

Date: July 22, 2020
From: Vlad Gutman-Britten, Climate Solutions
To: Puget Sound Energy Integrated Resource Plan Team
RE: July 21, 2020 Social Cost of Carbon Presentation Responses and Feedback

Climate Solutions appreciates the opportunity to comment on the July 21st Social Cost of Carbon presentation. A key principle for Climate Solutions that has been articulated to both the UTC and the Department of Commerce as part of CETA rulemaking is that the SCC application methodology must accurately reflect how a plant will operate in the real world in order to properly evaluate the impact of the full projected emissions a facility will be responsible for. We articulated this position to the UTC in our comment letter date December 20, 2019 and in more detail to the Department of Commerce on June 15, 2020, from which we quote below:

Incorporating the social cost of greenhouse gas emissions should strive to reflect how generating stations and resource portfolios will operate in real-time after the planning process is complete...In order to accurately understand the greenhouse gas impacts of specific utility choices, a utility's resource plan should reflect the state of the grid, the costs of dispatch, and the competitive standing of various resources as accurately as possible and *as they would function in reality*. Doing this accurately enables a utility, its customers, and the public to understand the import of differing choices and the social costs being imposed by those choices.

If a utility incorporates the social cost of greenhouse gas emissions into the input cost of fossil fuel resources, this assumes that in real-time, the social cost of greenhouse gas emissions will impact dispatch and operations. Doing this will artificially suppress the dispatch of fossil fuel resources in a utility's system simulation and create the impression of a portfolio that is lower-emitting than said portfolio would be in actuality. In practice, this means that a substantial share of emissions the portfolio would generate would not be covered by the social cost of greenhouse gases as required in statute, and lead to utility resource decisions that are not reflective of real-world greenhouse gas impacts of specific resource selections. Utilities should only be permitted to incorporate the social cost of greenhouse gas emissions pre-economic dispatch if in real-time, utilities plan to incorporate these costs into operational decisions.

It is of paramount importance that *all* the emissions from an evaluated portfolio be priced with SCC, which would require simulating an accurate capacity factor for all selected resources. Furthermore, artificially suppressing the dispatch of a thermal resource under consideration would yield an increased energy gap that would need to be filled by other resources, resulting in builds that are not necessary given the actual higher level of dispatch that a facility would experience.

Nonetheless, we agree with other stakeholders that there is an opaqueness in how:

1. SCC impacts resource portfolios. This is because of the factor that PSE has identified—resource choices are being driven principally by portfolio requirements and not SCC.
2. SCC impacts on conservation and demand side resource selection.

We recommend that PSE provide more background on point 2—explaining how the proposed SCC impacts the cost-effective level of conservation and other demand side resources selected and how this selection is and is not informed by metrics like LCOE. On the call, presenters explained that the avoided carbon emission value of these resources is reflected in their selection by providing a relative cost advantage for them when minimizing total portfolio cost, but more clarity on this point would be beneficial.

To address point 1, we agree with other stakeholders that a scenario with SCC applied as an adder and another with SCC applied during dispatch would be helpful. As the company has pointed out, the 2019 IRP included such runs and concluded that SCC largely doesn't impact resource selection, so in addition we'd suggest running these scenarios *in absence* of the CETA portfolio requirements. Ultimately, depending on how rule-making settles on this question, this scenario could be useful for establishing the baseline for the purposes of incremental cost calculation.

In addition, we have concerns with the emissions leakage rate selected by the company for upstream methane sources. While we recognize that the company is suggesting using an agency figure selected by PSCAA, numerous recent peer-reviewed studies have indicated that this level may be too low. A recent example published by a team led by Ramon Alvarez, who has a long history of examining leakage rates and impacts, indicates that US leakage rate could be [60% higher than the EPA](#) currently estimates for example. We urge the company to reexamine the leakage level selected for its natural gas sources and consider adjustments to reflect recent research. At minimum, a sensitivity that includes higher leakage estimates should be conducted to address whether such an adjustment impacts the company's preferred portfolio. Doing so would help elucidate the impact of this specific figure in making resource choices.

Thanks again for providing an opportunity to comment on the company's 2021 IRP, and we look forward to continued engagement with your team.