

PMC-EF2a

(2.0402)

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



RECIPIENT: City of Boulder, Colorado

STATE: CO

**PROJECT TITLE :** Modernization of Boulder Canyon Hydroelectric Project

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000120	DE-EE0002675	GFO-10-206-001	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:

**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 City of Boulder plans renovations and upgrades to existing equipment at the Boulder Canyon Hydroelectric Plant, a small-scale hydroelectric power plant in Boulder County, Colorado. These upgrades will require the removal and replacement of one 1930's-era turbine, generator, and associated equipment. All work for this project, with the exception of temporary modifications to a bridge, will be done within the power plant.

**Potential Environmental Impacts**

**Cultural Resources** – The BCHP is eligible for listing in the National Register of Historic Properties. Unless impacts are mitigated, the project would result in adverse impacts to historic properties, as defined in the implementing regulations for the National Historic Preservation Act. To comply with that Act, DOE has prepared, in consultation with the Colorado SHPO and the City, a Memorandum of Agreement that stipulates mitigation measures that must be implemented by the City to resolve adverse impacts. Implementation of the MOA and required stipulations will complete DOE's obligations under the National Historic Preservation Act, and will resolve any potential adverse impacts to historic properties.

**Water Resources** – This project will not require or result in a change in water delivery systems or water flow. To support delivery of equipment, the abutments for the bridge used to access the site may need to be refurbished or temporary supports may be added. If required, this work would not affect stream flow and would cause at most a minor and temporary increase in sedimentation. A Section 404 permit from the Corps of Engineers would not be required because the work would involve temporary placement of materials in or near the stream, or would involve maintenance or replacement of existing fill material, neither of which require a permit.

**Health and Safety** – This project will have substantial health and safety benefits, as deteriorating wiring and other electrical and mechanical equipment will be replaced, reducing risks from electrical shorts, equipment malfunctions, and dangerous equipment repairs. Some asbestos-containing wiring will be removed and some equipment and structures covered with lead paint may need to be handled or removed. The City and its contractors will prepare and implement safety plans to minimize risks to workers and will properly dispose of all hazardous materials. All work will be within the interior of the power plant, so there will be no risk of the release of hazardous materials to the outdoor environment.

**Other Sensitive Resources** – This project would be conducted within an existing facility and would not adversely affect other environmentally sensitive resources such as protected species, wetlands, areas having a special designation, prime agricultural sites, or prime sources of water.

NEPA Compliance Consideration

This project would not violate applicable statutory, regulatory, or permitting requirements; would not involve waste storage, disposal, or treatment facilities; and would not adversely affected environmentally sensitive resources except as described above. By implementation of the Memorandum Of Agreement to resolve adverse effects on historic properties, this project can be categorically excluded under category B5.1 (Actions to conserve energy) in accordance with DOE implementing regulations for NEPA at 10 CFR 1022, Subpart D.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Insert the following language in the award:

You are required to:

Implement the following stipulations and all other requirements of the Memorandum of Agreement for this project that was signed by the DOE, Colorado State Historic Preservation Officer, and the City of Boulder.

- 1. Documentation of Equipment Removed – To the extent feasible, historic equipment at the Boulder Canyon Hydroelectric Plant, including at a minimum one turbine and generator, and significant appurtenances that must be removed prior to installation of a new turbine and generator, will be documented. Copies of this documentation will be submitted to the DOE and Colorado SHPO.
- 2. Preservation of Historic Equipment in Place – To the extent feasible, historic project equipment that does not need to be removed or modified to replace one turbine/generator unit and conduct the other planned upgrades at the Boulder Canyon Hydroelectric Plant will be preserved within the power plant building. At a minimum, one of the two existing turbines and generators and representative portions of the control room housing and switchgear will be preserved.
- 3. Documentation of Changes in Interior of Hydroelectric Plant – The City of Boulder will complete a study to compile and compare historic and recent photographs of the power plant interior to identify changes in equipment over the life of the plant. This will include correlation of photographs to historic engineering drawings, as available. A report documenting the results of this effort will be submitted to the DOE and Colorado SHPO. All documentation for this project will be to the Level II standards of the Colorado Office of Archeology and Historic Preservation.

Note to Specialist :

Kurt Rautenstrauch 8.23.2010

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: [Signature] Date: 8/24/10  
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

**MEMORANDUM OF AGREEMENT  
BETWEEN THE DEPARTMENT OF ENERGY AND THE  
COLORADO STATE HISTORIC PRESERVATION OFFICER  
REGARDING MANAGING HISTORIC PROPERTIES  
THAT WILL BE ADVERSELY AFFECTED BY  
UPGRADING AND MODERNIZING GENERATION EQUIPMENT  
AT THE BOULDER CANYON HYDROELECTRIC PLANT  
IN BOULDER COUNTY, COLORADO**

**WHEREAS**, the City of Boulder (City) proposes to upgrade and modernize electrical generation equipment at the 100-year-old Boulder Canyon Hydroelectric Plant; and

**WHEREAS**, the Department of Energy (DOE) will provide Federal assistance in the form of a grant to the City of Boulder for upgrades at the Boulder Canyon Hydroelectric Plant; and

**WHEREAS**, the Boulder Canyon Hydroelectric Plant is eligible for nomination to the National Register of Historic Places; and

**WHEREAS**, DOE has determined that the City's project will have an adverse effect on historic properties, and has notified the Colorado State Historic Preservation Officer (SHPO) pursuant to 36 CFR Section 800.14(b) of the Advisory Council on Historic Preservation (Council) regulations (36 CFR Part 800), implementing Section 106 of the *National Historic Preservation Act* (16 USC 470f) ; and

**WHEREAS**, in accordance with 36 C.F.R. Section 800.6(a)(1), the Council has been notified of DOE's adverse effect determination and has elected not to participate in consultation pursuant to 36 C.F.R. Section 800.6(a)(1)(iii); and

**WHEREAS**, the City has participated in the consultation and has been invited to concur in this Memorandum of Agreement (MOA); and

**NOW THEREFORE**, DOE and the SHPO agree that the upgrading and modernization of electrical generation equipment at the Boulder Canyon Hydroelectric Plant will be administered in accordance with the following stipulations in order to satisfy DOE's Section 106 responsibilities.

## Memorandum of Agreement – Boulder Canyon Hydroelectric Plant Upgrades and Modernization

### STIPULATIONS

In coordination with the SHPO and the City, DOE will ensure that the following measures are completed prior to use of Federal funds to remove historic equipment from the Boulder Canyon Hydroelectric Plant

1. **Documentation of Equipment Removed** – To the extent feasible, historic equipment at the Boulder Canyon Hydroelectric Plant, including at a minimum one turbine and generator, and significant appurtenances that must be removed prior to installation of a new turbine and generator, will be documented. Copies of this documentation will be submitted to the DOE and Colorado SHPO.
2. **Preservation of Historic Equipment in Place** – To the extent feasible, historic project equipment that does not need to be removed or modified to replace one turbine/generator unit and conduct the other planned upgrades at the Boulder Canyon Hydroelectric Plant will be preserved within the power plant building. At a minimum, one of the two existing turbines and generators and representative portions of the control room housing and switchgear will be preserved.
3. **Documentation of Changes in Interior of Hydroelectric Plant** – The City of Boulder will complete a study to compile and compare historic and recent photographs of the power plant interior to identify changes in equipment over the life of the plant. This will include correlation of photographs to historic engineering drawings, as available. A report documenting the results of this effort will be submitted to the DOE and Colorado SHPO. All documentation for this project will be to the Level II standards of the Colorado Office of Archeology and Historic Preservation.

### DURATION

This MOA will remain valid until the completion of the DOE-funded upgrades of the Boulder Canyon Hydroelectric Plant and all documentation stipulated in this MOA has been completed and submitted to the DOE and Colorado SHPO.

### DISPUTE RESOLUTION

Should any signatory party to this MOA object at any time, within the time frames specified, to the manner in which the terms of this MOA are implemented, the DOE shall consult with the objecting party to resolve the objection. If the DOE determines, within 15 days, that such objection(s) cannot be resolved, it will either:

- a. Forward all documentation relevant to the dispute, including the DOE's proposed resolution, to the ACHP. The ACHP shall provide DOE with its advice on the

## Memorandum of Agreement – Boulder Canyon Hydroelectric Plant Upgrades and Modernization

resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, DOE shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. DOE will then proceed according to its final decision.

- b. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, DOE may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, DOE shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
- c. DOE's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

### AMENDMENTS AND TERMINATION

Before DOE lifts the spending conditions on the City's Financial Assistance Agreement, any signatory to this memorandum of agreement may request that it be amended or terminated. 36 C.F.R. 800.6(c)(7 and 8) shall govern the execution of any such amendment or termination.

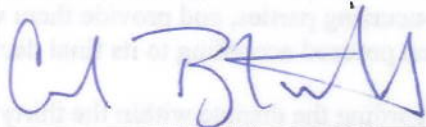
### OTHER TERMS AND CONDITIONS

Execution and implementation of this MOA evidences that DOE has afforded the Council a reasonable opportunity to comment on the project and its effects on historic properties, taken into account the effects of the project on historic properties, and satisfied its responsibilities under Section 106 of the National Historic Preservation Act and applicable implementing regulations.

Memorandum of Agreement – Boulder Canyon Hydroelectric Plant Upgrades and Modernization

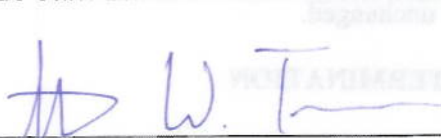
**SIGNATORIES**

**U.S. Department of Energy**

By:  Date: 8/23/10


Carol Battershell  
Executive Director of Field Operations (Acting)  
Golden Field Office

**Colorado State Historic Preservation Officer**

By:  Date: 8/18/10

*bc* Edward C. Nichols  
State Historic Preservation Officer

**CONCURRENCE BY CONSULTING PARTIES**

By:  Date: 8/18/10

Carol D. Ellinghouse, P.E., Water Resources Coordinator  
City of Boulder