

Request for Proposal (RFP)

Solar Generator Feasibility Study for Cinnamon Creek Camp
Project ID: CEEEn-2016CPST-011

Introduction (Background Information)

The Church of Jesus Christ of Latter-day Saints, the sponsor for this project, is a prominent international religious organization. The Church holds business interests and assets to serve the needs of its members and the community alike. The Cinnamon Creek Campground is one such asset that the church built for providing a safe environment for wholesome outdoor activities for church groups and families. The Church's natural resources department located in Salt Lake City is responsible for maintaining, managing and operating this campground.

The Cinnamon Creek Campground is located near Avon, UT. The Camp consists of nine separate camps with multiple camp sites spread out over approximately 2 miles along a stream which accommodates up to 1,100 campers. The camp has additional amenities such as RV parking, toilets, sinks, hot-showers, amphitheaters. However, the camp does not have any electricity or sufficient lighting at night for the patrons. The purpose of this project is to perform a feasibility study for installing a Solar Generator and/or a Hydro-Electric Generator. This electricity would be used to provide lighting throughout the pavilions in the campgrounds.

Project Description and Scope of Services

- The purpose of this project is to create a design and a feasibility report to highlight the feasibility of Solar Generator and/or Hydro-electric generator for the Cinnamon Creek Campground. The client will then determine their future course of action based on this report.
 - Design includes a report on the number, type, shape and size of the solar panels that will be needed for the campground. It should also evaluate the type, size and effectiveness of using a Hydro-Electric generator on one of the two springs in the camp site or by the collection tank. The final design template should include the respective drawings and calculations.
 - Feasibility report will provide a summary of the financial implications of each design criteria. It should also provide the minimum requirements for making each design have a sustainable life span.

- The following is a list of major tasks that need to be completed as part of this study:
 - Determine the ideal location for solar panels
 - Determine the ideal location for setting up a hydro-electric generator
 - Determine the ideal flow conditions for setting up a small hydro-electric generator
 - Provide a summary of the financial implications of each design
 - Provide structural, mechanical and schematic diagrams of the solar/hydro equipment and their relevant location on the campgrounds.

- The following is a list of Project Milestones and Expectations:
 - Preliminary Site Visit: October 29, 2016
 - Proposal Approval: December 6, 2016
 - Solar Generator Design: January 2, 2017
 - Hydro Electric Design: February 6, 2017
 - Feasibility Report comparing Solar and/or Hydro: March 6, 2017
 - Final Report, Presentation and Poster: April 10, 2017

- The Sponsor has provided the following resources (More resources can be provided as needed):
 - Cinnamon Creek Water System Plan
 - Vicinity Map
 - Water System CAD Drawings
 - Hydraulic Grade Profile
 - Redevelopment Plan
 - Tank, Collection Box details

Outcome and Performance Standards

- The following statement must be included in the proposal
 - Our student team will provide the work for this Capstone project “as is”. Our results cannot be construed as work provided by licensed professionals and cannot be used as “stamped deliverables” without first being reviewed, approved and stamped by a qualified license professional engineer.

- Note to graduate mentor/project manager:
 - Student teams represent the BYU Civil & Environmental Engineering Department. As such, all Capstone students are expected to interact among their peers and customers/sponsors in a professional manner and with

- courtesy and respect at all times. Support for future Capstone projects can be affected by our actions
- Team work is crucial for the success of current Capstone project as well as all future projects in the field as a professional. It is vital that each team, starting from the top (i.e. you as a graduate mentor/project manager), to foster team work, mutual respect, patience, and innovative ideas
 - Monthly status reports are highly visible as they will be bundled and sent to all sponsors, Capstone committee members, faculty and potential employers who are interested in receiving Capstone status reports. Team diligence, dynamics and challenge resolutions can be a noticeable positive addition to future employers – more so than resume alone. Taking ownership of the project ensures success.
 - Do not worry about disappointing customer/sponsor as long as team members put forth their best effort. It is alright to be nervous and it is also rewarding to figure out how to tackle challenges. Important thing is to take full advantage of this opportunity to gain valuable “real world” experience. Customers understand where you are at as they have all gone through nervous experiences themselves.

Deliverables

- Deliverable specifications
 - A final feasibility report with design alternatives that include economic and environmental considerations
 - No longer than 15 pages
 - PDF Format
 - A poster summarizing the design
 - A presentation summarizing the feasibility report
- Minimum required deliverables
 - Short monthly status reports documenting challenges, solutions & progress
 - Answers to 4 questions
 - What challenges have your team encountered in your project?
 - What actions did your team decided to do to overcome these challenges?
 - Any progress in overcoming these challenges?
 - Summarize the current status of your Project
 - Did challenges negatively impact the progress of your project?
- Before the end of winter semester both a presentation to sponsors and poster session for students, faculty and other interested people will be organized.

- All deliverables are tentatively due on Monday April 10th 2017.

Contractual Terms and Conditions

- Contract type: Non-monetary compensation with all project work on a “best effort” basis
- Term: Team members are to spend 8 hours/week/student with at least 3 hours/week working together. Class time or time spent on class assignments counts toward these hours
- Each project team consists of
 - A project manager/mentor: A graduate student who does not perform technical work on the project. He/she guides, facilitates and directs the team toward successful completion of the project by achieving customer objectives, adhering to schedule/time/cost, and promoting team unity.
 - A project team lead: An undergraduate student team member who serves as the team’s spokesperson and liaison among the team, its project manager, sponsor, faculty advisor and Capstone Committee advisors
 - Two project team members/task leads who may be assigned to take lead on certain aspects of the project in addition to the project team lead. All team members, including project team lead, are to assist one another on each member’s specific task assignments
 - One can take lead on analysis or data gathering, another on design/drawings, data interpretations etc.
- Customer/Sponsor may require team members to sign a [non-disclosure agreement](#) that simply states the work you do belongs to the project sponsor
- If any Federal Approval/Exemptions are required. The Customer/Sponsor will be responsible for obtaining the necessary approvals.

Payments, Incentives and Penalties

- Late submittals will result in a penalty of 10% project grade deduction per week.
- Project work to be graded by graduate student mentors/project managers with potential additional inputs from sponsors, Capstone Committee members and faculty advisors
- Grading criteria
 - Team work and unity
 - Project proposal

- Project Management Plan (PMP)
- Monthly status report
- Final report, poster, and presentation
- Customer satisfaction in satisfying project objectives and required deliverables

Submittal Requirements for the Proposal

- RFP availability: 10/24/2017
- Proposal deadline: Monday, October 31, 2016 at 4:00 pm MDT
 - Three copies of proposals in accordance with guidelines & formats specified in the proposal template (to be available by Monday 10/17/2016)
- Minimum requirements for the proposal (each section must start on a new page. Details and formats will be provided in the standardize proposal template)
 - Cover page
 - Letter of submittal / introduction
 - Executive summary (one page or less)
 - Work plan
 - Proposed approach, including innovative ideas, to complete the project
 - Weekly project work schedule for individual team members
 - Weekly team work/meeting schedule
 - Section identifying necessary tools, data, equipment, etc. with brief explanations
 - Project schedule including important milestones
 - Engineering budget: Estimated hours for each phase/element of the proposed work plan
 - Outcome and Performance Standards
 - List of outside consultants (faculty, Capstone Committee member etc.) necessary for this project
 - Statement of qualifications
 - Background, experience, education and organizational structure of the team
 - Team member assignments
 - Team member collaboration plan: (How will team work together seamlessly)
 - Appendices
 - Appendix A: 1 page resume for each team member
 - Appendix B, C, etc. as necessary

- Review committee reserves the right to reject any proposal or presentation that is not submitted in a timely fashion or in accordance with instructions and requirements in this RFP

Contacts

- Roy McDaniel
 - Principal Sponsor
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 - (801) 240-4656
 - Address: 50 East North Temple Street, 12th Floor, SLC, UT 84150
- Sarva Pulla
 - Graduate Mentor
 - pulla@byu.edu
 - (801) 906-3191
 - Address: 375 Clyde Building, Provo, UT 84606
- Federal Energy Regulatory Commission
 - Authority for providing the approval/exemption
 - customer@ferc.gov
 - (202-502-6088)
 - Address: Washington D.C. 20426

Proposal Evaluation Criteria

- Proposal will be evaluated by graduate student mentor/project manager in accordance with the following rubric, with inputs from project sponsor, Capstone Committee member and potentially faculty advisor.

Timeliness - 1 pt off per full hour late, up to 5.	5
Grammar/Spelling - 1 pt off per blatant error, up to 5.	5
Cover Page - Title, Data, Sponsor, Team Name, Team Members, Department of Civil & Environmental Engineering, Ira A. Fulton College of Engineering and Technology, Brigham Young University - 1 pt per piece of information included.	6
Cover Letter - brief letter of introduction that 1) states your intent to propose and 2) how you may be contacted.	6
Executive Summary 3/4 to 1 page that summarizes the contents of your proposal	12
Team Abilities Summary as a team of 1) relevant courses and experience, 2) abilities to complete the work on time and in a professional manner, 3) including use of specific engineering tools/software. Include résumés.	12
Key Personnel - 1) Identify which individuals will focus on which pieces of your potential tasks, and 2) some kind of organizational chart or visual describing how you will work together as a team.	12
Project Understanding - 1) Did they address specific items mentioned in the RFP? 2) Do they repeat basic background in somewhat new terms to <i>demonstrate their understanding</i> of the project? 3) Do they mention key deliverables they may need to provide? 4) Did they articulate a <i>specific</i> approach for developing design alternatives and deliverables? 6 pts max per piece.	24
Formatting - Does it look professional? Consistent?	6
Concise vs. Wordy , Meaningful vs. Fluffy, repetitive wording. 6 pts means concise, and accurate, and specific. 1 pt means often confusing, wordy, or vague.	6
Clear and professional flow of writing and style. 6 pts means that you would feel comfortable handing this in if it were your own; it is easy to read and understand; feels professional; 1 pt means it feels like it was cut-pasted, rushed, and done with little thought; hard to read; feels like a high school essay.	6
Total	100