



COORDINATING RESEARCH COUNCIL, INC.

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June 15, 2021

In reply, refer to:
CRC Project No. SM-3

Dear Prospective Bidder:

The Coordinating Research Council (CRC) invites you to submit a written proposal to provide services for “Evaluation of a Sample of Off-Highway Refueling Sites for Current and Potential Electrical Service to Support LD and HD EV Charging” (CRC Project No. SM-3). A description of the project is presented in Exhibit A, “Statement of Work.”

Please indicate by email before **June 30, 2021** if you or your organization intends to submit a written proposal for this research program. CRC will answer technical questions regarding the Request for Proposal if they are submitted in writing. CRC will then return written answers to all of the bidders, along with a copy of the original questions.

A CRC technical group composed of industry representatives will evaluate your proposal. CRC reserves the right to accept or reject any or all proposals.

The reporting requirements will be monthly progress reports and a summary technical report at the end of the contractual period. The reporting requirements are described in more detail in the attachment entitled “Reports” (Exhibit B). Contract language for intellectual property and liability clauses is presented in Exhibit C and in Exhibit D, respectively. Important selection factors to be taken into account are listed in Exhibit E. CRC evaluation procedures require the technical group to complete a thorough technical evaluation before considering costs. After developing a recommendation based on technical considerations, the costs are revealed and the recommendation is modified as needed.

The proposal must be submitted as two separate documents. The technical approach to the problem will be described in part one, and a cost breakdown that is priced by task will be described in part two. The cost proposal document should include all costs associated with conducting the proposed program. The technical proposal shall not be longer than 10 pages in length (not including resumes). **The schedule / timeline information should be included in the technical proposal.**

CRC expects to negotiate a cost-plus fixed fee or cost reimbursement contract for the research program.

The technical and cost proposals should be submitted to:
Christopher J. Tennant Email: ctennant@crcao.org

The deadline for receipt of your proposal is **July 22, 2021**.

EXHIBIT A – STATEMENT OF WORK

CRC Project SM-3

Evaluation of a Sample of Off-Highway Refueling Sites for Current and Potential Electrical Service to Support LD and HD EV Charging

Background

As the number of battery electric vehicles (BEV) increases, the development of a non-residential charging infrastructure becomes more important. While there are many scenarios for EV charging, there is general agreement that fast charging along interstate and other busy rural highways will be important. Fast charging along these roadways will facilitate medium and long distance travel using BEVs. Long distance customers will expect charge rates of hundreds of miles range per hour which will require charge rates of at least 100 kW/hour. Direct Current Fast Chargers (DCFC) are the way these high energy transfer rates will be achieved.

The installation of several Direct Current Fast Chargers (DCFC) that would be required to service potential customers could easily exceed the installed electrical service of an average convenience store, truck stop or travel plaza when coupled with the ordinary demand of the site. Depending on local service capability a store might work with their utility to increase available power or could elect to install battery systems to gradually accumulate power to facilitate quick charging. Despite the importance of the topic, there is currently limited public data available on actual and available electrical service at rural, near highway, convenience stores, truck stops or travel plazas.

Objective

The objective of this project is to develop data on a sample of rural, near highway, convenience stores, truck stops or travel plazas. The data would include actual and potential electrical service, inclination to install DCFCs to service potential EV charging customers along with information on potential site locations for DCFCs.

The contractor will interview a selection of chains and develop a report summarizing the capability and inclination of the site to install DCFC stations.

Items to be captured include:

- The existing electrical service of the site (voltage, amperage, phase, etc)
- The existing load of the site
- Potential increases in load being considered (restaurant, car wash, ...)
- Proprietor's goal for charging time and number of charge points
- The power supply would be traced to the high capacity source and the capacity and cost to extend to the store determined or estimated
- Parking availability for DCFC sites and relationship to store
- Utility providing service (Note that follow up with the utility may be required to fully determine service)

Statement of Work

There are several approaches to gathering data. Three examples are:

- 1) Survey a sample of convenience store chains requesting data on off-highway convenience stores that meet pre-determined criteria. The contractor will interview these chains and develop a report detailing capabilities using common metrics.
- 2) Survey the major truck stop and travel plaza chains to acquire data on their near highway facilities. The contractor will interview these chains and develop a report detailing capabilities using common metrics.
- 3) The contractor approaches individual stores directly. The contractor will identify a selection of convenience stores (e.g. 200) to survey. These would be within 2 miles of the highway exit and have the location of the store indicated at the exit on public service signage. The contractor will interview the store management and develop a report detailing capabilities using common metrics.

Deliverables

- A kick-off meeting/call between CRC and the contractor to discuss project scope and align expectations.
- Monthly calls between CRC and the contractor to discuss preliminary results and identify any information gaps before finalizing findings and starting the final report.
- A final report, the draft of which will be reviewed by CRC before final release.

Project Schedule

The contractor will propose an appropriate timeline for completing the study, including milestones for study deliverables.

Project Management

CRC and its project technical panel will provide management and oversight for this project.

EXHIBIT B

REPORTS

MONTHLY TECHNICAL PROGRESS REPORTS

The contractor shall submit a monthly technical progress report covering work accomplished during each calendar month of the contract performance. An electronic Microsoft® Word compatible file (<1 MB) of the monthly technical progress report shall be distributed by the contractor within ten (10) calendar days after the end of each reporting period. The report shall contain a description of overall progress, plus a separate description for each task or other logical segment of work on which effort was expended during the reporting period. Periodic conference calls may also be requested by CRC to update the technical committee overseeing the project.

FINAL REPORT

The contractor shall submit to CRC a draft final report. The report shall document the test procedure, document details of each test iteration, and explain any observations noted. The test data will be recorded and reviewed, and the final report will include a certification that the test procedures were followed, noting any exceptions. The detailed data will also be supplied electronically to CRC.

The draft report must have appropriate editorial review corrections made by the contractor prior to submission to CRC to avoid obvious formatting, grammar, and spelling errors. The report should be written in a formal technical style employing a format that best communicates the work conducted, results observed, and conclusions derived. Standard practice typically calls for a CRC Title Page, Disclaimer Statement, Foreword/Preface, Table of Contents, List of Figures, List of Tables, List of Acronyms and Abbreviations, Executive Summary, Background, Approach (including a full description of all experimental materials and methods), Results, Conclusions, List of References, and Appendices as appropriate for the scope of the study. Incomplete draft reports or reports of poor quality requiring additional outside editorial review may have outside editorial services charged back to the project budget.

Comments regarding the report shall be furnished by the CRC committee to the contractor within one (1) month after receipt of the draft copy. Additional rounds of review may be required.

Within thirty (30) days after receipt of comments, the contractor shall make the requested changes and submit an electronic copy of the draft final report in both Microsoft Word and Adobe pdf file format. Once accepted, the contractor shall deliver five (5) hard copies of the final report to CRC. The final report may be prepared using the contractor's standard format, acknowledging author and sponsors. An outside CRC cover page will be provided by CRC. The electronic copy will be made available for posting on the CRC website.

EXHIBIT C

INTELLECTUAL PROPERTY RIGHTS

Title to all inventions, improvements, and data, hereinafter, collectively referred to as (“Inventions”), whether or not patentable, resulting from the performance of work under this Agreement shall be assigned to CRC. Contractor X shall promptly disclose to CRC any Invention which is made or conceived by Contractor X, its employees, agents, or representatives, either alone or jointly with others, during the term of this agreement, which result from the performance of work under this agreement, or are a result of confidential information provided to Contractor X by CRC or its Participants. Contractor X agrees to assign to CRC the entire right, title, and interest in and to any and all such Inventions, and to execute and cause its employees or representatives to execute such documents as may be required to file applications and to obtain patents covering such Inventions in CRC’s name or in the name of CRC’s Participants or nominees. At CRC’s expense, Contractor X shall provide reasonable assistance to CRC or its designee in obtaining patents on such Inventions.

To the extent that a CRC member makes available any of its intellectual property (including but not limited to patents, patent applications, copyrighted material, trade secrets, or trademarks) to Contractor X, Contractor X shall have only a limited license to such intellectual property for the sole purpose of performing work pursuant to this Agreement and shall have no other right or license, express or implied, or by estoppel. To the extent a CRC member contributes materials, tangible items, or information for use in the project, Contractor X acknowledges that it obtains only the right to use the materials, items, or information supplied for the purposes of performing the work provided for in this Agreement, and obtains no rights to copy, distribute, disclose, make, use, sell or offer to sell such materials or items outside of the performance of this Agreement.

EXHIBIT D

LIABILITY

It is agreed and understood that _____ is acting as an independent contractor in the performance of any and all work hereunder and, as such, has control over the performance of such work. _____ agrees to indemnify and defend CRC from and against any and all liabilities, claims, and expenses incident thereto (including, for example, reasonable attorneys' fees) which CRC may hereafter incur, become responsible for or pay out as a result of death or bodily injury to any person or destruction or damage to any property, caused, in whole or in part, by _____'s performance of, or failure to perform, the work hereunder or any other act of omission in connection therewith.

EXHIBIT E

PROPOSAL EVALUATION CRITERIA

- 1) Merits of proposed technical approach.
- 2) Previous performance on related research studies.
- 3) Personnel available for proposed study – related experience.
- 4) Timeliness of study completion.
- 5) Cost.