



U.S. Department of Energy

Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: Marine BioEnergy - Disruptive Supplies of Affordable Biomass Feedstock Grown in the Open Ocean

Program or Field Office: Advanced Research Projects Agency - Energy (ARPA-E)

Location(s) (City/County/State): La Cañada, CA; La Jolla, CA; Richland, WA

Proposed Action Description:

Funding will support the project team's small-scale, research and development activities to develop an open ocean cultivation system for macro algal biomass, which can be converted to a liquid fuel precursor. The project team intends to test the effects of depth cycling on kelp in near shore and offshore ocean environments ranging from surface to 50m in depth. The kelp will then be converted to biocrude and evaluated for possible co-products in a small-scale, laboratory setting. Specifically, the project team will: (1) design and build near-shore and offshore kelp elevators; (2) apply for permits to deploy kelp elevators; (3) research and design kelp cultivation techniques; and (4) convert kelp to biocrude and evaluate co-products. Field testing is not yet authorized.

The project team will comply with applicable local, state, and federal regulations and incorporate appropriate control technologies and best management practices in all project activities. Marine BioEnergy is required, under the terms of its ARPA-E Cooperative Agreement, to secure all necessary permits prior to initiating field testing and to provide ARPA-E with written assurances of acquiring such permits prior to field testing. Field testing may only proceed after an amended NEPA determination is issued by ARPA-E. Bodies of water that may be used for testing include coastal waters off La Jolla in San Diego County and Catalina Island in Los Angeles County. No modifications will be made to existing facilities to accommodate the proposed work.

Categorical Exclusion(s) Applied:

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

B5.25 - Small-scale renewable energy research and development and pilot projects in aquatic environments

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 1021.

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal 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 proposal that may affect the significance of the environmental effects of the proposal.

The proposal 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.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer:

(This form will be locked for editing upon signature)

Date Determined: 02/17/2016