U.S. Endowment
for Forestry and Communities

Request for Pre-Proposals

RFP Number: 2008-005

Opens on 6.4.08 and closes on 7.4.08 (Any Pre-proposals received after 7.4.08 may not be considered.)

The State of Wood-based Bio-energy/Bio-fuels Technologies and Industries in North America

1. **Statement of Purpose**
   The U.S. Endowment for Forestry & Communities (the Endowment) is seeking pre-proposals from qualified service providers who can aid in the development of a state-of-the-issue report and an information management system on the current and emerging wood and woody biomass/bio-energy industry in North America (Canada and U.S.). The Endowment seeks to develop this information so that it might best determine places and means to target work to yield the greatest gain from potential future programmatic investments.

2. **Background**

Growing interest in the development of "new" bio-product markets that use wood and wood-based cellulose offers the potential for enhanced income streams, expanded raw material markets, and a means to improve forest health. At the same time, the development of such markets may have unintended economic and environmental consequences.

Also, while there has been much in the media about potential liquid fuels made from cellulose, it is difficult to draw conclusions from these reports. The emphasis on liquid fuels alone belies the use of wood in combustion for heat and power much less the potential creation of materials and chemicals beyond the traditional products such as terpines and tannins.

A reasoned view of the potential benefits and unintended consequences of the biomass/bio-energy industry must begin with a sound assessment of the current state of the industry including a summary of the state of the science, facility distribution and sources of raw material.

3. Scope of Work

The Endowment desires to commission a "state-of-the-issue" report on the woody biomass/bio-energy industry in North America and create a system that will allow long-term tracking and information on an on-going basis to support the needs of individual producers and users as well as to support and inform local, state, regional and national resource planning and assessment. The successful vendor will:

a. Develop a state-of-the-issue report providing the following North American information:

i. A literature review on the "state-of-the-science" on technologies to convert woody biomass to bio-energy. These technologies include but are not limited to 1) technologies for commercial establishments (e.g. schools, businesses) to use biomass to make heat and/or power, 2) technologies for industries – including solidwood and pulp and paper industries – to use biomass to make steam/heat/power, 3) technologies for utilities to use biomass in making electric power (including co-generation), 4) technologies to increase density or otherwise prepare biomass for use in conversion technologies (e.g. pellets), 5. technologies to make liquid transportation fuels/chemicals from biomass.

A. State of research in pipeline, entity doing research, funding, status of technical development, estimated product manufacturing cost and expected schedule for commercialization. Work should be limited to those that are beyond "bench

scale" and make clear the state of "pilot-" or "demonstration-scale."

B. Provide case study summaries of "best of class" examples of each product type (e.g. wood to energy; wood to pellets; wood to liquid fuel, etc.) including capital cost, production cost, production capacity, technology employed and markets served where such information is not proprietary. This level of detail would apply only to technologies that are currently commercialized.
C. Provide background information on the "best of class" facilities worldwide that hold promise for North American application including economy-of-scale capital cost, product cost and technology employed. This level of detail would apply only to technologies that are currently commercialized.

ii. The current state of development of the bio-mass/bio-energy industry by state and region, including the number, location, production capacity and types of industrial facilities that use and/or convert wood and woody biomass to bio-energy along with their source of supply (e.g. logs; chips; bark) whether direct from the forest or a bi-product of primary processing, and total consumption by source of raw material. In pulp and paper facilities, use of black liquor or other woody extracts for energy should also be included.

A. Include facilities where wood and wood-based biomass is one of multiple raw materials – e.g. wood chips in coal-fired facilities.
B. Include announced demonstration-scale capacity not yet online by product and with planned sources of supply and consumption as well as timelines to production.
C. Include direct employment figures by type/size of facility.

iii. The estimated numbers and types of non-industrial (e.g. commercial -- schools, community-scale facilities) entities using woody biomass for energy including capacity, utilization, technology employed, capital cost (where such information is not proprietary) and type/source of raw material and provide case studies on "best of class" applications at various scales and by types (e.g. heat; combined heat and power; electricity).

iv. Review of studies providing information on potential opportunities to further sustainable market growth (e.g. ability of forest to sustain demand) across any or all types of woody biomass uses) taking into consideration the expected consumption of forest biomass by the traditional forest products industry.

v. Potential barriers to sustainable market growth (by segment or production type where appropriate), taking into consideration the expected consumption of forest biomass by the traditional forest products industry.

b. Develop an efficient, cost-effective, easy-to-update online database (perhaps a modified, controlled access wiki) that would allow continual updating of existing and new wood biomass/bio-energy facilities (both industrial and commercial) in a real-time system.

i. Determine the best technologies to gain needed information quickly and cost-effectively while protecting proprietary information.
ii. Review options for "permanent homes" for the system and costs/means to sustain its operation.

3. **Process Schedule**
The Endowment will entertain "pre-proposals" – 1-2 page summaries of a plan of work and expected outcomes and ask the prospective vendor(s) to complete a final proposal in greater detail.
   a. Commitments made in the pre-proposal stage should be viewed as "contract ready" with the exception of items where the Endowment and the vendor agree to project modifications that alter expected product outputs and timelines and therefore call for adjustment of timelines and cost.
   b. The Endowment would like to engage the successful vendor at the earliest possible time. Pre-proposals should be submitted within 30 days of the date of this notice of availability.
   c. Once a contract is let, all work and a final product would be expected in not more than 180-days *if possible*.

4. **Outcome and Performance Standards and Deliverables**
The successful vendor will work closely with the Endowment staff (and our project funding partners) in the performance of this agreement to yield a report(s) that will be ultimately published by the Endowment for broader community use.

Work will progress from a detailed work plan agreed to by both the vendor and the Endowment followed by periodic updates on progress leading to a draft report(s). The vendor and the Endowment will work closely to develop revisions leading to a final PDF version acceptable to all.

In the case of the on-line database, the final product would be a working system including initial data from a significant majority of the range of possible participating facilities.

5. **Terms of Contract**
   The services agreement will be by written contract between the Endowment and the successful vendor.

6. **Evaluation and Award Process**
   a. Proposal evaluation criteria. The Endowment will rate potential vendors on a range of criteria.
      i. Relevant work experience
      ii. Quality of prior work
      iii. Ability to meet timelines desired
      iv. Proposed methods and products
      v. Total project price

7. **Contact and Questions**
   For questions or clarifications contact rfp@usendowment.org
   You may wish to check our website frequently during the open call period for a complete listing of Questions and Answers generated by other potential respondents.

8. **Pre-Proposal Process**
   The Endowment ONLY accepts Pre-proposals via its online process. To start a pre-proposal application use the following address or click on the link in the "Initiatives and Grants" section of the Endowment website and follow the link to "RFPs."
   http:\\www.GrantRequest.com\SID_841?SA=SNA&FID=35003