

Proposed Energy Independence Act Rule Revision, WAC 480-109-300

Adoption of Requirements for Annual Reporting of Energy and Emissions Intensity Metrics

July 31, 2015

In the Commission's adoption order, R-578, of March 12, 2015, in Docket UE-131723, it addressed a proposed new section regarding reporting of energy and emissions intensity metrics (proposed WAC 480-109-300). Consideration of the proposed energy and emissions intensity metrics section of the rule was continued to allow time for UTC staff and stakeholders to meet and discuss whether clarifying language might be useful in this section of the rule.

The Commission directed staff and stakeholders to discuss the "appropriate methodology for the per capita measurement, as well as guidelines to allocate emissions for multistate utilities".¹ PSE indicated during the adoption hearing that the per capita issue might be simply solved by designating the source of data to use for calculating per capita values.²

Staff organized a stakeholder workgroup and convened four stakeholder meetings from March 19 through July 17, 2015. The meetings were attended by representatives from all three electric utilities, staff from the UTC and Department of Commerce, and representatives from Northwest Energy Coalition, Public Counsel, and Renewable Northwest.³ This document summarizes the workgroup discussions, and describes agreed methodologies for calculating annual energy and emissions intensity metrics developed as a result of those meetings. The workgroup believes that the collaborative process undertaken in these discussions fulfills the Commission's directive in its March 12, 2015 order. The workgroup also agrees that the methods and guidance contained in this document provide the clarity needed for utilities to submit reports in compliance with the rule language as proposed.

Consequently, the workgroup recommends that the Commission adopt the proposed language of WAC 480-109-300 without modification.

Per Capita Methodology

Per capita is simply a ratio of a value of interest, such as amount of energy, divided by the population associated with that value. The proposed rule called for utilities to report annual MWh per capita. The MWh per capita calculation called for in the proposed section, WAC 480-109-300, will provide new utility specific information, which is not captured by other state and federal utility reporting requirements.

¹ Docket UE-131723, General Order R-578, at 41: 13.

² *Id.* at 43: 137.

³ See Attachment A, stakeholder workgroup roster and attendance record.

The utilities routinely track the MWh delivered in their service territories and how many *customers* they serve by class of service, but do not closely track the number of *people* (population) served. Without this population information available from company records, there is a need to identify consistent and reliable data sources to estimate the population served by each utility to make the per capita calculations. Various sources of information exist that could be used to estimate the population served by each utility, however utility service territories for all three utilities do not always follow common population boundaries such as county or city lines.

The workgroup investigated potential population data sources routinely available from reliable state and federal sources.⁴ The workgroup analyzed and reviewed different approaches to estimate populations served by each utility. The workgroup determined that a method that combines U.S. Census data with the number of residential customers by company is the best method to apply across the three Washington electric utility service areas. It provides a reliable data source and a method that is flexible enough to be applied to all three of the utilities. The following paragraph describes this preferred method to estimate the population in an electric utility service territory.

For a specific year, total service area population will be estimated by multiplying:

a) average household size (AHS) of occupied homes, using data from the most recent five-year estimates from the U.S. Census Bureau's American Community Survey (ACS)⁵

by

b) total residential customers in a utility's service area.

The American Community Survey provides five-year household size estimates for all Washington counties. The workgroup found that using the five-year estimates reduces the volatility of results compared to using single year values.

Some counties are served by more than one electric utility. In those cases flexibility is needed to adapt the population data when only part of a county is in a utility service territory. For those counties the utility will apply the ACS data values in proportion to the population estimated to be within each utility's service territory.

Each utility should document in detail how they applied the ACS data to their service territory to provide a reliable estimate of population in their first annual report under WAC 480-109-300. Barring extraordinary circumstances, it is assumed that the methodology going forward will be the same from year to year as described in the first annual report, in June 2016. In the event

⁴ Stakeholders identified and examined data available from the Washington State Office of Financial Management, and the U.S. Census Bureau (the American Community Survey).

⁵ The Commission recently accepted analysis using the ACS data set in its approval of modifications and additions to Avista's low-income rate assistance program in Dockets UE-140188 and UG-140189 (Consolidated), ORDER 07, at 4: 12.

that the methodology is changed in future reports, the utility should report any changes to the methodology as part of its annual report, as well as the reasons for any changes.

Guidelines to Allocate Emissions for Multistate Utilities

The proposed rule calls for utilities to annually report the carbon dioxide (CO₂) emissions associated with their Washington fuel mix, and provide a comparison of those annual emissions to 1990 emissions. This calculation provides new information that is not currently reported to other federal or state entities. The purpose of this reporting requirement is to estimate emissions from all generating sources serving each utility's Washington customers, regardless of generation location.

At the adoption hearing, companies commented that the emissions data necessary to calculate these metrics is available, but expressed concerns about the administrative burden of calculating historical emissions. In its order, the Commission directed staff to continue to discuss the methodology for calculating this metric with stakeholders.⁶

With the assistance of staff at the Department of Commerce, a subgroup of the main workgroup collected sufficient information to estimate a baseline 1990 emissions value for each utility. First, the workgroup reconstructed the 1990 energy generation, sales and purchase data for each utility using the same methodology used in recent years to develop the annual Washington fuel mix report.⁷ This process took multiple iterations researching all available sources of reliable data and refining the data in detail by the subgroup.

Finally, the energy generated by each energy fuel type, for instance XX MWh generated by a coal plant, was multiplied by the appropriate emission rate using Commerce's fuel mix methodology, for instance XX tons CO₂ per MWh, to estimate each utility's tons of 1990 CO₂ emissions.

The results of this work is contained in the following table.

1990 CO₂ total emissions from all sources to serve Washington customer loads

Utility	1990 CO₂ Emissions, Million short tons
Avista	1,131,957
PacifiCorp	2,399,078
Puget Sound Energy	6,946,064

⁶ General Order R-578, Docket UE-131723 Adoption Order at 41: 131, March 13, 2015.

⁷ Required pursuant to RCW 19.29A.080. This annual report identifies the types of resources in each utility's fuel mix, but does not allocate emissions on a utility basis. Fuel Mix Reports are available dating back only to 2000.

In future annual reports, based on the amount of energy provided to customers paying Washington rates by each resource, each utility should calculate the number of tons of CO₂ emitted from all resources included in Washington rates and compare that to the 1990 emissions levels shown above.

Conceptually, the annual calculation should assign emissions to the actual delivery of energy from each specific generation source used to serve Washington customers. For a utility serving only Washington customers, such as Puget Sound Energy (PSE), this is a relatively straightforward calculation. The basic calculation is to determine the emissions or average emission rate for each generating source used to serve the Washington customers and add up the total emissions for the year that is associated with the PSE customer load.

For a utility with customers in multiple states, the calculation is more complex. The emissions from a specific generator may need to be allocated to customers in multiple states.

This challenge is slightly different for each of the two multi-state utilities, Avista and PacifiCorp.

Avista has one balancing authority that serves electric customers in only Washington and Idaho and those loads are similar in size. The workgroup proposes that the company use the proportion of customer load in each state to allocate the emissions from its system of generating sources.

For PacifiCorp, the Commission has required analysis and allocations based on the West Control Area inter-jurisdictional methodology. The West Control Area consists of PacifiCorp's Washington, Oregon and California jurisdictions. PacifiCorp also provides service to customers in Utah, Idaho, and Wyoming. Therefore, emissions allocated to Washington need to align with the generating resources used to actually serve power to West Control Area customers.

The workgroup proposes that the company allocate emissions associated with its West Control Area resources to Washington based on the proportion of the Washington load within the West Control Area.

Attachment A

WAC 480-109-300, Energy and Emissions Intensity Metrics Stakeholder Workgroup Roster and Attendance Record (√ = person attended)

Name	Representing	Phone	Email	3/19	4/17	6/11	7/17	
Clint Kalich	Avista	509-495-4532	Clint.Kalich@avistacorp.com	√	√		√	
Linda Gervais	Avista	509-495-4975	Linda.Gervais@avistacorp.com	√	√			
John Lyons	Avista	509-495-8515	John.lyons@avistacorp.com		√	√	√	
Grant Forsyth	Avista	509-495-2764	Grant.forsyth@avistacorp.com		√	√	√	
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Nate Hill	PSE	425-457-5524	nathan.hill@pse.com	√	√		√	
Joni Bosh	NW Energy Col.	(206) 621-0094	joni@nwenergy.org	√			√	
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Kelly Hall	Renewable NW	(317) 908-4716	Kelly@renewablenw.org	√			√	
Mary Kimball	Public Counsel	206.389.2529	MaryK2@ATG.WA.GOV	√				
Natasha Siores	PacifiCorp	503-813-6583	natasha.siores@pacificorp.com				√	
Etta Lockey	PacifiCorp	503-813-5701	Etta.Lockey@pacificorp.com	√	√	√	√	
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Lauren McCloy	UTC	360-664-1209	lmccloy@utc.wa.gov	√	√	√		

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