



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: Los Gatos Research

Location: Mountain View, CA

Project Title Advanced Laser-Based Sensors for Industrial Process Control

Proposed Action or Project Description American Recovery and Reinvestment Act:

Los Gatos Research proposes to develop advanced laser based sensors for industrial process control monitoring in high temperature, harsh environments found in steel, glass, and syngas (synthetic gas) manufacturing. These sensors will increase manufacturing efficiency, save energy, decrease harmful emissions, and reduce costs. In Phase III, LGR will fabricate, deploy, and commercialize two advanced laser based gas sensors for industrial process control monitoring in electric arc furnaces. The first sensor will utilize both midinfrared and near infrared lasers to make rapid (> 1 Hz), in situ measurements of CO, CO2, O2, H2O, and gas temperature in the offgas of an electric arc furnace. The second analyzer will employ LGR's patented Off Axis ICOS technology to make extractive measurements of multiple process gases (CO, CO2, O2, H2, H2O) and trace pollutants (NO, NO2, CH4). LGR will manufacture 3 of each sensor and perform long term deployments at U. S. secondary steel manufacturing facilities (including The Timken Company, Nucor, and other facilities, through a collaboration with AMI General Electric) to demonstrate the commercial potential of the instruments. These long term deployments in realistic conditions will provide the necessary experience for reliability tests and field qualification.

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