



Staff Report

for the Board of Directors' Meeting of June 23, 2021

TO: Board of Directors

FROM: Keane Sommers, P.E., Hydroelectric Manager *KSS*
Nathan Droivold, E.I.T., Project Manager *ND*

DATE: June 14, 2021

SUBJECT: Procurement Services Contract for the Rollins Powerhouse
Balance of Plant Upgrade Project (FATR #2393) (Consent)

HYDROELECTRIC DEPARTMENT

RECOMMENDATION:

Award sole-source contract to d'Heurle Systems Incorporated (dHSI) in the amount of \$157,201.66 for procurement services for the Rollins Powerhouse Balance of Plant Upgrade Project (Project) FATR# 2393 and authorize the General Manager to execute the appropriate documents.

BACKGROUND:

The recommended contract is for the procurement phase of the Project that has been ongoing since December 4, 2020 when NID entered into a consulting services agreement with dHSI to complete the design phase. On May 19, 2021, NID awarded a second contract for the installation and commissioning phases of the Project to dHSI in order to secure the consultant's time during a prescheduled annual outage at the Rollins Powerhouse (RPH) in the Fall of 2021.

The continuity of flow through RPH is critical for two reasons, the first being that Bear River flow at YB196 must be maintained to predetermined setpoints. Flow deviation (above and below) this setpoint will result in a Federal Energy Regulatory Commission (FERC) compliance violation. Additionally, downstream consumptive water deliveries must be met.

When the unit trips, the RPH bypass Howell-Bunger valve (HBV) must be opened to sustain flow for the reasons described above. The RPH HBV was replaced in 2019, and current automatic controls for the HBV use a micro programmable logic

controller (PLC). Integration of the HBV controls into the new Balance of Plant (BOP) PLC, and the demolition of the existing micro PLC are included in the Project scope.

Existing vibration instrumentation at RPH has not been upgraded since the time of unit installation (1986). The existing vibration system provides trip function only, and no convenient method for calibration is available. Currently, the availability of replacement vibration protection equipment, and assurance against nuisance tripping of RPH is in question while using the existing vibration instrumentation. The Project provides refurbishment of RPH with a modern, electronic vibration monitoring system consistent with Western US utility practice.

Under the previously contracted scope of work, the RPH BOP PLC will assume the function of the RPH bypass HBV controls, and provide supervision and monitoring of the new RPH unit vibration monitoring system. The BOP PLC is intended as an available platform for future incorporation of miscellaneous "balance of plant" and machinery protection functions such as speed relay, bearing temperature, cooling water, and sump management systems.

Increasing the number of systems that are monitored by the BOP PLC will allow for better diagnostics and will give NID the ability to complete preventative maintenance tasks that could prevent system failures from occurring, and thus, prevent unit downtime. Ensuring RPH is online and available is key to maximizing revenues from the sale of power generated at this facility. In addition, when the unit trips unexpectedly, a Hydroelectric Plant Operator is dispatched to the facility, regardless of the time of day or adverse weather conditions, to resolve the issue and restore the unit to service. Preventing such callouts will reduce the operating costs of RPH incurred by NID.

The Hydroelectric Department recommends awarding a sole-source contract to dHSI to complete procurement services for the Project. In recent years, dHSI has completed projects of similar scope for the Bowman Powerhouse (2016), the Chicago Park Powerhouse (2018), and the Dutch Flat No. 2 Powerhouse (2020). In continuing with NID Hydro's Powerhouse Improvement Program, the next facility scheduled for a BOP PLC upgrade is RPH. The proposed Project will replicate the systems installed at these facilities as closely as possible. Awarding a contract to dHSI for the proposed Project would allow the District to use the same programming, hardware, and operational/maintenance procedures for the RPH as other NID powerhouses. This will create less strain on NID's powerhouse operators and technicians who may otherwise need to follow different procedures when working with different installers.

NID has used the expertise of Al d'Heurle of dHSI for many standalone powerhouse improvement projects in the past, and has been satisfied with the results. This has allowed dHSI to develop a strong familiarity with NID's hydroelectric facilities, including the RPH.

Awarding a sole-source contract to dHSI for the procurement phase of the Project would help to ensure that correct materials are purchased for the design completed by dHSI for the Project. By allowing the designer, installer, and system commissioner to provide project materials, NID is able to reduce risk of liability in the event incorrect parts are ordered or that project materials are not delivered in time to meet the construction schedule of the consultant.

NID has solicited a materials quote from dHSI for the Project. The proposed purchase would include the procurement of parts and materials necessary to complete the Project, as well as a selection of spare parts that can be used to maintain multiple NID powerhouses. At this time, the District does not have a sufficient stock of spare parts that would be required to repair a unit that has gone offline due to a part failure. Some of these parts have long lead times that could cause significant financial burdens and loss of income should a powerhouse remain offline while parts are ordered for replacement. Details of the equipment to be purchased are considered Critical Energy Infrastructure Information and have therefore not been included with this Staff Report. District staff have researched the costs of a selection of this equipment, and have concluded that the quoted prices from dHSI are reasonable.

This sole source award complies with the following District Procurement Policy Section:

3080.3.J.2 In order to match other products in use on a particular public improvement either completed or in the course of completion

This expenditure is in alignment with Goal No. 4 of the District's Strategic Plan, as completion of the Project will allow the District to install modern control systems in the RPH that will replicate similar systems at other NID powerhouses. Doing so will establish operational continuity that will improve the efficiency of the unit and NID's hydroelectric system as a whole.

BUDGETARY IMPACT:

The 2021 Hydroelectric Department Budget includes \$250,000 for the RPH Balance of Plant Upgrade Project (FATR 2393) which would cover the cost of this contract. To date, \$83,551.50 has been spent on the Project using the 2021 Project budget. The remaining balance in the project budget would be \$9,246.84 after the procurement services contract has been approved. No additional costs are expected to be incurred by the Project.

Attachment(s): none.

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