

Energy Utility support to State Greenhouse Gas Emission reduction schedules

Background:

The 2019 Clean Energy Transformation Act (CETA) establishes that “utilities have an important role to play in this transition” to 100% carbon free electricity. In 2020, the legislature passed ESSB 2311 which declares new Greenhouse Gas (GHG) emission reduction goals and schedules for the State of Washington.

Washington State has multiple alternatives to achieve planned GHG emission reductions. Legislating or regulating conservation, energy efficiency, demand response, fuel switching and financial incentives are just a partial list. An alternative that Washington State does not directly control is the carbon content of the energy delivered to the state.

The goal: How can Utilities and Transportation Commission (UTC) rulemaking encourage a partnership between the State of Washington and investor owned utilities (IOUs) so that state GHG emission reduction goals are given due consideration in utility portfolio acquisition planning.

CETA rulemaking presents an opportunity to improve dialogue between the State of Washington and IOUs. Clarifying the utility’s contributions to State GHG emission reduction plans would be enabled by requiring utilities to perform two additional analysis activities during their Integrated Resource Plan:

- The amount of carbon content in the energy delivered to the state, and
- Utility portfolio modifications needed to meet State GHG emission reduction goals.

This data would provide multiple benefits:

- Clarifies the degree to which a utilities clean energy transformation plans enable GHG emission reduction objectives of the State
- Informs utilities how to adjust their portfolio to support the GHG reduction objectives of the State in which they operate
- Allows the State to adjust GHG reduction strategies, accelerating emission reduction goals if utility carbon reduction schedules allow

Motivation:

Despite Washington’s clearly defined Greenhouse Gas (GHG) emission reduction goals and schedules, Puget Sound Energy (PSE), when asked these questions (see Ref 1):

- Has PSE identified their carbon emission reduction requirements needed to comply with Washington State carbon emission reduction goals and timelines?
- What carbon emission reduction derived requirements apply to the PSE electricity business?
- What carbon emission reduction derived requirements apply to the PSE gas business?

responded “Unfortunately, at this time, we don’t have detailed answers. These questions will help inform PSE’s 2021 IRP” (see Ref 2). This response suggests that PSE acquisition decisions are made

independently of state GHG reduction goals. Now that “the legislature declares that utilities in the state have an important role to play in this (clean energy) transition”, it is appropriate that Washington State energy providers must answer these questions. UTC rulemaking provides an opportunity to assure that energy IOUs, granted monopoly rights to serve the State, are so tasked.

Improving dialogue between the State and the IOUs that deliver energy to their residents and businesses would be a beneficial outcome of this approach:

- Clarifying the degree to which a utilities clean energy transformation plans enable GHG emission reduction objectives of the State
- Informs utilities how to adjust their portfolio to support the GHG reduction objectives of the State they serve

Summary:

Compelling IOUs to include an analysis in their portfolio planning process of how their CETA carbon reduction schedules support State GHG emission reduction objectives would give the State a “utility carbon content benchmark” that they could include in their GHG reduction plans. If the utility moved forward aggressively to reduce the carbon content of their energy supply then the State could adjust their plans to take advantage.

The electricity portfolio shift required by the Clean Energy Transformation Act provides a rulemaking opportunity to influence this issue. Revised comments to achieve this outcome are provided below.

Kevin Jones

206-463-1766

kevinjonvash@gmail.com

Vashon Climate Action Group

PSE Integrated Resource Plan (IRP) Technical Advisory Group member

UW BSEE

Ref 1: Email dated November 4, 2019, Subject: 2019 IRP Technical Input – IRP analyses should meet state CO2 reduction goals, Doug Howell to Irena Netik

(https://oohpseirp.blob.core.windows.net/media/Default/Action_Items/2019_1104_IRP-Technical-Input-IRP_CO2_reduction_goals.pdf).

Ref 2: PSE response to Ref 1 email:

https://oohpseirp.blob.core.windows.net/media/Default/Comment_Reports/2019_November_IRP_CommentSummary_WEB.pdf

Vashon Climate Action Group suggested changes to UE-190698 Draft Rules regarding State of Washington / investor owned utility (IOU) Greenhouse Gas Emission reduction schedule cooperation:

This summary of suggested Draft Rule changes contains two sections.

- 1) Revised Vashon Climate Action Group (VCAG) Washington State / IOU GHG emission reduction schedule cooperation comments to WAC 480-100-610
 - a. VCAG provided multiple responses to WAC 480-100-610. Only the responses relevant to the State / IOU GHG emission reduction schedule cooperation concept is repeated in this section.
- 2) The entire VCAG WAC 480-100-610 proposed comment
 - a. This section is provided so that the UTC may understand the entire scope of VCAG WAC 480-100-610 comments

Section 1: Revised Vashon Climate Action Group (VCAG) State / utility GHG emission reduction schedule cooperation proposed comments to WAC 480-100-610

- Since:
 - o “The legislature finds that Washington must address the impacts of climate change by leading the transition to a clean energy economy.”¹
 - o “Absent significant and swift reductions in greenhouse gas emissions, climate change poses immediate significant threats to our economy, health, safety and national security.”²
 - o “The legislature declares that utilities in the state have an important role to play in this transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this policy.”³
 - o We suggest adding:
 - (11)(k) Complies with all Washington State approved clean energy policy goals and timelines.
 - The IOUs long-range integrated resource plan solution will include a forecast over the 20-year IRP timeframe showing the amount of carbon content in the energy delivered to its service area in the State of Washington, and
 - If the IOUs long-range integrated resource plan solution does not meet the State of Washington carbon reduction budget allocation, a description of what utility portfolio modifications are needed for the utility to comply with the delivered energy carbon reduction budget allocation provided by the State of Washington.

Section 2: The entire VCAG WAC 480-100-610 revised comment

¹ Clean Energy Transformation Act, Section 1(1)

² Ibid, Section 1(3)

³ Ibid, Section 1(5)

WAC 480-100-610 comments

- We suggest the Commission provide specific instructions to utilities regarding acquisition of demand-side aggregation resources, as would be enabled by the following modification:
 - o (2) Demand-side resources. The (integrated resource) plan must include assessments of load management that is cost-effective and commercially available. These assessments must include:
 - o (a) Currently employed and new policies and programs needed to obtain all cost-effective conservation and efficiency and load management improvements, including the ten-year conservation potential used in calculating a biennial conservation target to be filed in the biennial conservation plan consistent with chapter 480-109 WAC;
 - o (b) Currently employed and new policies and programs needed to obtain all demand response at the lowest reasonable cost; including aggregated demand response resources, and
- Given the critical need to Transform the energy sector, it is critical to assess both new and existing energy generation resources, which can be explicitly required by:
 - o (6) Resource Evaluation. The plan must include a comparative evaluation of all new and existing

identified resources that considers resource costs, risks, including those associated with environmental effects and the social cost of greenhouse gas emissions, and benefits that accrue to the utility, to customers, and program participants when applicable, including transmission and distribution delivery costs;; and public policies regarding resource preference adopted by Washington state or the federal government.

- The requirement under the Clean Energy Transformation Act, to incorporate the social cost of greenhouse gas emissions as defined in RCW 80.28.405, carries a derived requirement as stated in the Technical update of the social cost of carbon for regulatory impact analysis under Executive Order No. 12866, published by the interagency working group on social cost of greenhouse gases of the United States government, August 2016:
 - o “...there is extensive evidence in the scientific and economic literature on the potential for lower-probability, but higher-impact outcomes from climate change, which would be particularly harmful to society and thus relevant to the public and policymakers. The fourth value is thus included to represent the marginal damages associated with these lower-probability, higher-impact outcomes.” (emphasis added)
 - o As such, we recommend adding new sub-section:
 - (10)(a) The utilities integrated resource plan analyses must include at least one sensitivity that contains the High Impact social cost of greenhouse gas emissions, and to explicitly include the results of this sensitivity in the integrated resource plan to allow policymakers to assess lower-probability but higher-impact outcomes from climate change.
 - This addition will cause corresponding modification to:
 - WAC 480-100-600, Definitions:
 - o “High Impact Social cost of greenhouse gas emissions” is the inflation-adjusted

costs of greenhouse gas emissions resulting from the generation of electricity, as required by RCW 80.28.405, and published on the commission's website.

- Corresponding changes to the WAC associated with RCW 80.28.405:
 - Clean energy action plan—Greenhouse gas emissions— Calculation of cost.
 - For the purposes of chapter 288, Laws of 2019, the **social** cost of greenhouse gas emissions resulting from the generation of electricity, including the effect of emissions, is equal to the cost per metric ton of carbon dioxide equivalent emissions, using the two and one-half percent discount rate, listed in table 2, technical support document: Technical update of the social cost of carbon for regulatory impact analysis under Executive Order No. 12866, published by the interagency working group on social cost of greenhouse gases of the United States government, August 2016.
 - The “High Impact cost of greenhouse gas emissions” data is listed in column 4, table 2, technical support document: Technical update of the social cost of carbon for regulatory impact analysis under Executive Order No. 12866, published by the interagency working group on social cost of greenhouse gases of the United States government, August 2016.
 - The commission must adjust the costs established in this section to reflect the effect of inflation.
- To aid utility compliance with their obligations imposed by the legislature in the Clean Energy Transformation Act – “The legislature declares that utilities in the state have an important role to play in this (clean energy) transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this (clean energy transformation act) policy”, we recommend adding subsections:
 - (10)(b) The utilities integrated resource plan analyses must include at least one scenario that constrains the net greenhouse gas emission profile to comply with all Washington State approved clean energy policy goals and timelines.

- Subsections (11)(a) through (11)(f) do not allow regulators to adequately address utility portfolio transition plans to comply with the CETA transition timeline and its associated risks. We suggest the following modifications:
 - o (a) Achieves requirements in RCW 19.405.030, RCW 19.405.040, and RCW 19.405.050 at the lowest reasonable costs, considering risk, on what timeline, showing a schedule of portfolio assets acquired and retired;
 - o (b) Includes all cost-effective, reliable, and feasible conservation and efficiency resources, and demand response, using the methodology established in RCW 19.285.040, if appropriate, clearly identifying portfolio options evaluated, explaining which were accepted, which were rejected and which are still under consideration;
 - o (c) Considers acquisition of new or existing renewable resources and relies on renewable resources and energy storage in the acquisition of new or existing renewable resources, insofar as doing so is at the lowest reasonable cost, considering risks;
 - o To address costs, we recommend adding:
 - (g) Identifies cost and cost risks, by (i) including portfolio transition capital costs and a narrative statement of capital cost risks, (ii) identifying the major capital cost drivers and cost risks and opportunities, (iii) including the greenhouse gas emission profile

associated with the transition plan, and its associated social cost of greenhouse gas costs and (iv) including the High Impact social cost of greenhouse gas costs associated with the transition plan.

- To address additional portfolio transition risks and opportunities we recommend adding:
 - (h) Addresses technology risks and opportunities by including (i) the list of technology solutions evaluated to enable the CETA portfolio transition, (ii) which of these technologies are suitably mature to include in the IRP, (iii) which are likely to be suitably mature over the CETA transition timeline and therefore still under consideration for future IRPs and (iv) which are unlikely to be mature enough over the CETA transition timeline and therefore no longer being considered.
 - (i) Address market risks and opportunities by including (i) the list of market solutions evaluated to enable the CETA portfolio transition, (ii) which of these market solutions are suitably available to include in the IRP, (iii) which are likely to be suitably available over the CETA transition timeline and therefore still under consideration for future IRPs and (iv) which are unlikely to be suitably available over the CETA transition timeline and therefore no longer being considered.
 - (j) Address resource capacity risks and opportunities by including (i) the current transmission capacity and a 20-year transmission capacity projection, (ii) the current renewable energy capacity and a 20-year renewable energy capacity projection, (iii) the current energy efficiency capacity and a 20-year energy efficiency capacity projection, (iv) the current demand response capacity and a 20-year demand response capacity projection and (v) the current storage capacity and a 20-year storage capacity projection
- Since:
 - “The legislature finds that Washington must address the impacts of climate change by leading the transition to a clean energy economy.”⁴
 - “Absent significant and swift reductions in greenhouse gas emissions, climate change poses immediate significant threats to our economy, health, safety and national security.”⁵
 - “The legislature declares that utilities in the state have an important role to play in this transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this policy.”⁶
 - (11)(k) Complies with all Washington State approved clean energy policy goals and timelines.
 - The IOUs long-range integrated resource plan solution will include a forecast over the 20-year IRP timeframe showing the amount of carbon content in the energy delivered to its service area in the State of Washington, and
 - If the IOUs long-range integrated resource plan solution does not meet the State of Washington carbon reduction budget allocation, a description of

⁴ Clean Energy Transformation Act, Section 1(1)

⁵ Ibid, Section 1(3)

⁶ Ibid, Section 1(5)

what utility portfolio modifications are needed for the utility to comply with the delivered energy carbon reduction budget allocation provided by the State of Washington.

- The carbon content of purchased electricity is of critical importance to achieving CETA objectives. Please include new sub-section WAC 480-100-610(14)(d) to increase transparency of purchased electricity agreements:
 - o New sub-section 480-100-610(14)(d): The IRP must contain a schedule of purchased electricity contracts, showing (i) the megawatt hour capacity of each contract, (ii) the contract expiration date, and (iii) the greenhouse gas emissions, stated in CO2 equivalent, associated with each contract.

- We applaud the Commission's emphasis on utility summary public participation inputs in the Integrated Resource Plan. We recommend modification of WAC 480-100-610 (16) to include technical inputs from the advisory group members and to include utility rationale backed by sufficient credible documentation for not incorporating technical or public inputs:

- o (16) The utility must provide a summary of advisory group technical inputs received during development of the integrated resource plan, public comments received on the draft integrated resource plan and the utility's responses, including whether or not issues raised in the technical inputs and comments were addressed and incorporated into the final plan. For any technical or public inputs not incorporated into the final plan, the utility will provide its rationale for not doing so.

The matrix may be included as an appendix to the final plan.