

11/04/19 04:30

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COMMISSION

Date: Monday, November 4, 2019  
To: Washington Utilities and Transportation Commission  
From: Robert Briggs  
Subject: **Docket Number UE-190652 – Oct. 4 Notice of Opportunity to Comment**

### **Comment #1 on greenhouse gas emissions reporting**

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

I support the additions.

### **Comment #2 on greenhouse gas emissions reporting**

*UTC Question #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 proposed revisions to WAC 480-109-300 now read:

(3) Unknown generation sources. For resources where the utility purchases energy from unknown generation sources, from which the emission rates are unknown, the utility must use an emissions rate determined by the department of ecology. If the department of ecology has not adopted an emissions rate for unspecified electricity, a utility must apply an emissions rate of 0.437 metric tons of CO<sub>2</sub> per megawatt-hour

It is appropriate to task the Department of Ecology to specify an emissions rate for electricity from unknown generating sources. Given that CETA’s intent is to reign in greenhouse gas emissions, the rate assumed for unknown generating sources should be set to ensure that it does not understate actual emissions.

What is the basis for the 0.437 metric tons of CO<sub>2</sub> per megawatt-hour contained in the proposed changes? It is difficult to provide useful comment in the absence of knowing that. I note that EPA’s AVERT program uses a value of 1591 lb/MWh CO<sub>2</sub> or 0.722 metric tons of CO<sub>2</sub> per megawatt-hour for their Northwest Region avoided emissions factor for electricity, which is 65% higher than the proposed value.<sup>1</sup> In addition, EPA’s value appears to be for carbon dioxide not carbon dioxide equivalent. On this basis, I question whether the 0.437 isn’t too low.

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<sup>1</sup> EPA, *Emission Factors from AVERT*, May 2019. Downloaded November 4, 2019.  
[https://www.epa.gov/sites/production/files/2019-05/documents/avert\\_emission\\_factors\\_05-30-19\\_508.pdf](https://www.epa.gov/sites/production/files/2019-05/documents/avert_emission_factors_05-30-19_508.pdf)

If the 0.437 value reflects the mix from previous years, as the deleted language [“net system mix (spot market) in the Washington state electric utility fuel mix”] suggests it might, such a value would appear to understate actual emissions, as spot-market purchases are likely to come from out-of-state thermal generators.

I recommend the UTC report to stakeholders the basis for the proposed 0.437 metric tons of CO<sub>2</sub> per megawatt-hour and entertain input on revisions to the value based on best available science, including emissions from other greenhouse gases than carbon monoxide.

### **Comment #3 on greenhouse gas emissions reporting**

*UTC Question #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?*

Currently, the most robust meta-study on greenhouse gas emissions for the gas industry nationally appears to be Alvarez et al.<sup>2</sup> Using its national-average upstream leakage rate for methane (2.3%) would be appropriate if sufficient regional data are not available. Use the GWP<sub>20</sub> value for methane with carbon-climate feedbacks (86) from Myhre et al.<sup>3</sup> It would make no sense to use the GWP<sub>100</sub> value in this policy context. Because there is much on-going research in this area and an expectation that the industry will be able to reduce leakage rates significantly in the future, it makes sense to update these data at least every three years. For simplicity, the Commission should specify the default value in metric tons of CO<sub>2</sub> equivalent per megawatt-hour.

### **Comment #4 on greenhouse gas emissions reporting**

*UTC Question #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, WAC 480-109-300 should include language requiring electric companies to report on greenhouse gas emissions occurring during all operations upstream of electricity generators.

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<sup>2</sup> Ramón A. Alvarez et al, Assessment of methane emissions from the U.S. oil and gas supply chain, Science 13 Jul 2018: Vol. 361, Issue 6398, pp. 186-188, DOI: 10.1126/science.aar7204. <https://science.sciencemag.org/content/361/6398/186.full>

<sup>3</sup> Myhre, G. et al, Anthropogenic and Natural Radiative Forcing. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Table 8.7 (p. 714). [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_Chapter08\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf)

The application of improved monitoring and measurement methods during all phases of natural gas exploration, development, production, and transmission offer some of the most cost-effective and significant steps that can be taken to curtail greenhouse gas emissions. To date, the financial and regulatory incentives to reduce fugitive methane emissions from these phases of operation have been inadequate to motivate the development and use of effective measurement procedures and protocols. Gas produced following such protocols will have higher value in the market place and will be produced more efficiently. Requiring reporting of measured upstream gas emissions or requiring use of an unfavorable default assumption (for example, a leakage rate higher than 90% of producers) will foster accountability and improve the industry.