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September 09, 2020

DECISION MEMORANDUM

TO: Council members

FROM: John Ollis
Manager of Planning and Analysis

SUBJECT: Amendment to the cloud service agreement with PSR Soluções e Consultoria em Energia Ltda (PSR)

PROPOSED ACTION: Council staff recommends authorization to amend the cloud service agreement with PSR to add \$25,000 for a total agreement price not-to-exceed \$140,000.

SIGNIFICANCE:

In development of the 2021 Power Plan, Council staff will use the redeveloped GENESYS model as an analytical tool to understand the impacts of changes in the hydroelectric system's operation on the regional power system and to assess resource adequacy. To run the redeveloped GENESYS model through cloud computing an adequate remote infrastructure is required due to the intensive processing and storage needs of the model. The Council is utilizing PSR's remote infrastructure, PSR Cloud, to support and execute model runs in development of the 2021 Power Plan.

BUDGETARY/ECONOMIC IMPACTS

Total agreement price not-to-exceed \$140,000.

BACKGROUND AND ANALYSIS

The GENESYS model is used to assess resource cost-effectiveness, to evaluate the effective load carrying capability of variable generation, and to provide estimates of the power system impacts of various potential scenarios. GENESYS is also used to assess the impacts and costs of non-power related constraints on the regional power system, such as timing and flow restrictions at the dams. The Council previously contracted with

PSR to redevelop the GENESYS model, and staff will use the redeveloped model in the 2021 Power Plan.

To run the redeveloped GENESYS model the Council is utilizing PSR Cloud, which uses multiple Amazon Web Services products and is capable of effectively running the model within the timeframes necessary for the plan. PSR Cloud employs an upfront payment model, with the cost of each model run deducted monthly from the total amount paid under the cloud service agreement. The cost of each run varies depending upon processing and query times for the model executions as well as the server and storage costs. In executing the initial cloud service agreement, staff estimated the costs necessary to run the model for the draft plan; however, to ensure sufficient cloud support for the draft and final plan, as well as any additional GENESYS support requested thereafter, staff recommends adding \$25,000 to the cloud service agreement for a total not-to-exceed \$140,000.

ALTERNATIVES

The Council could choose to not add any additional funds to the cloud service agreement, which may hinder model executions for the draft and final power plan as well as potential model uses thereafter.