

**RTF PAC Notes**  
**October 17, 2014**  
**Wood Smoke Report Review**

Attendees: Jim West (PAC Co-Chair), Pat Smith (PAC Co-Chair), Danielle Walker (BPA), Charlie Grist (Council Staff), Jennifer Anziano (RTF Manager), Tom Eckman (Council Staff), Sandra Hirotsu (Council Staff), Gillian Charles (Council Staff), Deb Young(Northwestern Energy) Elaine Proust (ETO), Greg Kelleher (EWEB), Jeff Harris (NEEA), Josh Rushton (RTF Contract Analyst), Kathryn Hymas (Pacific Corp), Mohit Singh-Chhabra (RTF Contract Analyst), Pete Pengilly (Idaho Power), Wendy Gerlitz (NWEC), Chris Robinson (Tacoma Power), Lauren Gage (BPA), Josh Warner (BPA), David Nightingale (UTC), Richard Genece (BPA)

**Meeting Summary**

The PAC raised and discussed several policy questions and the potential implications of the RTF's investigation into the ability to quantify and monetize the health effects due to changes in wood use resulting from an energy efficiency measure. The PAC did not resolve any of the questions on the webinar, and there was some disagreement in the implications for some of the questions.

The high level takeaways from the discussion are below (note: more detailed notes are captured under "Detailed Discussion"):

- The PAC discussed the term "direct attribution" and what that means in the case of wood smoke. There were differences of opinion as to whether the health benefits of reduced wood smoke fit this definition, but Sandra Hirotsu noted that this has not been defined in the Act and that the Council decision may not be bound by litigated interpretations of direct verses indirect in other forums.
- The PAC touched on several questions related to the role of the Council (and the RTF and utilities) based on Congress's intent when the Act was written. One specific concern was whether electric rate payers should pay for reduction of a pollutant that the electric system is not responsible for, and whether justifying programs based primarily on the non energy benefits (and not the energy benefits) is appropriate. The PAC did not resolve this
- The PAC discussed the challenge and importance of setting boundaries in this work the point about defining the boundaries of this work and where do we draw the line when trying to quantify benefits from pollutant reductions. The big concern here was related to the resources and costs of doing the work. Some on the call articulated that wood was a big issue that already cleared a significant hurdle for DHP, so that there should be enough to move forward. Others felt that it might be hard to just draw the boundaries around this one example. A few PAC participants recommended that it would be helpful to inform the Council of the potential resource considerations of going down this road.
- The PAC briefly discussed the role of the RTF and RTF PAC in informing the Council on this topic. The RTF needed more time to develop their recommendations around the RTF staff report (speaking to the technical considerations of the quantification). There was interest on the PAC in trying to develop a PAC recommendation to the Council on this issue. Ideally this would be framed around any RTF decision. The PAC decided to follow up on this after the next RTF meeting.

## Detailed Discussion

Meeting started at 9:00 am with Jim West and Pat Smith welcoming the participants.

Grist started the discussion summarizing the genesis of the Wood Smoke report. The wood smoke issue came up when RTF looked at savings from the installation of ductless heat pumps. When analyzing data from these installations, the findings were in homes where there is supplemental wood heating, the savings from DHP were less than expected.

The study lead to the question if there is a big reduction in using supplemental wood heat after DHP was installed, can we quantify the health benefits of reduced wood smoke?

With the help of Abt Associates, the RTF contract analysts, and the Council staff have prepared a draft report that summarizes the findings on what the Council need to decide if it were to incorporate health benefits in cost effectiveness test. This effort was done using ductless heat pump as an example.

Quantifying health benefits of wood smoke is doable under the act which requires the effect to be directly attributable and quantifiable to the measure. It doesn't directly define what directly attributable and quantifiable mean.

Eckman reminded the group that the Council has an issue paper out on the quantification of environmental cost and methodology that will be included in the Seventh Power Plan with consideration of residual impacts outside of regulatory requirements. In that context the draft wood smoke report will be taken to the Council for consideration at the December meeting. Council staffs are looking for the RTF PAC feedback on including this particular aspect of environmental impact.

Anziano gave a high level summary of the wood smoke report and an update of the wood smoke discussion at the October RTF meeting referring to this [presentation](#).

Genece: Does the scope of the methodology go beyond wood smoke, and are you assuming the methodology can be applied differently to other measures.

Anziano: We would have to look at measure by measure basis to understand what data we could collect to get at the quantification and the attribution necessary to move on the next step.

Grist: Added wood smoke is not the only pollutant that may have a change due to an efficiency measure. It would be up to the Council to determine where those boundaries are and the analytical analysis the RTF would do.

Anziano: The RTF members had a robust discussion at the October meeting and made the following suggestions:

- As some of the RTF members were not comfortable to bring the report as an RTF product to the Council, it was suggested changing the voice of the report to have come from staff and including a memo to reflect the RTF's consensus findings around the report.
- To determine direct attribution based on evidence
- To clarify the methodology used is consistent with EPA and other experts, and that the RTF is relying on the expertise of outside bodies.

- Assessment of costs and resources required to conduct sufficient analysis.

Nightingale: All combustion activities will generate some level of PM2.5 but wood smoke is a good example as an extreme producer.

### **Issue 1: Determining direct Attribution**

Anziano: RTF has made the connection that installing DHP reduces the amount of supplemental wood use, but the clear connection of direct attribution and quantification changes how precise we need to get. More sophisticated dispersion modeling may require more granular input.

Gage: What is direct definition? In RTF we have made a lot of reasonable steps but somewhere we fell off the direct cliff. There is a federal litigated requirement of direct vs. indirect. In that definition direct effects are caused by the action and occur at the same time and space. The wood smoke health benefit would not be considered direct. Litigation may be guidance here.

Anziano: When the pollutants are dispersed and cause health impacts over time in different places and counties that is where it falls off the direct cliff. This is a good question to bring to the Council.

Harris: In my opinion the only real thing the RTF can weigh on is that we can draw a direct link between the energy saving measure in this case the DHP and some quantifiable change in the pollutant output from wood stove (some source of pollutants). There are a lot of precedents here that we don't need to recreate wheels that have been made. We don't want to come up with some policy decision without taking a look at that. In step 2, on the distribution of the impact of space heating reduction from DHP on wood use, what granular level do we have data we can support of impacts at county- level or below? This is something the RTF could weigh in on as a component of step 2.

Hirotsu: For reference there is nothing in the power act as far as defining what congress meant on what directly attributable mean. We are interested in looking at how the federal agencies have interpreted that for the purpose of NEEA, but this is also a different situation. This question may not be bound by litigated interpretations of indirect in other forums but we will be looking into that more.

Nightingale: Regarding direct vs. non-direct, looking at the classical experiments done in time and space, it is of acute reaction after exposure within hours. In addition, EPA has done a lot of work in cancers, one in a million population getting cancer is the threshold if there was an exposure in the same time and space as pollutant was present to be exposed that led to the result happening. This might be a different way of looking at what time and space mean.

Genece: What is state of affairs across the country with respect to wood smoke, are we the first pioneers in terms of energy efficiency?

Eckman: Some states such as Massachusetts and Vermont have included non-energy benefits including health and other societal benefits in their quantification of their cost effectiveness analysis.

### **Issue 2: Defining the Boundaries**

Anziano: On the topic of defining the boundaries, if we start to quantify the residual effect of wood smoke what else do we address? Environmental impacts of PM2.5, health impacts from other pollutants, residual emissions from generation and net generation changes, and positive and negative

energy efficiency measures with heat load interactions are question the Council will be tackling through the environmental methodology and one we need to tee up to this discussion.

Other aspect of this question is what it would mean when the benefits are not utility benefits and due to dispersion, benefits may be outside of a utility service territory.

Robinson: Should electric rate payers pay for reduction of pollution that results from a source they are not responsible for, and if we are sponsoring conservation measures that are justified more based on non-energy benefits than they are on energy benefits is that what congress has in mind when they wrote the act?

Genece: The questions of boundaries are also important, you can quickly see a lot of RTF and Council staff time could be taken up by this effort if we don't set a boundary. What is our role, and what do we envision here.

Eckman: The task at hand without carefully designed articulated boundaries could rapidly go out of control with respect to time spent, and the staff and resources dedicated to answer the questions may not be germane to the task at hand. This is what policy makers will have to decide.

Genece: We need to recognize it is a significant issue but not consider this in terms of evaluation of cost effectiveness of measures.

Nightingale: If we don't go down in detail but do broad brush in a judicious way, the administrative burden should be able to be managed reasonably without spending a lot of time and budget of the RTF.

Eckman: Before we start monetizing the benefits and turning it to cost effectiveness analysis, the level of precision, the cost and benefit will have to be an acceptable range. The question is if wood smoke the only pollutant we will ever do or other quantifiable benefits that ought to be incorporated beyond wood smoke. Drawing that boundary is critical.

Nightingale: This particular factor with PM2.5 might have the most science behind it. From a policy perspective, this will be a threshold. We will have to be robust and extensive in peer review going forward and it will close the door on other things that wouldn't meet this level of quality.

Eckman: RTF and staff have spent significant amount of time looking at the record on PM2.5, if someone is to propose for the RTF to take up some other health benefit derived from other pollutant reduction, would you envision dedicating staff time to reviewing that the science is adequate like we have for wood smoke?

Nightingale: If there is a criteria or policy that police the threshold.

Harris: Step 1 is a high threshold to cross as it requires a direct connection between the energy savings measure and the pollutants. In 3 decades there hasn't been additional work raised in this field by all the energy efficiency work we have been doing. Somewhat skeptical perhaps we are worrying about something that might not show up. If we have a high threshold for step 1 we can mitigate that substantially.

Grist: With respect to step 2, we need to do better work with DHP to have a better dispersion model because of the unevenness of wood heating within a climate zone using the tools and the data collected periodically by counties on the type of wood burned. If we do this work it crosses the threshold.

Eckman: The general conclusion from the RTF was the directness and the quantification (step 1) can be done given time and resources, and EPA has done step 2-4. The question to the Council is should it be done? It would help the staff if we have policy guidance from your perspectives on the question whether it should be done if we can do it.

West: Is the staff memo that goes to the Council specific to this issue or part of the whole environmental methodology.

Eckman: It is specific to this issue but in the context of the decision on the entire environmental methodology as one of the questions that were raised is how we should deal with residual impact and whether or not they should be quantified and incorporated.

West: If the memo goes forward and the PAC recommends we undertake it and the Council is to approve in December, what does it mean in terms of when it will be done? Undertake this soon in order to have the quantification done as the plan is being developed, or take this up over the next several years even after the plan is issued, revising our cost benefits associated.

Eckman: We will probably make a recommendation either way.

Genece: When we ask the question if we should be doing this, the question will be benefits vs. cost, how much does this cost us, and how much time and resource would it take? If we can assess the benefit is significantly higher than the cost, I feel more comfortable pursuing the question.

Eckman: On the wood smoke report, the health benefit measured so far are significantly, a factor of 10 larger than the savings of energy.

Genece: What comes off the table in order to pursue this farther?

Eckman: Depending the level of confidence and precision needed (as the RTF agreed) we need to do more work, a layer of analysis which is in order of a minimum of 100k plus staff time and resources.

Anziano: The other unknown of using the more sophisticated model is whether we need more data to input or if the data we have is sufficient. This could create more expense to collect the data.

Gage: From the evaluation perspective if we go down the path of the RTF being responsible for the quantification of environmental benefits, the ripple impact on the evaluation and primary research requirements on the utilities will be enormous. I have a lot of concern about the potential for large cost on both the RTF budget and also the evaluation and research budget of the utilities.

Nightingale: We want the RTF and the region to do this so the utilities don't have to do the modeling later on.

Genece: Given all the discussion we had, we don't know enough to advise moving forward and recommend to the Council

Robinson: Agree with Genece. I don't believe it is the intent of the act for the electric system to pursue conservation measure which is not energy benefit. In this particular issue it is the responsibilities of other agencies such as the clean air agencies.

Gerlitz: I disagree. For conservation resources we count all the costs. I understand the hardship and we need to address the challenges and the costs but we do need to do our due diligence to do what the act tells us we need to be doing.

Robinson: Not basing my decision on the cost of doing it, more concerned we are not including all of the cost. If we are replacing all the wood appliances with DHP we are actually using more electricity. We are not taking that into consideration in the discussion.

Genece: There are too many unknowns. The process and the time and cost of quantifying what we don't know is very daunting.

West: What was the RTF vote?

Anziano: We didn't have a vote. The RTF was not comfortable to approve the report as an RTF product. The plan is to revise the report slightly and include a cover memo to reflect the RTF perspective and bringing it to November meeting.

West: I would like to see the PAC take a position on this. The discussion has been very helpful but it does raise a lot of questions from impact on utilities budget to the value to the region for RTF doing it. One of the issues the PAC might weigh in for the Council is does the PAC has to have a consensus position?

As a PAC co-chair, I would like the PAC to make a recommendation that is specific of the RTF. Our charter is to recommend actions, operations and position coming out of the RTF.

Eckman: As RTF funder, having the PAC weigh in on whether this is a relevant exercise and resource is very useful to the Council.

Genece: Would like the PAC to work toward a unified recommendation.

Anziano: When we have materials ready for the RTF, I will make it available and work toward scheduling a meeting in November.

Rushton: The report is not going to change much. We have tried to draw the boundaries in the report narrowly; some of the issues we have heard in this meeting will need to be expressed in more concrete manner.

West: It feels the RTF is distancing itself from recommendation when they talk about changing the voice of the report from RTF work product to staff product. If the RTF doesn't come to a position, it is more appropriate for the PAC to do a comment process. In our role as RTF policy advisory committee we are advising on what the RTF has taken a position on. For the PAC to make a recommendation without the RTF is already acted on is pretty different than what we have done in the past and somewhat outside of our charter.

Smith: I appreciate the presentation, the discussion and comments that have been made. Having the PAC meet again in late November after the RTF meeting is a good scenario. It will be helpful if we can have more PAC involvement after the members have a chance to look again at the presentation, summary of today's discussion and the cover memo with the report. It will be helpful to the Council if the PAC can weigh in in terms of RTF budget down the road.

Grist: One of the things we can do at the November RTF meeting is to ask the members to take a vote on adopting the report as an RTF product.

Meeting concluded with West asking Anziano to send a meeting invite for the PAC to attend the November RTF meeting and to schedule a PAC meeting in late November.