



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: FieldMetrics Inc.

Location: Seminole, FL

Project Title A Low-Cost Modular Optical Voltage Sensor for Power
Transmission Applications

Proposed Action or Project Description American Recovery and Reinvestment Act:

A low-cost modular optical voltage sensor has been designed for deployment on power lines over the full range of distribution and transmission voltages. The sensor is comprised of modular sections that are produced in high volume using advanced manufacturing techniques to dramatically reduce the cost as compared to conventional equipment. During the Phase I and II projects, FieldMetrics, Inc., addressed the design of the optical sensor to ensure accurate measurements under all operating conditions. Exceptional accuracy was demonstrated at 138kV, with a clear design path shown for extending the concept to 765 kV. Modular impedance building blocks, which are a critical enabling technology for the modular optical voltage sensor system, were designed, fabricated and tested. During Phase III, FieldMetrics, Inc. proposes to finalize the mechanical package, fabricate and test field-ready hardware, and complete full dielectric type testing of one or more three-phase systems that will be provided to utilities for field trials. The proposed optical voltage sensor has a wide range of possible applications for the electric utility industry. The device offers a high-accuracy, low cost, environmentally friendly voltage measurement technology to replace conventional instrument transformers that have exceeded their design lifetime. An integrated power supply allows the inclusion of GPS timing, transient recording, revenue metering, power quality assessment and other specialty sensing needs.

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: 9/17/2010