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August 3, 2010

MEMORANDUM

TO: Power Committee

FROM: Ken Corum

SUBJECT: Recommendation for Council contribution to pilot program to explore providing balancing services with demand response

Action Items DR-2 and DR-3 in the Council's Sixth Power Plan call for the evaluation and demonstration of demand response as a potential source of load- and wind-balancing. The Council has been asked to contribute to a pilot project that pursues these objectives.

Ecofys, US, Inc. and a team composed of Lower Valley Energy, EnerNoc, Steffes Corporation, Spirae, Dr. Hashem Nehrir of Montana State University, Shuai Lu of Pacific Northwest National Laboratory, Renewable Northwest Project, Iberdrola Renewables, and Horizon Energy, have proposed a pilot project to test the use of controllable load to provide balancing services to Bonneville. The project will be largely funded by Bonneville's Technology and Innovation funds and by members of the project team, and will eventually involve about \$1,000,000 of total effort. Ecofys has requested support in the amount of \$25,000 from the Council.

Staff will describe the objectives of the project in general terms and will respond to any questions from the committee. The Power Committee will develop a recommendation for the full Council regarding funding for the project.

BPA pilot program to explore providing balancing services with demand response

Ken Corum

NWPCC Power Committee Aug. 12, 2010

Council Sixth Plan Action Items

- DR-2 “Evaluate and demonstrate demand response programs....also pilots that explore innovative programs...e.g. to provide load following and/or wind integration”
- DR-3 “The Council, the region’s utilities, and regulators should examine demand response as a source of ancillary services”

Proposed Pilot Program

- Primary funding from BPA Technology and Innovation funds
- Goals include testing water heaters and cold storage for balancing wind/load
- Guides for evaluation of technology and cost effectiveness

Schedule

- Recruitment, installation of equipment beginning before end of FY2010
- Project completion 3rd quarter, FY2012

Proposal Team

- Ecofys US, Inc.
- Lower Valley Energy
- EnerNoc
- Steffes Corporation
- Spirae
- Dr. Hashem Nehrir, Montana State U
- Dr. Shuai Lu, PNNL
- Renewable Northwest Project
- Iberdrola Renewables
- Horizon Wind Energy

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Proposed Council Contribution

- \$25,000 Council contribution
- ~\$1,000,000 total effort over 2 years
- ~\$490,000 from BPA

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