market expected to be strongest over the next five years? Ten years?*

The research project derived three key findings:

1. **The highest growth areas for multifamily are the metropolitan areas around Seattle, Portland, Boise, Spokane, and Missoula.** Nearly three-quarters of all the developments planned for the region are in these five metro areas.

2. **In-unit (individual) laundry facilities are now the norm in multi-family developments.** In 2016, 90% of new multi-family projects provided in-unit laundry, and 99% provided on-site access to laundry. These are growing trends.
3. **In terms of building size, growth is projected to be highest for mid-rise developments¹.** Fifty-four percent of permitted buildings in the five high-growth metro areas are for mid-rise buildings, defined as those with four to fourteen floors.

Additional Takeaways from the Study

- **Growth in the multifamily market is overwhelmingly urban.** Opportunities to influence demand for super-efficient dryers in multifamily are concentrated in urban areas. The study shows that permits for multifamily are highest in urban areas, where 85% of new building permits – representing 95% of units, were issued.
- **Projected population growth is highest in Boise, ID.** Among the five metro areas that are experiencing growing multifamily markets, Boise is projected to have the highest growth in population – 10% and 20% over the next five and 10 years, respectively.
- **Trends are localized.** The type and scale of multifamily projects differ by location, so a one-size fits all approach will miss the mark.

Next Steps

The findings of this research will inform Phase 2 of our multifamily market test. Current plans are to conduct an “MROC”, or Market Research Online Community. This qualitative approach will bring together market actors in the development, design, and management of multifamily buildings to identify their needs, constraints, and motivations regarding the selection of appliances (particularly, dryers) for their buildings. The timeframe for this work will be approximately one year. Scoping and development of the various research and engagement activities that will be deployed through the MROC will begin in Q4 2017, with recruiting and launch in early 2018. This will be discussed in detail at the next Dryers Workgroup meeting, expected to take place in November (but not yet scheduled).

Program Workgroup

The Dryers Program Workgroup met in August of 2017. Workgroup meeting notes and presentation slides can be found on the [Dryers Workgroup Conduit page](#).*

August

- NEEA Staff facilitated an in-depth discussion about the July RTF decision to decrease savings for ENERGY STAR dryers, including:
 - Summary of changes
 - Proposed next steps
 - Discussion of utility impacts, including BPA response
- NEEA Staff shared the details of the 2018 Operations Plans for Dryers:
 - Review of plan
 - Utility feedback
- NEEA Staff presented findings from the incremental cost analysis completed over the summer

**Note: The Workgroup page on Conduit is marked “private” due to the sensitive nature of some manufacturer development plans. If you do not have access to the files linked above, please contact [Stephanie Baker](#).*

¹ The majority of the remainder of permits in the high-growth areas were for townhomes (38%) of permits issued in the were for townhomes, which are designated as multifamily, though they are single units.

Memorandum - Agenda Item (Tier 1)

October 5, 2017

TO: Residential Advisory Committee (RAC)
FROM: Neil Grigsby, Portfolio Program Manager
SUBJECT: Next Step Home Q4 Update

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Next Step Home



Our Ask of You: Read the following Next Step Home update and contact [Neil Grigsby](#) with any questions.

In Q3, the Next Step Home team prepared for the Scale-Up Approval milestone of the Initiative Life Cycle. Below is a summary of milestone document, highlighting the past achievements during the Strategy Testing and Finalization phase, and plan to move forward. Neil Grigsby will provide an in-depth presentation during the Q4 RAC meeting. Please reach out to [Neil](#) before or during the meeting with questions or feedback.

Strategy Testing and Finalization

In the **Strategy Testing and Finalizing Phase**, NEEA supported a number of activities that achieved two main goals:

1. Establishing technical guidelines, best practice, and modeling protocols through Pilot Homes
 - a. Phase I (2012 – 2013) - 12 Homes
 - b. Phase II (2013 – 2014) - 28 Homes
 - c. Phase III (2014 – 2016) - 75 Homes
2. Solidifying the residential new construction infrastructure (market partner relationships capabilities, utility programs, data collection, training/technical assistance, code coordination)

Pilot homes helped demonstrate how builders build above code, what measure mix they choose, best practice/challenges, etc. Learnings from the Pilot phase informed what measures builders had most success with, what is most cost effective, and what measures NEEA should support for future code adoption.

Solidifying the residential new construction infrastructure allows NEEA to continue reaching key market partners that will increase builder participation, increase the value proposition for energy efficiency, and gain advocates for progressive code change.

By meeting these goals, the Next Step Home program team has refined intervention strategies that remove the barriers to sustained adoption of energy-efficient technologies and strategies in residential new construction homebuilding and demonstrated readiness to move into the Market Development phase.

In **Market Development**, Next Step Home will refocus the program’s objectives to supporting the code process in each state by:

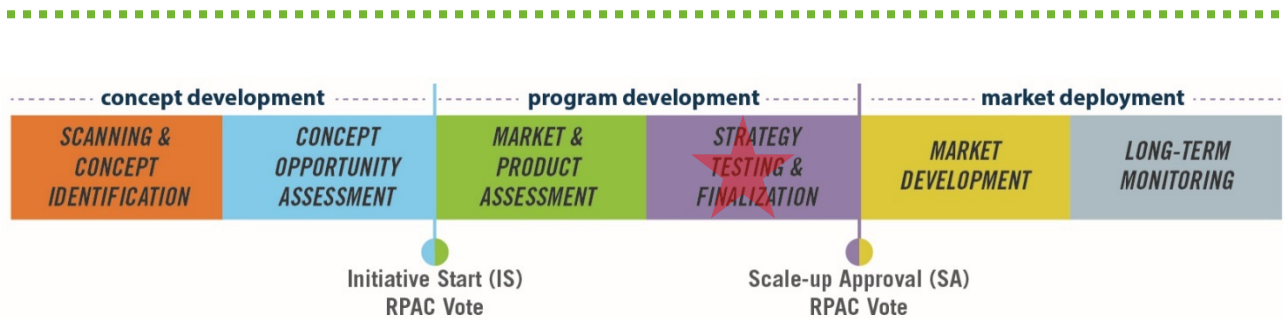
1. Coordinating with Commercial Code Enhancement to leverage existing collaboratives in each state to identify long term code targets.
2. Developing utility incentive programs, and driving participation from key market partners.
3. Collaborating with home certification programs in the region and pursuing government partnerships to increase non-financial builder incentives.

Memorandum – Informational (Tier 2)



October 5, 2017

TO: Residential Advisory Committee (RAC)
FROM: Beth Littlehales, Program Manager
SUBJECT: Retail Product Portfolio (RPP) Program – Q4 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.

Program Updates

- Lowe’s is expected to join the collaboration in Q4 2017, though NEEA may not be able to offer them a contract immediately due to budget constraints. NEEA staff expect to contract with Lowe’s in early 2018.
- Current products and retailers are as follows:

Participation in Category						
Category	Best Buy	Home Depot	Sears / Kmart	Nationwide	Costco	Walmart / Sam’s
Soundbar	x		x	x	x	x
Air Cleaner	x	x	x		x	
Freezer	x	x	x	x		
Electric Dryer	x	x	x	x		
Room AC	x	x	x	x		
Clothes Washer	x	x	x	x		
Refrigerator	x	x	x	x		
UHD TV	x		x	x	x	x

- NEEA staff has been successful in deploying the new portfolio management process this year. With support from the Workgroup, NEEA staff have decided not to add any products to the portfolio for 2018. However, we have worked with other Program Sponsors around the country to encourage them to add UHD TVs to the national portfolio, so that there is more scale behind

- NEEA's effort to incentivize that project.
- In addition, there have been two other big achievements in the portfolio management area this year:
 - NEEA staff supported an effort to adopt a "menu approach" to ESRPP portfolio management. For 2018, this means all Program Sponsors may choose to not incentive one product in the portfolio. This allows for regional variation, and is a step toward a more flexible management approach that will benefit NEEA and other Program Sponsors.
 - For 2018, NEEA is opting to not offer incentives on dehumidifiers, which are being added to the national portfolio along with UHD TVs. NEEA staff believe that dehumidifiers may turn out to be a good fit for the portfolio, and may consider adding them in future years, pending support from the Workgroup.
 - The Portfolio Management Process developed last year by NEEA staff and the RPP Workgroup has been adopted by the ESRPP Product Taskforce. This is a great example of how NEEA is providing leadership and having influence with this group.

Workgroup Activity

The RPP Workgroup met October 2 to review program updates for 2017 and 2018, review results of the Market Test Assessment, and discuss 2018 Operations Planning. Workgroup meeting notes and slides are available on [Conduit](#).

Market Test Assessment

In September, NEEA published the Market Test Assessment, prepared by Research Into Action. The Market Test Assessment verifies and documents the results of the market test, which seeks to provide final validation of an initiative's intervention strategies, identify any gaps in the strategies, and answer any remaining questions of effectiveness before NEEA fully implements an initiative. While the report does include recommendations for improving program operations, it ultimately validates that the program is on course and is making progress on the four RPP Market Test objectives. The full report, as well as a summary memo prepared by NEEA staff, are available on [Conduit](#).

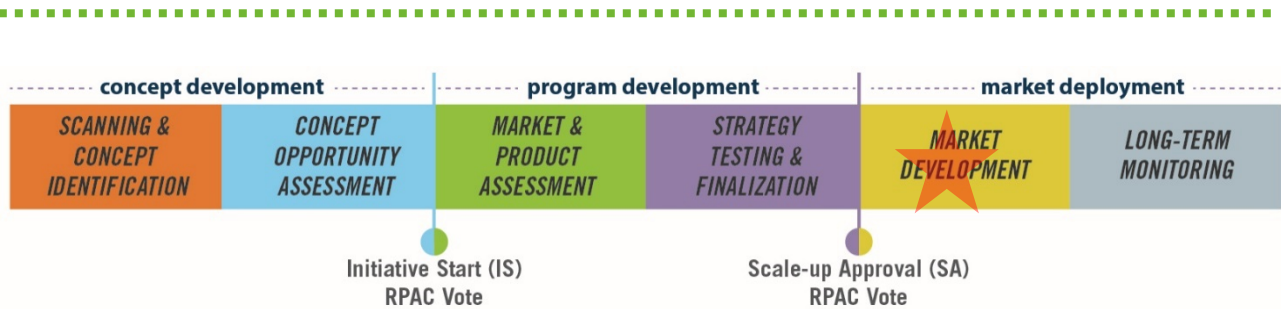
Note: The Workgroup page on Conduit is marked "private" due to the sensitive nature of some retailer and incentive information. If you do not have access to the files linked above, please contact [Beth Littlehales](#).

Memorandum – Informational (Tier 2)



October 5, 2017

TO: Residential Advisory Committee (RAC)
FROM: Jill Reynolds, Program Manager
SUBJECT: Heat Pump Water Heater (HPWH) Program – Q3 2017 Update



Our Ask of You: Read the following HPWH updates and contact Jill Reynolds with any questions – jreynolds@neea.org.

Following are Q3 2017 status updates for the HPWH Program: 2018 operations planning update, promotions update and HPWH Workgroup update.

2017 HPWH Key Focus Areas:

- Supply Chain Adoption of HPWHs
- Expansion of Emergency Replacement Market
- National HPWH Support Activities
- Supply Chain and Consumer Awareness

HPWH 2018 Operations Planning Update

2018 HPWH Goals:

- 20,000 units sold in the region
- Increased installer acceptance/adoption
- National HPWH engagement

2018 HPWH Incentive Structure:

In 2018, NEEA’s HPWH goal is to reach 20,000 HPWH sales in the Northwest. This goal is up nearly 6,000 – 8,000 units from 2017 numbers. While the HPWH sales goal is significantly higher than 2017, the HPWH incentive budget decreased. As a result, the 2018 HPWH incentive structure is updated to the following:

- Per unit incentives will no longer be paid beginning January 1, 2018
- Split system per unit incentives will continue in 2018
- The Administrative Fee (AF) of \$40/unit will be paid to distributors. The AF is part of the Sales, Marketing, Inventory, Training (SMIT) supply chain program started in 2017

- NEEA will pay key manufacturing partners \$150,000 to invest at their discretion. Requirements of this stipend are to provide NEEA monthly shipment data, invest dollars in regional HPWH training and marketing
- New construction per unit incentives will be paid in 2018 provided the builder contractually committed to HPWH installations by December 31, 2017

Work Group Update

September 18, 2017: HPWH Work Group met and meeting topics included:

- Hot Water Solutions Program Updates
- 2018 Operations Planning
- NEEA 2018 HPWH Incentives
- 2016 Market Progress Evaluation Report (MPER)
- Utility Questions and Program Share-outs
- Notes are posted to [Conduit](#)

Other Updates/Opportunities:

- November 14 is the Q3/Q4 Joint HPWH/DHP Utility Webinar for all utility program staff. Agenda is TBD.
- The 3rd HPWH Market Progress Evaluation Report is nearly finalized and should be published mid-October.

HPWH Promotions Ongoing

2017 Q2 – Q4 Promotions

April 1 – December 31, 2017 [HPWH promotions](#) include:

- A. O. Smith
 - Up to \$300 markdown on State, Voltex and Reliance Tier 3 units
- Rheem
 - Up to \$300 markdown on Rheem Tier 3 units
- Bradford White
 - Up to \$300 markdown on Aerotherm Tier 3 units
- Sanden
 - Up to \$300 markdown on SANCO2 Tier 3 units

NEEA Portfolio Overview: 20 Year View

Portfolio Status as of September 2017

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 Industrial Motor Product Labeling Dedicated Outdoor Air System	Window Attachments	.	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)



October 3, 2017

TO: Residential Advisory Committee (RAC)
FROM: Mark Rehley, Senior Manager Product Management & Emerging Technology
SUBJECT: Summary of Emerging Technologies – Q4 2017

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. This quarter we added a table showing the list of technologies and our assessment of readiness levels. The rest of the report provides high-level information on each project. Future reports will add more information about the regional pipeline. Stay tuned!

Click [here](#) for a copy of the full Q4 2017 Emerging Technology Report posted on NEEA.org (all sectors).

Residential Highlights

- **Combo Hot Water and Space Heat - CO2 (Carbon Dioxide):** NEEA staff is recruiting 6 existing homes with electric forced air furnaces and electric resistance water heaters for a retrofit of Sanden’s Eco Runo-based system with hydronic air handlers from AirScape Fans (Medford, OR). Utilities that would like to partner in these projects and have a candidate home should contact Charlie Stephens. Candidate homes should have a design heating load no greater than 30,000 Btu/hr and have reasonable access to building spaces and services for running power and water lines between the outdoor unit and the indoor air handler and water heater
- **Ultra-High Definition (UHD) TVs:** ENERGY STAR Version 8 development process is still underway as of Sept 25, 2017 and is planned to be finalized within the next month. If all goes well, it will go into effect in 2018. ENERGY STAR v8 updates are focused on addressing manufacture certification testing irregularities around Automatic Brightness Control (ABC) and Motion Detection Dimming (MDD). NEEA staff has been active in the specification revision process.

Northwest Energy Efficiency Alliance
421 SW Sixth Avenue, Suite 600, Portland, OR 97204
503.688.5400 | Fax 503.688.5447
neea.org | info@neea.org