



Backup Power Reliability Project Scope of Work

DR4431-PJ057

Hidden Valley Lake Community Services District's (HVLCSO) mission statement reads "to provide, maintain and protect our community's water". The Backup Power Reliability project is a reflection of the action necessary to achieve this mission. Water pumping stations are currently unprotected from a loss of power due to wildfire. The clear and present danger of wildfire to the community demands action of the part of HVLCSO, and this project is a culmination of the mitigation activity needed. The scope of work needed to complete this project can be categorized into three primary work efforts, pre-award engineering tasks, post-award engineering tasks, and construction. The construction portion of the project also is sub-categorized into six milestones. All sequential tasks are also reflected in schedule and budget descriptions.

Pre-Award Engineering Tasks

**The summary of pre-award tasks is provided here for informational purposes. The costs and schedule associated with these tasks are reflected in the Grant Management Subapplication.

Environmental – In compliance with Section 20 of the Subapplication, Planning Partners, Inc was engaged to assist with the completion of the three elements in this section; FEMA Site Information, Environmental Review and the Environmental Checklist. Planning Partners conducted field reconnaissance and project review with HVLCSO staff, and developed biological and cultural resource studies to meet this requirement. Seven identified environmental commitments will be kept during construction; 1) Compliance with Construction General Permit order 2009-0009-DWQ), 2) Watering of exposed surfaces twice daily, 3) Minimize visual effects, 4) Compliance with the Migratory Bird Treaty Act, 5) Compliance with National Historic Preservation Act, and the California Code of Regulations, Title 14, Chapter 3, Section 15064(5), 6) Compliance with Lake County Air Quality Management District Regulation Section 467, and 7) Perform work between the hours of 7am and 7pm, Monday through Friday.

Design, Cost, Schedule – Coastland Civil Engineering (CCE) was engaged to assist in the development of Preliminary Design Drawings, and to prepare Cost Estimates and Schedule. To this end, three milestone tasks were scoped out, and an additional engineering firm was sub-contracted to meet the timeline. The first task was to coordinate with HVLCSO staff to identify design criteria, visit both sites listed in the project, and provide support during the preparation of the subapplication. Based on the information gathered in this first task, the preliminary designs would be prepared, which is the second task in this pre-award scope. During discovery, the I/O load of the new generators to the existing telemetry system was found to be of some concern. Further research into the codes and standards of SCADA technology was added to post-award tasks. The third task, to prepare cost estimates and schedule were also defined by the discovery process of both task 1 and 2. In accordance with the subapplication requirements to remain consistent, the Scope of Work, Cost Estimate, and Schedule will all be parallel to



Backup Power Reliability Project Scope of Work

DR4431-PJ057

each other, and list project milestones sequentially. Noise attenuation, visual sensitivity and security were notable factors that influenced the design, cost and schedule.

1. Post-Award: Survey, Design & Bid Support, District Proj Mgmt

Provided the HMGP subapplication 4431-057 Backup Power Reliability project is approved, direct costs associated with District project management, and further engineering participation have been identified. Meetings with all key participants will continue in the form of project kickoff, as well as on-going progress review meetings and correspondence (See "Budget - Permanent Generators Design CM Work Estimate July-2021" and Budget – PM Work Estimate July 2021").

Six items within the post-award engineering activities ("Budget – Permanent Generators Design CM Work Estimate July-2021", tasks 2.1 – 2.4) can occur concurrently; District Project management, survey, agency coordination, permits, progress review meetings and the preliminary preparation of bid documents. The Greenridge location will be reviewed for retaining wall feasibility. A guy wire associated with PG & E equipment is in the path of the generator installation at the Greenridge location. Agency coordination to establish a variance for this equipment will be initiated at this phase. These tasks will be outsourced, allowing CCE and Luhdorff & Scalmanini Civil Engineers (LSCE) to efficiently manage the pre-construction tasks of permitting and bid documentation. Three permits are needed prior to construction; 1) Grading permit for the Greenridge location, 2) Authority to Construct permit from the Lake County Air Quality Management District, and 3) potential Notice of Exemption as per the California Environmental Quality Act (CEQA). District staff will assist in the pursuit of these permits. During this time, CCE and LSCE will prepare the first of three bid solicitation design documents.

The four final tasks within the post-award engineering activities ("Budget – Permanent Generators Design CM Work Estimate July-2021", task 2.5) all revolve around bid solicitation documentation, and are therefore sequentially dependent. One task must be completed before the next task can begin. The bid documentation timeline plan is to develop a 60% version, invite review and comments, a 95% version to incorporate previous comments, and to invite any additional comments. Once all comments are incorporated, a final bid solicitation packet will be prepared, and the bid solicitation activity can begin. The bid solicitation package will clearly contain construction details of the project, but care will be taken to also conform to CFR 2, section 200.319, that states procurement transactions will be conducted in a manner ensuring full and open competitions, by allowing all responsible contractors to submit a sealed bid. Affirmative steps will also be taken in accordance with CFR 2, section 200.321, making sure small and minority businesses, women-owned enterprises, and labor surplus area firms are used when possible. The construction details will include instructions for generator acquisition, site preparation, demolition, concrete pad and retaining wall construction, generator install, electrical integration, telemetry integration, fencing and paving, and conformity with environmental commitments. The project will be advertised and put out to public bid. Receipt of sealed bids will be analyzed to ensure all bid requirements have been met. The contract will then be awarded to the lowest apparent bidder at a public meeting of HVLCSD's Board of Directors.



Backup Power Reliability Project Scope of Work

DR4431-PJ057

Construction

An on-going task throughout the construction phase is the incorporation of construction management and inspection by CCE. Construction project management, responding to Subapplication Requests for Information (RFI), submittal reviews, factory testing, site visits, witness testing, as-built drawings, and 9 months of inspections will occur throughout the course of all construction activities. As previously mentioned, construction has been broken down into six sub-categories, which often contain tasks that can occur concurrently.

2. **Construction : Mobilization** – Defined as the actions to move equipment and materials to the site, hiring subcontractors, ordering materials, construction project administration, and the demobilization of equipment materials and personnel. This is occurring at both pumping stations.
3. **Construction: Purchase generators, site preparation, construction mgmt. & insp, district proj mgmt** - The lead time for acquiring commercial stationary generators at this time of high demand dictates the importance of starting the ordering process as soon as mobilization is complete. A 400kW generator with sound attenuation will be ordered for the Water Treatment Plant location. A 350kW generator with sound attenuation will be ordered for the Greenridge location. The agency coordination activity refers to the relocation of the PG & E guy wire that will likely continue from the post-award engineering phase into the beginning of the construction phase. Once generators are ordered, site preparation can begin. This will be comprised of grading (90CY) at the Greenridge location and clearing and grubbing at both locations.
4. **Construction: Demolition, concrete & retaining wall, construction mgmt. & insp, district proj mgmt.** - Once the sites are prepared, structure demolition can begin. At the Water Treatment Plant the former booster pump station (24'x22') will be removed. To make the most efficient use of resources, the pouring of concrete pads for the Greenridge pumping station can begin concurrently with the Water Treatment Plant demolition. The Water Treatment plant will require 9 CY of concrete and 26 CY of aggregate base to build a pad (14'x33'). Greenridge will require 24 CY of structural concrete, 11 CY of concrete, and 32 CY of aggregate base to build a retaining wall and concrete pad (14'x34').
5. **Construction: Fencing, install generators, electrical improvements, construction mgmt. & insp, district proj mgmt.**- Once the generators arrive, the installations can begin. The generators will be centered on the concrete pad, so that 4' of clearance is available on all sides. A significant amount of skilled labor is required at this point, to install automatic transfer switches at the Water Treatment Plant, to integrate both of the generators to their automatic transfer switch, and to integrate generator I/O into telemetry at both sites. A pedestrian gate and 21 LF of fencing will be installed at the Water Treatment Plant. A security gate and 67 LF of fencing will be built at the Greenridge location.
6. **Construction: Paving, construction mgmt. & insp, district proj mgmt.** – The last step in construction is to pave surfaces and trenches. The Water Treatment Plant will require 5 T of asphalt, and 2 T of trench paving. Greenridge will require 5 T of asphalt that will extend from the road to the generator pad.



Backup Power Reliability Project Scope of Work

DR4431-PJ057

- 7. Project closeout, district proj mgmt.** - Project closeout tasks consist of completion of construction specific paperwork and records, as well as the final as-built drawings.

Grant closeout tasks consist of paperwork and inspections required to complete the project to the satisfaction of FEMA and CalOES.