



U.S. Department of Energy Categorical Exclusion Determination Form



Program or Field Office: Office of Energy Efficiency and Renewable Energy:
Phase III Xlerator Program

Funding Opportunity Number DE-FOA-0000397

Applicant Name: Dynalene, Inc

Location: Whitehall, PA

Project Title Large Scale Testing, Demonstration and Commercialization
of Nanoparticle-based Fuel Cell Coolant

Proposed Action or Project Description American Recovery and Reinvestment Act:

Large scale commercialization of fuel cells depends on their cost, durability, weight and size. Dynalene's nanotechnology-based coolant fluid has shown significant promise to address all these issues by reducing operating cost, weight and size of a fuel cell and improving durability. In Phase III of the project, Dynalene proposes to commercialize the coolant by performing long-term (5000 hr) testing in-house as well as in subcontractor facilities under freeze-thaw conditions, and then provide the data to the fuel cell community. The main focus of the Phase III research is to validate the durability of the coolant under severe conditions such as temperature cycling and high electric field. Any result coming out of these testing would be utilized by Dynalene researchers to further optimize the coolant fluid. A successful optimization and scale-up effort for the fuel cell coolant will significantly expand the versatility of the PEM fuel cells in both mobile and stationary applications by offering the advantages of freeze protection, corrosion inhibition and low electrical conductivity in a single aqueous-based fluid, attributes that are not available in competitive alternates. The commercial applications include, but are not limited to, automotive fuel cell engine, power generation for residential and commercial buildings, back-up power for hospitals and other emergency establishments, fuel cells used in ships and space vehicles, mobile machinery and equipment, portable power generation systems and cooling of electronics and microprocessors.

Conditions: None

Categorical Exclusion(s) Applied: B3.6, B5.1

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

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.

ORO NEPA Compliance Officer

James L. Elmore

Date Determined:

9/14/2010