



U.S. Department of Energy

Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: (0470-1544) University of Florida - Commercial Production of Terpene Biofuels in Pine

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): Gainesville, FL; Bamberg County, SC; Emeryville, CA; Boulder, CO

Proposed Action Description:

Funding will support development of genetically modified (GM) loblolly pine trees that produce more terpenes and have terpene compositions that are more suitable for blending with petroleum-based fuels than natural loblolly pine trees.

Proposed work will consist of (1) laboratory-based development of recombinant DNA molecules and genetic modification of microorganisms at the University of Florida (UFL) campus in Gainesville, FL and the University of California-Berkeley (UC Berkeley) campus in Emeryville, CA; (2) genetic modification of loblolly pine trees at ArborGen's laboratory facility in Summerville, SC; (3) indoor growth of the resulting GM loblolly pine trees at UFL's and ArborGen's laboratory and greenhouse facilities; (4) outdoor field tests with the resulting GM loblolly pine trees at ArborGen's dedicated field testing farm in Bamberg County, SC; and (5) laboratory-based analysis of the resulting GM microorganisms and GM loblolly pine trees at UFL's, UC Berkeley's, ArborGen's laboratory facilities and at the National Renewable Energy Laboratory (NREL) facility in Boulder, CO.

UFL and UC Berkeley will receive approval from their respective Institutional Biosafety Committees prior to beginning work with recombinant DNA molecules. ArborGen and NREL will carry out all indoor work with recombinant DNA molecules in accordance with the NIH Guidelines for Research Involving Recombinant DNA Molecules. ArborGen will receive USDA-APHIS permits prior to engaging in the interstate transport of GM loblolly pine trees or field tests with GM loblolly pine trees, and will carry out these activities in accordance with the terms and conditions of these permits.

Categorical Exclusion(s) Applied:

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

B3.8 - Outdoor terrestrial ecological and environmental research

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:

Date Determined: 12/01/2011