PMC-EF2a
(2.04.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: North Dakota Department of Commerce **STATE:** ND

PROJECT TITLE : SEP Flare Gas to Electricity Commercial Viability Project (Updated)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000142	GFO-09-267-007	0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

B3.6 Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

This NEPA determination (GFO-09-267-007) is a result of a previous determination (GFO-09-267-002) and is being re-evaluated due to a location change of the proposed pilot project.

North Dakota's Department of Commerce would pass DOE funding to Blaise Energy for a Flare Gas to Electricity Commercial Viability pilot project. Blaise Energy would use turbine generators to transform wellhead flare gas into high-quality three-phase electricity. This process would use the flare gas to generate electricity and would reduce emissions caused by the flaring of the waste gas.

Site Consideration and Impact:

Both the 1MW generator and natural gas conditioning equipment (if needed) are in enclosed standardized 20 ft shipping containers and are skid mounted. The containers would be placed on the existing gravel pad of the well site within the footprint prepared by the oil operator during the initial well site construction. These containers would enclose the gas conditioning, generation, control, switching and interconnect equipment.

There are two equipment interconnects required:

The natural gas line from the treater shack to the container would be buried or placed aboveground, depending on oil operator preference and duration of installation. The length of this interconnect is equal to or less than 100 ft. and would be located entirely within the confines of the existing well location's gravel pad.

The electric line from the utility to the generator container is equal to or less than 100 ft. in length and is located entirely within the confines of the existing well location's gravel pad. Utility cross connect equipment would follow existing site specifications.

All equipment would be constantly monitored and remotely controlled.

All required equipment would be on existing petroleum well sites that are already in compliance with existing environmental regulations.

Pilot location:

SECTION 29, T163N, R90W of Burke County, North Dakota (commonly referred to as EFMU South CTB)

Location Information:
Burke County is 1,104 square miles with a population of 2,200. The closest city to the Pilot site is Flaxton, approximately 10 miles southwest. Flaxton has a population of 55 residents and is located 80 miles Northwest of Minot, ND. The area around the Pilot site is used for farming.

Safety precautions:

Gas line pressure regulators will ensure the gas goes back to flare should the gen-set stop. The gas line feeding the gen-set will also have backflow prevention valves to ensure any flames/fire originating from the gen-set would not make it back into the operators system. All site safety guidelines established by the operator as well as electric utilities must and will be followed during installation and operations.

This project comprises a pilot-project and actions to conserve energy; therefore, this project is categorized under CX B3.6, B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF-2a completed by Bill Knapp.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 10/5/10

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____

Field Office Manager