

PMC-EF2a

(20402)

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



RECIPIENT: Flathead Electric Cooperative

STATE: MT

PROJECT TITLE : Facility HVAC System Conversion to Ground Source Heat Pump (Phase 2)

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|--|--------------------------------------|----------------------------|-------------------|
| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
| DE-FOA-EE0000116 | DE-EE0002816 | GFO-0002816-003 | GO2816 |

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.
- B5.3** Modification (but not expansion) or abandonment (including plugging), which is not part of site closure, of crude oil storage access wells, brine injection wells, geothermal wells, and gas wells.

Rational for determination:

Flathead Electrical Cooperative (FEC) was issued an approval for Phase 1 activities by GFO-10-162-001 on May 12, 2010 for feasibility, engineering, and test wells associated with the installation of four 20 ton geothermal open-looped heat pumps. This NEPA determination applies to Phase II and Phase III activities.

Phase II – Installation and Commissioning of Equipment
Phase III – Operation, Data Collection, and Marketing

Flathead is required by the state of Montana's Dept. of Natural Resources and Conservation (MDNRC) to obtain a Beneficial Water Use Permit (i.e Water Rights) before they convert the test wells into production and/or reinjection wells. While FEC has submitted the project for permitting to both MDNRC and EPA Region 8 they have not yet obtained their determination. FEC has committed to DOE that they will obtain and follow all conditions of MDNRC's issuance of their Beneficial Water Use permit and EPA's Region 8 Underground Injection Control (UIC) permit for their 80 ton open-looped geothermal system. (Documentation in Case File).

All wells have been drilled on the previously disturbed paved parking lot on FEC's property. The surrounding area has existing production wells on other sites within the same aquifer and geologic formation, this hydrologic formation has an extensive amount of existing operating wells. There were four wells drilled to a depth of 30 ft per well.

FEC was allowed to drill the necessary test wells for future conversion/development under Phase 1 of this award. A state licensed driller was used, and was required to follow Title 37, Chapter 43, MCA and Title 36, Chapter 21, Administrative Rules of Montana (ARM), ("Water Well Contractor Rules"). FEC will adhere to all guidelines outlined within the Water Well Contractor Rules (ARM). ARM has set procedures for well capping and abandonment in the case that the system is determined unfeasible (ARM 36.21.669A through ARM 36.21.677).

DOE has determined that the installation, commissioning, and operation of an arrogated 80 ton open-looped ground source heat pump into the already breached evergreen aquifer does not have a significant impact to the human health and/or environment. This project is hereby Categoricaly Excluded under CX A9 "Information gathering/data

analysis/document preparation/dissemination", B5.1 "Actions to Conserve Energy" and B5.3 "Modification, which is not part of site closure, to geothermal wells".

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

EF2a prepared by John Jediny/Casey Strickland

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 1/12/11
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