

**Richard Devlin**  
Chair  
Oregon

**Chuck Sams**  
Oregon

**Mike Milburn**  
Montana

**Doug Grob**  
Montana



## Northwest Power and Conservation Council

**Guy Norman**  
Vice Chair  
Washington

**Patrick Oshie**  
Washington

**Jim Yost**  
Idaho

**Jeffery C. Allen**  
Idaho

September 8, 2021

### DECISION MEMORANDUM

**TO:** Council members

**FROM:** John Ollis  
Manager of Planning and Analysis

**SUBJECT:** GENESYS Model Support

**PROPOSED ACTION:** Staff recommends authorization to 1.) amend Contract C2021-02 with Gwendolyn Shearer to add 40 hours and \$6,000 for a total amended contract budget not to exceed \$81,000 for continued GENESYS modeling support through the remainder of this fiscal year, and 2.) contract with Gwendolyn Shearer in an amount not to exceed \$75,000 for GENESYS modeling support throughout fiscal year 2022.

**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 Contract C2021-02, staff recommends authorization to add \$6,000 for a total amended contract budget not to exceed \$81,000.

For fiscal year 2022, staff recommends authorization to contract with Ms. Shearer in an amount not to exceed \$75,000.

## **BACKGROUND AND ANALYSIS**

Ms. Shearer has supported Council staff in the redevelopment, testing and running of the GENESYS model throughout development of the 2021 power plan. Staff is seeking her continued support with GENESYS modeling through development of the final 2021 Power Plan and for potential enhancements and studies undertaken post-plan during the next fiscal year, which will rely substantially on the GENESYS model.

Ms. Shearer has extensive knowledge of both the classic and redeveloped GENESYS models and substantial experience with pacific northwest power operations.

## **ALTERNATIVES**

In the alternative to proceeding as recommended by staff, the Council could proceed without or different contracted support. However, the redeveloped GENESYS model is substantially more complex than the classic and requires significantly more time and effort to set up and run the analyses; therefore, additional support is recommended, and a different contractor is likely to encounter a substantial learning-curve, which could be more costly and less efficient.

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### 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 \$86,000 for renewal of the GENESYS model software license and software maintenance and technical support services for the 2022 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 2022, staff recommends authorization to contract with PSR in an amount not to exceed \$86,000.

### BACKGROUND AND ANALYSIS

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 2022 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.

### **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.