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October 31, 2014

Chairman Bradbury
The Northwest Power and Conservation Council
851 SW Sixth Ave, Ste. 1020
Portland OR 97204-1347

Dear Chairman Bradbury,

The Washington Department of Commerce thanks you for the opportunity to comment on the Northwest Power and Conservation Council's Issue Paper on the Methodology for Determining Quantifiable Environmental Costs and Benefits. We would like to reiterate Governor Inslee's interest for the Seventh Plan - that it facilitate and accelerate the transition from coal power and identify the steepest reasonable glide path to reduce the carbon pollution from the electric sector in the fastest, most effective and efficient way possible.

Environmental costs of carbon emissions

The Washington Department of Commerce, in cooperation with the Washington Department of Ecology, has recommended for public procurement processes that Washington agencies adopt the social cost of carbon methodology developed by the federal interagency working group and published on the U.S. Environmental Protection Agency's website.[1] To quantify the environmental effects of carbon emissions in the Seventh Power Plan, we believe the Social Cost of Carbon (SCC) methodology is the appropriate process and a 2.5 percent discount rate is an appropriate value to apply to that process.

The Social Cost of Carbon varies depending on the discount rate applied to the analysis. Because carbon dioxide pollution creates intergenerational impacts, in our view an intergenerational discount rate should be applied that is lower than those used by for-profit companies, consumers, and utilities. In addition, the SCC interagency working group methodology seeks to monetize a continually increasing number of externalities over time, meaning that today's calculation likely underestimates the future impact of carbon pollution. For these reasons, Ecology and Commerce recommend the use of the 2.5 percent discount rate when calculating the social cost of carbon.

Evaluation of the economic impacts of carbon emissions from a new power source should be based on the social cost of carbon approach. This evaluates the negative costs borne by society for each incremental unit of carbon emission created. This is significantly different than evaluating based on the

[1] http://www.epa.gov/climatechange/EPAactivities/economics/scc.html

cost of reducing or eliminating emissions. In some case the cost of reducing emissions will be much lower, and in other cases much higher than the social cost of carbon.

In a perfect market on-site mitigation efforts would be implemented if the cost of mitigation is lower than the social cost of carbon, and not taken on when the cost is higher. A societal cost-effectiveness comparison of new resources should be completed within this same context which can best be achieved by applying the social cost of carbon to all proposed resources. Within that context some new resources may benefit by implementing GHG mitigation efforts with increased capital costs prior to being evaluated by a cost effectiveness test that internalizes the social cost of carbon.

Suggested scenarios

The final 111(d) regulations are scheduled be released in June, 2015. We recommend that the Council include the individual state targets in scenario modeling after the regulations are final. We also recommend evaluating a business-as-usual scenario with no additional federal power plant emissions rules.

In the interim, the Council could evaluate one or more scenarios that result in all states meeting their individual 111(d) compliance obligations as proposed. The scenarios should be based on the proposed standards for compliance in 2030 and a range of state obligations both higher and lower than the proposed standards. Another alternative interim scenario could consider emissions rate targets submitted by each member state to the Council that are representative of each state's best estimate of the aggregate impact of their suggested modifications submitted in comments to the EPA. A third interim alternative could be to examine the rate targets resulting from the application of only building blocks 1 and 2 of the proposed rules to represent an "inside the fence line" final rule.

We recommend modeling a regional coal-closure scenario or scenarios to identify replacement resources and effects on surrounding states' electric-sector carbon intensities. This scenario might look at removing 50 percent of the region's coal generation as was done in the Sixth Power Plan, or could model certain units at specific plants, such as eliminating output from Colstrip units 1 and 2 in 2020, or all four units in 2020.

Finally, we recommend a proxy "regional cooperation" scenario or scenarios based on an aggregate regional target derived from the final EPA targets, or, alternatively, from the proposed targets prior to EPA finalizing the rule or targets estimated in the additional scenarios suggested above.

Dealing with uncertainties

In general, we recommend that the Council acknowledge the greenhouse gas implications associated with end-uses of electricity, even without quantification. For example, growth in the adoption of electric vehicles reduces greenhouse gas emissions from combustion of fossil fuels outside the electric sector, but would increase consumption of electricity. We recommend that the Seventh Plan methodology acknowledge electric vehicles' potential for carbon pollution reduction, increased efficiency as compared to conventional vehicles with internal combustion engines, and the opportunity for end-use cost savings that may occur from switching to electricity as a transportation fuel.

Clean Air Act, Section 111(d)

Specific to dealing with the uncertainties stemming from the proposed rules under the Clean Air Act, Section 111(d), stakeholder comments to EPA overwhelming support the use a multi-year baseline in the final rule. Based on the recently released Notice of Data Availability from EPA, it appears that the EPA is leaning toward using a 3-year baseline with the years 2010-2012. A baseline using the most recent data likely to be available at the time of the final rule (e.g. 2011-2013) also seems possible. Ideally, the Council would perform some sensitivity analysis around baselines of different years and lengths for the region.

Perhaps the most straightforward way to accommodate the substantial uncertainty around the proposed rule at this stage would be to model it on a mass basis rather than a rate basis. EPA has recently stated that additional information would be forthcoming in 2014 on mass-based targets for the states. If this information consists of presumptive mass-based targets for the states, then these mass-based targets would be a convenient proxy for the full effect of the proposed rule as envisioned by the EPA.

Because the proposed 111(d) rules capture virtually every aspect of the power system currently, through the four building blocks, it may be unnecessary to build a different hypothetical policy construct to use as the basis for modeling. Another approach, as has been used by the Council before, is a straight carbon-pricing approach mimicking the effects of a carbon tax. Such an approach could be modeled in addition to the 111(d) modeling as an alternative. This seems particularly relevant in light of strong renewed interest in both Oregon and Washington on carbon price legislation. Given that at least some Council states may be looking at having both a broad carbon price and 111(d) regulations the Council is encouraged to not necessarily think of a carbon price model as a different approach, but rather modeling both in order to represent a more comprehensive overall approach.

The Council can add great value for all of its states and stakeholders by focusing on the regional cooperation aspects of the proposal. While modeling state-by-state compliance is clearly important for building the foundation of the Seventh Power Plan, extending that effort to potential models of regional cooperation will assist the states as they weigh their compliance options once the final rule is promulgated. Prior to EPA finalizing the rule, Washington encourages the Council to focus on a wide array of potential regional cooperation options rather than focus on getting the state-by-state details completely correct (which is impossible under these circumstances). Understanding the magnitude of the potential cost differences between state-by-state approaches and regional cooperation will be greatly helpful to the states, even if the results have to be scaled or otherwise adjusted based on the targets in EPA's final rule.

Environmental effects of new renewable resources

We generally support the Council identifying the environmental effects of renewable resources as well as all other resources. In our view, this should include identifying the potential reductions in environmental impacts that may result from developing new distributed renewable generation versus developing renewables at utility scale. The Council should also revisit the environmental effects of

existing resources, including the greenhouse gas effects of methane releases from impounded mud at dams.

Again, thank you for the opportunity to comment on the Methodology for Determining Quantifiable Environmental Costs and Benefits. We look forward to participating in the development of the Seventh Power Plan.

Sincerely,

Tony Usibelli
Washington State Energy Office