U.S. Department of Energy
Categorical Exclusion Determination Form

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

Project Title: 25A3400 - Catalytic Biocrude Production in a Novel, Short-contact Time Reactor

Location: North Carolina

Proposed Action or Project Description: American Recovery and Reinvestment Act: ☒

The goal of this early stage R&D project is to develop a novel single-step catalytic biomass pyrolysis process with high carbon conversion efficiency to produce stable bio-crude with low oxygen content (<10%). RTI will lead three main efforts: catalyst development, process development, and market analysis. In collaboration with our industrial partners, a clear path to commercialization will be identified. Integrating this transformational technology in the existing domestic petroleum refining infrastructure can be an economically attractive option for second generation biofuels production because hydrogen demand for hydroprocessing would be significantly lower. This technology, once fully commercialized, has the potential to reduce the demand for imported petroleum (thus enhancing national security) and reduce greenhouse gas emissions by displacing fossil fuel with biofuels while creating new jobs in the developing biofuels industry, particularly in rural areas of the United States.
To successfully meet this challenge, RTI has assembled a diverse team that includes Archer Daniels Midland Company (ADM), ConocoPhillips (COP), and Albemarle Catalysts. Each team member brings diverse areas of expertise that can break this larger challenge into a number of smaller, manageable tasks, with high likelihood of success. ADM is the world's leading biofuels producer with extensive knowledge of the costs for producing, preparing, and delivering biomass resources. COP brings world-renowned expertise in downstream processing of hydrocarbon liquids

Categorical Exclusion(s) Applied:

X - B3.6 Siting/construction/operation/decommissioning of facilities for bench-scale research, conventional laboratory operations, small-scale research and development and pilot projects

*-For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, see Subpart D of 10 CFR10 21 Click Here

This action would not: threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders; require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities; disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or adversely affect environmentally sensitive resources (including but not limited to those listed in paragraph B.(4)) of Appendix B to Subpart D of 10 CFR 1021). Furthermore, there are no extraordinary circumstances related to this action that may affect the significance of the environmental effects of the action; this action is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

Based on my review of information conveyed to me and in my possession (or attached) concerning 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: /s/ William J. Bierbower Digitally signed by William J. Bierbower DN: cn=William J. Bierbower, o, ou, email=william.bierbower@hq.doe.gov, c=US Date: 2009.12.15 15:44:57 -05'00' Date Determined: 12/15/2009

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