

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION



RECIPIENT: Quidnet Energy Inc.

STATE: TX

PROJECT TITLE : ENVIRONMENTS

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0011046	GFO-0011046-001	GO11046

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

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

B5.1 Actions to conserve energy or water

(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix. (b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4) have the potential to cause a significant increase in energy consumption in a state or region.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Quidnet Energy Inc. to demonstrate the commercial feasibility of an innovative form of long-duration energy storage. The proposed project activities include field testing of pumped storage hydropower utilizing the natural pressure of a deep-subsurface saline reservoir and subsequent desktop modeling to develop a conceptual model and commercial development plan.

Award activities would be completed over two Budget Periods (BPs,) with a Go/No Go Decision Point between the BPs. This NEPA determination applies to both BPs.

Proposed project activities by location are:

Quidnet Energy Inc., Houston, TX

Activities include information gathering, field testing design and data analysis, commercial system level conceptual design, regional and national resource assessment, and commercial development planning. No modifications would occur at, and no permits would be required for this facility.

Field-testing site

Site selection for field testing is the first project task. The selected site would be a pre-existing, inactive gas well and onshore wellsite in the Texas Gulf Coast region. The project would require a change of well operator permit from the state regulator, as the recipient would need to take ownership of the gas well. Field testing is anticipated to occur over a 10-month period. The location of the field-testing site has not yet been identified. Once identified, DOE may require an additional environmental review to assess any potential impacts that may occur at these locations.

Site characterization and surface improvements (leveling and stabilization) may take place to accommodate increased activity at the field test site, with all improvements limited to the previously disturbed footprint. The existing well pad and access roads would be used, and no expansion of existing facilities would occur.

Field testing activities would involve the use of heavy machinery and drilling operations, which could result in exposure of project workers to high pressure and high temperature fluids, as well as hazardous chemicals. All such work would occur on site and pose no risk to the public. All onsite personnel would be required to adhere to Personal Protective Equipment (PPE) standards and fall protection compliant with the Occupational Safety and Health Administration. Pre-job safety meetings (held prior to operations and prior to any change in routine operations) would be used to communicate site hazards, job plans, and roles/responsibilities of personnel. Zones with high pressure hazard exposure on site would be clearly communicated to personnel; only required personnel would be allowed in those zones. Material Safety Data Sheets would be accessible to personnel for all hazardous chemicals on site and PPE requirements would be met.

Grid level electrical power would be utilized when available to meet field test power requirements. If grid power is not available, on-site power generation would be used. The recipient would use fuel efficient equipment and minimize fuel consumption to minimize emissions whenever possible. Minimal air emissions may result from the use of equipment and heavy machinery. However, significant air impacts are not anticipated as emissions would be temporary and intermittent.

The selected field test site would previously have been used for oil and gas production; therefore, visual and noise impacts from the project (i.e., increased activity at the site) would be a normal occurrence in the area. Perforation explosives would be used at the beginning of field testing to establish connectivity to previously bypassed reservoirs within the project well. It is expected that noise levels from heavy machinery and general drilling operations would be below 75 dbA at the edge of the project site.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on resources which would be considered significant.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

The following conditions must be met for the selected field-testing site:

- 1) If the location selected by the Recipient is not a previously disturbed, pre-existing, inactive gas well and onshore wellsite in the Texas Gulf Coast region, or if the location selected is a greenfield site, the Recipient must submit the proposed field-testing site to the DOE at GONEPA@ee.doe.gov;
- 2) If DOE determines it necessary, DOE completes necessary consultations with other agencies or stakeholders; and
- 3) The Recipient receives written authorization from the DOE to move forward with the activities stated above at the selected field-testing site.

Notes:

Water Power Technologies Office (WPTO)

This NEPA determination requires legal review of the tailored NEPA provision.

NEPA review completed by Melissa Parker, 01/02/24

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Andrew Montano

NEPA Compliance Officer

Date: 1/4/2024

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

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

Field Office Manager's Signature: _____

Field Office Manager

Date: _____