Northwest Power and Conservation Council

April 18, 2007

DECISION MEMORANDUM

TO: Council Members

FROM: Massoud Jourabchi
Manager Economic Analysis

SUBJECT: New Demand Forecasting System

PROPOSED ACTION: The staff is seeking approval of a $55,200 contract with Systematic Solutions Inc. to enhance the Energy 2020 model, which would be used for the Council's new Demand Forecasting System.

SIGNIFICANCE: The proposed Council action is needed to enable the staff to further evaluate and enhance the model that would be used for the Demand Forecasting System (DFS). Currently staff does not have a working model that can meet credibly the Power Act's requirements. Without an independent, detailed, end-use load forecasting model Council staff would not be able to produce a reliable demand forecast that could be used in the next plan.

BUDGETARY/ECONOMIC IMPACTS: Funds for this contract are available within this year's Power Planning Division budget. Work on this project will begin in April and will be completed by end of September 2007. We are working with BPA to leverage our resources in testing and enhancing the model.

BACKGROUND: Over the past five plans the Council staff has used the Demand Forecasting System (DFS) that was developed in the 1980s and 1990s. This system served the Council well. It has produced reliable long-term forecasts of the electricity demands of the region. However, as the regional electricity industry has evolved, so have the requirements for the DFS.

The new DFS system will have to respond to a new set of needs. It has to go beyond forecasting annual electricity demand of the region. It has to forecast, the level and timing of load. It may need to forecast for more business sectors, more areas and for more periods. The new DFS needs be able to forecast electricity demand at regional, state and maybe even utility level. The new DFS is envisioned to be flexible and integrated, so that it can help address, transmission and environmental policy and planning issues as they arise.

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Based on the above requirements a vendor provided tool, Energy2020, was reviewed, evaluated, and selected to meet long-term load forecasting requirements. Energy2020 has been used throughout the country by many states and utilities. It can produce electricity energy and load forecasts for a wide range of business sectors.

ANALYSIS: The contractor will perform the following tasks:

1. Expand the residential end-use technology categories;
2. Report forecasted commercial square feet and number of residential households;
3. Update enduse hourly load shapes;
4. Expand the agriculture sector detail;
5. Train Council staff in the use of the model;
6. Assist Council staff in preparation of a long-term forecast.

ALTERNATIVES: One alternative is for the Council staff to acquire the model, obtain basic training on the model, and proceed on its own to enhance the model and make the necessary changes. This alternative would be a less efficient use of staff time and would delay the date when an enhanced version of this model would be available.

ATTACHMENTS: None

OTHER DOCUMENTS: The following documents have also been prepared:

- Sole-Source Justification
- Statement of Work and budget