

# Natural Gas Advisory Committee Meeting

SeaTac Conference Center; Seattle WA

April 2, 2019

9:30 a.m.



## Attendees

### Committee Attendees in Person:

Gary Heikkinen	NW Natural
Carlos Limon	Avista
Rem Husted	Puget Sound Energy (PSE)
Andy Hemstreet	Puget Sound Energy (PSE)
Monica Cowlshaw	Cascade Natural
Andrew Rector	Washington Utility and Transportation Commission

### Committee Attendees by Phone:

Phil Degens	Energy Trust of Oregon
Holly Braun	NW Natural
Jim Kobialko	Fortis BC
Anna Kim	Oregon Public Utility Commission

## NEEA

Becky Walker, Aaron Winer, Jeff Rigotti, Amanda Davidowitz, BJ Moghadam, Alisyn Maggiora, Jonathon Belmont (phone), Anu Teja (phone), Ryan Brown (phone), Julia Harper (phone), Bing Liu (phone)

## Resources

- Agenda packet on NEEA.org: <https://neea.org/advisory-committee-documents/q2-2019-april-ngac-meeting-packet>
- Master slide deck on NEEA.org: <https://neea.org/advisory-committee-documents/ngac-2019-q2-april-meeting-slides>
- Meeting Recording: <http://neea.adobeconnect.com/pir4ceon4w1e/>

## Welcome & Introductions

### Round Robin Discussion

- 1. What are you facing in terms of carbon reduction pressures and how are you handling them?**
  - a. Reoccurring theme at conferences, etc around digress from natural gas in decarbonization movement.
  - b. PSE noted concerns with meeting capacity; it's easy to say, but the practicality of finding ways to hit decarbonization targets without natural gas is very complicated and costly.
  - c. Avista focused on doing what's best for customers; there are line losses, etc to be considered if we have to eliminate it from the portfolio and move to acquiring generation further upstream.
  - d. Cascade Natural facing strong pressure in Bellingham to curtail natural gas use by 2030; how to maintain position in community as a viable energy service provider. Working to approach the impact through education and staying engaged in the local dialogue.

- e. Fortis BC has dedicated group (4 FTEs within government relations department) working on these solutions (green growth pathways for 2050); incorporating natural gas as part of the solution (investing in zero and low carbon natural gas – Renewable Natural Gas (RNG) and hydrogen injection). Positioning Fortis BC as a major Liquid Natural Gas (LNG) provider along with investing in energy efficiency and the built environment. Here’s a link to a report published on their gov’t website: <https://engage.gov.bc.ca/app/uploads/sites/391/2018/08/FortisBC.pdf>
  - f. LNG is a critical source for reducing carbon impacts in the shipping (water transport) sector
  - g. NEEA experiencing concerns from some manufacturers on how much effort should really be dedicated to natural gas technologies given the perceived electrification push
  - h. Based on perceptions of gas being phased out in Bellingham, Cascade Natural getting questions from customers on regarding investment in gas products
  - i. Recent “Getting to Zero” forum (hosted by RMI and ) a significant number of presentations focused on benefits of electrification; NW Natural partnering with American Gas Association to bring balance to the conversation and encourage a collaborative approach to decarbonization
- 2. How are you connecting with your Board member and disseminating NGAC information to the appropriate folks?**
- a. Given the agenda packet is sent out a week in advance, suggestion for committee members to arrange internal meetings to review materials and collect feedback in advance of the meeting.
  - b. Cascade Natural member is same for both NGAC and Board, so it’s fairly easy to be informed/aligned internally.
  - c. Avista working toward getting all their staff together that have NEEA touch points to start coalescing on efforts and awareness internally.
  - d. PSE: Bob comes to Andy and Rem when he sees concerns; more concerned with budget and products. Their staff that have NEEA touch points come together about 1x/year, sometimes more depending on what’s going on.
  - e. Suggestion that folks put together quick bullet points for internal consumption within their organizations.
  - f. NW Natural staff that focus on EE come together 1x/month, and those directly involved with NEEA material meet anytime a packet comes out to discuss/prepare.
  - g. Energy Trust uses memos, and also has direct conversations on specifics; handled more selectively.
  - h. The WUTC handles NEEA-related activity in a selective manner; however, they have a small staff dedicated to energy conservation so it’s fairly easy
  - i. OPUC relies on Energy Trust for a majority of information; no specific approach for informing their NEEA board member.
  - j. COMMITTEE ACTION ITEM: Be sure to connect with Monica (Cascade Natural) if you have anything you want brought to the Natural Gas Board Committee
  - k. Resources:
    - i. [List of committee members, by committee](#)

#### Other Key Committee Member Updates

1. OPUC working on avoided cost numbers before handing off to Energy Trust; Natural Gas energy efficiency workshop next Friday (4/12).
2. WUTC new hire, Jim Woodward, will be working with Northwest Natural.

#### Housekeeping Items (p. 2-8 in [packet](#))

##### A. Agenda Review

## B. Packet Review – Housekeeping Items

- 1) Announcements
  - a. Next meeting: May 29 at NEEA
    - Suggestion to do a morning to mid-afternoon meeting and then take a field trip down to Salem to see the new absorption heat pump system at Capitol Manor, with possible dinner after.
    - Some expressed interest in the field trip (Monica, Gary, Rem maybe depending on RETAC schedule)
  - b. Efficiency Exchange conference this year in Coeur d'Alene, Idaho, May 14-15; encouragement to join the gas team, hosting two breakfast tables: topics will cover gas heat pump technology and impacts of decarbonization.
- 2) Action Item Follow-up from Last Meeting
  - a. All in progress, no comments/questions
- 3) Budget and Forecast Update (see [slide 7](#))
  - a. Labor slightly under budget due to Christine's maternity leave; will pick up extra product management support so should balance out by end of year.
  - b. Water heaters showing up as under budget due to a credit but will spend full budget; on target for the year thus far.
- 4) Other
  - a. Cascade Natural appreciated opportunity to co-present with gas team at ACEEE Hot Water Forum mid-March

### Bimonthly Progress Report Review (p.9-25 in [packet](#))

Becky Walker, Aaron Winer, Jeff Rigotti and Amanda Davidowitz (NEEA) gave a portfolio overview and highlighted key activities for each technology. *The desired outcome is to address the Committee's questions and that members understand the status of activities related to NEEA's gas efforts.*

#### **Overview Topics w/ Key Discussion Points, Action Items & Decisions: *Review packet for greater detail***

- 1) Portfolio Overview:
  - a. Natural Gas Board Committee held first meeting Feb. 5; focusing on cost effectiveness and extra regional funding. Committee will meet quarterly.
  - b. Scanning: Majority of effort taking place within programs
    - i. **NEEA ACTION ITEM: Follow up with Avista regarding Endotherm proposal and share GTI report.**
  - c. Codes & Standards update (latest full report on Conduit [HERE](#))
    - i. Opportunity assessments for three key proposals included in report in packet
    - ii. **NEEA ACTION ITEM: Share NEEA collaboration report on *Investigation of Installation Barriers and Costs for Condensing Gas Appliances* + the public comments with NGAC members.**
    - iii. Note regarding CCE Washington update: the Total System Performance Ratio is based on carbon emissions; NW Natural concerned they are using artificially low carbon emissions factor for electric that could unfairly impact the gas ratio/calculation.
    - iv. **NEEA ACTION ITEM: Investigate adding RTF/Natural Gas discussion for next meeting**

- 2) Combination Unit: Blue Mountain Energy/Oakridge National Labs project (three internal combustion prototypes) back on schedule. This is a residential unit that has potential to provide water and space heating, and also cooling; An \$8,000 price target is the goal of this effort
  - a. NEEA ACTION ITEM: Request to have one of the field trials in NW service territory
  - b. NEEA ACTION ITEM: Provide updated Natural Gas Internal Combustion Engine Heat Pump Field Trial Final Report (Including unit failure investigation findings) to NGAC members
- 3) Condensing Rooftop Units: Seeking interim report on field trial for condensate management; will continue monitoring through end of May.
- 4) Dryers: Nothing significant
- 5) Efficient Gas HWPHs: See next section for greater detail; one highlight noted included NEEA's recent involvement with the Minnesota Energy Efficiency Potential Study Forum; slides and a video of the forum are available here: <https://www.mncee.org/resources/resource-center/presentations/minnesota-energy-efficiency-potential-study-forum/>
- 6) Next Step Homes: Now reporting on gas-related activities for this program. Focus on homes incented through the Performance Path (above code homes) program. See bimonthly report or subsequent topic in these notes for more detail.

### Efficient Gas Water Heaters Update (slides 10-28)

Aaron Winer (NEEA) provided the progress to-date. *The desired outcome is for Committee members to be aware of progress since October and are informed on next steps and strategy evolution.*

#### **Overview Topics w/ Key Discussion Points, Action Items & Decisions: Review packet and slides for greater detail**

- 1) Review of progress-to-date
- 2) Interim Product Progress Update
  - a. Reminder: "Interim Products" are the currently available, energy efficient gas water heaters (non-powered damper tank and tankless)
  - b. Tankless Lab Testing
    - i. Testing is underway at GTI of both condensing and non-condensing tankless units supplied to us by six major manufacturers.
    - ii. Lab testing is initiated to confirm the tankless system efficiency in steady state condition as well as to look at the full range of variation at different operating conditions.
    - iii. We are also exploring the applications of where 1/2" gas lines will properly function and determine installation savings offered through the use of existing 1/2" gas lines.
    - iv. Condensing units will also be tested and monitored to see when they are actually running in condensing mode and when not.
    - v. Testing is planned to wrap up at the end of Q2 2019.
  - c. Tankless Market Research (Residential focus only at this point)
    - i. Preliminary work/kick-off underway (started early March)
    - ii. Planned activities:
      1. Review secondary literature/data
      2. Hold discussions w/ utility staff

3. Illume (contractor) and NEEA will hold a findings workshop (late June)
  - iii. Anticipated next steps
    1. Updates provided via bimonthly progress reports
    2. NEEA Staff will develop recommendation in Q3
  - iv. Key Discussion Points:
    1. Pricing will be part of discussion
    2. NGAC members will be invited to observe focus groups if conducted
- 3) Gas Heat Pump Water Heater progress update
- a. Commercialization project on track, expect to conclude by mid-May
  - b. North American Field Demonstration – Administered by GTI; recruiting additional partners to support funding
  - c. Additional Discussion Points and Action Items:
    - i. California utilities are engaged and involved in discussions with manufacturers
    - ii. Draft Advanced Water Heater Specification update including gas criteria is ready for gas funder input
    - iii. Reminder: Do not currently have a NEEA budget to cover incentives; seeking to have utility programs in place with by the time the product hits the market so that incentives will be available.
    - iv. **COMMITTEE ACTION ITEM: Identify who in your organization should review and advise on Advanced Water Heater Specification and who in your organization should participate in Program Manager interviews associated to tankless market research. NEEA staff to send requests along with meeting notes.**

### Next Step Homes Update (p.26 in [packet](#) | [slides 29-43](#))

Jonathon Belmont (NEEA) provided the update on gas-related, program activities. *The desired outcome is for Committee members to be more informed on program activities and for NEEA staff to be more informed on gas-specific program goals.*

#### **Overview Topics w/ Key Discussion Points, Action Items & Decisions: *Review packet and slides for greater detail***

- 1) Overview of program market theory and program components
- 2) Planned activities for 2019
- 3) Gas-focused activities for 2019
  - a. Top 3 technologies of interest: advanced walls, thin triple-paned windows, heat recover ventilator (HRV) systems
  - b. New construction work group will reconvene soon
    - i. **COMMITTEE ACTION ITEM: Notify Jon ([jbelmont@neea.org](mailto:jbelmont@neea.org)) or Becky ([bwalker@neea.org](mailto:bwalker@neea.org)) if you want someone from your organization to participate in the group (see [slide 41](#)).**
- 4) Key Discussion Points
  - a. Utilities can set their own threshold for % above code on their performance pathway programs
  - b. **ACTION ITEM: NEEA staff to coordinate a deeper/more technical discussions on REM rate and Performance Path with individuals**

## Northwest Pathways ([slides 45-113](#))

Collaborative discussion on E3 Decarbonization Study conducted for NW Natural; led by Holly Braun, Mary Moerlins, and Ryan Bracken (NW Natural)

*The desired outcome is for Committee members to be familiar with the overview and recommendations of the study.*

### **Overview Topics w/ Key Discussion Points, Action Items & Decisions: *Review packet for greater detail***

- 1) Focus is on building sector and what it would mean to serve peak loads from a systems perspective;
- 2) Direct use NG is for all things not “electricity generation” – comprises 12% of OR greenhouse gas use as of 2015
- 3) Water and space heat sources are equal to if not more than electric (comprises 50-65% in most cases)
- 4) 2050 goal: 80% carbon reduction below 1990 levels (equates to 29 MMT)
- 5) Findings demonstrate there’s a good story for the Gas Heat Pump – being the least expensive way to the 80% reduction goal
- 6) More in-depth presentation available, ask Holly ([Holly.Braun@nwnatural.com](mailto:Holly.Braun@nwnatural.com)); full study available here: [https://www.ethree.com/wp-content/uploads/2018/11/E3\\_Pacific\\_Northwest\\_Pathways\\_to\\_2050.pdf](https://www.ethree.com/wp-content/uploads/2018/11/E3_Pacific_Northwest_Pathways_to_2050.pdf)

## Feedback & Wrap-Up, Adjourn

- A. Next meeting topic suggestions
  - 1) RTF and natural gas
  - 2) Field trip to Capitol Manor
  - 3) REM rate and performance path – Next step homes
- B. Next meeting is scheduled for Wednesday, May 29, 2019, at NEEA (Portland, OR)
- C. Meeting adjourned at 3:30pm