

PMC-EF2a

(2010)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: AstroWatt

STATE: TX

PROJECT TITLE : High efficiency (> 20%) heterojunction solar cell on 30µm thin crystalline Si substrates using a novel exfoliation technology

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
492	DE-EE0005404	GFO-0005404-001	0

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

Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

A9

Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.

Rational for determination:

AstroWatt Inc. (Astro) would utilize DOE and cost share funds to demonstrate the feasibility of silicon solar cell technology. The location of the laboratory work would take place at the Microelectronics Research Center (MRC) at the Pickle Research Campus of the University of Texas (10100 Burnet Road, Austin, TX 78758) and at the National Renewable Energy Laboratory (NREL) in Golden, Colorado for validation.

Phase I

1. Develop optimal local back surface field and rear heterojunction structure for high efficiency Semiconductor-On-Metal (SOM) cell
2. Cell Process Integration

Phase II

3. Develop optimal light trapping scheme for SOM cells
4. Optimization of Device Performance
5. Manufacturing Development and Fabrication of Short Length Functioning Test Specimens
6. Physical, Thermal Laboratory Test Program, and Reporting

There is no fieldwork associated with this project.

According to the R&D laboratory questionnaire (for work to be completed at MRC): no additional permits are needed, and there would be no generation of air emissions associated with this work; all hazardous waste is disposed of appropriately at approved Treatment, Storage, and Disposal facilities; Safety Operating and Chemical Hygiene Plans (also in compliance with OSHA and industry standards) are in place; and NREL follows all federal regulations.

Budget: \$1,500,000 (DOE); \$375,600 (cost share)

This project is comprised of information gathering, analysis, and dissemination; and laboratory operations; therefore the DOE has categorized this into Categorical Exclusions A9 and B3.6.

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 :

EF2A composed by Christopher Carusona

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Kym Miller Date: 12/1/2011
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager