September 11, 2020

Mark Johnson
Executive Director and Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop SE
Lacey, WA 98504-7250

RE: Comments of Renewable Northwest, Dockets UE-191023 and UE-190698
Utilities and Transportation Commission's August 13, 2020, Notice of Opportunity to File Written Comments Relating to Clean Energy Implementation Plans and Compliance with the Clean Energy Transformation Act, Docket UE-191023, and In the Matter of Amending, Adopting, and Repealing WAC 480-100-238, Relating to Integrated Resource Planning, Docket UE-190698.

I. INTRODUCTION

Renewable Northwest thanks the Washington Utilities and Transportation Commission ("the UTC" or "the Commission") for this opportunity to comment in response to the Commission's August 13, 2020, Notice of Opportunity ("Notice") to File Written Comments Relating to Clean Energy Implementation Plans ("CEIPs") and Compliance with the Clean Energy Transformation Act ("CETA"), and In the Matter of Amending, Adopting, and Repealing WAC 480-100-238, Relating to Integrated Resource Planning.

In these comments, we first address topics not directly prompted by the questions within the Notice, focusing on improved guidance in rule to aid utilities' development of resource adequacy standards, and on the importance of clarity and consistency in utilities' application of the social cost of greenhouse gas ("SCGHG") in resource and compliance planning. We then address many of the questions posed by the Notice, with particular attention given to the methodology for performing the incremental cost of compliance calculation.

Finally, we commend the Commission and Commission staff for recognizing the benefit of combining the rules on integrated resource planning with those for CEIP development, and for the thoughtful improvements made to the second set of draft rules on the implementation of CETA. We also thank the Commission and Commission staff for their thoughtful attention to the details most critical for securing Washington's clean energy future. As always, we look forward to continued participation in these processes.

II. COMMENTS

A. Overall Rule Language

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

Renewable Northwest recommends that the Commission's rules provide utilities with additional clarifications regarding resource adequacy and system reliability in order both to ensure system reliability and to protect against unwarranted use of a CETA offramp.

Resource adequacy is embedded in CETA in a couple of meaningful ways. First, RCW 19.405.010 provides that "[i]n implementing [CETA], the state must ... provide safeguards to ensure that the achievement of this policy does not impair the reliability of the electricity system." Second, if a utility fails to meet CETA's substantive standards, RCW 19.405.090(3)(a) specifies that:

> the commission may issue an order relieving the utility of its administrative penalty obligation ... if it finds that: (i) After taking all reasonable measures, the investor-owned utility's compliance with this chapter is likely to result in conflicts with or compromises to its obligation to comply with the mandatory and enforceable reliability standards of the North American electric reliability corporation, violate prudent utility practice for assuring resource adequacy, or compromise the power quality or integrity of its system.

This statutory setup effectively allows reliability and resource adequacy concerns to provide an offramp from compliance with CETA's substantive requirements. In order to ensure Washington achieves those standards, therefore, it is important for the Commission to provide clear guidance to utilities as to how a utility might assess resource adequacy in both its Integrated Resource Plan ("IRP") and its CEIP.

On this topic, draft WAC 480-100-620(7) provides that a utility's "IRP must include an assessment and determination of resource adequacy metrics" and "must also identify an appropriate resource adequacy requirement and measurement metrics consistent with RCW 19.405.030 through RCW 19.405.050." This broad rule language could allow utilities to use outdated resource adequacy methods and metrics that fail to capture the benefits of modern variable resources and overstate the reliability risks associated with a transforming system. Accordingly, Renewable Northwest recommends that the Commission provide additional methodological guidance to utilities to avoid this outcome and ensure use of robust analytical tools.

We have previously recommended in broad terms some of the elements that could ensure utilities' resource adequacy determinations are robust. For example, in December comments to the Commission regarding CEIPs, we observed that:

> Utilities' resource adequacy requirements are often expressed in terms of meeting a certain target loss-of-load probability ("LOLP") or loss-of-load expectation ("LOLE"). One common and useful tool for providing a resource or resource mix's contribution to meeting such a target is known as effective load carrying capability ("ELCC"), which at a high level represents the difference in a portfolio's probability of meeting the utility's target across a given time frame with versus without a certain resource or resource mix.
>
> Maintaining resource adequacy is a key utility requirement in this time of energy system transformation, and thankfully stakeholders have recourse to increasingly sophisticated tools such as ELCC to determine how new, dynamic resource mixes may help them meet this requirement. To that end, utilities should provide detailed information on the resource mixes that they plan to use to meet their system reliability and resource adequacy obligations, and should break out information regarding the contributions of different components of their resource mixes. Because resource adequacy is to some extent a regional as well as a utility-specific issue, the Commission may wish to consider establishing some rule language to ensure consistency in how utilities address resource adequacy in their CEIPs.
>
> Importantly, however, any rules governing utilities' resource adequacy reporting requirements as part of their CEIPs should be written with sufficient flexibility to capture the potential additive benefits of specific resource combinations above and beyond the expected contributions of the individual resources that are part of those combinations. As a simple example, a hybrid solar-plus-storage project may have a greater contribution to resource adequacy than standalone solar and standalone storage. More complex resource mixes are also increasingly being recognized for their potential benefits when operated as "clean energy portfolios" or hybrid projects, as opposed to standalone resources. Efforts to capture the reliability benefits of individual variable resources often undercount these resources' contributions to achieving resource adequacy as part of a dynamic mix.

The key elements of this discussion, which are relevant to both IRPs and CEIPs, are: (1) use of probabilistic methods as opposed to blunt tools such as a planning reserve margin ("PRM") on

coincident peak load; (2) grounding of such methods in a target LOLP; (3) some degree of flexibility to allow for the use of emerging probabilistic tools rather than prescribing a single methodology; and (4) the importance of analytical consistency across regulatory silos due to the interconnected nature of the western grid.

On the first topic, we recommend that the Commission require utilities to undertake a probabilistic analysis of resource adequacy using tools such as ELCC that accurately account for the reliability benefits of non-traditional resources. We explored this issue in some depth in June 15, 2020 comments to the Department of Commerce at pages 6-9, attached to these comments as Exhibit A, and we offer some additional updated comments supporting the rules' use of probabilistic methods such as ELCC.

Traditional methods of planning for resource adequacy such as a deterministic PRM, in which a utility adds a fixed percentage of capacity to its annual coincident peak demand, do not adequately reflect the reliability or adequacy of the emerging dynamic demand and supply system. Instead, a target PRM should be informed by probabilistic metrics like LOLP or LOLE. Generally, these metrics capture the wide range of possible future events based on stochastic simulation of load, weather, generation, and outages. Another recent analytical method, called Adequate Reserve Margin ("ARM") formulated by the Northwest Power and Conservation Council and used in their Regional Portfolio Model ("RPM"), can also be an effective metric to assess system-level resource adequacy. The Council's 5% LOLP target is translated to ARM to determine the surplus capacity needed, over the expected weather-normalized peak load (or average load), to ensure adequacy.

To ensure utilities are accurately accounting for individual resources' and resource portfolios' contributions to resource adequacy, we further recommend that the Commission prescribe ELCC as the primary metric to evaluate capacity contributions of resources including but not limited to variable resources, storage, and demand response in maintaining system reliability at a pre-defined reliability level, usually on the order of one day of loss of load in ten years (or 2.4 hours/year). The related LOLP should capture the unique nature of the hydro-dominated northwest region and consider sensitivities relating to weather and hydro flow, factors that are essential to provide an accurate LOLP value. Similarly, using multiple years of historical operating and weather data would help to capture different risk profiles and inter-annual variability of resources such as wind and solar. Adding specific language to address these issues would provide much needed uniformity in informing system reliability during actual capacity critical hours.

While some specific additional direction would help to ensure that utilities employ robust resource adequacy analysis, flexibility to adopt new methodologies is important as well. For

example, the California Public Utilities Commission has recently adopted a new methodology for determining the contributions of new resources such as hybrids and storage.[1] And the Associated System Capacity Contribution ("ASCC")[2] methodology developed by the Power Council as the precursor to evaluating the system-level ARM could offer a less time-intensive but still robust method to calculate capacity contribution of resources.

Finally, additional specificity in the rules could help provide the consistency that will be necessary to ensure regional resource adequacy in a time of significant system transformation. Recent long-term resource adequacy assessments conducted by E3[3] and the Power Council have suggested that, without new capacity additions in the region, the Pacific Northwest could experience significant capacity shortfalls ranging from 500-3000 MW over the next decade. These potential shortfalls have prompted not only capacity procurements by utilities within the region but also conversations on applying a regional approach to leverage geographic resource diversity and collaboration among utilities and other load-serving entities. The Northwest Power Pool's Resource Adequacy Program ("RAP") has emerged as a voluntary collaborative platform among utilities and is a step further than the current reserve sharing arrangement operated by the Power Pool. Currently in the detailed program design phase, the Power Pool's preliminary straw proposal[4] maps out a stage-wise approach beginning with a voluntary interim reserve sharing arrangement. The proposal would proceed to a binding phase, at which point LSEs would use a probabilistic approach to calculate reserve margins and establish pooled capacity that could be tapped into by member entities in case they face capacity shortfalls. The advantage of this program would be robust uniform accounting methods to assess system reliability and capacity contributions from diverse resources. Thus, it would make sense for the Commission's CETA rulemaking to track proceedings at the Power Pool as detailed program design elements develop over the next few months. And regardless of the Power Pool's efforts, it will be important for the Commission to ensure that methodologies are reasonably consistent across utilities given the regional nature of resource adequacy.

WAC 480-100-640 Clean Energy Implementation Plan (CEIP)

The CEIP rules invoke resource adequacy at (4)(e) and (5)(b); for clarity and consistency, Renewable Northwest recommends that in each instance the rules specify that the narrative

[1] Section 3.4.2, In-Front of Meter Hybrid Resources. CPUC Rulemaking 19-11-009. June 30 2020. https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M342/K083/342083913.PDF
[2] ASCC uses arrays of resource combinations to effectively calculate resource contributions over an entire region.
[3] Resource Adequacy in the Pacific Northwest. Energy & Environmental Economics, March 2019. https://www.ethree.com/wp-content/uploads/2019/03/E3_Resource_Adequacy_in_the_Pacific-Northwest_March_2019.pdf
[4] Northwest Power Pool Resource Adequacy Program Conceptual Design Document. https://www.nwpp.org/private-media/documents/2020-07-31_RAPDP_PublicCD_v2.pdf

description and metrics relevant to resource adequacy be consistent with the IRP resource adequacy requirements.

WAC 480-100-660 Incremental Cost of Compliance

Renewable Northwest appreciates the Commission's revision of WAC 480-100-660(1)(a) to require utilities' incorporation of the social cost of greenhouse gas ("SCGHG") in the alternative lowest reasonable cost and reasonably available portfolio during resource acquisition decisions. This rule language is not only more analytically consistent, but it will also better ensure utilities maximize investments in renewable and nonemitting resources before opting to comply via the incremental cost of compliance provision.

We also request that the Commission further develop the SCGHG as a tool for ensuring utilities' resource and compliance planning efforts *accurately* account for the externalities of certain resource decisions. The potential influence of the SCGHG, if applied correctly, could be profound enough to bolster Washington's clean energy transition in conjunction with the GHG-neutrality and 100% clean compliance obligations.

First, we recommend additional references to the SCGHG requirement, woven through the rules for integrated resource planning and for CEIP development. Second, we suggest that the Commission require consistency in utilities' incorporation of the SCGHG. A handful of methodologies have been proposed across the CETA rulemaking activities and in the public participation processes of ongoing IRP efforts by Washington utilities. In the IRP context, Renewable Northwest supports the application of the SCGHG adder at the end of a model run with economic dispatch. This approach best reflects real-world conditions, with optimization models virtually dispatching the cheapest marginal cost unit adjusted for the SCGHG at the time of resource need. Because the optimization models will dispatch resources based on current resource values, emitting resources will dispatch as often as the economic conditions are most favorable; thus, the SCGHG will be applied as often as GHG emissions would actually accrue, likely resulting in a higher cumulative SCGHG value for fossil-intensive portfolios by the end of the model run.

Again, recognizing the potential impact this modeling tool may have on utilities' successful compliance with the clean energy standards, Renewable Northwest supports additions to the draft rules which would provide clear guidance to utilities on the most uniform, transparent, and accurate application of the SCGHG tool.

B. Responses to the Notice

1. Do you agree with Staff's interpretation of RCW 19.405.060(1)(c) that Commission approval is contingent upon the utility justifying and supporting each specific action it takes or intends to take, including providing the business cases supporting each specific action identified in the CEIP? Please explain your response.

We agree that a utility should be required to provide the Commission with the estimated results, including basis of estimate, of specific actions showing how those actions will "demonstrate progress toward" meeting the clean energy standards and interim targets.[5] This will allow the Commission to ensure the utilities have a credible plan to comply with the targets. However, we question whether the term "business case" is used appropriately to define the device to be assessed. In the traditional sense, a business case justifies an investment with a high enough return on that investment; this implies demonstrating a commercial benefit.

If Staff intends for this "viability review" or "feasibility study" to identify and track the utility's costs associated with taking CETA-relevant actions balanced against the resulting compliance, then "business case" *may* be suitable. In either case, the device that the Commission is proposing to be used in this assessment should be clearly defined and specific.

2. Several comments submitted in response to the first draft CEIP rules proposed that the Commission require some form of funding to support equity-related public engagement. Specific proposals ranged from requiring utilities to provide funding support for participation in a utility's equity advisory group to utilities funding support for equity-focused intervenors.

a. Does the Commission have the authority to require utilities to provide funding to support equity participation such as intervenor funding or direct payments to advisory group members?

b. If so, what type(s) of funding should the Commission require, and how would utilities implement such funding? For example, if you advocate direct payments to advisory group members, how would the utilities structure those payments (e.g., based on an hourly rate, per diem, etc.)?

[5] RCW 19.405.060 (1)(b)(iii)

c. What other issues arise if the Commission were to require utilities to provide funding or direct payments to support equity advisory group members?

Renewable Northwest has no comment at this time.

3. The Commission appreciates the value stakeholders have said they see in having commissioners and the agency participate in broad conversations about equity needs. Due to restrictions on commissioners taking part in ex parte conversations concerning items that are before the Commission to decide, the commissioners cannot engage in such conversations or otherwise participate in utility advisory groups to discuss issues related to particular CEIPs. However, the Commission will be involved in the process through workshops, special open-meetings, and other available proceedings with stakeholders to discuss important issues. The Commission additionally awaits guidance from the state Environmental Justice Task Force on agency engagement with equity issues and looks forward to addressing recommendations internally and throughout agency divisions as needed. The Commission is further committed to addressing agency awareness of equity issues and needs through continued agency-wide learning. The concerns stakeholders raised through their comments are beyond what this single rulemaking can address and may be better addressed outside of this docket. In preparation for future process and discussions, please provide a list of CETA-related topics the Commission should address immediately following or concurrent with this rulemaking.

Renewable Northwest thanks the Commission for its acknowledgement that this rulemaking calls attention to broader issues which may be best addressed in a separate docket. While we have not provided detailed guidance on equity issues and rely on other, better-equipped organizations to provide related analyses and recommendations, we have identified other topics the Commission should explore in concert with or immediately following the CETA implementation rulemaking.

Over the course of its energy transformation, Washington state will hit many fewer roadblocks if it implements tools addressing the complexities and synergies of its energy system. Because utility participation in wholesale electricity markets will likely strengthen over the course of CETA's timeline, markets within the Western Interconnection should operate harmoniously with its constituent states' energy policies. We recommend that Washington encourage this compatibility by requiring all-generation tracking within the Western Interconnection using methods similar to those used in the Pennsylvania-New Jersey-Maryland Interconnection (PJM). This tracking could elucidate the level of renewable, nonemitting, and fossil-fuel based generation Washington customers actually receive.

Further, because CETA was structured "to address the impacts of climate change by leading the transition to a clean energy economy," taking a procurement-based approach to mitigating Washington state's carbon footprint, this law may not sufficiently close the gaps for fossil-based resources to find their way to the state's distribution systems. Our understanding is that the only traceable protection against carbon-intensive electricity making its way to Washington customers is to implement a cap on emissions in the state, akin to California's approach. While a carbon-accounting system would likely best ensure Washington reaches its clean energy goals of GHG neutrality by 2030 and 100% clean by 2045, development of this system is beyond the scope of the CETA rulemaking but would be worth the Commission's attention in a parallel or successive investigation.

4. Draft WAC 480-100-610(6) requires each utility to adaptively manage its portfolio of activities to achieve the requirements in the section. Some commenters recommended that this section belongs in the section that describes the CEIP. Staff proposes to place this provision in section 610 because adaptive management is an expectation of all the utility's investments and operations for achieving the requirements of CETA. Please state whether you agree that this adaptive management requirement is appropriately placed in section 610 and explain your response.

Renewable Northwest agrees with the Commission that the provision regarding adaptive management belongs in draft WAC 480-100-610(6), as opposed to the section that describes the CEIP. Section 610 outlines the framework for utilities' compliance with CETA, documenting the clean energy milestones, emphasizing the importance of demonstrating progress toward those milestones, mandating an equitable distribution of benefits, and reiterating the importance of reliability and cost-effectiveness during the energy transition. Adaptive management of investments and activities is additionally fundamental to sustainable change in a technically- and economically-evolving sector. Therefore, we think the Commission's placement of this requirement is appropriate.

5. When a utility files its CEIP, it will include an estimate of its incremental cost of compliance, which is the difference between the portfolio of actions it will take to comply with RCW 19.405.040 and RCW 19.405.050 and the portfolio of the alternative lowest reasonable cost and reasonably available actions (the baseline portfolio). At this stage, both portfolios will estimate inputs, such as natural gas prices, over the four-year period. When the utility files its CEIP compliance report and calculates the actual incremental cost at the end of the four years, the utility will use the actual costs for the portfolio of actions it took. However, for purposes of determining if the utility may rely on the incremental cost provision, the Commission must determine whether the utility should update the inputs to the baseline portfolio as well. If the utility does not update the inputs to the baseline portfolio, then it is not measuring the true incremental cost between the two portfolios because they use different input assumptions. However, updating the assumptions may leave the utilities exposed to unknowable changes in circumstances for which they could not reasonably plan, such as a rapid increase or decrease to natural gas prices.

In draft WAC 480-100-660(4)(c), Staff proposes to require the utility to update the verifiable inputs of the alternative lowest reasonable cost and reasonably available portfolio (baseline portfolio). Please respond if the utility should be required to update the assumptions in its baseline portfolio when reporting its actual incremental costs, or if it should not.

Renewable Northwest agrees with the Commission's crafting of draft WAC 480-100-660(4)(c) to require a utility to update the verifiable inputs of the baseline portfolio when reporting actual incremental costs to determine compliance. As indicated in the Notice, leaving out this requirement would deflate the validity and usefulness of the incremental cost provision. Further, utilities are versed in risk management across many activities and decisions; perhaps utilities should fold into their incremental cost calculations a risk-weighted factor to buffer for unknowable changes in circumstances.

Additionally, RCW 19.405.090(3) gives the Commission authority to "issue an order relieving the utility of its administrative penalty obligation," if the utility is unable to meet compliance requirements "due to reasons beyond the reasonable control of the investor-owned utility."[6] If the utility's compliance planning efforts failed due to unpredictable circumstances, the utility could make a case for the Commission's employment of WAC 480-100-665(4). This provision treats unpredictable events as rare, which by definition they are.

[6] RCW 19.405.090(3)

That said, while any specific "rapid increase … to natural gas prices" may be "unknowable," such spikes have occurred periodically throughout the country including recently in the northwest and are therefore not categorically unpredictable. Accordingly it may well be appropriate for the Commission to hold utilities to the risks associated with reliance on gas as a fuel for generating electricity given that fuel-price volatility is among the risks known and increasingly associated with reliance on thermal units as part of the general risk-management referenced above.

6. The Commission is considering two alternative interpretations of the incremental cost of compliance option in RCW 19.405.060. First, both interpretations find the Directly Attributable Costs of compliance by finding the difference between the RCW 19.405.040 and RCW 19.405.050 Compliant Portfolio and the Baseline Portfolio.

. 040 & .050 ***Compliant Portfolio − Baseline portfolio = Directly Attributable Costs***

To determine whether the utility can exercise the incremental cost compliance option, the Commission is considering two alternative interpretations. One interpretation calculates incremental cost as the directly attributable cost in any given year, and the other interpretation calculates incremental cost as the year-over-year change in directly attributable cost. The Department of Commerce's draft rule, WAC 194-40-230(1)(b) – Compliance using 2% incremental cost of compliance, takes the second approach.

Interpretation 1: ***Directly Attributable Costs / Weather Adjusted Sales Revenue***
Interpretation 2: ***Change in Directly Attributable Costs from Previous Year / Weather Adjusted Sales Revenue***

Please respond with a recommendation for the appropriate calculation. See attachment C to the Notice for sample calculations of these two interpretations.

Renewable Northwest appreciates the Commission's attention to quantitative approaches for solving the incremental cost of compliance calculation, as consistency across utility reporting will encourage transparency and will improve the Commission's understanding of utilities' progress over each compliance period. However, we would like to present a third interpretation for calculating the 2% incremental cost of compliance, which we think best captures the original intent for this provision.

As is apparent in the spreadsheet provided with the Notice, because Interpretation 1 takes a cumulative approach to attributable costs, counting a previous year's costs against a future year's costs, a utility will reach the 2% incremental cost threshold much quicker than it would if

operating under Interpretation 2.[7] While Interpretation 2 gets closer to our understanding by considering the difference in attributable costs from one year to the next, this methodology may be sensitive to the timing of new procurements within the compared portfolios.

Ultimately, the incremental cost provision establishes an optional cost cap or threshold at an average 2% increase of the utilities' weather-adjusted sales revenue above the previous year, and the total incremental cost threshold for the four-year compliance period should reflect that some costs accrued in an early year can be carried through the duration of the compliance period. This will simplify the consideration of long-term investments: once a utility determines the 2% threshold for the full compliance period, a 20-year investment in a resource, for instance, will not count against a future year's incremental cost threshold.

The following formula can be used to calculate the full incremental cost threshold[8] for a four-year compliance period, resulting in a 2% *average* annual increase in a utility's weather-adjusted sales revenue:

$$C = (B_0 * 1.02^4 - B_0) + \sum_{n=1}^{3} (G_n * 1.02^{(4-n)} - G_n)$$

WHERE:

$C = Total\ cost\ cap\ over\ compliance\ period$

$B_0 = Weather\ adjusted\ sales\ revenue\ in\ Year\ 0$

$G_n = Change\ in\ sales\ revenue\ compared\ to\ B_0\ in\ Year\ n$

$n = Compliance\ year$

The formula has two terms. The first term is a calculation of the 2% annual increase in sales revenue based on the Year 0 Cost Basis. The total Cost Basis in Year 4 minus that of Year 0 equals the total incremental cost of compliance for the four-year period. The sigma term is an adjustment for changes in the Cost Basis resulting from future unknowables, including load growth, rate increases, etc. This term compounds the increase in Cost Basis for Year n, for the remaining years in the compliance period.[9]

[7] Attachment C UE-190698 and UE-191023 Incremental Cost of Compliance Calculation Examples.
[8] Variable *C* in the referenced formula, while labeled "Total cost cap over compliance period," takes the same meaning as "incremental cost threshold."
[9] Formula developed by Climate Solutions.

Applying the hypothetical example from Commerce's spreadsheet to this formula, the total incremental cost threshold for the full period would be 84.65 (omitting units), which would then be compared to the *actual* incremental cost for the full compliance period (80, in this example). This method of calculation captures the intent of the provision while also providing utilities a helpful tool to support resource planning, enabling utilities to project CETA-related spending well in advance of any one compliance period.

7. Commenters have raised additional concerns about how utilities should demonstrate the elimination of coal from the allocation of electricity. Current draft rule language relies on attestations or audits and e-tags. Some commenters suggest waiting for the work of the markets workgroup to finish before developing rules for compliance with RCW 19.405.030(1)(a). Do stakeholders have concerns about whether e-tags are capable of tracking all electricity generated from coal-fired resources? Should the commission wait for recommendations or comments from the markets workgroup before addressing this issue in rule?

Renewable Northwest supports the draft rule language as written, which would require attestations or audits and e-tags for demonstration of the elimination of coal-fired resources from a utility's resource mix. Especially considering that this compliance must be demonstrated in the near-term, by 2025, utilities must begin planning for this obligation. For that reason, we do not recommend that the Commission delay this issue for further analysis by the markets workgroup or other stakeholders.

IV. CONCLUSION

Renewable Northwest thanks the Commission for its consideration of these comments. We look forward to continued engagement in this rulemaking and the remainder of the Clean Energy Transformation Act implementation process.

Respectfully submitted this 11th day of September, 2020,

/s/ Katie Ware
Katie Ware
Washington Policy Manager
Renewable Northwest
katie@renewablenw.org

/s/ Max Greene
Max Greene
Regulatory & Policy Director
Renewable Northwest
max@renewablenw.org

EXHIBIT A

June 15, 2020

Washington Department of Commerce
via email: ceta@commerce.wa.gov

Re: Comments of Renewable Northwest on Request for Comments -- Draft Rule Language

I. INTRODUCTION

Renewable Northwest thanks the Washington Department of Commerce ("the Department") for this opportunity to comment in response to the Department's first set of draft rules ("Draft Rules") for the implementation of the Clean Energy Transformation Act ("CETA"), published April 28, 2020. Specifically, these comments address draft WAC 194-40-110, -200, -210, -220, -300, -310, and -320.

Overall, we identify opportunities in the Draft Rules to improve transparency and analytical consistency in utilities' resource planning processes and to minimize ambiguity in utilities' compliance with the standards and interim targets in RCW 19.405.040(1) and RCW 19.405.050(1). Our comments focus particular attention on 1) standardizing and enumerating the methodology for incorporating the social cost of greenhouse gases in utilities' resource planning, 2) establishing guidelines for resource adequacy standards that incorporate improved reliability metrics and ensure consideration of the rapidly changing energy landscape, and 3) detailing the requirements for utilities' demonstration of compliance such that the Department's language is not misconstrued in ways that delay the goals of the statute.

Renewable Northwest thanks the Department for its continued efforts to do the deeply important work of implementing CETA, and we look forward to continued participation in the Department's stakeholder processes.

II. COMMENTS

A. Planning Requirements

1. WAC 194-40-110 -- Methodologies to Incorporate the Social Cost of GHG Emissions

Renewable Northwest acknowledges the differences in the way consumer-owned utilities structure resource planning, some using an optimization model and some not. However, in

budgeting for these differences, the current draft rule language creates optionality for *all* utilities in the way they apply the social cost of GHG emissions (SCGHG). This degree of flexibility will undoubtedly lead to wide variations in utilities' application of the SCGHG and, thus, difficulty for the Department in its efforts to track compliance over a long timeline. Renewable Northwest supports revisions to the draft rule to categorize utilities based on the appropriate application of the SCGHG in resource planning: 1) Utilities that use optimization modeling to facilitate resource planning must apply the SCGHG via option (b) in draft WAC 194-40-110(2), and 2) utilities that do not use optimization modeling must apply the SCGHG adder to the expected market prices of electricity to determine resource cost effectiveness via option (c).

Option (b) stands out to us as the best option for utilities that use resource modeling because this language appears to take the most comprehensive view of a portfolio's impact, acknowledging that emissions accumulate not only at the point of generation, but also upstream in production and processing.

However, we also request that WAC 194-40-110(2)(b) be expanded to provide utilities with more detailed guidance for applying the SCGHG such that utilities' resource modeling is consistent, transparent, and representative of the cumulative impact of GHG emissions. Specifically, we suggest that the Department add clarifying language that the SCGHG adder must be applied post-economic dispatch, with optimization models virtually dispatching the cheapest marginal cost unit adjusted for the SCGHG at the time of resource need. The SCGHG adder is a way to help achieve the clean energy standards in RCW 19.405.040(1) and RCW 19.405.050(1), in that it helps to correct the costs associated with dispatching a fossil fuel resource by internalizing the externalities of that dispatch decision.

The rule language should also acknowledge that, for analytical consistency and to ensure maximized investments in renewable and nonemitting resources, the SCGHG must be a baseline input in determining the lowest reasonable cost in the optimization model.

The following changes to the draft rule language would account for all of the above recommendations:

(2) A utility may comply with the requirements of Subsection (1) by using one of the following analytical approaches, as appropriate and consistent with the utility's overall analytical approach for resource evaluation and selection:

a. ~~Performing a resource analysis in which it increases the input cost of each fossil fuel by an amount equal to the social cost of greenhouse gas emissions value of that fuel;~~

a~~b~~. Conducting a resource analysis in which alternative resource portfolios are compared at dispatch across multiple scenarios on the basis of cost, risk, and other relevant factors and the aggregate end-of-model social cost of greenhouse gas emissions is included in the lowest reasonable cost and in the cost of each resource portfolio; or

b~~e~~. If a utility is unable to complete comprehensive portfolio modeling, a~~A~~dding the social cost of greenhouse gas emissions to the expected market price of electricity, using an estimate of the emissions rate of marginal generating resources~~; or~~

~~d. Using another analytical approach that includes a comprehensive accounting of the difference in greenhouse gas emissions and social cost of greenhouse gas emissions between resource alternatives~~.

These changes would then require a definition be added to WAC 194-40-030 for "lowest reasonable cost":

> "Lowest reasonable cost" means the lowest cost mix of resources and programs 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, public health costs imposed on utility customers, the cost of risks associated with environmental effects, including the social cost of greenhouse gas emissions, while ensuring an equitable distribution of energy and non-energy benefits and reductions of burdens.

2. WAC 194-40-200 -- Clean Energy Implementation Plan

WAC 194-40-200(1)

Renewable Northwest appreciates the clarity afforded by subsection (1) of this section of the Draft Rules, which provides that the ultimate standards against which utilities' Clean Energy Implementation Plans (CEIPs) will be measured are the standards established under RCW 19.405.040(1) and 19.405.050(1), which include GHG Neutrality by 2030, 100% Clean Electricity by 2045, and the interim targets that utilities will establish and adhere to prior to 2030 and between 2030 and 2045. As Draft WAC 194-40-200(1) indicates, the actions that a utility will undertake to "demonstrate progress toward" meeting the GHG Neutral and 100% Clean standards, in compliance periods prior to 2030 and between 2030 and 2045, respectively, constitute the framework of the CEIP.

Moreover, in comments submitted to the Department on June 8, 2020, Renewable Northwest provided analysis of the statute concluding that interim targets are mandated:

> RCW 19.405.060(4)(a) is written such that a utility would be considered in compliance with the standards under RCW 19.405.040(1) and 19.405.050(1) if, over the compliance period, "the average annual incremental cost of meeting the standards or the interim targets established under subsection (2) of this section meets or exceeds a two percent increase"[1] of the utility's annual revenue. Subsection (2) requires that the utility's clean energy implementation plan (CEIP) propose interim targets for years prior to 2030 and between 2030 and 2045. Deductive reasoning would show, then, that because a utility may use the incremental cost of compliance mechanism to comply with an interim target if the costs of meeting that target exceed a two percent increase in annual revenue, then compliance with the interim targets prior to 2030 and between 2030 and 2045 is mandated.[2]

Moreover, RCW 19.405.060(2)(a) provides that "each consumer-owned utility must develop and submit to the department a four-year clean energy implementation plan for the standards established under RCW 19.405.040(1) and 19.405.050(1) that … (iv) Identifies specific actions to be taken by the consumer-owned utility over the next four years, consistent with the utility's long-range resource plan and resource adequacy requirements, that demonstrate progress towards meeting the standards under RCW 19.405.040(1) and 19.405.050(1) and the interim targets proposed under (a)(i) of this subsection." And RCW 19.405.060(2)(b) reads, "The governing body may adopt more stringent targets than those proposed by the consumer-owned utility and periodically adjust or expedite timelines...."[3] Therefore, because CETA mandates that the actions in utilities' CEIPs must "demonstrate progress toward meeting" standards *and interim targets*, and because these targets are subject to review and approval, utilities are indeed held to their ability to "demonstrate progress toward" meeting the clean energy standards in each CEIP. If a CEIP does not reasonably represent a path to meet those standards, it would be appropriate under RCW 19.405.060(2)(b) forn a utility's governing body to impose conditions holding a utility to more stringent targets.

There are a number of conditions under which a utility should be held to more stringent targets: (1) if the targets are projected to be inadequate to meeting the 2030 and 2045 standards; (2) if there is reason to believe that there will be long- or short-term cost savings from more stringent

[1] RCW 19.405.060(2)(a)(i).
[2] Comments of Renewable Northwest re: Draft Incremental Cost Rule.
[3] RCW 19.405.060(2)(b).

targets; (3) if the utility did not sufficiently consider a broad set of public interest benefits and there is reason to believe that these benefits exceed the costs of more stringent targets; or (4) if broad technological advancements, including the development of new clean energy resources, cost declines of clean energy resources, or material changes to operational characteristics of the grid result in cost savings that were not incorporated in the original calculation of the targets.

WAC 194-40-200(2)

Because the alternative compliance mechanisms are only to be used once a utility has maximized investments in renewable and nonemitting resources, the rule language should be crafted as such. In that vein, WAC 194-40-200(2)(a) may be revised to read, "The utility must describe any plans it has to rely on alternative compliance mechanisms as described in RCW 19.405.040(1)(b)."

WAC 194-40-200(3)

Renewable Northwest understands and shares the Department's concern for deliverability as a component of a utility's demonstration of compliance with the targets set in RCW 19.405.040(1) and RCW 19.405.050(1). We support not only creating a clarifying subsection on this topic in WAC 194-40-320, but also weaving emphasis on delivery of renewable and zero-emission electricity to Washington retail customers throughout the rules, especially in WAC 194-40-200. One opportunity for adding this emphasis is to structure the renewable energy targets as percentages of retail sales, as opposed to "the increased quantity in MWh of renewable electricity, relative the average quantity of renewable electricity used in the four years prior to the period."[4]

Additionally, WAC 194-40-200(3)(c) should clarify that battery storage may fall under this target only when charged with renewable resources.

> c. **Renewable energy.** The utility's target for renewable energy must identify the percentage of retail sales of electricity supplied by renewable resources ~~increased quantity in MWh of renewable electricity~~, relative to the percent of retail sales of electricity supplied by renewable resources ~~average quantity of renewable electricity used~~ in the four years prior to the CEIP period. The utility may include storage resources in the renewable energy target when those resources have been charged using renewable resources.

Finally, to improve transparency and accuracy of CEIP reporting, utilities should document the assumptions of their resource models and projected interim and specific targets. A subsection of the rules on assumptions could read, "The utility must provide a description of the technologies,

[4] Draft WAC 194-40-200(3)(c).

data sources, processes, procedures, and assumptions the utility used to develop the targets in this subsection."[5]

3. WAC 194-40-210 -- Resource Adequacy Standard

Renewable Northwest recognizes the complexity of establishing a resource adequacy standard in the context of a clean energy transformation and appreciates the Department's effort to provide for consistency while leaving utilities a degree of analytical flexibility. Before turning to a discussion of the proposed rule language, we will first discuss some additional policy considerations and analytical developments relevant to the rapidly evolving concept of resource adequacy in the context of a changing electricity grid.

The first policy consideration to bear in mind is the risk that providing too much flexibility in the Department's rules regarding resource adequacy may allow utilities to over-rely on conventional ideas around resource adequacy, in particular by undervaluing the role renewable resources play in system reliability. A corresponding risk, however, is that providing too *little* flexibility could entrench in rules a methodology that similarly fails to reflect stakeholders' updated understanding of how modern portfolios of diverse, carbon-free resources can meet system reliability needs.

The second policy consideration is the risk that providing too much flexibility in rules could allow utilities to develop standards independent from one another -- and from those developed by the Northwest Power and Conservation Council ("Power Council") -- resulting in analytical variabilities that increase events of double counting. In this case, multiple utilities could end up relying on the same resource to meet corresponding system peaks, while in reality that resource is only capable of addressing one utility's resource inadequacy event. Currently, all assessment areas are required to calculate and report Loss of Load Hours (LOLH) and Expected Unserved Energy (EUE) to NERC for their long-term reliability publications. The Power Council is actively considering how it might apply these probabilistic metrics among others which may be adopted by utilities in the future.[6]

Moving on to analytical developments, in recent years certain analytical tools have been developed that help to identify the resource-adequacy contributions of diverse resources. Holding utilities to one such specific analytical approach that nevertheless affords utilities some flexibility in application may help to strike the appropriate balance between too much and too little flexibility regarding resource adequacy. Indeed, it is in part the variance among resource

[5] Draft WAC 480-100-655(3)(b).
[6] Fazio & Hua (2019), Three probabilistic metrics for adequacy assessment of the Pacific Northwest power system, *available at* https://www.sciencedirect.com/science/article/pii/S0378779619301713.

adequacy standards across utilities and regions in the United States that creates the significant risk that utilities will undercount or undervalue the reliability/adequacy contributions of renewable and hybrid energy systems due to methodological differences.

Renewable Northwest, in previous comments to the Utilities and Transportation Commission ("UTC"), has recommended that regulated investor-owned utilities be required to apply a consistent and robust effective load carrying capability ("ELCC") calculation which captures the entire value of variable resources.[7] Applying this approach to consumer-owned utilities as well would be consistent with the methodology adopted by Northwest Power and Conservation Council ("Power Council") and would portray the reliability value of variable resources.

It is important to identify a methodology that avoids perpetuating conventional ideas around resource adequacy -- in particular, traditional undervaluing of the role renewable resources play in system reliability and overvaluing the role of fossil-fuel generation -- for multiple reasons. First, fossil-fuel generation is increasingly more expensive on a variable cost per unit basis.[8] Second, "dispatchable" renewable energy has come to fruition across the United States with utility-scale solar and wind developers addressing variable generation concerns by adding storage (including batteries),[9] optimizing solar/wind configurations to provide firm output,[10] coordinating with aggregated distributed energy resources and demand-side management to provide dispatchable capacity,[11] and using highly sophisticated forecasting techniques. These developments enhance the "reliability" aspect of variable resources with respect to resource adequacy.

Regulators are increasingly considering how storage can help manage peak electricity requirements as well by increasing the dispatchability of renewables. For example, Arizona regulators are considering a Clean Peak Standard, which would require that utilities use a mandated proportion of clean resources at peak times (30% in the most recent February 2020 draft rules) and likely would require significant storage to meet evening ramps.[12] Similarly, the California Public Utilities Commission is responsible for implementing SB 338 (2017), which

[7] Washington Utilities and Transportation Commission, Docket UE-190698, Comments of Renewable Northwest at 3 (Dec. 20, 2020).
[8] *See*, *e.g.*, Lazard's Levelized Cost of Energy Analysis Version 13.0 (Nov. 2019), *available at* https://www.lazard.com/media/451086/lazards-levelized-cost-of-energy-version-130-vf.pdf.
[9] Gorman et al., 2020 https://www.sciencedirect.com/science/article/pii/S1040619020300312.
[10] E3 and First Solar Study: https://www.ethree.com/wp-content/uploads/2018/10/Investigating-the-Economic-Value-of-Flexible-Solar-Power-Plant-Operation.pdf.
[11] *See*, *e.g.*, Rocky Mountain Institute, *The Economics of Clean Energy Portfolios* (2018).
[12] *See* Arizona Corporation Commission, Docket RU-00000A-18-0284, *Staff's Third Revised Proposed Draft Rules for the Possible Modifications to the Arizona Corporation Commission's Energy Rules* (Feb. 18, 2020), *available at* https://docket.images.azcc.gov/E000004960.pdf.

requires utilities to plan for how hybrids can help combat the solar "duck curve."[13] All of the above developments -- the ability to meet system peaks with diverse resources and the potential role of storage in shifting variable generation in time to create virtual "dispatchability" -- highlight the importance of achieving the right balance with respect to the flexibility of the Department's rules regarding utility resource adequacy standards.[14]

Due to a number of recent developments including coal retirements, renewable resource economics, policy-driven electricity-system transformations, evolving concepts of how diverse resources can meet system needs including reliability, and the complexities of both analytical approaches to resource adequacy and conflicting policy considerations, resource adequacy has been a significant discussion topic in the Northwest. It is important that the Department's rules reflect this dynamic conversation. Against that backdrop, some changes to the draft rules may be necessary to ensure that Washington can achieve CETA's core standards of GHG Neutrality and 100% Clean Electricity established under RCW 19.405.040(1) and 19.405.050(1).

At a high level, Renewable Northwest agrees with the Department that it will be prudent for utilities to follow the Northwest Power and Conservation Council's Loss of Load Probability (LOLP) standard, which provides that "for the power system to be deemed adequate, the LOLP must be 5% or less" across the board, but we recommend also incorporating ELCC or a related reliability metric based on variable energy forecasting and battery charge/discharge cycles to meet the reliability needs of each utility's balancing area. Renewable Northwest would welcome more engagement on the particulars of the proposed methodology.

> (1) Each utility must establish a standard for resource adequacy to be used in resource planning, including assessing the need and type of generating resources, storage resources, demand response resources, and conservation resources. The resource adequacy standard must be consistent with prudent utility practices and relevant regulatory requirements and must include reasonable and nondiscriminatory:
> a. Measures of adequacy, including peak load standards and loss of load probability,

[13] SB 338 (2017), enacted at California Public Utilities Code § 454.52, *available at* https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201720180SB338&showamends=false; see specifically California Public Utilities Code § 454.52(a)(3) ("[T]he commission shall consider the role of existing renewable generation, grid operational efficiencies, energy storage, and distributed energy resources, including energy efficiency, in helping to ensure each load-serving entity meets energy needs and reliability needs in hours to encompass the hour of peak demand of electricity …").

[14] As the costs of renewables and storage decline while the ability to harness an ever-broader range of benefits from these resources increases, Renewable Northwest looks forward to continued engagement with the Department regarding evolving reliability methodologies of hybrid systems.

b. Methods of measurement, including probabilistic assessments of resource adequacy at both a system and a resource level and
c. ~~M~~Probabilistic measures of resource contribution to resource adequacy such as effective load carrying capability (ELCC) applicable to all resources available to the utility, including but not limited to renewable, storage, hybrid and demand response resources.
(2) A utility that establishes a resource adequacy standard that is inconsistent with the resource adequacy standard of the Northwest Power Planning Council and the resource adequacy program of the NW Power Pool must demonstrate that its standard meets the requirements of subsection (1) and does not burden customers of other utilities with a risk of inadequate resources.

4. WAC 194-40-220 -- Public Input for Planning

Renewable Northwest supports the expansion of processes for incorporating public input in utilities' resource planning, as early public involvement sets the foundation for improved equity in the transformation of Washington's electric grid. For utilities and their customers to benefit from meaningful customer and stakeholder feedback will rely on transparency and reduced barriers to communication. The draft language in this section could benefit from additional specificity as to the requirements that will apply to utilities.

First, to reflect the importance of public input, the term "reasonable" should be removed from WAC 194-40-220(1) to read, "Each utility must establish and implement a public input process that provides opportunity for its customers and interested stakeholders to provide input to the utility prior to the adoption by the utility of a CEIP, an integrated resource plan, or a resource plan, as applicable." This subsection or an additional subsection should also provide guidance for a utility to 1) make public its CEIP to initiate a sixty-day stakeholder feedback period and 2) share all collected stakeholder feedback with the Department to inform its review of the utility's CEIP.

Lastly, the current public health crisis has raised an additional communication barrier not currently acknowledged in WAC 194-40-220(2) -- technological. Thus, this subsection should include "barriers to public participation due to language, cultural, economic, technological or other factors."[15]

[15] WAC 194-40-220(2).

B. Compliance Standards

5. WAC 194-40-300 -- Documentation Concerning Coal-Fired Resources

Renewable Northwest supports the Department's proposal to require an annual attestation that a utility has not allocated to Washington customers costs associated with coal-fired resources.

Regarding power contracts for unspecified resources that may include coal-fired resources, the rules appropriately reflect the underlying statutory language but could benefit from additional specificity. RCW 19.405.030(1)(a) requires that "[o]n or before December 31, 2025, each electric utility must eliminate coal-fired resources from its allocation of electricity." RCW 19.405.020(7)(b)(i) provides that a "'Coal-fired resource' does not include an electric generating facility that is included as part of a limited duration wholesale power purchase, not to exceed one month, made by an electric utility for delivery to retail electric customers that are located in this state for which the source of the power is not known at the time of entry into the transaction to procure the electricity." The Department's draft rules provide some clarity as to how this statutory exclusion applies to required utility attestations:

> (2) The purchase of electricity, where the source is unknown at the time of purchase, for a term not to exceed one month, is not a coal-fired resource and does not preclude a utility from making the attestation required by subsection (1).
> (3) If the utility purchased or otherwise acquired electricity for Washington retail electric load for a term greater than one month and the source of that electricity is unknown at the time of purchase, the utility may rely on operational data, such as electronic tags used to schedule the transmission and delivery of the electricity, to demonstrate that the electricity was not generated using coal as a fuel source.

Renewable Northwest appreciates the clarification regarding use of operational data and e-tags. The only additional detail we would request is language providing that a utility may not avoid the "not to exceed one month" provision by stacking consecutive contracts for unspecified resources. As the Northwest Energy Coalition provided in their November 27, 2019 comments to the Department:

> [T]he rules must be crafted carefully such that this language does not become a loophole for coal-fired electricity. The rules should ensure that utilities couldn't commit to multiple, consecutive 30-day contracts from unspecified power in order to avoid the coal-fired provision. This would deliberately circumvent the intent of the law and should be prohibited by rule.

While there are many possible ways to address this issue, one possibility is to add a new subsection (4):

> (4) Notwithstanding subsection (2), a utility may not make the attestation required by subsection (1) if it makes consecutive purchases of electricity, where the source is unknown at the time of purchase, such that the combined terms of the purchases exceed one month.

Renewable Northwest would welcome additional approaches to ensuring that the rules avoid creating a loophole for coal-fired resources.

6. WAC 194-40-310 -- Documentation of Nonemitting Electric Generation

Renewable Northwest has no comment on this section at this time.

7. WAC 194-40-320 -- Use of Electricity from Renewable Resources and Nonemitting Electric Generation

Renewable Northwest appreciates the Department's efforts to reduce ambiguity regarding the transfer of electricity from the point of generation to the consumer and regarding the demonstration of transmission availability to deliver that electricity. However, the language in WAC 194-40-310(2) creates unintentional obscurity around the interstate import and export of electricity generated from CETA-compliant resources. As written, the rule may be interpreted to allow unbundling of nonpower attributes from their associated energy such that a utility may sell the electricity and use the associated unbundled renewable energy credits (RECs) to comply with RCW 19.405.040(1). To avoid this interpretation, we suggest the following revision to WAC 194-40-310(2):

> If a utility using electricity as provided in subsection (1) sells or transfers ownership of the electricity to any entity that is not its Washington retail customer, it may not use the nonpower attributes of that electricity for compliance with the GHG Neutral Standard, except for compliance under RCW 19.405.040(1)(b)(ii) to meet no more than 20% of the standard between 2030 and 2045 ~~unless the electricity transaction identified the electricity as unspecified electricity and the utility retained ownership of the nonpower attributes~~. It may not use the nonpower attributes for compliance after 2045.

This section of the Department's rules must still address the appropriate demonstration by a utility of deliverability, the MW-by-MW generation or purchase by the utility and subsequent consumption of renewable or nonemitting electricity by Washington retail customers. Renewable

Northwest is monitoring the stakeholder discussions around this topic and may have detailed recommendations in the future.

III. CONCLUSION

Renewable Northwest again thanks the Department for its work to implement CETA and maximize decarbonization in Washington. We look forward to continued engagement in this rulemaking and the remainder of the Clean Energy Transformation Act implementation process.

Respectfully submitted this 15th day of June, 2020,

/s/ Katie Ware
Katie Ware
Washington Policy Manager
Renewable Northwest
katie@renewablenw.org

/s/ Sashwat Roy
Sashwat Roy
Technology & Policy Analyst
Renewable Northwest
sashwat@renewablenw.org

/s/ Max Greene
Max Greene
Regulatory & Policy Director
Renewable Northwest
max@renewablenw.org