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February 25, 2008

MEMORANDUM

TO: Power Committee

FROM: Terry Morlan

SUBJECT: Introduction to Power Planning and Preliminary Analysis Assumptions

One of the first steps in developing the Sixth Power Plan is conducting a preliminary resource analysis. This is primarily an internal exercise to ensure that our analytical tools and processes are all in place and working together. It helps us integrate new tools and new employees into the planning process. In addition, it provides an opportunity for Council members to gain some experience with the analytical process behind a power plan.

At the March Power Committee meeting staff will take you through a summary of how a power plan is developed. You will see how the major pieces are developed and fit together at a summary level. Staff will describe the assumptions that are going into the preliminary resource analysis. In general, the preliminary analysis should be thought of as a test drive of the analytical tools. But it will give Council members some idea of how the Fifth Power Plan might have changed with more recent information.

Some of the major revisions will include fuel price assumptions, electricity price forecasts, cost of generating technologies, financial assumptions, including recent resource additions, and a revised forecast of demand for electricity. These assumptions will be put into essentially the same resource integration models that were used in the Fifth Power Plan to develop the preliminary resource portfolio.

Because this is primarily an internal exercise, we do not plan to describe the process or results in written form. There will be no public comment period or revisions to the preliminary analysis. The results should not be viewed as a preview of the Sixth Power Plan because most of the important policy issues will not be addressed until later in the planning process.

Nevertheless, the preliminary resource analysis is a vital step in developing staff and Council member capability to do the analysis and make the policy choices involved in the Sixth Power Plan. Attached is a very brief overview of the steps in the power planning process.

One Page Summary of the Council's Power Planning Process

- 1) Develop basic planning assumptions and uncertainties
 - Financial assumptions about cost of capital, discount rates, and inflation
 - Economic growth forecasts for the region and the West
 - Forecasts of natural gas, oil, and coal prices
 - Preliminary forecast of wholesale and retail electricity prices
- 2) Forecast a range of demands for electricity
- 3) Develop assumptions about alternative resource choices, their costs and availability
 - a) Develop conservation availability and cost (supply curve)
 - b) Identify generating resource alternatives expected to be available for commercial development during the planning period and their costs, operating characteristics, and quantity available for development
- 4) Conduct resource analysis. Search for the mix of conservation and generation resources that meets demand and maintains adequacy and reliability at the lowest cost and least risk to the power system, while meeting operating constraints for fish and other purposes of the FCRPS. Consider various constraints on resource choice due to renewable portfolio standards and greenhouse gas reduction policies.
- 5) Incorporate the effects of resource choices back into previous assumptions. Resource costs and efficiency improvements will affect electricity prices and the demand for electricity. Changing demand will affect the availability of conservation to some degree. [i.e. repeat steps 1 through 4 to update assumptions]
- 6) Redevelop the resource portfolio with the revised assumptions
- 7) Examine sensitivities and alternative scenarios and develop policy positions
- 8) Develop an action plan for achieving the desired resource portfolio and for achieving any other policy objectives the Council has included in the plan
- 9) All of above is accomplished with public participation through technical advisory committees, consultations, Council presentations, comment on draft issue papers, and formal comments and hearings on the draft plan.