

**Conservation Resources Advisory Committee**  
**June 24, 2015**  
**Northwest Power and Conservation Council**

Charlie Grist, NPCC, started the meeting at 9:30 am. Introductions were made. He reviewed the agenda and the minutes from the May 1, 2015 CRAC meeting were adopted.

Grist presented a Snap Shot of the Seventh Plan process. Hossein Haeri, Cadmus, asked if the staff plans to run the four sensitives on each scenario. Grist replied no, all sensitivities will not be run on all scenarios. Grist stated that for the meeting today the Council is asking for feedback and recommendations from the Conservation Resources Advisory Committee on the Action Plan, MCS and the RPM scenario analysis.

**Action Plan Ideas**

**Charlie Grist, Tina Jayaweera, Kevin Smit**

Grist explained that the action plan will be a six or 12 year plan to accommodate coal plant closures along with long ramp rates for conservation. Eugene Rosolie, NEEA, asked how this timetable relates to the next Power Plan. Grist answered that every time the Council adopts a Plan staff resets the Action Plan.

Lauren Gage, BPA, asked if the start year would be 2016. Grist answered that it would be an early 2016 adoption, perhaps in February.

**Regional Coordination on Research [Slide 6]**

**Charlie Grist**

Ralph Cavanagh, NRDC, suggested tapping university centers for partnering and coordinating with this action item. Grist agreed and said they should be included in the implementers list. Cavanagh mentioned John Gardner at Boise State University in Idaho as a potential contact.

Jeff Harris, NEEA, cautioned that considering the region's varied research activities, the group should not draw too big a tent. He explained that he understands the idea to think more broadly about the research activities but is reluctant to ask for another organization to be set up considering the size of the lift. Grist stated that it would provide good value and sees it as a hosted road map that ensures against lost opportunities or duplicated efforts.

Harris suggested being specific about the scope of activities: technologies, market end use, market research, or stock. Grist stated they are thinking about the bigger universe.

Rosolie stated that we should be collaborating on these activities and not just sharing information. He said "collaboration" sends a strong message to the Region.

Grist summed up this action item by saying he heard:

1. Include Universities, including Joel Swisher at Western Washington University in Bellingham
2. Caution about the scope and who's in charge of the project
3. Encourage collaboration

### **Emerging Industries [Slide 8]**

Harris gave kudos to the idea of RETAC having more responsibility. He wondered if he had enough resources to do all the work but stated that the foundation is there. He discussed some of the work going on in Emerging Industries and suggested taking them out of the "Big Tent" of the Regional Coordination of Research Action Item [Slide 6].

Cavanagh called it riveting to know that ½ of the savings in the supply curves come from new tech not found in the Sixth Plan. He brought up the opportunities that may come from managing idle load. He referenced data that showed that average households show 1300 KWh of consumption per year. He called this an opportunity and wondered where it fits in emerging tech. Grist answered that

smart plug strips are aimed at phantom standby load. He said that they look inexpensive but he's unsure about their ability to capture all of the savings. Grist then pointed to Federal standards that are targeting this in new equipment. He noted that there are probably other places to get at idle loads and suggested RETAC could address this.

Cavanagh then asked the utility representatives present about sponsoring projects at universities. He suggested creating a central advisory group that looks out at the whole system and thinks of ways make use of resources and alert Universities to opportunities. He called attention to a similar program at UC Davis Center for Energy Efficiency.

Wendy Gerlitz, NWECC, brought up a slide shown at the SAAC meeting on June 23, 2015 which showed annual conservation ramping up for five years and then rapidly dropping off. She expressed concern about the methodology for developing supply curves for a 20-year plan stating that we're missing out on years six through 20. She called for the group to think creatively about how to better estimate a longer term, accurate supply of conservation and would like to see it in an action item.

Gage asked if stopping emerging tech at commercialization instead of adoption was done on purpose. Grist stated that it was more of a word selection issue and stopping at commercialization was not the intent. Gage then brought attention to emerging industries saying that she felt it might be better to focus less on Best Practice Guides and more on identifying and understanding opportunities. She called the Best Practice Guide too narrow. Grist suggested a Best Practice Guide that identifies actual savings results. Gage suggested a guide that identifies the measures and baselines, and gives guidance to help us achieve and measure those savings.

Haeri asked if there is a list of stakeholders who play a role in promoting or researching emerging technologies. He wondered if there was a classification of what strategy would be effective for certain measures. He defined strategies as

incentives, market transformations, and codes and standards. Haeri then stated that incentives have not been successful in dealing with phantom loads.

Cavanaugh asked if incentives were tried for phantom loads. Haeri pointed to some programs. Grist stated that a key recommendation in past Plans was to figure out how to get these savings from codes, NEEA effort or local utility rebate. He stated that these strategies should not be developed by Staff but NEET and admitted that this has had mixed success. He said it's always a question on who should develop this.

Craig Smith, Seattle City Light, stated that his utility has started work through NEEA for regional market strategies and perhaps this is a level up from the portfolio level to the Plan level. Haeri said that IOUs in California went through something similar 4-5 years ago and was faced with the decision to invest in codes and standards, market transformation or both. He stated they came up with an elegant decision model.

Chuck Murray, WA State Energy Office, added that we think of standards as a Federal activity even though CA and the West Coast have done a good job of coming up with state standards. He would like that in the portfolio. He stated that he thinks the idle standby issue is a good one for West Coast state standards. Grist summed up by saying a process piece that identifies overarching efficiency delivery strategies would be valuable. The room agreed.

Gage stated that this NEEA-style work is good but hard. She cautioned about taking on too much and being too broad as it could end with nothing being accomplished.

Grist asked who would lead this effort. Haeri suggested people engaged in market transformation like NEEA, the Council and Utilities. He said program implementers and managers have a lot of insight. Harris called this a classic NEEA play however he is worried about the resource requirements.

Smith asked about the process between NEEA and the Council. Cavanaugh offered a friendly amendment saying that this is looking at things not yet in the business plan and it's helpful to know that. Grist suggested an action item for a deliberate look at that.

Harris suggested that lining up the business plan to the Seventh Plan is what the strategic planning committee of NEEA's board, which meets in July, should take up.

Harris then addressed Gerlitz's point saying that they have been lucky but not necessarily good at predicting which technologies will be the big winners. He called for a more robust emerging technologies portfolio that allows more attempts and failures.

Rosolie said that best practices are too narrow for emerging industries. He said this is problematic for indoor Ag as we don't tell paper mills how to make paper. He stated he would rather see more nuanced language.

### **Updating Stock Assessments [Slide 9]**

#### **Kevin Smit**

Cavanaugh asked what it would cost to get the desired Ag assessment. Smit didn't know but mentioned RTF and BPA work. Rosolie asked if Ag just meant irrigation. Smit replied no, it includes dairy and other Ag end uses. Cavanaugh mentioned the new indoor agriculture sector in Washington and Oregon that has intense interest.

Grist stated that we are short on data and going to the field requires windshield time which is expensive. Grist mentioned that many groups are looking for this same data. Cavanaugh stated that in the past the Council Staff has identified how much it costs and what's at stake. He suggested reaching that level of specificity again.

Danielle Walker, BPA, asked how the Staff used the IFSA for the supply curves. Smit stated that it came up a bit short but they were able to update and use some of it for the industrial sector end uses. Grist stated it needs a re-design especially as Industrial is so lumpy and has many one-offs.

Harris stated that the motor information they have is from 1999 so it's getting a bit moldy. He said this is important information as motors make up a large portion of industrial end use (60% of energy goes through a shaft). He said the DOE is thinking about a refresh of the study and we as a region should think about oversampling to get a robust sample and good Northwest information. Grist called that realistic and actionable.

Stan Price, NEEC, suggested thinking about coordination with other entities to get building performance data. He mentioned Portland and Seattle as examples of places with performance disclosers where you could get more information than the CBSA. He pushed for coordination between the groups.

Cavanagh asked Price for a reminder about the data disclosure requirements. Price stated that Seattle is in its third year of the program. There have been two years of data analysis and the third year will publish soon. He said that the Portland disclosure in 2016 will report on 2015 data for buildings larger than 50,000 square feet, while buildings larger than 20,000 square feet are due the subsequent year.

Ted Light, Energy Trust, echoed Cavanaugh's previous statement about the Ag stock assessment noting the year to year turnover. He suggested the goal might be to look at costs and benefits.

Haeri stated that the LBNL did an extensive cannabis study in 2012 that had comprehensive energy use information. Grist stated that indoor Ag is not just cannabis but also local produce and other emerging industries.

**End-Use Load Shapes [Slide 10]**

Fred Gordon, Energy Trust, said his group is more supportive of this project as the dialog has moved from getting more meters to analyzing the data. He stated that there is a lot of hard work on the front end of this project and called attention to the need to access the huge piles of data that exist.

Jessica Mitchell, Snohomish PUD, expressed excitement over this project stating that developing information at the regional level is needed.

### **Whole-Building Data [Slide 11]**

Rosolie asked if this is just commercial or residential too. Smit answered primarily commercial but really everything. Smit noted that many of the firms doing this work are commercial only.

Rosolie then asked why the regulators are identified as implementers and not the BPA too, given Bonneville's smaller customers. Smith stated that the BPA has a regulatory role too. He then mentioned that SCL is diving into analysis and program implementation and has not asked for BPA permission to recognize whole-building savings. He said from an I-937 perspective these don't fit neatly into the deemed savings of an M&V construct. Smith then said he sees BPA as a regulator and not just a wholesale supplier or program aggregator. Smit said that BPA should be added to the list.

Gordon offered support in caution noting that the data collection from this can be noisy and buildings change. He stated that an increasing amount of equipment has built-in sensing information. He said that this information becomes more available it will be interesting. He cautioned the Council to be vigilant and watch what migrates from whole-building to equipment with built-in sensing.

Price added a caution to Gordon's statement stating that as Energy Trust has just one building in four months any conclusion on transaction costs would be premature. He then said that there are other more experienced pilots in the region and supports giving it a fair shake.

Gage acknowledged that this is a huge area moving forward. She suggested recognizing the amount of work required to leveraging the data for cheaper and more effective EM&V. She said those methods need to be tested and verified and she is more comfortable with residential than she is with commercial and industrial. Smit agreed and suggesting editing the action item to make it more clear.

Grist mentioned security and privacy concerns with this data. He called attention to the work that needs to get done to release data and does not want to be sidetracked by the red tape. He said there is a lot of promise to the data but wants to understand any potential privacy and security barrier that might come up.

Cavanagh asked if any such barrier exists now for utilities. He conceded that the barriers are paralyzing for third parties but wondered about utilities having a problem. Gage answered that the production data is very sensitive but not the utility's billing data. Haeri stated that it is difficult and expensive to comply with security when it comes to billing data. Grist stated this seems like a problem that needs addressing.

Cavanagh acknowledged that this is a problem. He then said it would be helpful to distinguish between the utility evaluations of their own data and.... He said if there is a privacy issue there, and he's not sure there is one, it would be good to call it out. He said the real problem is third parties trying to get access from this data and he's not sure that could be solved. Smith said this issue has come up many times but SCL can use their own billing data.

Price said that it's important to isolate the two issues: privacy and looking at a broad swath of buildings versus thinking about developing the market potential by working with an individual customer. Cavanagh asked Price what the Council could do to clarify this. Price said it comes up later in the Council's actions. He said thinking about the nexus between technology, operations and behavior is not our

strong suit in the way we do potential assessment right now and we should exploit this and think about the potential.

Cavanagh added a friendly amendment concerning his idle loads data saying you could identify the outliers and direct initiatives to that group.

### **Water-Saving Measures [Slide 10]**

Gordon stated that a real opportunity lies in mid-term food processing as well. He said the big animal is on the generation side and it comes from lining ditches and creating energy. He suggested thinking about this as it puts water back into streams and generates power.

### **Hard-To-Reach [Slide 25]**

#### **Tina Jayaweera**

Haeri brought attention to a study that came out earlier today and called on Cavanagh to discuss it. Cavanagh updated the room about a report from the DOE that researched the results from a weatherization project from stimulus money in Michigan. He called the information useful but limited and problematic and said the program's press release was grotesquely distorted. He noted that because of this the project is getting a lot of coverage and called on people in the CRAC to be prepared to be better respondents to reporters. Haeri called the timing of the report in relation to the Clean Power Plan disturbing.

Gordon called attention to a multi-million dollar DOE study on weatherization that may be more substantial with a broader focus. He then spoke about an analysis of his customers overlaid with census data and said what jumped out was the possibility of over participation in multifamily housing as compared to single family. He said that rural was the only area of under participation so that's where they are focusing their study. He said the take away lessons are that it can be cheap and easy to analyze census data and not to assume outcomes as the problem may lie in the supply chain.

Shani Taha, UCONS, LLC, spoke about the difficulties of lower income customers that live in manufactured housing. She applauded the work the Staff is doing on hard-to-reach clients but suggested that the manufactured home community needs to be a separate and unique sector. Taha noted that this community doesn't fit into large industrial, rural or commercial as manufactured home owners have no access to financing.

Taha stated that as they are lower income customers they don't meet the Federal standards for low income customers yet they have some of the highest instances of complaints about their heating bills which can run from \$300-\$400 in the winter. She noted that these are the working poor, or on fixed incomes and often not native English speakers.

Taha then said they can't afford a stick-built home or expensive energy saving technologies and are not eligible for financing. She said that some of the newer homes are more efficient but many of the homes she deals with are from the 1970s and 1980s and are not. She called for a separate bullet in the Hard-to-Reach action item that identifies this community and the issues that they face.

Taha recalled the work already done in this area (duct sealing and LED lights) saying they are fixed contracts but said that there is much more opportunity for advanced measures like ductless heat pumps and floor insulation. She also argued for on-bill repayment as a tool for that community to afford more expensive measures. She mentioned that Seattle City Lights has had a good experience with on-bill repayment.

Taha concluded by saying that there is a two-page analysis available for the CRAC that summarized her presentation. Finally she urged the CRAC not to merge manufactured housing in this action item but pull it out and treat it distinctly.

Linda Esparza, Franklin PUD, echoed the struggle with manufactured housing.

Rosolie also felt the action item was too broad as he doesn't think of large industrial customers as hard-to-reach calling attention to BPA's ESI program. He stated that it doesn't recognize the work the BPA has done with low income groups in the region.

Rosolie then said he's concerned that we are running into costly measures that may present a barrier to low and mid income customers. He noted the lack of easy financing mechanisms for these measures saying that a \$1200 heat pump water heater without any incentive is prohibitive. He suggested talking about mechanisms that would allow better penetration into these low and middle income markets.

Grist stated that this action item is crafted in a way that first identifies what is hard to reach then asks why they are hard to reach and then looks for solutions. He stated that they have always stopped short of recommending specific solutions to specific markets. He said his tendency is to look for facts and deliverable reports on what is happening and then look at why and then use the overarching strategy group to facilitate them.

Cavanagh asked if Taha thought that manufactured homes were not adequately captured in the supply curves. Taha answered that they are merged with residential, single family sector. Grist stated that they are looked at separately. Cavanagh asked Jayaweera if she thought the supply curve captured them. Jayaweera stated that they have done their best.

Cavanagh asked Taha if she thought the manufactured home information is lurking in the supply curves and needs to be called out or if it's not there at all. Taha stated that we have approved measures, mostly duct sealing, duct repair, LEDs and showerhead, which they are using because that's all that current contracts allow. She said they could do more if there was financing available and called attention to a pilot program with PSE for floor insulation where manufactured home owners were willing to pay. She noted that more would be

willing to pay if financing was available. She then said that financing would allow more expensive measures as well.

Smith said that capturing this in the supply curve is one piece of the puzzle and the other is market strategies. He thinks we should have a focus around more effective and appropriate market strategies.

Gerlitz agreed with Rosolie's early statement saying it's a good idea for a number of items in the low and moderate income sectors to be pulled out and treated separately. She mentioned low income weatherization language from 1983 which is very specific yet there hasn't been much progress and called the group to think about action items that would move the region forward.

Gerlitz offered information that she compiled with the help of low-income advocates. She then said that one recommendation outside of the low income sector is to encourage the BPA and utilities to look at ETOs Savings Within Reach Program and expand on it.

Taha emphasized the point saying that multi-family housing is a business decision the property owner makes based on economics, just like small and large business owners. She said these are different strategies than the low or lower income customers have to make and she is suggesting documented savings tools that could be introduced into these communities.

Rosolie stated that small industrial customers are harder to reach than large ones.

### **Explicit Baseline Reporting [Slide 13]**

Brendan O'Donnell, Seattle City Light, called these worthy goals as apples to apples reporting makes work easier. He said there is a clear role for Bonneville and utilities but harder for the IOUs in the region. He asked if there was a plan to address that.

Jayaweera answered that they are not asking IOUs to change their reporting as they do a CPA every two years. She said that they do want them to be explicit in

their baselines. O'Donnell stated that BPA has tracking system. Several voices in the room stated "kind of." O'Donnell restated that this is a worthy goal that will be challenging in practice. He expects that the BPA will play a big role in this and he's interested in following it.

Cavanagh stated that efficiency standards that might be captured by programs relates to the schedule the Council assumes for Federal standards. He stated that he thinks Staff assumes that every standard will be adopted including EISA in 2020. He suggested putting out a strong caveat that the schedule and level of proposed standards are not certain. He said the utility programmatic support that advances product before standard deadlines is important to keep things, especially lighting, on track. Jayaweera stated the Staff will touch on this in the MCS items.

Gage noted the other areas of reporting where there was consistency opportunities i.e. short measure life. She wondered what it means to report and evaluate adjustment opportunities.

Haeri stated that the baseline comes into play in stages; developing conservation potential, planning and evaluation. He wondered how we deal with this and what utilities should report. Jayaweera answered that the evaluation issue is a real one. She said they are focusing on when savings are reported out (gross, net, ex-ante, ex-post) so Staff knows what baseline was used. Jayaweera then said the next step is consistently reporting evaluated or gross savings.

Brad Cebulko, WUTC, asked if Staff is looking for detailed baselines in the reports. Jayaweera answered that they are thinking about RCP and reporting to the Council. Grist noted that NEEA has to report savings to the Council baseline, the NEEA baseline and the baseline of each of the IOUs separately and it's not easy. Grist then stated that if we ever get tradable efficiency credits we will need a rigorous system.

Haeri stated that there are initiatives where there has to be compliance with 111(d) and people are struggling with the baseline. He said the question is can we

come up with general guidelines that apply to different methods of delivering efficiency. He said retrofit has one baseline and new construction had code adjusted for compliance. He said this would be a huge step forward.

Grist summed up by saying that guidelines might be an actionable item. He then asked how you apply guidelines with the available data considering the squishiness of the market. He said the work on this is not over.

Walker said the RTF is a good implementer for trying work but suggested the Council as an overseer.

### **Health & Other Non-Energy Benefits [Slide 14]**

Rosolie asked for an example and clarification between primary health benefits and secondary. Jayaweera said insulation that cuts wood burning and thus smoke offers a secondary benefit as the smoke particulates travel and the home owner is not the only one who benefits. Rosolie suggested altering the language to reflect that secondary benefits are downstream or larger societal benefits.

Gage stated that we track and quantify many NEBs beyond health and asked if health should be separate.

Haeri asked for the Power Act language that defines what benefits can and cannot be included. Grist stated that there is language in the Act that encourages the Council to include all of the costs of all of the resources. Haeri asked if health was specifically mentioned. Grist stated he didn't think so but the Council has hinged its work on the quantifiable elements of it.

Gordon said there's two ways of thinking about NEBs: as quantifiable or as something that should be thought about anyway. He said you could keep studying them and the number doesn't get any sharper, but he thinks it's valuable to keep thinking about things you can't quantify.

Gerlitz called Gordon's statement a "don't rock the boat" approach. She referenced the Council's approach where all of the costs are applied when they evaluate the costs of the measures. She stated that just thinking about things is different than adding them to the calculation. Gerlitz stated that she appreciated the wood smoke study and would like to see more work along those lines.

Scott Davidson, Clean Energy Works, voiced support for Gage and Gerlitz saying he is seeing results in the health benefits of weatherization in communities. He suggested an expansion of the language and pulling health benefits in a separate category.

### **Code Compliance [Slide 15]**

Cavanagh stated that utilities are making efforts to enhance and facilitate code compliance and they don't want to get into enforcement. He asked if the Council is calling that out in the supply curves. Jayaweera said the first question is to determine if code compliance is happening. Cavanagh said utilities are doing things to support it without taking it over but in the past they've done more and wondered if any were continuing.

Smith answered that SCL has their own commercial building code for efficiency and they pay for development and compliance that's paid for by the utility and funded by City Light rates. He then said they are kicking off their own evaluation for compliance and trying to get a sense of savings from the code.

Cavanagh then guessed that other utilities, especially IOUs, don't have that level of engagement. He wondered if this could be a low cost way to generate savings.

Murray stated that these comments will become more relevant later in the presentation. Cavanagh agreed to hold his comments.

### **Tracking Codes & Standards [Slide 16]**

The room gives thumbs up to the slide as presented.

### **End-Use Conservation Model [Slide 18]**

O'Donnell stated an added benefit would be making I-937 compliance easier calling it a worthy effort.

### **Industrial Sales [Slide 19]**

#### **Smit**

Jessica Rose, Energy Trust asked if data centers are considered in this context as an influx have come to Oregon. She said they are not relevant to sales but can shift loads in seconds. Grist called this a good point and stated it might be useful in the DR realm. Cavanagh stated that industries like Microsoft has offered resources to utilities and are frustrated at the lack of uptake in shift load.

Bud Tracy, Independent, stated that it is hard for utilities to change the definition of industrial. Smit agreed.

Lunch

### **BPA Slides**

#### **Quantify Value of Conservation [Slide 21]**

Smith asked if Grist is discussing the value of conservation at the wholesale level as Bonneville is a wholesale supplier. Grist answered yes.

Cavanagh cautioned that, from a wholesale perspective, thinking about electricity as a commodity is relevant. He stated if your sole focus in this study is commodity prices you risk finding yourself in a "ratepayer impact" world. Cavanagh concluded by saying that energy efficiency reduces commodity volumes and could count against them even though bills are reduced at the same time.

Grist stated that he thinks of this action item as more of a long term look at regional revenue requirements with and without conservation. Smith stated that it's important to be clear about the definition of "value."

Cavanagh said we still believe that regional electricity rates are \$3 Billion lower with energy efficiency and wondered what more are they looking for. Grist answered that in the case of the BPA doing an IPR there is often a cry that rates

are higher in the short term and this is a way to observe the long term impact on billings.

Smith stated that, more than a revenue requirement, he's curious about what the system would look like. Grist said this is addressing the lack in the rate case discussions of the value proposition of conservation in terms of revenue requirement.

Rosolie wondered how the tiered rate structure comes into play as in Tier 2 you're responsible for your own load requirement. He then asked if this will impact the BPA's next IPR in 2018-19. Walker stated that process starts in January and flagged caution about the timeframe. Smith stated this looks at historical accomplishments so it's a back cast of the value of investments. Grist said we are asking for both a back cast and a forecast.

Rosolie agreed with Smith saying this needs to be defined better.

Megan Stratman, NRU-NW, followed up on Rosolie's statement and asked how the Staff imagined this working with Bonneville's tiered rate structure. She stated she understood the historical back cast and asked if any thought was given on capturing the rest as the revenue requirements are set for the for Tier 1 and the high water marks. Grist answered no.

Cavanagh was unclear of the problem, as tiered rates are how revenues are recovered but the revenue requirement can be calculated with or without efficiency.

Tracy called attention to the fact that every penny Bonneville gets comes from the end user. He supported analysis to quantify value but stressed the loss of revenue to utilities makes rates go up.

### **Track & Report Savings [Slide 22]**

Gage asked if there was data missing because of system issues. Grist stated that for the Six Going on Seven version 2 report they are getting what they need but this goes beyond that direct connection.

Gage asked if it would be fair to say this about all utilities. Grist said yes.

Gage stated that the BPA wants this up and running but didn't want to put due dates ahead of quality.

Mitchell asked if the Council could narrow the scope of data to build a right-sized system. Grist said they were looking for more, not less, information.

Tracy asked that all costs be included in the tracking and comparison. Grist asked for specifics. Tracy pointed to overhead and staff time which end up in administrative costs and are recovered through the consumers.

Gordon gave an update on Energy Trust's internal tracking, calling it difficult and best attacked in smaller pieces.

Stratman stated that from the customer's perspective we want the BPA to get it right and the timeframe is less important.

Roslie concluded by saying that there should be language that stresses the value to BPA's customers and the overall efficient operation of the EE program.

### **EEI Program Effectiveness [Slide 23]**

Bo Downen, PPC, stated that he felt this was too vague for the Action Plan as the BPA is already looking at progress toward targets and this would add additional cost. He asked for more sideboards and more understanding. He then asked for more information on how the Third Party would work.

Josh Warner, BPA, agreed with Downen stating that the EEI is a funding mechanism and not a program. He then said he was concerned about a 12-month annual evaluation as the BPA is on a two year funding cycle. He stressed that the BPA already talks to the Council about savings number often and adding a Third Party should be carefully considered.

Stratman echoed Warner's comments and asked if there were concerns about the transparency of the BPA programs. She pointed out their public process and wondered what itch this was trying to scratch. Grist noted that transparency wasn't an issue but suggested a Third Party could bring recommendations not seen by Bonneville or the customers.

Gerlitz said there was validity to this as the current structure could inhibit cost effective energy efficiency acquisition and pointed to examples. She then addressed Warner's point saying the EEI is one piece of this program and BPA's

structure. She said she would like to review a broader set of BPA's systems i.e. how well the tiered rate system is working. She concluded by saying an outside entity looking at this would be fruitful. Grist suggested taking EEI out of the title and talk about overall program effectiveness.

Tracy asked who would hire the consultant. Grist said Bonneville.

George Pohndorf, Snohomish PUD, said that coming from an IOU the energy efficiency relationship between the BPA and its customers looks confusing and inefficient. He said a third party could lead to more collaboration, efficiency and innovation if it's set up right.

Rosolie reminded the group that they're dealing with a Federal bureaucracy and there should be language noting that sometimes the BPA's hands are tied because of Federal rules. Grist agreed that this action item needs more definition work.

## **Model Conservation Standards and Surcharge Recommendations**

### **Tom Eckman, NPCC**

Eckman discussed the history of the MCS

### **Our Ideas [Slide 11]**

#### **Charlie Grist**

Cavanagh discussed Conservation Voltage Regulation saying that NEET found it was largely unimplemented in the region as utilities see it as lost revenue. He asked if this is still the case. Grist pointed to progress but called it a mixed bag. He stated that is not just a revenue issue but planning and structures upgrades play a role as well.

Tracy agreed with Grist saying that scheduling and budgeting are the key issues noting that if it is cost effective the utilities will do this on their own schedule. Smith stated that Snohomish did a lot but it took having a champion on the staff. He said there is institutional resistance in many places and it's not widely accepted even in Snohomish. Smith said Seattle has feasibility issues.

Eckman said the proposal language asks to identify and not require.

Rosolie said it takes time and resources to identify and the utility is focused on reliability so it can be put on the back burner. Cavanagh commended the Council for drawing attention to this.

Gordon said this work will not get done by Energy Trust, rather PGE and PacifiCorp.

### **Codes/Standards + Programs [Slide 26]**

Murray said he would like other implementers along with State Regulators to address this MCS. He emphasized that they are adopting codes that aren't quite ready yet but are to the left of the curve and gave some examples. He asked for more support, strategies, code enforcement mechanisms and utility alliances.

Eckman said many of this has been done in the past. Cavanagh agreed with this strongly. Grist summarized that the codes are starting to lead so there's a need for more partners and utility efficiency support.

Smith said that this is important for 1937 utilities that need rules written into the codes. Murray agreed.

Cavanagh suggested specifying that utilities that do this get explicit credit. Smith stated SCL is trying to view codes, standards and utility programs as an integrated whole and gave an example.

Price stated that we should recognize the efforts of existing building owners that try to do more robust work.

Ken Baker, NEEA, said he's working with utilities on incenting what's in code calling it a necessary move. He stated residential is doing a good job of complying with codes but commercial is another area. He mentioned a white paper by Dave Baylon that finds that code changes haven't made a huge difference in EUI in commercial buildings. Baker said that overdesign is still an issue that needs addressing.

Dave Hewitt, consultant, said there is an opportunity to deal with new manufactured housing. He then asked what to do with codes and standards in existing buildings to drive them to deeper savings. Hewett noted that costs are

different for existing structures and asked for packages that look at triggers like new ownership or major renovations. He suggested looking at performance outcomes as much of a new building's loads (i.e. Seattle's Bullitt Center) come from equipment the tenant brings and is not touched by codes.

Grist addressed the EUIs of new buildings saying they operate for more hours than old buildings which might account for the lack of savings but agreed that there may be a need to think about mechanical overdesign. Baker agreed that building use has changed and offered to send the white paper.

Rose agreed with the comments about codes and added that data centers don't have to comply with codes and don't have standards and suggested that this gap is worthy of a deeper conversation. She said that two new data centers can wipe out the savings gained from 600 buildings. She said that Oregon, with its high-quality power, is attractive to international firms looking to site their data centers and wanted to put this emerging market on the radar.

Murray said that putting process loads into buildings codes is hard so connection standards make more sense.

Cavanagh stated that many people think it's time to revisit the Manufactured Home issue. Eckman pointed to a new HUD/DOE standard which pushes the envelope to near site-built equivalency. He also said the magnitude of Manufactured Homes is going down although internal equipment standards could use some work.

Rosolie stated that NEEA is almost ready to launch their high-performance Manufactured Home initiative.

### **Other Ideas [Slide 12] (MCS Slide Deck)**

Gordon stated that using CPAs for compliance in small public utilities is a losing proposition as there's no data to calibrate. Murray asked if utilities could do more geographically-based CPAs, referencing parts of Eastern Washington. Gordon said

it would be a miracle if their baseline saturations of efficiency equipment and histories are similar.

Tracy asked if the first bullet in this slide is limited to public utilities only. Grist answered that MCS applies to public utilities and the BPA. Eckman stated that it applies to anyone who takes power from Bonneville.

Rosolie said this could be doable if you set the CPAs at the level of 1937 requirements but asked if the CPA determines the share of target. Grist said the intent is a mechanism for the BPA to make good on commitments to reach regional targets and possibly collect resources to do that.

O'Donnell stated that there might be a time misalignment as larger utilities do CPAs every two years versus the Power Plan's five.

Walker wondered why this matters if we're hitting the target.

Gerlitz said this idea has complications. She noted that the BPA has a responsibility under the act and the current policy funds 75% of the cost effective conservation while the utilities are responsible for the remaining 25%. Gerlitz said this puts the BPA at risk for not achieving what the Act says it should. She said that the BPA has no backup plan if the 25% does not materialize. Gerlitz sees this as a mechanism to get the shortfall. She says the language should be broader than the 75/25% split.

Pohndorf said if you put this in the Draft the publics would have a lot of "unhelpful" comments. He thought the ability to surcharge specific utilities if they don't hit targets could be a potential model but the idea needs more conversation and it's premature to put in the Action Plan.

Gerlitz asked if language was broader would be helpful. She gave the example of if a utility has an agreement with Bonneville to self-direct any portion of their funding for energy efficiency, etc. then the Council authorized Bonneville to use

surcharges if there's a shortfall. Pohndorf agreed that could work but his primary concern is to continuing a creative discussion and not reacting to language.

Gage brought the discussion back to Hard-to-Reach [Slide 25] asking for a better definition that puts some teeth into the tracking of "hard-to-reach." Grist said he was trying to get something deliverable and manageable and noted that it might be an incremental, iterative endeavor.

### **Distribution Efficiency [Slide 27]**

Gage stated that an ongoing program already exists and said she was having a hard time distinguishing between Action Items and what should go in the MCS. Grist stated that the MCS is a reasonable tool that can overcome a barrier.

Rosolie stated that there's a language problem with "the utilities should then implement any cost-effective upgrades within a reasonable timeframe." He said the MCS should be more specific than "a reasonable timeframe" calling this MCS difficult to measure and get at.

Eckman asked him to think about two independent things: what is the requirement in the MCS and is it surchargable or not. Eckman said they don't have to be surcharged but could if there are some laggards. He summed up by agreeing that the language is fuzzy.

### **Next Steps [Slide 29]**

Mitchell asked for more time for feedback. Grist said there is some flexibility but not much.

Cebulko noted that the Sixth Plan Action Plan was divided into three buckets and wondered if the Staff plans to organize this the same way. Grist noted that he's received a note about Adaptive Management. Cebulko called that an important tool for utilities mid-plan. Grist asked about incorporating new measures into the stream. Cebulko answered that they like to defer to the Council for methodology so it's an Action Item they like to see.

Cavanagh pushed for action on idle loads again saying it needs attention.

Juliet Homer, PNNL, wondered how connected the Council is to research outside the region. She felt that there is opportunity there, particularly in the end-use load shapes. She said the DOE would be more likely to fund efforts if they felt it was not just a NW regional effort.

Rosolie stated that the industry paradigm is changing and wondered if the Action Plan should address that. He asked where energy efficiency fits in the world of renewables and distributed energy and gave the example that a homeowner could put solar panels on their house but there's no requirement for that house to be energy efficient.

Gerlitz asked what utilities and the BPA are doing for capacity benefits. She noted the Council does good work capturing them and wanted an action item that calls on utilities and the BPA to do that as well.

Cavanagh stated that some people think that if a utility has zero growth and demand then the case for energy efficiency is gone. He said the Council has useful things to say about that and they should be heard.

## **Selected Findings from Scenario Analysis Conducted to Date**

**Tom Eckman**

### **Average Conservation Development Across Scenarios Increases When Carbon Risks are Considered But Does Not Increase With Full Coal Retirement or Consideration of the Social Cost of Carbon [Slide 7]**

Grist gave context to this slide saying even in high carbon they do not build all of what was put into the supply curves in the average case. Homer asked if you wouldn't do anything differently under 111(d) because of cost effectiveness. Eckman said yes. Gordon clarified that the existing resource stack wouldn't change but the IRP variable is emerging tech. Eckman stated that if there was

proven, energy efficiency that is less-expensive than running a gas turbine it comes into the portfolio.

Gage asked about avoided costs noting that there are measures above that level that people like. Eckman stated that they are blind to that number when performing analysis.

**Average DR Winter Peak Development in the Least Cost Resource Strategies for Scenarios 1B, 2B, 2C and 3A are VERY LARGE, nearly Identical, and Change Little Through Time [Slide 12]**

Gordon asked if Staff saw any interaction in the amount of energy efficiency selected as the model went from 500 to 2500MW of DR. Eckman answered no. Grist stated that the Sixth Plan didn't have a strong DR signal to deliver capacity so it only looked to energy efficiency or peakers. Eckman concluded by saying with the magnitude of the capacity shortfall DR is the only near-term resource.

**Average Renewable Resource Development for Energy Occurs After RECs are Used and Loads Begin to Increase [Slide 14]**

Rosolie asked if the renewables being built are central station. Eckman answered utility scale with some distributed solar.

John Wellschlager, BPA brought the conversation back to DR asking what the cost assumption was for it. Eckman explained that there are four blocks of DR; the first is \$25 KW year, the second block is \$55-60, the third is \$90 and the last is \$177. Wellschlager stated this comes to \$2 a KW month and noted that he buys DR and balance capacity commercially and wondered why Staff wasn't using existing resources to meet capacity needs. He stated that there is competitively priced capacity out there but not much DR available for commercial use. Eckman noted that they are investigating this question and are looking for more information. Wellschlager noted that \$2 per KW month is an optimistic price as he's seeing triple that price. Eckman noted that they are testing without DR entirely.

Wellschlager contested the idea of benchmarking DR against building new peaker plants saying that there are other resources in the NW power pool that are long on capacity and willing to sell. Eckman suggested taking the conversation off-line.

Grist stated that the model needs this capacity during winter critical water when some resources are offline. Wellschlager understood but stated that DR has to be available during the whole time which is expensive. Eckman invited Wellschlager to talk through details with Ben Kujala, NPCC. Wellschlager agreed.

### **Thermal Resource Dispatch With Carbon Risk – 2C [Slide 20]**

Gordon asked if Staff took tax credits into account when looking at renewables. Eckman stated that there is no PTC going forward and the solar credit is 10% going forward. Eckman stated that the assumption of declining cost for solar is built in as well. Grist stated that existing gas has a lot of capacity so it's cheaper.

### **Thermal Resource Dispatch with Coal and Inefficient Gas Retirement [Slide 21]**

Murray asked if there was any analysis using the 2.5% discount rate and wondered if that would change the renewable build. Eckman referenced slide 16, saying they could try it. Grist said we could try to find the carbon price threshold.

### **Thermal Resource Dispatch with Carbon Risk – 2B**

Rosolie asked if solar is always more expensive the model will always pick natural gas. Eckman said yes so you would have bump up the price of carbon or the price of solar would have to come down for it to get picked. Gordon stated that economics is not the way objective-driven policy works which cannot be predicted. Grist pointed to the need for capacity which doesn't come from solar or wind.

### **Thermal Resource Dispatch with Coal and Inefficient Gas Retirement [Slide 21]**

Murray asked if new plants would be built in this scenario. Eckman answered yes, a lot of them, like 18. Eckman then drew attention to Scenario 3B as its challenge is to get rid of the Natural Gas wedge for energy and a similar wedge for capacity to get to a zero carbon footprint by 2035. He noted the principal challenge is

meeting capacity. Gordon called these separate problems and if the policy is to drive down carbon you could work the energy in and leave in the peaking capacity. Eckman agreed but if you want a zero footprint that wouldn't work. Gordon agreed. Eckman said that wind and solar could provide energy but they don't match loads.

### **Sensitivity Studies [Slide 24]**

Gordon asked about the high carbon impact scenario that looked at weather and population. Eckman said it's a sensitivity study as we will not have the right water forecast until next year.

Grist adjourned the meeting at 4:15

### **Attendees on Site**

Kevin Smit	NPCC
Tina Jayaweera	NPCC
Charlie Grist	NPCC
Juliet Homer	PNNL
Jessica Mitchell	Snohomish PUD
JP Batmale	Energy Trust
Ted Light	Energy Trust
George Pohndorf	Snohomish PUD
Danielle Walker	BPA
Eugene Rosolie	NEEA
Hossein Haeri	Cadmus
Bud Tracy	Independent
Craig Smith	Seattle City Light
Brendan O'Donnell	Seattle City Light
Lauren Gage	BPA
Stan Price	NEEC
Chuck Murray	WA State Energy Office
Wendy Gerlitz	NWEC
Brad Cebulko	WUTC

Ralph Cavanagh	NRDC
Josh Warner	BPA
Jessica Rose	Energy Trust
David Hewitt	Consultant
Shani Taha	UCONS, LLC
James VandenBos	BPA
Jennifer Anziano	NPCC
Fred Gordon	Energy Trust
Tomas Morrissey	PNUCC

### **Attendees via Go-To-Meeting**

Austin Rohr	
Bo Downen	PPC
Brian DeKiep	NPCC
Frank Brown	BPA
Eli Morris	PacifiCorp
Elizabeth Osborne	NPCC
Summer Goodwin	BPA
Gail Hammer	BPA
Jeff Harris	NEEA
Jennifer Williamson	BPA
Kathy Moore	Umatilla Electric
Larry Blaufus	Clark PUD
Leann Bleakney	NPCC
Linda Esparza	Franklin PUD
Megan Stratman	NRU-NW
Mike Bailey	Energy Trust
Elaine Prause	Oregon PUC
Roger Spring	Evergreen Efficiency
Ryan Neale	
Scot Davidson	Clean Energy Works
Shauna McReynolds	PNUCC
Steve Bicker	City of Tacoma

Tashina Jirikovic-Reynolds

Milepost consulting

Tomas Morrissey

PNUCC

John Wellschlager

BPA

Jennifer Williamson

BPA

Jessica Kincaid

OR Dept of Energy

Scott Davidson

Clean Energy Works

Ken Baker

NEEA