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***Submitted Via UTC Web Portal ([www.utc.wa.gov/e-filing](http://www.utc.wa.gov/e-filing))***

September 11, 2020

Mark L. Johnson  
Executive Director and Secretary  
Washington Utilities and Transportation Commission  
621 Woodland Square Loop SE  
Lacey, WA 98503

Submitted via: [www.utc.wa.gov/e-filing](http://www.utc.wa.gov/e-filing)

**RE: Docket Nos. UE-190698 and UE-191023; Comments by Invenergy LLC**

Dear Mr. Johnson,

Invenergy LLC (Invenergy) appreciates the opportunity to respond to the Washington Utilities and Transportation Commission (Commission) Notice of Opportunity to File Written Comments (Notice) issued on August 13, 2020, relating to Clean Energy Implementation Plans (CEIPs) and Compliance with the Clean Energy Transformation Act (CETA), Docket No. UE-191023, and in the Matter of Amending, Adopting and Repealing WAC 480-100-238, Relating to Integrated Resource Planning (IRP), Docket UE-190698.

### **Summary Comments**

Invenergy supports the Commission's efforts to develop clear, workable rules for utility IRPs and CEIPs. We also agree with the Commission's decision to include both IRP and CEIP rules in a second, combined draft of rules for comments. As the Notice states, this will facilitate understanding of how utility IRPs inform their CEIPs. Invenergy adds that considering the IRP and CEIP rules together can also help the Commission develop a more cohesive and consistent package of rules.

### **Changes Required by CETA Call for the Commission to Shift the Paradigm for Utility Resource Planning and Implementation**

CETA dramatically increases the requirements for Washington utilities to use clean energy to serve their retail electric customers. These requirements are more than an incremental change; instead, they call for a fundamental shift in the paradigm for resource planning and implementation by electric utilities. Therefore, Invenergy encourages the Commission to adopt rules for IRP and CEIP that fully embrace and adopt this new paradigm to help ensure that the CETA clean energy goals are successfully achieved.

### **CETA Changes the Meaning of Least Cost and Cost-Effective**

One major example of the paradigm shift involves the meaning of "least cost" and "cost-effective" under CETA. Traditionally, the terms least cost and cost-effective meant choosing resource strategies that

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minimize the utility's revenue requirements and its retail electric rates. CETA explicitly changes this, including by requiring that IRPs, Clean Energy Action Plans (CEAPs) explicitly include the environmental externality costs of greenhouse gas emissions (GHG) produced by fossil-fueled generating resources.

#### Properly Incorporating the Social Cost of Greenhouse Gas Emissions in IRPs and CEIPs Requires Treating it as an Incremental Cost of Dispatch

RCW 19.280.030 (3) (a) states that electric utilities shall consider the social cost of greenhouse gas (SCGHG) emissions when developing IRPs and CEAPs, including incorporating the SCGHG as a cost adder when evaluating and selecting intermediate term and long-term resource options. CETA does not provide specific guidance on how this is to be done. The second draft rules also do not provide guidance on how to incorporate the SCGHG as a cost adder.

Incorporating the SCGHG is an important requirement that is in addition to - not obviated by - the Clean Energy Transformation Standards under CETA. It has also become a controversial topic in recent utility IRP efforts. Therefore, Invenergy strongly encourages the Commission to develop rules that provide clear guidance on how utilities shall incorporate the SCGHG in their resource planning and evaluation.

As the Commission develops rules for incorporating the SCGHG, Invenergy encourages requiring utilities to include the SCGHG as a variable cost of dispatch for GHG-emitting resources. The attachment to these comments (Invenergy Comments on Use of SCC in PSE 2021 IRP) provides a detailed explanation for treating the SCGHG as an incremental hourly cost to be included in dispatch costs.

Further support for incorporating the SCGHG as an incremental cost is provided by growing trends in the wholesale electricity markets. For example, the costs of GHG emissions allowances under California's GHG cap and trade program are already a component of the variable cost of dispatch for GHG-emitting resources used to serve retail electric customers in California. This applies to generation located in California as well as electricity imports into that state. As California's GHG emissions cap declines in the future, it is likely that GHG costs will become a growing component of incremental dispatch costs for GHG-emitting resources that serve loads in California.

More broadly, several regional RTOs and ISOs have recently been developing approaches to include carbon pricing in their short-term electricity markets. This is a growing area of emphasis that will improve the ability of centrally organized electricity markets to implement state policies for GHG emissions reduction. As carbon pricing is implemented in the short-term RTO and ISO markets, GHG costs will also become a component of variable dispatch costs. In light of these developments, the Federal Energy Regulatory Commission has scheduled a Technical Conference (<https://www.ferc.gov/news-events/events/technical-conference-regarding-carbon-pricing-organized-wholesale-electricity>) on September 30, 2020, to address implementation of in organized wholesale electricity markets.

Commission rules for incorporating the SCGHG as an incremental cost of dispatch in IRP and CEIP will be consistent will be consistent with these trends and help to achieve the CETA goals for reducing GHG emissions. Invenergy is not aware of any market where carbon pricing is being considered where the carbon price is not added as an incremental variable cost of emitting resources. Other utilities considering how to model resources in compliance with CETA have adopted the correct approach of

adding the social cost of carbon as an incremental variable cost of dispatch. Portland General Electric Aug. 19, 2020 IRP Roundtable 20-5.

### The Focus for IRPs and CEIPs Needs to Include Flexibility and Dispatchability

Another example of the paradigm shift involves the need for the IRP and CEIP rules to broaden the meanings of resource need, resource adequacy, and resource strategy. Traditionally, IRPs have typically focused on meeting two primary operational criteria: energy and capacity.

However, under the Clean Energy Transformation Standards established by CETA, utilities will need to dramatically increase their reliance on intermittent renewable resources such as wind and solar. As a result, matching loads and resources on an hourly, daily and seasonal basis will become more challenging and require greater emphasis on ensuring their resource portfolios include sufficient sources of flexibility and dispatchability to accommodate the intermittency of their renewable energy resources. Neglecting to recognize this growing issue in the rules will weaken their relevance and usefulness.

The following specific comments and suggestions by Invenergy elaborate on these summary comments and provide examples of how the Commission's IRP and CEIP rules can more effectively implement a CETA-driven paradigm.

### **Specific Comments and Suggestions**

#### References to Draft Rules:

##### *WAC 480-100-605 Definitions*

*"Cost-effective" means that a project or resource is forecast: To be reliable and available within the time it is needed; and to meet or reduce the electric power demand of the intended consumers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof.*

*"Integrated resource plan" or "IRP" means an analysis describing the mix of generating resources, conservation, methods, technologies, and resources to integrate renewable resources and, where applicable, address overgeneration events, and efficiency resources that will meet current and projected needs at the lowest reasonable cost to the utility and its ratepayers and that complies with the requirements specified in RCW 19.280.030(1) .*

*"Lowest reasonable cost" means the lowest cost mix of generating resources and conservation and efficiency resources determined through a detailed and consistent analysis of a wide range of commercially available resources. At a minimum, this analysis must consider resource cost, market-volatility risks, demand-side resource uncertainties, resource dispatchability, resource effect on system operation, the risks imposed on the utility and its customers, public policies regarding resource preference adopted by Washington or the federal government, and the cost of risks associated with environmental effects, including emissions of carbon dioxide. The analysis of the lowest reasonable cost must describe the utility's combination of planned resources and related delivery system infrastructure and show compliance with Chapters 19.280, 19.285, and 19.405 RCW, including a demonstration that the mix of resources will be clean, affordable, reliable, and equitably distributed.*

#### Comments:

Because these definitions are directly linked, they should be fully consistent with each other. They should also recognize new requirements under CETA.

Unfortunately, the definitions appear to recognize only internal, direct costs that become part of a utility's revenue requirements and are passed on to customers in retail electric rates. The definitions do not recognize that CETA requires utilities to internalize the externality costs of GHG emissions by incorporating the SCGHG as an incremental dispatch cost adder in resource planning and evaluation.

Suggestion:

Invenergy encourages the Commission to revise the definitions of cost-effective, integrated resource plan and lowest reasonable cost to clearly spell out that in the context of IRPs and CEIPs "costs" include internal costs to the utility and its retail electric customers, as well as external costs of GHG emissions valued at the SCGHG. The definitions of these terms should also be revised to make them more internally consistent with each other (e.g., in the definition of "cost-effective", delete the reference to 'least-cost' and replace it with 'lowest reasonable cost').

Reference to Draft Rule:

*WAC 480-100-605 Definitions*

*"Resource need" means any current or projected deficit to meet demand, state or federal requirements, or operational requirements reliably. Such requirements may include, but are not limited to, capacity and associated energy, capacity needed to meet peak demand in any season, Federal Energy Regulatory Commission jurisdictional operational requirements, or resources required for regulatory compliance, such as fossil-fuel generation retirements, equitable distribution of benefits or reduction of burdens, cost-effective conservation and efficiency resources, demand response, renewable and nonemitting resources.*

Comment:

The definition of "resource need" specifically identifies 'capacity' and 'associated energy' as key types of requirements to be included in a utility's determination of its resource needs. As described in the Summary Comments above, compliance with CETA will require utilities to dramatically increase their use of renewable resources including intermittent wind and solar. This will lead to increasing challenges for managing resource intermittency, and thereby increase the importance of ensuring that the utility's resource portfolio has adequate amounts of resource flexibility and dispatchability to reliably serve its retail electric customers' needs.

Suggestion:

Invenergy encourages the Commission to revise the definition of "resource need" to specifically identify "flexibility and dispatchability" as key elements to be identified in each utility's determination of its resource needs.

Reference to Draft Rule:

*WAC 480-100-610 Clean Energy Transformation Standards*

*(5) Each utility must demonstrate that it has made progress toward and has met the standards in this section at the lowest reasonable cost.*

Comment:

This requirement depends on the definition of “lowest reasonable cost”. If “lowest reasonable cost” is defined to include the SCGHG as an incremental dispatch cost adder for planning and evaluating GHG-emitting resources, then this version of the requirement seems reasonable.

Suggestion:

Invenery encourages the Commission to ensure that WAC 480-100-610 (5) is based on a definition of lowest reasonable cost that reflects inclusion of the SCGHG as an incremental dispatch cost adder for planning and evaluating GHG-emitting resources.

Reference to Draft Rule:

*WAC 480-100-615 Purpose of Integrated Resource Planning.*

*Consistent with Chapters 80.28, 19.280, and 19.405 RCW, each electric utility regulated by the commission has the responsibility to identify and meet its resource needs with the lowest reasonable cost mix of conservation and efficiency, generation, distributed energy resources, and delivery system investments to ensure the utility provides energy to its customers that is clean, affordable, reliable, and equitably distributed.*

Comment:

This requirement also depends on the definition of “lowest reasonable cost”. If “lowest reasonable cost” is defined to include the SCGHG as an incremental dispatch cost adder for planning and evaluating GHG-emitting resources, then this version of the requirement seems reasonable.

Suggestion:

Invenery encourages the Commission to ensure that WAC 480-100-615 is based on a definition of lowest reasonable cost that reflects inclusion of the SCGHG as an incremental dispatch cost adder for planning and evaluating GHG-emitting resources.

Reference to Draft Rule:

*WAC 480-100-620 Content of an Integrated Resource Plan.*

*(1) At a minimum, integrated resource plans must include the components listed in this rule. Unless otherwise stated, the assessments, evaluations, and forecasts should be over an appropriate planning horizon.*

Comment:

It is unclear what an “appropriate planning horizon” for an IRP means. At a minimum, the rule should set the planning horizon for utility IRPs at 20 years.

Suggestion:

Invenery encourages the Commission to revise the draft rule to require electric utility IRPs to use a planning horizon of at least 20 years.

Reference to Draft Rule:

*WAC 480-100-620 Content of an Integrated Resource Plan.*

*(5) Regional generation and transmission. The IRP must include an assessment of the availability of regional generation and transmission capacity on which the utility may rely to provide and deliver electricity to its customers.*

*(a) The assessment must include the utility's existing transmission capabilities, and future needs during the planning horizon, including identification of facilities necessary to meet future transmission needs.*

*(b) The assessment must also generally identify the location and extent of transfer capability limitations on its transmission network that may affect the future siting of resources.*

Comment:

Invenergy agrees that utilities should be required to address transmission needs in its IRPs and CEIPs. However, as drafted, this rule is unclear and does not recognize that different resource strategies will require different uses of regional transmission.

For example, a resource strategy that relies on resources located in one geographic area will require transmission from that area to the utility's local system. Another resource strategy that relies on resources located in a different geographic area will require transmission from the other area to the utility's local system. As a result, the availability and costs for transmission under the first resource strategy are likely to differ from the availability and cost of transmission under the second resource strategy.

This reality has an important implication for good utility IRP practice. Specifically, evaluation of each alternative resource strategy should include costs for the resources included in the strategy plus costs for the specific transmission uses that would be needed to deliver power to the utility's system.

Suggestion:

Invenergy encourages the Commission to revise the draft rule to require utility IRP analyses to include both the cost of each resource alternative as well as the costs of specific transmission needs associated with that resource.

Reference to Draft Rule:

*WAC 480-100-620 Content of an Integrated Resource Plan.*

*(7) Resource adequacy. The IRP must include an assessment and determination of resource adequacy metrics. It must also identify an appropriate resource adequacy requirement and measurement metrics consistent with RCW 19.405.030 through RCW 19.405.050.*

Comment:

Invenergy agrees that the Commission should require utilities to use resource adequacy metrics in their IRP analyses and resource strategy decision-making. However, the draft rule does not provide guidance for how a utility should actually use the metrics it has chosen to identify its resource adequacy requirement and then demonstrate that its preferred resource strategy satisfies the metrics.

Invenergy notes that Commission's first draft rules included a section on identification of each utility's resource adequacy requirement. Unfortunately, that section has been deleted from the second draft rules.

Suggestion:

Invenergy encourages the Commission to revise the draft rules to include examples of the types of metrics that utilities are required to identify and then use in their IRPs. Energy, capacity, flexibility and dispatchability should be included in the list of required metrics.

The rule should also explicitly require each utility to establish a resource adequacy requirement for each metric, and in its resource portfolio modeling include a test to ensure that each candidate resource strategy satisfies the resource adequacy requirements.

Further, the rules on resource adequacy should require utilities to perform stress-testing analyses of alternative resource portfolio strategies using assumptions including extreme-low hydroelectric generation availability and market price spike events in regional wholesale power markets.

Reference to Draft Rule:

*WAC 480-100-620 Content of an Integrated Resource Plan.*

*(11) Clean Energy Action Plan (CEAP). The utility must develop a ten-year clean energy action plan for implementing RCW 19.405.030 through RCW 19.405.050. The CEAP must:*

*(j) Incorporate the social cost of greenhouse gas emissions as a cost adder as specified in RCW 19.280.030(3).*

Comment:

This is the only place in the second draft rules that mentions the requirement under CETA that utilities incorporate the SCGHG as a cost adder in their IRPs. Further, this section of the rules applies only to CEAPs, not to other requirements for IRPs. This section also provides no guidance on how utilities should apply the SCGHG as a cost adder in their resource planning and evaluation.

One of the more important and contentious aspects of incorporating the SCGHG as a cost adder is whether it should be treated as an incremental cost or if it can be treated as a fixed cost. Invenergy has actively participated in various discussions on this topic and believes that the SCGHG is clearly an incremental cost and should be treated as such under CETA.

Suggestion:

Invenergy strongly encourages the Commission to address the topic of how the SCGHG should be incorporated as a cost adder in electric utility resource planning and evaluation, including in IRPs, CEAPs and CEIPs.

Invenergy also encourages the Commission to recognize that the CETA requirement to include the SCGHG as a cost adder in utility resource planning and evaluation will not be satisfied simply by meeting the Clean Energy Transformation Standards (CETSs). The SCGHG requirement must be met in addition to the CETSs.

Invenergy has demonstrated that GHG emissions from fossil-fueled electric generating resources are an incremental environmental externality that CETA requires to be internalized in utility resource planning and evaluation, that the SCGHG is an estimate of the incremental value of the damages caused by each metric ton of CO2-equivalent GHG emissions, and that the SCGHG should be incorporated as an incremental cost for each hourly dispatch decision in resource portfolio modeling.

Reference to Draft Rule:

*WAC 480-100-660 (1) Incremental Cost Methodology*

*(a) The alternative lowest reasonable cost and reasonably available portfolio must include the SCGHG in the resource acquisition decision in accordance with RCW 19.280.030(3)(a).*

Comment:

Invenergy agrees that under CETA, utilities should be required to include the SCGHG as a cost adder in all resource portfolio analyses, including development of IRPs, CEAPs and CEIPs. In the second draft rules, WAC 480-100-660 appropriately requires utilities to include the SCGHG in the alternative lowest reasonable cost and reasonably available portfolio.

However, WAC-480-100-640 does not mention the SCGHG or how utilities should use it to develop their CEIPs.

Suggestion:

Invenergy encourages the Commission to add new language to WAC-100-640 specifically requiring utilities to include the SCGHG as an incremental dispatch cost adder in their analyses to develop CEIPs. The language should also provide guidance on treating the SCGHG as an incremental hourly cost for dispatching GHG-emitting resources.

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Invenergy looks forward to further participation in the Commission's IRP and CEIP rulemaking activities, including upcoming stakeholder workshops.

Sincerely,/s/ Orijit Ghoshal

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Attachment: Invenergy Comments on Use of SCC in PSE 2021 IRP