



COORDINATING RESEARCH COUNCIL, INC.

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February 8, 2008
In reply, refer to:
CRC Project No. AVFL-17

Dear Prospective Bidder:

The Coordinating Research Council (CRC) invites you to submit a written proposal to provide services for **"Investigation of plant derived bio-fuels as potential blend stocks for transportation fuels"** (CRC Project No. AVFL-17). A description of the project is presented in Exhibit A, "Statement of Work."

Please indicate by letter, fax, or email by February 22, 2008, whether 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 and government 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).

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 be no longer than 10 pages in length.

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

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.

Thirty (30) copies of the technical proposal and three (3) copies of the cost proposal (or one each electronic-copy) should be submitted to:

Dr. Christopher J. Tennant
Coordinating Research Council
3650 Mansell Road, Suite 140
Alpharetta, GA 30022

Phone: 678-795-0506
Fax: 678-795-0509
E-mail: ctennant@crcao.org

The deadline for receipt of your proposal is **March 12, 2008**.

Yours truly,

Christopher J. Tennant
Deputy Director

Exhibit A
Statement of Work

CRC Project AVFL-17 (Phase 1)

**Investigation of Plant-Derived Biofuels as
Potential Blend Stocks for Transportation Fuels**

Background:

Biofuels have become one of the fastest growing markets in the world – at 16% growth a year. Biodiesel is an example of a biofuel and is a clean, renewable and biodegradable source of energy. Plant derived biodiesel offers several advantages when compared to petroleum diesel. It contributes to significant CO₂ reduction relative to petroleum-derived diesel. It contains no sulfur or aromatics. Biofuels are being promoted by European governments hoping to meeting Kyoto targets – and by U.S. government policies intended to replace some Middle Eastern oil imports. With oil prices reaching a series of new highs in 2008, biofuels have become very attractive as a fuel blend stock. There appears to be a strong support for biofuels as one of many renewable technologies needed to reduce our dependence on hydrocarbon-derived fuels and to reduce green house gas production and the concomitant climate change issues. Some want targets to greatly increase the use of biofuels whilst ensuring that all supplies have to be certified as coming from sustainable sources. Meantime, governments around the world are introducing targets without the environmental safeguards. A European Union Directive, for example, mandates the use of biofuels in 5.75 – and possibly even 8% of all road transport fuel. A 20% target is stated for 2020. This work to be proposed will set out to explore the major issues facing the biofuels in a social, environmental and scientific perspective. Major focus will be given toward biofuels derived from vegetable oils, such as rapeseed oil (Europe), jatropha (India, Africa), soy (U. S.) and palm oil (Malaysia and Indonesia).

Objective:

To investigate and evaluate the plant derived biofuels as potential blend stocks for ULSD in transportation applications. Plant derived biofuels including but not limited to soy, rape seed, jatropha and palm will be investigated in terms of their fuel properties and emission characteristics from the existing data in the literature. Data on well-to-wheel analysis (WTW), when available, will be included for the various biofuels.

Methodology:

This project will consist of several phases. Phase 1 will collect existing technical data on plant derived biofuels and organize them in terms of product volumes, properties and emission characteristics when available. WTW analyses will be included where appropriate. Knowledge gaps will be identified. Also, at the end of this phase a likely candidate will be chosen for further evaluation. Phase 2 will involve procurement of the selected biofuel for emissions and material compatibility testing.

Schedule:

Phase 1 will start in the first quarter of 2008 and will be completed by the first quarter of 2009. There will be a comprehensive Phase 1 report at the end of the first quarter of 2009 with recommendations for further work such as engine and material compatibility testing.

Deliverables:

A comprehensive report on Phase 1 will be published at the end of the first quarter of 2009.

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. Thirty-five (35) hardcopies or one 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.

FINAL REPORT

The contractor shall submit to or distribute for CRC thirty-five (35) hardcopies (or one hardcopy and one electronic pdf-compatible copy transmittable via email) of a rough draft of a final report within thirty (30) days after completion of the technical effort specified in the contract. The report shall document, in detail, the test program and all of the work performed under the contract. The report shall include tables, graphs, diagrams, curves, sketches, photographs and drawings in sufficient detail to comprehensively explain the test program and results achieved under the contract. The report shall be complete in itself and contain no reference, directly or indirectly, to the monthly report(s).

Within thirty (30) days after receipt of the approved draft copy of the final report, the contractor shall make the requested changes and deliver to CRC fifty (50) hardcopies including a reproducible master copy of the final report. The final report shall also be submitted as an electronic copy in a pdf or pdf-convertible file format. 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 of Contractor 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.