

**RE: Rulemaking for Energy Independence Act (EIA), WAC 480-109, Docket UE-190652**

**Docket UE-190652**

Mark Johnson, Executive Director/Secretary  
Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Dr. S.W., P.O. Box 47250  
Olympia, Washington 98504-7250

Dear Mr. Johnson:

The NW Energy Coalition (Coalition) submits the following comments pursuant to the Notice of Opportunity to File Written Comments dated October 4, 2019 in UE-190552.

The Coalition is an alliance of approximately 100 organizations united around energy efficiency, renewable energy, fish and wildlife preservation and restoration in the Columbia basin, low-income and consumer protections, and informed public involvement in building a clean and affordable energy future.

**ISSUES DISCUSSION: QUESTIONS FOR CONSIDERATION**

**Low-income conservation**

- 1. Do stakeholders have concerns with the additions of the statutory definitions for “energy assistance” and “energy burden” in WAC 480-109-060?**

The NW Energy Coalition supports the incorporation of the definitions, as drafted, for “energy assistance” and “energy burden” in WAC 480-109-060. The drafted definitions are consistent with the new Clean Energy Transformation Act (CETA) definitions in 19.405.020. However, because there is a strong relationship between WAC 480-109-060 and 480-109-100 (10) and Laws of 2019, Chapter 288, §§ 2(16) and 12, and because the Department of Commerce (Commerce) must also create and update rules for utilities under these sections, we recommend a deliberative process and additional stakeholder input prior to finalizing rulemaking of these sections.

- 2. Please propose the level of energy burden that should be included within the definition of “Energy assistance need.” Please explain and provide justification for your proposal. Industry literature suggests an affordability benchmark as low as six percent of household income.**

The Coalition recommends careful and through consideration of the percent of household income threshold used as a maximum level of energy burden in the definition of “energy assistance need” . Nationally, 6% is a commonly used figure for an affordable level of energy burden. Fischer, Sheehan and Colton have

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conducted extensive research on energy burden across the United States. For their Home Energy Affordability Gap analysis, they use a home energy burden of 6% for an affordable threshold level in their modeling.<sup>1</sup> This dataset is used by many organizations, including the American Council for an Energy-Efficient Economy (ACEEE)<sup>2</sup>. However, utility costs and average energy burden are lower in Washington State compared to the rest of the United States<sup>3</sup>. These costs may be offset by other higher costs related to housing or other cost of living expenses (such as food, rent, property costs and taxes, etc.). This may provide justification for an energy burden threshold lower than 6% in Washington. In fact, Seattle City Light’s Energy Equity Rate Pilot launched in 2019 utilizes a 4% energy burden to determine bill affordability.

Additionally, in picking a number/methodology to determine energy burden for energy assistance need, it is important to clearly define what is included in this number and how the number should be used. Typically, the use of the term “home energy burden” excludes transportation costs, which on average are an additional 20% of a household’s income,<sup>4</sup> but can exceed 30% for low-income households<sup>5</sup>. As more households switch to electric vehicles for their transportation needs, the line between home utility bills and transportation will become blurred. In making utility programmatic decisions it may become increasingly important to consider the shift of transportation energy costs to utility bills, a shift that often benefits the households overall energy burden, but can appear as a negative if only assessing “home energy burden” independently.

- 3. Please propose a definition of “low-income” based on area median household income or percentage of the federal poverty level. Please explain and provide justification for your proposal. The maximum allowed in Laws of 2019, Chapter 288, § 2(25), is the higher of 80 percent of area median household income or 200 percent of federal poverty level, adjusted for household size. Investor-owned utilities currently use 200 percent of the federal poverty level, adjusted for household size, for the low-income conservation programs.**

The Coalition supports using the “higher of 80 percent of area median household income or 200 percent of federal poverty level, adjusted for household size.”

- 4. Do stakeholders have concerns with the proposed changes to WAC 480-109-100(10) addressing funding and programs for low-income energy assistance as described in**

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<sup>1</sup> [http://www.homeenergyaffordabilitygap.com/01\\_whatIsHEAG2.html](http://www.homeenergyaffordabilitygap.com/01_whatIsHEAG2.html)

<sup>2</sup> Lifting the High Energy Burden in America’s Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities. ACEEE, April 2016. <https://aceee.org/research-report/u1602>

<sup>3</sup> USDOE, Low-Income Energy Affordability Data Tool. <https://www.energy.gov/eere/slsc/maps/lead-tool>

<sup>4</sup> ACEEE, *America’s Transportation Energy Burden for Low-Income Families*, July 2016, <https://aceee.org/blog/2016/07/america-s-transportation-energy>

<sup>5</sup> *The Housing and Transportation Affordability Index*, <https://htaindex.cnt.org/>

**the Laws of 2019, Chapter 288, §§ 2(16) and 12? Is additional language necessary? If so, please propose alternative rule language.**

The Coalition supports the language as amended and offers the following additions underlined below. Additionally, we do not believe that the proposed changes below fully integrate the necessary content of the Laws of 2019, Chapter 288, § 12, consequently, if it is the intent of the Commission to integrate this section into the WAC 480-109-100(10), additional changes will be necessary.

**(10) Low-income conservation.**

(a) A utility ~~may~~ must fully fund low-income conservation measures that are determined by the implementing agency to be cost-effective consistent with the *Weatherization Manual* maintained by the department. Measures identified through the priority list in the *Weatherization Manual* are considered cost-effective. In addition, a utility ~~may~~ must fully fund repairs, administrative costs, and health and safety improvements associated with cost-effective low-income conservation measures.

*(b) The utility's biennial conservation plan must include low-income conservation programs and mechanisms identified pursuant to the Laws of 2019, chapter 288, section 12(4)(b), which pertains to energy assistance and progress toward meeting energy assistance need.*

*(i) A utility must consider the costs and benefits, including non-energy benefits, that accrue to the customer and/or premises over the life of each conservation measure.*

*(ii) To the extent practicable, a utility must prioritize energy assistance to low-income households with a higher energy burden.*

~~(b c)~~ A utility ~~may~~ must exclude low-income conservation from portfolio-level cost-effectiveness calculations.

~~(ed)~~ A utility must count savings from low-income conservation toward meeting its biennial conservation target. Savings may be those calculated consistent with the procedures in the *Weatherization Manual*.

- 5. The Laws of 2019, Chapter 288, § 12(2), requires utilities to plan for the provision of energy assistance aimed toward reducing household energy burdens. To the extent practicable, this energy assistance must prioritize low-income households with higher energy burdens. What considerations should the Commission consider in determining what is practicable in the context of low-income conservation?**

It is our understanding that many of the agencies dispersing energy assistance already prioritize households based on energy burden, as well as a number of other

factors, such as the presence of elderly, disabled persons or children in the household. This practice of prioritizing households based on need should continue, and any utilities or agencies implementing programs with utility dollars that are not currently prioritizing energy assistance based on energy burden should implement this practice immediately. However, need may not be the only criteria by which households are prioritized. The law is clear on this issue, and does not prevent prioritization based on other factors; consequently, further rulemaking may not be needed at this time.

### **Incremental hydropower method three**

- 6. The Commission proposes to eliminate incremental hydropower method three and its associated five-year evaluation from its rules (*see* WAC 480-109-200(7)(d) and (e)). A recent analysis by Avista Utilities showed method three overestimated incremental generation. The Commission subsequently approved Avista’s switch from method three to method one. Since no investor-owned utility currently uses method three, the Commission believes it reasonable to remove it from the rules. Additionally, while the proposed rules would allow the transfer of incremental hydropower renewable energy credits (RECs) per statute (*see* RCW 19.285.040(2)(e)(ii)(B)), this transferability would only apply to bundled RECs that cannot be calculated using method three because method three does not deal with real-time generation. Do stakeholders have concerns about deleting method three and its associated five-year evaluation?**

The Coalition supports deleting method three.

### **Greenhouse gas emissions reporting**

- 7. Do stakeholders have concerns with the additions of the statutory definitions for “carbon dioxide equivalent” and “greenhouse gases”?**

The Coalition supports the addition of the statutory definitions for “carbon dioxide equivalent” and “greenhouse gases.” However, we strongly urge the Commission to adopt only provisional emissions rates at this time, and to plan ahead for frequent updates as new scientific analysis is forthcoming.

Of several dozen distinct greenhouse gases, the top two in terms of climate impact are also the most important for electric power generation: carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>). We note significant analytical concerns in two respects.

First, while the terrestrial emissions of carbon dioxide (both natural and anthropogenic) are well characterized, for methane there are very significant data gaps and measurement issues. Both “top-down” and “bottom-up” analyses vary considerably on the sources and rates of methane emissions to the atmosphere. While the overall quantities of methane emissions are less than carbon dioxide, as discussed below the impact per unit mass of methane is far greater, so we must

balance the current assessment and data gaps against the very substantial risk of underestimating methane impacts.

In particular, there has been significant improvement in the last decade in assessing leakage (both intentional venting and unintentional fugitive emissions) from natural gas well to burner tip, but very substantial data and analytical gaps remain, with credible estimates varying by a factor of 3 or more. At the same time, it is likely that supply chain leakage of methane will be reduced in the future due to recognition of its climate impacts as well as the economic value of capturing and using what otherwise would be leaked. A recent assessment states:

When scaled up nationally, our facility-based estimate of 2015 supply chain emissions is  $13 \pm 2$  Tg/y, equivalent to 2.3% of gross U.S. gas production. This value is ~60% higher than the U.S. EPA inventory estimate, likely because existing inventory methods miss emissions released during abnormal operating conditions. Methane emissions of this magnitude, per unit of natural gas consumed, produce radiative forcing over a 20-year time horizon comparable to the CO<sub>2</sub> from natural gas combustion. Significant emission reductions are feasible through rapid detection of the root causes of high emissions and deployment of less failure-prone systems.<sup>6</sup>

Second, greenhouse gases have a wide variety of atmospheric residence and climate effects. The established metric for comparison is called the Global Warming Potential (GWP), which normalizes the effect of different greenhouse gases using the effect of CO<sub>2</sub> over a 100-year time horizon as a reference. The purpose of the GWP, when it was first proposed in the early 1990s, was to make it easier for policy makers to consider the relative long-term impacts of different GHGs *on a global basis*. Since the Kyoto Protocol established the “basket of gases” approach using the GWP more than two decades ago, it has become embedded in climate policy. However, as numerous recent papers discuss, the GWP has inherent shortcomings and is less suitable for considering both short-lived and long-lived greenhouse gases, finer grained analysis at the regional level, and assessing different energy sources.

The underlying principle of the GWP is that the effect of each greenhouse gas can be measured by its “radiative forcing” (RF) – the change in the planetary heat balance at the tropopause, that is, the “top of the atmosphere” at the boundary between the troposphere and stratosphere. The RF provides a simple single metric normalizing for both impact and atmospheric lifetime, but it also hides significant differences among the greenhouse gases, and this is particularly notable for carbon dioxide and methane. While the radiative forcing of atmospheric carbon dioxide is well understood, methane is more difficult to specify due to data gaps and the complexity of its atmospheric interactions.

Carbon dioxide is effectively inert while aloft, eventually falling back to the surface where it is recaptured primarily in the oceans, rivers and cryosphere and then gradually deposited into the deep ocean (thus creating the geological carbon cycle). While about half of CO<sub>2</sub> emissions are recaptured from the atmosphere in a year,

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<sup>6</sup> R. A. Alvarez et al., Assessment of methane emissions from the U.S. oil and gas supply chain, Science 10.1126/science.aar7204 (2018).

atmospheric concentrations diminish more gradually thereafter, and a significant portion (perhaps 10% or more) will remain aloft for at least 1,000 to 10,000 years.<sup>7</sup>

Conversely, methane is a highly interactive “short lived forcer” with about a 12-year average atmospheric residency, where oxidation and other processes convert it mostly into water and a small fraction of CO<sub>2</sub>. In addition, methane has a much higher radiative forcing per unit mass compared to carbon dioxide – around 34 times for 100-year Global Warming Potential (GWP) or about 85 times for a 20-year GWP. This means relatively small estimated differences in ground-level emissions and in atmospheric interactions can substantially change the imputed climate impact of methane, and makes the standard approach to GWP less robust than it may appear.

- 8. Electric utilities currently report their carbon dioxide emissions through the energy emissions intensity reports required by WAC 480-109-300. The Laws of 2019, Chapter 288, § 7, requires reporting of “metric tons” of “carbon dioxide equivalent,” which is further defined in the Laws of 2019, Chapter 288, § 2(22). Do stakeholders have concerns with the changes proposed in WAC 480-109-300? If so, please provide alternative rule language or justifications for retaining the existing language.**

The Coalition supports the switch to metric tons and CO<sub>2</sub>e (WAC 480-109-300 2(d), 2(e) and 3(a)). The switch to metric tons aligns with international practice and will make comparative assessment easier.

Our comments above outline our concerns about over-reliance on “carbon dioxide equivalent” as a stable measure of the differences in greenhouse gas impacts on climate.

- 9. The Laws of 2019, Chapter 288, §§ 2 and 7, define “greenhouse gas” and “carbon dioxide equivalent.” However, the Laws of 2019, Chapter 288, § 7, does not provide a default emissions rate for greenhouse gas emissions other than carbon dioxide from unspecified electricity. How should the Commission’s rules specify an emissions rate for greenhouse gas emissions other than carbon dioxide from unspecified electricity? What data source(s) and methodology should the Commission use to establish a default emissions rate from greenhouse gases other than carbon dioxide?**

In general, the Coalition believes that the default emissions rate for carbon dioxide is reasonably well established. We also note that the emissions profile for nitrous oxide, while important especially for coal-fired generation, is also well established. While traces of other greenhouse gases may also be involved in power generation, they are relatively insignificant. However, the same cannot be said for methane. There are significant issues with measuring emissions from the supply chain for natural gas power plants. In addition, many coal-mining facilities also have significant methane leakage.

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<sup>7</sup> D. Archer, Fate of fossil fuel CO<sub>2</sub> in geologic time, *Journal of Geophysical Research* 10.1029/2004JC002625 (2005).

The methane supply chain emissions rates typically quoted in otherwise authoritative sources from the Environmental Protection Agency and elsewhere are outmoded. However, there is no clear consensus as yet in the technical literature, so further assessment will be needed in this rulemaking to ascertain a best-fit value.

- 10. The Laws of 2019, Chapter 285, § 15, requires natural gas companies to put a price-per-ton cost on greenhouse gas emissions, including “emissions occurring in the gathering, transmission, and distribution” processes. Should WAC 480-109-300 include language requiring electric companies to report on greenhouse gas emissions occurring during the gathering of fuel for electricity generators?**

Yes. Greenhouse gas emissions in the supply chains for fuels must be fully accounted for. This is particularly important for methane given the aggregate leakage from well to burner tip for natural gas end uses. As noted above, field research suggests that leakage may well be several times previous estimates. A recent Rhode Island assessment indicated such an increase applied to direct use of natural gas could raise aggregate state greenhouse gas emissions by 45%.<sup>8</sup> While local distribution systems for gas in Washington are newer and have less leakage, the impact could also be significant here.

#### Definitions and other changes

- 11. Do stakeholders have concerns with any of the proposed changes to chapter 480-109 WAC described in Attachment A?**

As discussed in these comments.

- 12. Do stakeholders have suggestions to simplify or clarify the language? If so, please cite the specific rule and propose alternative rule language.**

As discussed in these comments.

#### Additional questions

- 13. Do stakeholders believe a workshop is necessary for this rulemaking?**

Yes. The Coalition recommends that the Commission and Department of Commerce hold a joint workshop to examine the issues above identified for greenhouse gas emissions reporting. These questions require further examination in a Washington specific context. Furthermore, rules established by Commerce and the Commission

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<sup>8</sup> J. Veysey, et al., Deeper Decarbonization in the Ocean State: The 2019 Rhode Island Greenhouse Gas Reduction Study. Stockholm Environment Institute and Brown University Climate and Development Lab (2019)

on this topic should be consistent so that utilities are held to the same standard uniformly across the state.

Additionally, we recommend that the Commission and the Department of Commerce hold a joint workshop or workshops to discuss rulemaking for the Laws of 2019, Chapter 288 § 12 and determine additional rulemaking changes that might be necessary to WAC 480-109-100 (10).

**14. Are there other definitions from Laws of 2019, Chapter 288, that the Commission should include in chapter 480-109 WAC?**

The Commission may wish to include RCW 19.405.060 (22) “Greenhouse gas content calculation” and include this reference directly in WAC 480-109-300.

The Coalition recommends changing the definition of “non-power attributes” in WAC 480-109-060 (17), (subsection (23) in proposed revised rules), to be consistent with the definition in RCW 19.405.020 (29) which removes the words “from a renewable resource” in subsection (a) and reads as follows:

(29)(a) "Nonpower attributes" means all environmentally related characteristics, exclusive of energy, capacity reliability, and other electrical power service attributes, that are associated with the generation of electricity, including but not limited to the facility's fuel type, geographic location, vintage, qualification as a renewable resource, and avoided emissions of pollutants to the air, soil, or water, and avoided emissions of carbon dioxide and other greenhouse gases.

(b) "Nonpower attributes" does not include any aspects, claims, characteristics, and benefits associated with the on-site capture and destruction of methane or other greenhouse gases at a facility through a digester system, landfill gas collection system, or other mechanism, which may be separately marketable as greenhouse gas emission reduction credits, offsets, or similar tradable commodities. However, these separate avoided emissions may not result in or otherwise have the effect of attributing greenhouse gas emissions to the electricity.

**15. Should this rulemaking establish protocols for designating confidential information in utilities’ annual RPS reports? If so, how should the language in chapter 480-109 WAC be revised to address such protocols?**

Yes. The Coalition supports the development of protocols that would make public any information in the annual RPS reports. Without transparency, it is nearly impossible to ensure compliance with the law. We would suggest that as much information as possible be made available, that all assumptions, calculations, data and methodologies be transparent and fully explained. Further, we would like to see all renewable energy credit purchases from third-party generation providers disaggregated by resource type and ownership.



**16. Should the Commission consider changes to WAC 480-109-200 addressing incremental cost calculation for eligible renewable resources? Specifically, what modifications to the language in chapter 480-109 WAC do you propose to address potential upgrades or renovations to existing eligible renewable resources?**

Yes. It is essential to be able to adequately understand all proposed upgrades to existing resources, which will require full disclosure of all details of any repowering, including materials, methods and approaches to the upgrades and to the methodologies that describe those upgrades and their impact. Further, the upgrades should account for and explain in a transparent manner locational differences and type differences for each of the upgrades.

Some upgrades may be extensive enough that information about them should be submitted to the commission earlier, perhaps 45 days or more, to allow for comprehensive reviews.

Any methodology for calculation of incremental costs must be fully transparent, clear, and understandable. Any cost comparisons must be to contemporaneous resources and their current costs and must include the social cost of greenhouse gas emissions for both existing resources and the proposed upgrades.

**17. The Laws of 2019, Chapter 288, § 10, requires the Commission and the Department of Commerce to adopt rules that “streamline” the implementation of this statute with chapter 19.285 RCW. Given that the Commission and the Department will be conducting several rulemakings resulting from enacted legislation in the next few years, should this streamlining be addressed in the current rulemaking or should streamlining take place closer to the point when both agency’s finalize rulemakings implementing statutory changes? What sections of rules in WAC 480-109 should be subject to streamlining?**

The Coalition recommends addressing streamlining of the Laws of 2019, Chapter 288 § 10 with chapter 19.285 RCW at a later time when rulemaking discussions for the new law are more fully developed. At this time we do not have specific recommendations about which sections of rules in WAC 480-109 should be streamlined beyond our comments herein.

**18. The Laws of 2019, Chapter 288, § 6(a)(i), requires specific targets for energy efficiency, demand response, and renewable energy. Should planning and reporting requirements for energy efficiency integrate the planning and reporting requirements for demand response and other distributed energy resources? If so, how? Should any of this be addressed in chapter 480-109 WAC?**

At this time, the Coalition recommends that the specific targets related to demand response and renewable energy be addressed in the Laws of 2019, Chapter 288, § 6(a)(i) rulemaking specifically, and we see no reason why this should be addressed in chapter 480-109 WAC. For energy efficiency targets under Laws of 2019, Chapter

288, § 6(a)(i), we do see a direct linkage to 480-109 WAC and would expect cross-referencing.

**19. Do stakeholders recommend any additional changes to chapter 480-109 WAC in this rulemaking? If so, please explain and provide justification for the change.**

Yes. The Coalition recommends the additional changes to 480-109 WAC.

Incorporation of Social Cost of Greenhouse Gas Emissions in Energy Efficiency Resource Standard

The Laws of 2019, Chapter 288, § 14 (3) (a) require that "...An electric utility must incorporate the social cost of greenhouse gas emissions as a cost adder when:

(i) evaluating and selecting conservation policies, programs and targets..."

Consequently, WAC 480-109-100 must be updated to effectively ensure that utilities incorporate the social cost of greenhouse gas emissions in the energy efficiency resource standard setting process. We recommend integration of additional language in two areas of this section as follows:

WAC 480-109-100 (2) Ten year Conservation potential.

Recommend the addition of a new subsection "(c) *The projection must include the social cost of greenhouse gas emissions as determined by the Commission.*" Former subsection (c) would then be reassigned as subsection (d).

AND

WAC 480-109-100 (8) Cost-effectiveness

A utility's conservation portfolio must pass a cost-effectiveness test consistent with that used in the Northwest Conservation and Electric Power Plan. A utility must evaluate conservation using cost-effectiveness tests consistent with those used by the Northwest Power and Conservation Council and as required by the commission, except as provided by subsection (10) of this section. *Cost-effectiveness calculations must incorporate the social cost of greenhouse gas emissions.*

Use of Non-emitting Generation in Renewable Resource Standard Compliance

The commission proposes adding language from the Laws of 2019, Chapter 288, § 29(2)(m) to WAC 480-109-200 (10). Additional language should be added to this subsection that ensures compliance is consistent with the Laws of 2019, Chapter 288 § 4 with regard to renewable resources and 4(1)(f) Non-emitting electric generation used to meet the standard under (a) of this subsection must be generated during the compliance period and must be verified by documentation that the electric utility owns the nonpower attributes of the electricity generated by the non-emitting electric generation resource.

We recommend modifying the proposed language as follows.

(10) Use of non-emitting electric generation. Beginning January 1, 2030, a qualifying utility is considered to be in compliance with an annual renewable energy target in RCW 19.285.040(2)(a) if the utility meets 100 percent of the utility's average annual retail electric load using any combination of electricity from:

(a) Renewable resources, *pursuant to restrictions in RCW 19.405.040*, and renewable energy credits as defined in RCW 19.285.030; and

(b) Non-emitting electric generation, as defined in WAC 480-109-060(22), *verified by documentation that the electric utility owns the nonpower attributes of the electricity generated by the non-emitting electric generation resource.*

Nothing in this subsection (10) relieves the requirements of a qualifying utility to comply with the conservation targets established under RCW 19.285.040(1).

Integrated Resource Plan Definition Clean up

In WAC 480-109-060 (15), (subsection (19) under the proposed rules), we recommend making the following edit:

“Integrated resource plan” or “IRP” means the filing made ~~every two years~~ by an electric utility in accordance with WAC 480-100-238.

Sincerely,

Wendy Gerlitz  
Policy Director

Joni Bosh  
Senior Policy Associate