

**Northwest Power and Conservation Council
Conservation Resources Advisory Committee
March 31, 2020**

Charlie Grist, NWPCC, began the meeting at 9:30 with introductions. He informed the group about the Conservation Resources team's progress in the Plan process.

Grist then spoke about the untimely death of Bobbette Wilhelm, Idaho Falls Power. Grist praised her thoughtful, frank and helpful work on the Committee, stressing that she will be missed.

Grist then thanked CRAC members for their hard work and flexibility during this uncertain time. Jim Lazar, RAP, asked if there is any information on how COVID-19 might affect electric loads. Grist answered that Massoud Jourabchi, NWPCC, is presently investigating this. Zeecha Van Hoose, Clark PUD, noted that preliminary data shows a 2% load decrease for weekdays, revealing that Clark anticipates that number to drop further as shelter-in-place mandates continue.

Draft Conservation Supply Curves for the 2021 Plan

Charlie Grist, Tina Jayaweera, Kevin Smit, NWPCC

Lazar asked if the dryers referenced on [Slide 8] are ultrasonic dryers. Tina Jayaweera, NWPCC, answered that the number refers to residential, hybrid- or full-Heat Pump dryers and not ultrasonic dryers which are more appropriate for commercial applications.

Jeff Harris, NEEA, asked if the Heat Pump Water Heaters' achievable potential comes from Single Family applications only. Jayaweera answered that the number includes Single Family, Manufactured Homes and low-rise Multi-Family, acknowledging that this is expanded from the Seventh Plan. She added that she only looked at split systems for Multi-Family, which limited their cost effectiveness.

Harris asked if staff examined the incremental potential of the average residential lightbulb by moving from the weighted average current practice lm/W for [Slide 9.] He reported seeing bulbs labeled 10W for 800lm next to bulbs labeled 7W for 800lm. Jayaweera answered no, explaining that she looked at typical bulbs which range between 7 and 10W. Harris thought more rigorous analysis might reveal interesting results. Jayaweera stated that most bulbs are 90lm/W which still have savings.

Jayaweera added that Bonneville and WSU, formally known as E3, investigated this and might have data.

Harris voiced support for combining fixture efficacy and controls as it follows market realities [Slide 16.] Grist predicted that this would be a good place for programs to exert some market influence. Aaron Leatherwood, Evergreen Efficiency, seconded Harris's comment, saying he hoped to see forward traction in the area.

Lazar pointed to new control developments specifically for hospital rooms. Grist agreed that these additional control features are driving market adoption. He also pointed to PNNL work that identified increased demand for higher lighting levels to benefit employee health, comfort and productivity.

Harris asked what equipment makes up the fan block on [Slide 17.] Smit answered that these are stand-alone, not integrated, fans, adding that the large potential comes from two measures: upgrading the fan or switching from constant to variable speed applications. Smit added that he is working to avoid double counting, particularly with ARC.

Ted Light, Lighthouse Energy, also felt the potential was high and asked if Smit found similarly-quantified potential studies to compare his work against. Smit answered that he looked but hasn't seen anything similar.

T. Light called the increase in industrial potential so significant that it tested his limits of credibility [Slide 24.] He asked if there has been any benchmarking against other studies. Smit answered no and wasn't sure T. Light's numbers were correct. Smit then acknowledged that he is still working his way through the review comments and the number might shift a bit.

[Council staff note (post meeting): Mr. Light miscalculated the total share of industrial potential at 37% of load. The value at that time was 21% and the final value is 19% of 2041 load, and 17% of 2022 load.]

Harris asked how much potential is associated with natural replacement as opposed to retrofit. Smit answered about 40%. Harris confirmed that this is mostly pumps, fans and compressed air affected by the new DOE standard. Smit agreed that the majority are natural replacement while the optimization pieces are still retrofit. *[Council staff note (post meeting): the final split is 41% NR and 59% Retrofit for the Industrial Sector.]*

Rich Arneson, Tacoma Power, asked if CVR/DVR potential is reduced as the region progresses with additional measures that are not affected by voltage [Slide 37.] Grist said yes, pointing to former Council staff member, Mike Starrett's work.

Harris praised staff's work [Slide 38] calling it tremendously detailed and granular. He then asked if RPM scenarios include a run where ramp rate constraints are removed. Grist thanked Harris for praising the staff's work and then pointed to the "Robustness of EE" scenario that looks at ramp rates along with other factors.

Chris Johnson, Benton PUD, asked if the impacts of COVID-19 will be analyzed. Grist answered that none of the presented work addresses it and there is no strategy in place yet. Johnson understood and suggested that some narrative might be appropriate.

Incorporating OR EO 20-04

Tina Jayaweera, NWPCC

Blake Shelide, ODOE, said he is looking forward to rule-making and public comment in July 2020 [Slide 2.]

T. Light asked if there was any gut check of the increments between the ramp rates [Slide 6.] Jayaweera answered that Oregon represents about 1/3 of the total residential market and this represents a broad-brush approach.

Grist read notes from Jennifer Light, NWPCC, that identified the following questions:

- Potential overlap in commercial fan savings
- Potential overlap in HVAC savings
- Overly “Healthy” conservation savings in Industrial
- CVR concerns from Jim Lazar

Grist adjourned at 11:45.

Attendees via Webinar

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|-------------------|----------------------|
| Charlie Grist | NWPCC |
| Shani Taha | UCONS LLC |
| Kevin Smit | NWPCC |
| Rich Arneson | Tacoma Power |
| Aaron Bush | PPC |
| Amy Wheelless | NW Energy Coalition |
| Zeecha Van Hoose | Clark PUD |
| Andrea Goodwin | NWPCC |
| Brandy Neff | PNGC Power |
| Jack Cullen | ETO |
| Jeff Harris | NEEA |
| Brian Dekiep | NWPCC |
| Jennifer Light | NWPCC |
| Tina Jayaweera | NWPCC |
| Adam Schultz | ODOE |
| Ted Light | Lighthouse Energy |
| Anika Roberts | NWPCC |
| Jim Lazar | RAP |
| Aaron Leatherwood | Evergreen Efficiency |
| Debbie DePetris | Clark PUD |
| Joan Wang | Cadmus |
| Megan Stratman | NRU NW |
| Chris Johnson | Benton PUD |
| Aquila Velonis | Cadmus |
| Eli Morris | Applied Energy Group |
| Blake Shelide | ODOE |

Leann Bleakney
Wendy Gerlitz
Danielle Walker
Kerry Meade
Deborah Reynolds

NWPCC
NW Energy Coalition
BPA
NEEC
WA UTC