

PMC-EF2a

(2.04.02)

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



RECIPIENT: Hewlett-Packard Corporation

STATE: TX

PROJECT TITLE : Adaptive Environmentally Contained Power and Cooling IT Infrastructure for the Data Center

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000107	DE-EE0002893	GFO-10-247	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:

- 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.
- 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).

Rational for determination:

Hewlett-Packard Corporation (HP) is proposing to use ARRA funding through DOE to support a proposed R&D effort aimed at significantly raising the energy efficiency of the small and medium data center market.

HP will research and develop an Information Technology (IT) rack system that will provide its own internal power and cooling with High Voltage Alternating Current and chilled water as the primary inputs into the system and which will also accept alternative energy power sources such as wind and solar.

Activities being performed under this project include conducting research and development to develop 1) High efficiency power distribution path from the utility through to the servers, 2) high efficiency cooling system, 3) distributed power generation at the system unit level, 3) dynamic power and cooling monitoring and control software for total system optimization, and 4) an alternative DC power interface for wind and solar.

Research will be conducted at HP's fully established facilities in Houston, Texas and at Eaton Corporation's (HP sub-recipient) facilities in Raleigh, North Carolina. Each facility has submitted an R&D questionnaire which discusses their well established Health and Safety Management system, hazardous chemical storage and handling, waste disposal procedures and the EPA compliance information.

This project comprises information gathering and conventional laboratory research and development in facilities with well established safety and chemical handling procedures in place; therefore a CX A9 and B3.6 will apply.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Kimberly Lee
NEPA Compliance Officer

Date: 3/4/2010

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: _____