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September 7, 2022

DECISION MEMORANDUM

TO: Council members

FROM: John Ollis
Manager of Planning and Analysis

SUBJECT: GENESYS Model Software—Maintenance and Support

PROPOSED ACTION: Staff recommends authorization to contract with PSR Soluções e Consultoria em Energia Ltda (PSR Energy Solutions and Consulting Ltd) in an amount not to exceed \$120,000 for renewal of the GENESYS model software license and software maintenance and technical support services for the 2023 fiscal year.

SIGNIFICANCE: The GENESYS model is a key quantitative tool used in the Council's power planning processes. Specifically, the GENESYS model is the primary quantitative tool used by the Council to understand the impacts of changes in the hydroelectric system's operations on the regional power system and to assess resource adequacy.

BUDGETARY/ECONOMIC IMPACTS

For fiscal year 2023, staff recommends authorization to contract with PSR in an amount not to exceed \$120,000.

BACKGROUND

The Council previously contracted with PSR to redevelop the GENESYS model with the

intention of improving model usability and accuracy given the increasing complexity of the regional power supply. Staff is recommending contracting with PSR to renew the software license and for PSR's continued model maintenance and technical support services. With the continuation of the maintenance and support services through the 2023 fiscal year, PSR will continue to update and upgrade the model, fix all bugs, and provide its technical support team for web-based meetings with Council staff, which will ensure the model's efficiency, functionality, and accuracy.

For the last few years, throughout the development of the plan, PSR has maintained dedicated support staff to ensure that GENESYS model enhancements would be timely to support plan work and model development. The increased cost this year is to maintain that support staff focus to provide model enhancements, if necessary, to incorporate all the findings of the ongoing hydro operations review process, improving the computational speed, and expanding the model capabilities to include price forecasting and transmission risk analysis. These additional model developments are focused on maintaining and improving Council analytical capabilities to adapt to the changing power system while reducing the budget spent on modeling tools long term.

ALTERNATIVES

In the alternative to proceeding as recommended by staff, the Council could decide to not renew the software licenses and maintenance and support services. This alternative is not recommended given the functionality of the model may be jeopardized, which could require significant utilization of staff resources to provide the necessary maintenance and support to ensure model usability going forward.