PMC-ND
(1.08.09.13)

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

RECIPIENT: OxEon Energy LLC **STATE:** UT

PROJECT TITLE: Production of Liquid Hydrocarbons from Anaerobic Digester Gas, Control Number 2029-1580

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002029	DE-EE0008917	GFO-0008917-001	GO8917

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to OxEon Energy LLC (OxEon) to develop a small scale demonstration of production of liquid hydrocarbon fuels from gases generated by a food waste digester. The project would convert the bio-methane to synthesis gas using a non-thermal plasma catalyzed autothermal reformer. The project would have a nominal capacity of approximately 8 gallons of fuel production per day.

The proposed project would include three Budget Periods (BPs).

BP 1 would be limited to an initial verification to support the proposed projects process claims.

BP2 would include the design, fabrication and assembly of a small scale biogas to synthetic fuels system. This would include determining equipment specifications and completing system design work. Once a system is fully designed this BP would also include unit fabrication and assembly. The fully assembled unit would be contained on four skids each approximately 92” (L) x 46” (W) x 82” (H). The unit would also include an approximately 300 gallon stainless tank for storing produced materials and an approximately 275 gallon plastic tank for storing produced water.

In BP3 OxEon would commission and verify that the system is in working order at their facility in Salt Lake City, Utah. This would include an initial run of the system to produce approximately 10 gallons of liquid fuel product. If successful OxEon would then transport the system to Environmental Products and Technology (EPT) in Burley, Idaho. In Idaho OxEon would install the system on an existing outdoor slab and run necessary above ground piping for the system to connect to an existing dairy waste system. OxEon would then test the system at full scale for approximately 6 weeks with a production of approximately 150 gallons of biofuel.

Fabrication and system testing in BP2 and 3 would occur at OxEon’s facility in Salt Lake City, Utah. This facility is a preexisting industrial facility in an industrial area north of Salt Lake City. Fabrication will require handling of heavy materials, welding, and dealing with standard industrial materials. Verification that they system is working would require use of small amounts of catalyst. Existing safety practices, including training and use of protective equipment will be followed. No new permits would be required for fabrication of the unit.

Small scale testing would occur at EPT. The EPT site is an industrial site in Burley, Idaho. At EPT, the system would

be placed onto an existing slab and piped to an existing dairy waste system. Installation of the system would require handling heavy materials. Testing and running the system would require use of dairy waste, and would produce liquid fuel and water. Existing safety practices, including training and use of protective equipment will be followed. Any waste generated by the product, including water, would be disposed of in compliance with existing federal, state and local regulations. No modification to the site or new permits would be needed for installation of or operation of the system.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

This NEPA determination does NOT require a tailored NEPA provision
Bio Energy Technology Office
NEPA review completed by Roak Parker 12/3/19

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: Electronically Signed By: Roak Parker Date: 12/4/2019

NEPA Compliance Officer

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: _____ Date: _____

Field Office Manager