REQUEST FOR PROPOSAL No. 111616
Environmental Health Strategy Center
Global Industrial Sugar Cost Study

1. Summary and Background

Environmental Health Strategy Center, with its project partners the University of Maine and Biobased Maine, has been awarded a federal grant from the U.S. Economic Development Administration for a project entitled, "Diversifying Maine's Forest-Based Economy: Biobased Manufacturing from Renewable Biomass." The aim of this project is to attract investment that creates good manufacturing jobs in rural Maine to convert renewable biomass into advanced and sustainable biobased products, such as biobased chemicals, bioplastics, and biofuels, to meet rising global demand.

The 3-year project will extend from September 2016 through August 2019 and be administered by Environmental Health Strategy Center, a nonprofit organization based in Portland, Maine that works for healthy products in a healthy economy.

The purpose of this RFP is to solicit competitive bids for a Global Industrial Sugar Cost Study to thoroughly characterize the current and future production of industrial sugars around the world for use in the manufacture of biobased chemicals, biofuels, and other biobased products. The manufacture of high-quality cellulosic sugars from wood fiber has been demonstrated in Maine at pilot scale. Our goal is to attract investment in commercial production of cellulosic sugars in the State. In order to be competitive within the global sugars market, a complete analysis of the current sugar producers and costs is needed.

2. Project Scope

By "industrial sugars," we mean fermentable carbohydrates that can be converted into biobased chemicals for use in a variety of consumer products, plastics and fuels. By "first-generation feedstocks" we mean starch- or sugar-based crops such as corn, cassava, sugar beet, or sugar cane. By "second generation feedstocks," we mean forest residuals, agricultural waste and other lignocellulosic or woody biomass. By "cellulosic sugars," we mean industrial sugars produced from second-generation feedstocks.

The scope of work should consist of the following:

A. Describe at a high-level the industrial sugar sector, including sugars produced from both first- and second-generation feedstocks, including a list of the major sugar producers broken down by feedstock utilized;
B. Document current and historic industrial sugar prices, broken down by feedstock utilized (all major global feedstocks should be included, such as sugar beet, cassava, corn, sugar cane, forest residuals, agricultural waste, etc.) and technology used for sugar production;

C. Describe the price drivers for industrial sugar, including costs associated with pre-processing of feedstocks, consideration of the concentration and purity of sugars suitable for fermentation to biobased chemicals, and transportation costs;
D. Present an up-to-date cost model for manufacturing of cellulosic sugars from lignocellulosic biomass using various feedstocks and process technologies (e.g., enzymatic or supercritical water, etc.), including capital and operating costs, and feedstock pre-processing costs;
E. Characterize the current and projected production of industrial sugars by major manufacturers by:
    a. Quantity
    b. Geographic distribution (e.g., region)
    c. Feedstock
    d. Price;
F. Compare the relative cost of industrial sugar to its value creation potential for different end uses within the biobased chemical and biobased materials market (direct conversion to biofuels, or direct conversion to biobased chemicals), as well as additional information helpful in showing the value creation potential from the shift to higher-value products made from industrial sugars;
G. Describe the existing and emerging technology companies that currently produce or are planning commercial production of cellulosic sugars from lignocellulosic biomass;
H. To the extent practicable, include forward-looking projections of cost and availability and other factors currently driving change within the global industrial sugars market;
I. Describe at a high-level the food/fuel competition for feedstocks, and the relative degree of reliance on genetically modified feedstocks for industrial sugar production; and
J. Identify cost and quality targets that must be met for cellulosic sugar feed upgrading to specific value-added products.

3. Project Timeline

All proposals in response to this RFP are due no later than 5 pm EST on December 16, 2016. Evaluation of proposals will likely be conducted until January 6, 2017. If additional information or discussions are needed with any bidders during this time, the bidder(s) will be notified using the contact information provided in the bid.

The selection decision for the winning bidder will likely be made by January 6, 2017. Upon notification, the contract negotiation with the winning bidder will begin immediately. Contract negotiations will aim to be completed by January 20, 2017.

Environmental Health Strategy Center will initiate a kick-off meeting (or call) with the contractor once contract negotiations have ended and the contract has been signed. A specific timeline for project deliverables will be established during this meeting, although the work described herein

should be completed in an accelerated timeframe, with a likely completion date within the first quarter of 2017.

4. Proposal Guidelines

This Request for Proposal represents the requirements for an open and competitive process. Proposals will be accepted until 5pm EST December 16, 2016. Any proposals received after this date and time will not be considered. All proposals must be signed by an official agent or representative of the company submitting the proposal.

If the organization submitting a proposal must outsource or contract any work to meet the requirements contained herein, this must be clearly stated in the proposal. Additionally, all costs included in proposals must be all-inclusive to include any outsourced or contracted work. Any proposals which call for outsourcing or contracting work must include a name and description of the organizations being contracted. All costs included in proposals must be itemized to include an explanation of all fees and costs. Contract terms and conditions will be negotiated upon selection of the winning bidder for this RFP. All contractual terms and conditions will be subject to legal review by Environmental Health Strategy Center's attorney and will include scope, schedule, budget, and other necessary items pertaining to the project.

Electronic copies of proposals are preferred (.pdf) and can be emailed directly to cmace@biobasedmaine.org. Environmental Health Strategy Center will confirm receipt of bids as they arrive with a confirmation email to the sender.

5. Project Budget

All proposals must include proposed costs to complete the tasks described in the project scope. All costs and fees must be clearly described in the proposal. Contracts will consist of time-and-materials budgets with a not-to-exceed ceiling price.

6. Bidder Qualifications

Bidders should provide the following items as part of their proposal for consideration:

- Description of experience in characterizing the global sugars market, specific to biobased manufacturing
- List of how many full-time, part-time, and contractor staff in your organization
- Examples of three previous projects successfully completed to the satisfaction of a client
- References for the three successful projects described above
- Anticipated personnel you will assign to this project (name, title, brief summary of academic background and professional experience)
- Timeframe for completion of project

7. Proposal Evaluation Criteria

Environmental Health Strategy Center (and its project partners, as appropriate) will evaluate all proposals based on the following criteria. To ensure consideration for this Request for Proposal, your proposal should be complete and include all of the following criteria:

- Overall proposal suitability: proposed analysis must meet the scope and needs included herein and be presented in a clear and organized manner
- Organizational experience: bidders will be evaluated on their experience as it pertains to the scope of this project
- Previous work: bidders will be evaluated on the examples of previous projects completed successfully and the references of past clients of these projects
- Value and cost: bidders will be evaluated on the cost of their analysis based on the work to be performed in accordance with the scope of this project
- Expertise and experience: bidders will be evaluated on the documentation of their staff's expertise and experience
- Additional consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources or accessibility to other necessary resources to ensure successful project completion
- Non-response bids or proposals (i.e., those with material deficiencies, omissions, errors, or inconsistencies) will not be considered
- No contract shall be made with parties listed on the General Services Administration's List of Parties Excluded from Federal Procurement or Nonprocurement Programs
- All necessary affirmative steps will be taken to solicit participation of locally-owned, minority-owned, female-owned, and small businesses.

For questions about this proposal, please contact:
Charlotte Mace, 207-699-5792
cmace@biobasedmaine.org