

October 19, 2007

Mark Walker  
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Dear Mark:

The Washington Public Utility Districts Association (WPUDA) appreciates this opportunity to comment on the Northwest Power & Conservation Council's (Council) recently-released report on the "Carbon Dioxide Footprint of the Northwest Power System." We would also like to thank the Council for undertaking this project. The subject of this paper is timely.

In a highly-readable manner, this whitepaper describes how various policy choices would affect the region's prospective carbon dioxide emissions – and how difficult reductions to 1990 levels will be to achieve. It will provide a baseline document for the to rely on as individual states, the region, the nation, and nations around the world begin to document and seek to reduce the amount of greenhouse gas emissions released to the atmosphere.

The paper provides a quantitative demonstration of yet another benefit of the hydropower system of the Pacific Northwest – zero emissions of greenhouse gasses – as well as, for instance, the GHG impacts during low water years when the hydro system is curtailed and thermal resources are dispatched to make up the hydro shortfall. Additionally, several years in particular, 1990 and 2005, are chosen as baseline years for GHG emissions measurements in legislation and other documents issued by states in the region, while this paper shows the statistical weakness in choosing "snapshot" data to set long-term goals.

The analysis shows that between 1990 and 2005, emissions have increased about 34 percent (from approximately 44 million tons to 59 million tons using a simulated 2005 average water year). More fossil fuel helped meet the demands of economic growth, since the region's hydropower system lost flexibility over the same time period and a nuclear power plant was retired. Under the Council's Fifth Power Plan base case scenario, Northwest sources are expected to emit 71 million tons by 2024.

An important observation is that projected electric demand and associated carbon dioxide emissions are expected to outstrip possible reductions over the same time period, even under a scenario where renewable portfolio standards are achieved and summer spill from the Federal Columbia River Power System is eliminated. It is significant to note that variants on the base case contemplating high levels of renewables and no spill from the FCRPS results in only a 5 or 6 million ton reduction compared to the base case scenario. Conversely, further restricting the hydro system or removing the Lower Snake River dams would lead to an increase in emissions of a similar 4 – 5 million tons.

WPUDA supports including the analyses of the potential GHG impacts of removing the Snake River dams and additional spill. While we realize that these analyses have drawn controversy, we believe that these impacts must be accounted for in any scientific analysis of the current and future carbon footprint scenarios of the region. As noted in the paper, any loss of hydro generation – whether from drought, spill or dam breaching - almost by definition increases carbon emissions from thermal resources. And given the operational characteristics of hydro resources it is unrealistic to assume, as some have hypothesized, that they can be replaced in all capacity, energy and operational characteristics by conservation and renewables, particularly given the intermittency and low capacity value of the likely renewable replacements. In addition, at the same time these replacement resources would be competing with sites for the renewable projects that the region’s utilities have to build to meet renewable and conservation standards, potentially leading to a further shortage of renewable sites as well as integration resources from that same reduced hydro system.

The earlier example of a 5 or 6 million ton variation from the base case scenario demonstrates that reductions on a going-forward basis are not enough to achieve 1990 goals. While WPUDA members will be looking to new renewables and energy conservation to mitigate projected new demand growth, policy makers must recognize that drastic emission reductions will necessitate the development of new technologies to provide base load generation. Even if renewable energy were phased in as replacement sources for fossil resources over time, base load capacity would still be required to ensure reliability due to the intermittent nature of today’s renewable technologies.

We note that the GHG emissions data was developed including out-of-region generation used to serve the region’s retail load plus the Boardman and Centralia coal plants, without indicating what portion of these units are used to serve the region’s retail load.

WPUDA requests that the Council further tease out the data to calculate:

1. Output or load based emissions by calculating total GHG emissions from all emitting generation plus non-emitting generation serving the region’s retail load divided by the region’s load;
2. GHG emissions from only the emitting generation within the PNW region divided by the MWh generated by those resources, regardless of final destination; and
3. GHG emissions from emitting generation within the region divided by all generation within the region.

Again, we want to thank the Council for this paper and the opportunity to provide comments. Please don’t hesitate to contact us if you have any questions.

Sincerely,

s/

Dave Warren

Energy Services Director

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