

January 14, 2010

ITEM 146-1002-R0110

**Authorization to Pursue a Federal Initiative that Involves a Non-Governmental Organization as a Partner; The University of Montana-Missoula**

**THAT:**

The Board of Regents of Higher Education authorizes, in accordance with Montana University System Policy 401 (D), The University of Montana to pursue a Federal Initiative that will involve a subcontract to a NGO.

**EXPLANATION:**

The University of Montana will request \$5 million to establish a public/private partnership between The University of Montana and GreatPoint Energy of Cambridge Massachusetts. This partnership will research the feasibility and economics of a biomass to Synthetic Natural Gas pilot/demonstration scale plant to be located in Montana. The ultimate goal is to accelerate the commercialization of emerging new technologies to utilize biomass in the production of pipeline grade SNG. Pipeline grade SNG has multiple advantages for both the producer and the customers due to it being wheeled through existing transmission and distribution infrastructure to customers, regardless of size, and utilize the SNG in their existing mechanical systems. The customers targeted in this initial case are the Montana University System and the State of Montana Government facilities.

**ATTACHMENT:**

Submission Form

**Project Title:** Phase I Biomass to Synthetic Natural Gas (SNG) Commercialization Project for the Montana University System and State Government Facilities

**Project Description:** The commercialization effort will have two phases. The first phase consists of an engineering feasibility study which reviews applicability and feasibility of GreatPoint Energy's targeted technology through bench scale research utilizing biomass as the feed stock. GreatPoint Energy's technology has definite economic advantages using coal; however, this study will evaluate this technology using biomass to evaluate if the economics are maintained. Additionally, a significant area for evaluation to determine economics is the assessment of the biomass supply, harvest prescription and logistics and the evaluation of bi-products as inputs into other products sufficiently to develop schematic level design and preliminary operational and capital costs of a demonstration scale biomass to SNG plant in Montana. The second phase would proceed if the economic and technological assessment of Phase I is positive and would consist of the construction and operation of the demonstration scale plant and its associated logistic systems and modifying the plant and processes with lessons learned in the project to a state where the viability of a commercial application has been described sufficiently for commercial lenders and companies to confidently assess the cost effectiveness of biomass to SNG technology.

National need to be addressed:

- Sustainable and environmentally friendly energy development emphasizing biomass sources
- Goal of carbon neutral to negative, energy production
- Fossil fuels sources are becoming expensive due to world competition and global warming issues
- The University of Montana has made commitments through the President's Climate Commitment and the Talloires Declaration to accelerate and formalize efforts towards carbon neutrality
- Bench scale and feed stock logistic projects are needed to develop engineering and process experience and proforma metrics to allow commercial financing to be used in the implementation of full scale biomass to SNG industrial plant and logistic systems

**Congressional Action Needed:** An appropriation of \$5 million is requested.

**Importance to Montana:** The Nation, the US West, and in particular Montana have significant biomass sources which are underutilized such as small diameter timber and slash and contribute to wild land fires. Montana has a need to maintain forest health and sustain a viable and vibrant forest products industry with the associated jobs. Additionally, energy crops and municipal waste could be utilized.

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**Estimated Budget:**

Salaries and Benefits	\$	1,464,762
Equipment/Travel		500,087
Contracted Services (Algavolve – MT Company)		150,000
Sub Contract (GreatPoint Energy – MA Company)		2,000,000
Facilities and Administration		<u>885,151</u>
Total	\$	5,000,000