

PMC-EF2a

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



RECIPIENT: Iowa Office of Energy Independence

STATE: IA

PROJECT TITLE : SEP - Indigo Dawn Green and Main St. Project

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA000052	DE-EE0000162	GFO-0000162-013	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.
- B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

- The Iowa Office of Energy Independence proposes to provide \$250,000 of SEP funds to Indigo Dawn, L.L.C., for the Green & Main Project in Des Moines, Iowa. The project will convert a vacant building into a prototypical site that will integrate sustainable best practices in building renovations and community education centered on carbon reduction, energy efficiency and options in renewable energy. The multi-use, two-story building will combine commercial and residential occupancy. Ongoing monitoring of the building's energy and environmental performance will demonstrate how energy efficient rehabilitation of historic small business and residential buildings can be cost effective, save energy and reduce environmental impacts.
- Indigo Dawn will use SEP funds for design, engineering, interior and exterior renovations, installation of a small solar array and an 11.5 ton ground source heat pump. More specifically:
- Design tasks include architectural building design, historical consultation to develop design strategies that meet historic building guidelines, and landscape design of the building's vegetated roof.
 - Engineering tasks include structural engineering required for integration of additional support for the solar array and the vegetated roof, mechanical/electrical engineering to design the heating, cooling, and ventilation systems and lighting. Civil engineering will focus on the design of a storm water management system and the geothermal well field.
 - Exterior renovation will include the removal of roofing, doors, windows and inappropriate siding or claddings. The project will refurbish the windows, window trim, and the door to match the historical character of the building while providing for energy efficiency. Repairs to the leaking foundation include installation of waterproofing and insulation. Steel beams and posts will be inserted into the building to support the vegetated roof.
 - Interior renovation will include the installation of energy efficient plumbing such as low flow fittings to minimize water consumption and hot water waste, high efficiency lighting, HVAC retrofits, and energy efficient appliances. Computers and monitoring equipment will be used to measure energy use and design performance.
 - The new addition to the existing structure will match the historic character of the building. The new structure will provide classroom space as well as the basic structural support for the solar array.
 - An 11.5 ton closed-loop ground source heat pump system will be installed in a previously disturbed area that is currently a gravel parking lot. It will service the existing building and the new addition. The recipient committed to DOE that the boreholes will be drilled by a state licensed driller and the driller will follow the guidelines of the IGSHP Association and the NGWA recommendations. The driller will submit a drilling permit application to the Polk County Department of Health prior to any construction. Bentonite grout will be used to case the boreholes. The system will use HDPE piping that is fused by the manufacturer. The driller will pressure test all pipes before the final burial. The refrigerant used will be a non-toxic mixture of potable water and 20% propylene glycol solution.
 - The utility company, MidAmerican Energy, is responsible for relocating the power line from an overhead line which supports a single street lamp to a dedicated underground line to the building. This will enable greater control over the

management and distribution of the power to the building. The cobra head street lamp is already slated for removal as part of the Sherman Hill Action Plan.

The extant building is located within the Sherman Hill Historic District which is listed on the National Register of Historic Places. Portions of the District are also within the Sherman Hill residential neighborhood known locally as Des Moines' oldest neighborhood. The Phase I Archaeological Investigation, (Tallgrass Historians, L.C., July, 2010) shows the District has a history of mixed residential and commercial use since c.1869. The subject property was examined by a systematic shovel test excavation that included the sidewalk and street frontage area. Most of the tests showed no evidence of intact features. Portions of the brick foundations of two former buildings and the sidewalk were the only intact materials encountered. Overall, the site deposit has been damaged or destroyed by years of demolition and backfilling activities and it lacks integrity or individual significance. The Phase I report concluded that the overall site deposit does not appear to contribute significantly to the overall National Register status of the building or the Sherman Hill Historic District to which the extant building is considered contributing. No further archaeological investigation is recommended.

The SHPO reviewed the proposed project and noted that the building owner is attempting to meet the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic buildings. The SHPO concurred with a No Adverse Effect (R&C #100677123) provided Indigo Dawn continues to work with the SHPO and completes a successful NPS approved Part II tax credit application. After the work is completed, must also provide photographs of the finished project for SHPO's files. If the above conditions are not met, the No Adverse Effect finding will no longer apply. The recipient has affirmed they will comply with the SHPO conditions.

The recipient will continue to work with the SHPO to determine the appropriateness of the use of open cell spray foam and will abide by the SHPO's decision.

The City of Des Moines Historic District Preservation Commission issued a certificate of appropriateness (Case No. 20-2008-5.10 Renewal) to Indigo Dawn in March, 2010.

The historic building was tested for asbestos containing materials and the asbestos abated in accordance with the US EPA National Emission Standards for Hazardous Air Pollution (40 CFR, Part 61) and the Asbestos Hazard Emergency Response Act (40 CFR, Part 763). Seventy samples were taken and 12 contained asbestos including roofing tar, black mastic, texture and pipe wrap. All asbestos containing materials were removed from the building in May, 2008. Lead-safe work practices are followed and workers for deconstruction and construction are trained in lead abatement. "Steps to Lead Safe Renovation, Repair and Painting Rules" established by the EPA and the Iowa Department of Public Health will be applied to all potential lead contaminants.

Prior to the expenditure of Federal funds to implement any of the above-mentioned activities, Indigo Dawn, L.L.C., has the affirmative responsibility to ensure that it has a waste management plan addressing waste generated by their proposed actions. The plan will describe the plan to dispose of any sanitary or hazardous waste, e.g., construction and demolition debris, old light bulbs, lead ballasts, piping, roofing materials, discarded equipment, debris, asbestos, etc. generated as a result of the proposed project. The recipient must ensure that it will comply with all federal, state, and local regulations for waste disposal.

According to the recipient, the neighbors in the historic neighborhood are aware of the project and have been notified of the Historic Preservation Hearings as well as variances submitted to the zoning board. No public concerns have been raised. The neighborhood association is eager to see the project commence to help promote rehabilitation of the neighborhood and stimulate development in nearby vacant lots.

The proposed project would not impact wetlands, waters or floodplains as it is located in a residential area. The recipient is not required to obtain an NPDES permit but has committed to controlling erosion during construction and will revegetate disturbed areas immediately following construction.

There would be no impacts to any biological resources including threatened and endangered species, general wildlife, and sensitive habitats as the project is located in a highly developed, urban area.

There is a potential for small increases in traffic due to the community education center. The recipient will provide on-site parking, street parking spaces are available and a dedicated bicycle parking area is included in the site plan.

Based on the scope of the proposed project provided by the State and recipient, the work outlined is consistent with activities identified in Categorical Exclusion A9 "Information gathering/data analysis/dissemination of information" and B5.1 "Actions to conserve energy".

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

This EF-2a was prepared by Chris Paulsen on October 4, 2010.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____
NEPA Compliance Officer

Date: 10/20/10

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: _____