

PMC-ND

(1.08.09.13)

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



RECIPIENT:Intrinsiq Materials, Inc.

STATE: NY

PROJECT TITLE : Printed Nano Cu and NiSi Contacts and Metallization for Solar Cell Modules

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000923	DE-EE0006684	GFO-0006684-001	

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 funding to Intrinsiq Materials, Inc. to replace the silver contacts used in solar cells with printed Nickel Silicide (NiSi) and Copper (Cu) nanoparticle layers utilizing commercial printing equipment.

The proposed project activities would consist of developing, manufacturing and testing metal nanoparticle-based inks, applying the inks to solar cells using inkjet printing, testing the modified solar cells and development of standard solar cells for baseline comparisons. Intrinsiq Materials would partner with the Rochester Institute of Technology (RIT) and the College of Nanoscale Science and Engineering Photovoltaic Manufacturing and Technology Development facility (CNSE MDF) to complete project objectives. Incorporation of nanoparticles into ink would occur at the Intrinsiq Materials facility in Rochester, NY with all waste handling conducted in accordance with established nanoparticle waste stream processes and all local, state and federal waste disposal regulations. All other project work would follow the Environmental Health and Safety (EH&S) policies at the respective facilities. The facilities where development and testing activities would occur are designed for this type of research; therefore, no new construction, modifications or new permits, additional licenses and/or authorizations would be required as result of the proposed project.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that this project is consistent with actions outlined in DOE categorical exclusion B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and is therefore 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 :

Review completed by Logan Sholar on 09/08/14.

This NEPA Determination does not require a tailored NEPA provision.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Electronically Signed By: **Kristin Kerwin**
NEPA Compliance Officer

Date: 9/9/2014

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: _____

Field Office Manager

Date: _____