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January 8, 2013

MEMORANDUM

TO: Power Committee

FROM: John Fazio, Senior Systems Analyst

SUBJECT: Update on Genesys Model Enhancements

This memo is to inform the Power Committee that the power division is planning to execute a contract with Gwendolyn Shearer (contractor) to enhance the GENESYS model. This requires no Council action. The enhancements originated from comments received by Council members and others regarding certain limitations of the model. The major concerns were perceptions that:

- 1) Market access was being overestimated because of lack of transmission detail; and
- 2) The model does not address capacity.

To address the first concern, the contractor will modify the model to include more electrical subregions for the Northwest. This effort will be coordinated with similar work being done for the Regional Portfolio Model and the AURORAxmp Model. This more granular representation of the region will identify areas in the Northwest that have limited access to market supplies.

Some in the region have perceptions that GENESYS does not do capacity analysis. In fact, GENESYS does assess capacity issues by performing both a monthly and an hourly simulation of the operation of Northwest resources. The misconception about GENESYS's capabilities can largely be resolved with better communication. However, the Adequacy Forum's technical committee has suggested shaping monthly hydro energy into weekly values prior to the hourly dispatch to improve the capacity analysis. The contractor will work with staff to define and implement weekly hydro shapes into the model.

The contract also includes other minor enhancements to the model. The Council and the Bonneville Power Administration are sharing the cost for this work, which is to be completed by August 31, 2013. The total budget is \$42,000, of which the Council's share will be \$24,000 and BPA's share will be \$18,000.