

Bonneville Response to Public Comments on the Draft 2020-2039 Conservation Potential Assessment

July 31, 2018

In early 2018 Bonneville developed its first Conservation Potential Assessment, estimating the amount of energy efficiency available within public power from 2020-2039. Bonneville released the draft report for public comment from June 11 to July 6, 2018. Two comments were received. The responses to these comments are below.

Comment and Response to Clark Public Utilities:

Clark questioned the 2018-2019 savings and the impact it will have on the short term results of the study. Bonneville accounted for the expected achievements in 2018 and 2019 by identifying the savings we expect public power to achieve in 2018 and 2019 and incorporating those savings into the baseline. That is, those savings are assumed to have occurred thus reducing the amount of total conservation available beginning in 2020. Bonneville also removed savings expected from upcoming codes and standards during these years. While we expect actual savings achievements to vary from forecasts, this approach should capture most of the anticipated savings achievements and movement in the energy efficiency market.

Clark commented that it would have been prudent and a good exercise to include achievable economic potential in the CPA to compare with the economic potential assessed in utility CPAs and questioned why this type of potential was not included. It is correct that Bonneville assessed the economic potential only in the Bonneville Resource Program. It is Bonneville's understanding that most utilities apply an avoided cost energy to their CPA to determine the economic potential. At the time of the development of the CPA, Bonneville had not determined an avoided cost energy to apply an economic screen. Rather, that amount of energy efficiency was determined through the Resource Program, as it compared the cost and savings of energy efficiency to other available resources to meet BPA's needs. Bonneville agrees that interesting learnings could have resulted from a comparison of Bonneville's economic potential to public utility customers' estimates. Bonneville expects to conduct similar work as it begins to assess the program and incentive impacts of the Resource Program results, what programs and measures utilities are pursuing, and then compare what we find with the cost effective measures identified by the Resource Program.

We appreciate Clark's review and support of this study and look forward to its continued engagement in future work on CPAs.

Comment and Response to the Northwest Energy Coalition:

NWEC Comment on Total Resource Cost Approach: The Coalition is concerned that BPA did not take a total resource cost (TRC) approach that is consistent with the Council. As discussed in footnote 3 and in Table 12 of the CPA, in calculating TRC levelized costs for each measure, the

benefit of deferred transmission and distribution expansion was included in the TRC calculation, but only using a transmission rate as a proxy for both transmission and distribution. This approach is inconsistent with the total resource cost approach used by the Council and most utilities region-wide. We understand that the distribution system value can be different for each BPA customer, so we urge BPA to work closely with its customer-utilities to fully understand and value the distribution system savings provided by energy efficiency in its next CPA.

Bonneville Response: As noted in appendix G of the Seventh Power Plan¹, determining the value of transmission and distribution deferral is dependent upon local conditions. Each utility in the Northwest calculates this benefit differently depending on the perceived benefits and costs and how they are allocated across each system. Bonneville believes using its transmission rate is an effective proxy for capturing the value of energy saved on the Bonneville transmission system. Bonneville has asked the Council's workgroup to further study this value and will continue to be involved as the region explores a consistent methodology for calculating this important benefit.

NWEC Comment on Cannabis and indoor agriculture: This CPA does not look at the conservation potential associated with cannabis cultivation or other indoor agriculture measures. Though we know there are federal limits on what BPA is able to offer in the form of incentives to promote efficient practices, knowing the potential that could be influenced in the service territory could still be valuable for BPA and its customers. Many of BPA's customers have indoor agricultural operations in their territory and have started to model the potential for conservation (e.g., Seattle City Light), so their work could inform future BPA analysis.

Bonneville Response: The Bonneville CPA does not explicitly contain efficiency measures or calculate savings potential specific to indoor agriculture, such as cannabis cultivation. Bonneville does not include energy efficiency measures for cannabis businesses. However, our approach for calculating savings potential through estimating commercial floor space and industrial energy usage in the customer loads Bonneville supplies should capture the potential for lighting and HVAC savings of which indoor agriculture measures are generally reported through utility self-funding. In future CPAs, Bonneville will continue to consider how it can best capture this potential while recognizing that it can only be captured through self-funding.

NWEC Comment on Emerging technologies: An issue of many CPAs in the region is that they underestimate the futuristic and emerging technologies that could be emerging at the end of the 20-

¹ <https://www.nwcouncil.org/reports/appendix-g-conservation-resources-and-direct-application-renewables>

year horizon. We encourage BPA in future CPAs to consider ways to incorporate emerging technology in the supply curves to better model future potential

Bonneville Response: Bonneville recognizes that limiting the study to only RTF approved measures excludes the possibility for emerging technologies. The estimation of savings and costs for emerging technologies can be difficult with limited information and lack of regional standards. In the future as Bonneville better aligns its CPA with the Council's development of the Power Plan EE supply curves, we will leverage the work of the Council and guidance of the Conservation Resources Advisory Committee to include emerging technologies within our study.

NWEC Comment on Market transformation and NEEA: The CPA does not discuss market transformation opportunities or the important role that NEEA plays in acquiring savings on behalf of BPA and its customer utilities. This market transformation issue could be integrated with the improved assessment of emerging technologies in the next CPA.

Bonneville Response: Like the Council's Power Plan, the estimation of energy efficiency savings potential is not distinguished by acquisition channel. The attribution of total savings potential through market transformation and organizations like NEEA is assessed in the development of Bonneville's Energy Efficiency Action Plan. The 2016 EE Action Plan includes a detailed assessment of savings expected to be achieved through NEEA. Bonneville plans to update the 2016 EE Action Plan in the spring of 2019 and provide an updated assessment of NEEA savings.

NWEC Comment on Integration of savings shapes: The CPA states that "The Team assigned an hourly savings shape to each measure, which we then used to disaggregate annual forecasts of potential into hourly estimates." However, more detail on how this information was developed and used in the final inputs to the Resource Program would be useful. For example, how was resource shape by measure provided? Was information provided for each measure as in input to the resource program model, or did this shape become aggregated by bundle?

Bonneville Response: Over 1600 individual measures were developed in the CPA. To reduce the modeling burden, these savings were bundled into the following categories for the Resource Program:

- Levelized cost bin (such as measures that cost between \$10 per MWh and \$20 per MWh)
- Measure type (discretionary or lost opportunity)
- End-use group (such as HVAC, lighting, or water heating)

Savings shapes were assigned to each measure and defined Resource Program bundles, then forecasts of annual achievable technical potential were disaggregated for each hour of the study

horizon using each measure's respective savings shape. They were then aggregated by the bundle groups described above (levelized cost, measure type, and end use group). This produced hourly forecasts of achievable potential for 2020 through 2039 for each combination of levelized cost bin, measure type, and end-use group. BPA then used these hourly results to produce the weekly conservation shapes required by the Resource Program. In total, this process produced ninety separate conservation bundles

NWEC Comment on Single large loads: The CPA notes that new single large loads were removed from the CPA, but gives no reasoning behind this decision. It would be good to understand why these facilities were removed from the CPA. The Coalition would like to better understand this decision to ensure that the CPA is not omitting important conservation potential in the study.

Bonneville Response: New Large Single Loads are defined by the NW Power Act as “any load associated with a new facility, an existing facility, or an expansion of an existing facility which is not contracted for, or committed to, as determined by the Administrator, by a public body, cooperative, investor-own utility, or Federal agency customer prior to September 1, 1979, and which will result in an increase in power requirements of ten average megawatts or more in any consecutive twelve-month period.” (NW Power Act, 839a(13))

New Large Single Loads may be served by a Bonneville customer with either non-federal power or with federal power supplied by Bonneville. It is the customer's choice. Such large loads must be separately metered from the customer's other general retail load. If Bonneville is asked to supply power for NLSLs, such power is sold at the New Resources (NR) power rate, which is Bonneville's marginal cost based rate. Bonneville does not seek to acquire conservation savings in NLSLs since Bonneville does not have a continuing obligation to supply federal power for service to such loads. Indeed, Bonneville is not serving such loads today. It is also uneconomic to offer conservation measures at these sites since there would be no actual system savings benefitting Bonneville's obligation to supply federal power to meet the general requirements loads of its public utility customers.

NWEC Comment on Industrial and commercial sector potential: The achievable technical potential in the industrial sector is all very low cost and the commercial sector average measure costs are also fairly low. The Coalition is concerned that due the nature of the BPA EEI structure and the elimination of the large project fund, industrial and large commercial projects may have a tendency to remain unfunded in BPA territory. It might be worth a programmatic review of this measure potential to determine whether new mechanisms for large projects are needed. Additionally, several regional utilities have recently found additional commercial success with pay for performance type offerings that pay directly for meter based savings. It might be worthwhile to review whether there are programmatic changes that could help encourage BPA customer utilities to implement pay for performance based approaches to improve uptake of commercial opportunities.

Bonneville Response: The Bonneville CPA identified significant low cost savings in the commercial and industrial sector. Much of this savings, but not all, was chosen within the Resource Program. Bonneville is in the process of assessing the programmatic efforts and acquisition strategies needed to achieve the savings chosen by the Resource Program. More information is expected to be available on this effort in the fall of 2019.