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June 08, 2023

DECISION MEMORANDUM

TO: Council members

FROM: Steven Simmons
Principal Energy Analyst

SUBJECT: Authorization to contract with ITRON Inc. to provide a new forecasting framework to support long-term electricity demand forecasting

PROPOSED ACTION: Seeking authorization to contract with ITRON Inc. for professional services, software licensing and maintenance to support current and future demand forecasting efforts at the Council.

In the proposed project, with our collaboration, ITRON would build out the Statistically Adjusted End Use (SAE) Forecasting Framework to meet our long-term demand forecasting needs. Included in the project is the installation of the software tools MetrixND and MetrixLT, and any necessary training and support.

SIGNIFICANCE: The Council's 2021 Northwest Power Plan identified several dynamic changes taking place across the west that impact our power system. In particular the potential for large future load growth from the electrification of buildings and vehicles.

Given this dynamic, the Council embarked on a project to explore new tools that could facilitate a sustainable approach to end use demand forecasting which would support power

planning well into the future. To achieve this, the tool was required to have a graphical user interface, file management system, streamlined model structure and strong technical support.

That project was completed earlier this year. The suite of forecasting tools, which can be collectively referred to as the Statistically Adjusted End Use Forecasting Framework by Itron, was judged to be the most well rounded of the identified options. In particular, Itron scored the highest in technical support and user interface. Following the recommendation, we engaged with the vendor to propose a project for developing the framework for our end use demand forecast.

For more information, see past discussion:

- https://www.nwcouncil.org/fs/18252/2023_04_2.pdf
- https://www.nwcouncil.org/fs/17858/2022_08_5rfp.pdf

BUDGETARY/ECONOMIC IMPACTS

The proposed project schedule will include tasks broken out over the 2023 and 2024 fiscal years.

Total fees for the proposed project are expected to be \$399,790 (USD). The project schedule has five billing milestones for sixteen tasks spread across two fiscal years:

- FY23 – Milestones 1 and 2 - \$93,861
- FY24 – Milestones 3,4,5 - \$296,139

In addition to the Milestones, the total fee includes annual licensing and maintenance for the MetrixND and MetrixLT software at fee of \$9,790.

BACKGROUND

Per the Northwest Power Act, as part of its regional power plan the Council is required to develop and include “a demand forecast of at least twenty years...”. In addition to producing the long-term demand forecast, data from the load forecast model is used to inform the energy efficiency and demand response potential assessments. The forecast is also a key input to many of our power planning models including RPM GENESYS and Aurora.

ALTERNATIVES

There are limited alternatives If the Council choose not to contract with Itron to develop the demand forecasting framework. One alternative is a less mature, less complete end use demand forecast model from a European company. A second alternative is to contract for a custom build forecast model. This would require a substantial increase in funding, as well as staff resources.