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June 2, 2014

MEMORANDUM

TO: Power Committee

FROM: Charlie Grist

SUBJECT: Progress Report On Study of Health Benefits of Reduced Wood Smoke

The Regional Technical Forum (RTF) is preparing a report which will characterize the ability to quantify the health impacts from energy efficiency measures such as residential weatherization and space heating measures which have the effect of reducing wood smoke pollution.

Background

To date, the Council has not included health benefits or costs resulting from energy efficiency measures in previous analyses of such measures. The report, when completed, will be part of the ongoing discussion with the Council about whether, and how, to include quantifiable health benefits in the economic analysis of efficiency measures.

The Power Act requires the Council and Bonneville, in estimating system cost, to consider, among other factors, those "quantifiable environmental costs and benefits" directly attributable to a new measure or resource. So, the Council must determine whether any health impacts resulting from a reduction in wood smoke constitute environmental benefits (or costs) and if so, whether such impacts are quantifiable and directly attributable to a particular conservation measure before including them in a cost-benefit analyses.

The RTF's work is limited to characterizing the state of the science on quantifying health impacts from wood smoke. The RTF's review is intended to provide the Council with an understanding of the technical analysis and the underlying uncertainties of quantifying wood smoke health impacts. This information can serve as a precursor to any policy decision the Council may take up subsequent to the review.

Initial Steps

As an initial step, the RTF contracted with Abt Associates to prepare a memorandum describing the use of a set of screening-level models created by the U.S. Environmental Protection Agency (EPA) to estimate health impacts from air emissions. Abt Associates is a consulting firm which specializes in research and program implementation in the fields of health, social and environmental policy, and international development. Abt Associates is one of the key contractors EPA uses to develop the agency's technical analyses.

Abt Associates used a simple set of models made available by EPA. It populated the models with Pacific Northwest county-level data on emissions including burned wood. The firm also worked with the RTF wood smoke subcommittee to review the model inputs, and explore the workings and underpinnings of the models. Abt worked with the subcommittee to explain the methods used by EPA, the epidemiological studies that are used to estimate health impacts and EPA's method of monetizing health impacts. Abt Associates produced a memo for the RTF on their findings from initial model runs along with a set of recommendations for further analysis:

http://rtf.nwcouncil.org/subcommittees/WoodSmoke/PNW%20Wood%20Smoke%20Analysis%20Final%20Memo_v1.docx

Reports and documentation of the RTF Wood Smoke subcommittee meetings are on the RTF web site here: <http://rtf.nwcouncil.org/subcommittees/WoodSmoke/>

Next Steps

RTF staff is in the process of preparing a report which will characterize potential quantification methods. First, the RTF will do additional analysis with the wood smoke models to explore various shortcomings of the Abt analysis. Staff will test sensitivities to the amount and the geographic distributions of potential reductions in wood smoke from energy efficiency measures. Second, it will draft a report which will outline the three elements of the quantification process. The report also will highlight the areas of uncertainty in the models and assumptions along with a brief review of previous research of others into the viability of the models and underlying health impacts and monetization studies. The report will identify areas of analysis that would require further development or investigation before any policy recommendations about the inclusion of health benefits could be made. The report will not recommend a valuation of the health impacts of wood smoke.

Finally, the RTF is considering obtaining independent third party review peer review of its report to assure that it appropriately characterizes the key elements of methods to quantify impacts. The RTF report will be presented to the Council and the RTF Policy Advisory Committee (RTFPAC).

Where This Might Go

Findings from the RTF report could inform development of the Council's Seventh Plan environmental methodology. The air quality health impacts models can be used to estimate impacts from changes in emissions. Thus, the findings could tee-up a Council discussion of how quantifying health impacts might influence Council analyses of both efficiency measures and power generating resources. Findings from the report may also be reviewed by state and local air quality agencies and could influence the design of their programs or their air quality improvement efforts.