

PMC-ND
(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Georgia Tech Research Corporation

STATE: GA

PROJECT TITLE : Overcoming the Fundamental Bottlenecks to a New World-Record Silicon Solar Cell

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000806	DE-EE0006336	GFO-0006336-001	GO6336

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.
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Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Georgia Institute of Technology (Georgia Tech) to shrink the gap between the best silicon solar cell reported to date and the theoretical efficiency limit established by Shockley and Queisser (SQ). This would be accomplished through fundamental understanding of loss mechanisms, extensive atomistic and device modeling, novel materials growth, technology innovations, and cell fabrication. DOE funding would be used for research and development, modeling, characterization, and fabrication of crystalline silicon solar cells.

Research and development would occur at several laboratories at Georgia Tech, located at 225 North Ave NW, Atlanta, GA 30332. Georgia Tech completed an R&D questionnaire addressing the protocols for laboratory and facility safety, risk management and waste disposal. The laboratories comply with standard safety procedures and all processes and procedures are monitored by Environmental Health and Safety (EHS) staff. The laboratories have all applicable permits in place, and would not need additional permits for the proposed activities. All handling and disposal of gases, chemicals, wastes and liquid effluents comply with appropriate regulations.

Based on review of the project information and the above analysis, DOE has determined the research and development activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions B3.6 "small-scale research and development, laboratory operations and pilot projects" and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Kelly Daigle 8/8/2013

