

PMC-ND  
(1.08.09.13)

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



**RECIPIENT:**Natel Energy, Inc.

**STATE:** OR

**PROJECT TITLE :** SLH-100 demonstration project at Monroe Drop

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0000486	DE-EE0005420	GFO-0005420-002	GO5420

**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, analysis, and dissemination** Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
- B4.12 Construction of powerlines** Construction of electric powerlines approximately 10 miles in length or less, or approximately 20 miles in length or less within previously disturbed or developed powerline or pipeline rights-of-way.
- B5.15 Small-scale renewable energy research and development and pilot projects** Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

Natel Energy, Inc. is proposing to use DOE funding to design, construct and operate a new low-head hydropower project at an existing irrigation canal near Madras, Oregon.

Phase 1 for the project received a NEPA determination on April 11, 2012. That determination placed a hold on Phase 2 activities. This NEPA determination applies to all Phase 2 tasks and activities.

Phase 2 tasks include:

- Task 5.0 - Construct Powerhouse and Install HydroEngine™ unit
- Task 6.0 - Monitor System Operation and Verify Levelized Cost of Energy for Final Report
- Task 7.0 - Project Management and Reporting

The proposed project would include the construction of a small run-of-canal hydroelectric facility located on the North Unit Irrigation District Main Canal (NUMC) near the town of Culver, Jefferson County, Oregon. An elevation drop at this location would be utilized to run the turbines.

Construction would include installation of one SLH100 HydroEngine located within a newly constructed powerhouse with an intake channel and tailrace channel connected to the western side of the canal. An Obermeyer style gate would also be added to the existing structure to better control and distribute water in the canal.

The system would not dam the canal, only divert water; it is considered a "run-of-canal" hydro system that would produce an average generation of 1,004 MWh/year. It would operate within the normal operating profile of the NUMC, and in accordance with the NUMC operations, which are to deliver water for agricultural irrigation. The irrigation season runs from April through October. The canal is normally dewatered following the irrigation season. The project would not change the flow rate or the canal's period of use.

The canal is owned and operated by the U.S. Bureau of Reclamation and operated by North Unit Irrigation District (NUID). The surrounding land is farmland under active cultivation. An area of the land on which the project would be located is part of the Crooked River National Grassland which is under the administration of the U.S. Forest Service.

During construction, Natel would excavate the site in order to bury the inlet and outlet pipes, as well as create a level foundation for the powerhouse. Excavated soil would be replaced wherever possible and would be used to landscape

around the finished structure. The powerhouse would have a concrete floor, metal walls, and would measure 25' (L) x 25' (W) x 23' (H). About 100 feet of the existing roadway along the canal would be widened up to four feet east within the area adjacent to the project site to accommodate the powerhouse.

The project would also require road modifications and an interconnection path between the powerhouse and the existing 12.5 kV distribution line owned and operated by Pacificorp. An additional 1800 feet of trenching would be completed parallel to the existing road in order to extend the transmission lines to the site. The new transmission lines would spur off of existing lines and would be buried per agreements with the surrounding landowners. The project's construction activities would disturb approximately ½ acre of land previously disturbed by the construction of the canal and adjacent roadways.

#### Bureau of Reclamation:

The Bureau of Reclamation is the owner of the NUMC canal. A Construction, Coordination, and Completion Contract between Natel and the Bureau of Reclamation allows Natel the right and authority to enter upon, occupy and use the canal. Under this contract Natel has agreed to comply with the Bureau of Reclamation's Safety and Health Standards and prepare a Standing Operating Procedure for the hydro facilities.

#### Federal Energy Regulatory Commission (FERC):

Pursuant to the U.S. Federal Power Act 16 USC 791a - 825r, Natel submitted an application to FERC (Project # P-14430) for their proposed project. On August 1, 2014 FERC granted Natel an exemption from licensing, otherwise known as a Conduit Exemption. Agency consultations (as listed below in permits/approvals) were conducted during this federal process. FERC determined, after reviewing Natel's application and other pertinent information, the issuance of their order is not a major federal action significantly affecting the quality of the human environment warranting the exemption. Per the Exemption, Natel will develop an Emergency Action Plan consistent with FERC's guidelines.

#### Permits/Approvals:

As part of the project the following permits and approvals include:

\*US Forest Service: Special Use Permit (CRG145 and payment of a Land Use Fee issued on March 20, 2014.

\*Federal Energy Regulatory: Conduit Exemption issued August 1, 2014

\*US Bureau of Reclamation: Construction, Coordination, and Completion Contract – commitment letter issues September 27, 2013. Final contract between BOR and Natel is currently being completed.

\*State Historic Preservation Office: Section 106 Consultation per the National Historic Preservation Act –a Memorandum of Agreement signed on May 14, 2013. Natel will conduct Level II photo documentation of the site per the stipulations of the MOA to finalize the consultation process.

\*US Fish and Wildlife Service: – Section 7 consultations per the Endangered Species Act – completed June 18, 2013.

\*Oregon State Fish and Wildlife Office – per consultations with FERC and the Bureau of reclamation they indicated no objections to the project.

\*Oregon Water Resources Department - Minor Hydro Water Right permit, to be completed prior to construction.

#### Public Involvement:

As a part of the FERC process, A Notice of Intent and a Pre-Application Document were distributed to resource agencies, Native American Tribes, and filed at the Commission on April 1, 2013. A site visit followed by a publically noticed meeting was held on May 7, 2013, at the City Hall of Madras, Oregon.

#### Endangered Species:

Per a consultation letter from the U.S. Fish and Wildlife Service dated June 18, 2013, there are no species or habitat in the Project area that are protected under the Endangered Species Act. They indicated that the project would have minimal environmental impacts and they did not have any additional mitigation measures to recommend.

#### Historic Properties:

An inventory of cultural resources was undertaken by the University of Oregon Museum of Natural and Cultural History within the area of the project. A pedestrian survey of the project found the area to have been greatly disturbed

by past construction. No prehistoric cultural materials were discovered, and no historic artifacts were found. This was confirmed by the Oregon State Historic Preservation Office (SHPO) in a letter dated October 9, 2013. The SHPO concurred with findings of the inventory that there would be no adverse effect to archeological resources from activities proposed for Natel's project.

The Monroe Drop structure and canal qualify as historic properties eligible for listing in the National Register. On October 7, 2013, the Oregon SHPO determined that the project would have an adverse effect on the historic properties. Monroe Drop is a concrete chute-drop that was constructed in 1945. Per the cultural resource inventory, it has been determined to be eligible for the National Register. A Memorandum of Agreement (MOA) was established by FERC as lead federal agency for the project undertaking that established measures to minimize the adverse impact to the canal.

#### Aquatic Resources:

The proposed project is located on a conduit with fish screens installed at the diversions upstream of the project site and the canal is taken out of service and dewatered a large portion of the year, so there are no viable fishery resources within the project boundaries.

In addition, per the US Fish and Wildlife's National Wetlands Inventory there are no jurisdictional wetlands in or around the proposed project site.

#### Water Quality:

There is some potential to affect water quality during the period of construction. However, per the agreement with NUID, Natel would only construct the canal diversion during the outage period when the canal is dewatered. Affects to water quality would be limited to periods of precipitation when there may be runoff from the construction area. The use of construction best management practices would be implemented. These practices would limit any potential effects on water quality due to runoff and erosion.

#### Natel's Environmental Protection Measures:

To minimize affects to geology and soils, Natel would implement best management practices for all construction related activities. Natel would also maintain a supply of oil absorbing materials on site during the construction period to contain any potential spills of fuels or lubricants that could potentially reach waterways.

The metal powerhouse building will be colored with a neutral color selection consistent with Jefferson County Standards and appropriate for the rural setting.

Natel will also comply with all stipulations set forth in the permits and approvals from BOR, FERC, USFS, SHPO, NUID, Oregon Water Resources Department and the Oregon Department of Wildlife.

Based on the above information, including Natel's committed measures, DOE has determined that this project would have no significant impacts to the human or natural environment. Project activities are consistent with actions covered under DOE CX A9 (information gathering), B4.12 (construction of power lines), B5.15 (small-scale renewable energy research project) 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.

Insert the following language in the award:

You are required to:

The recipient must comply with all terms and conditions and/or stipulations set forth in all received and pending permits and approvals, including but not limited to the Bureau of Reclamation, Federal Energy Regulatory Commission, U.S. Fish and Wildlife Service, State Historic Preservation Office, North Unit Irrigation District, Oregon Water Resources Department and the Oregon Department of Wildlife.

Note to Specialist :

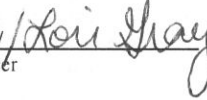
NEPA review completed by Laura Margason on August 7, 2014

This NEPA Determination requires a tailored NEPA provision.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: \_\_\_\_\_

Electronically  
Signed By: Lori Gray  
NEPA Compliance Officer



Date: 8/7/2014

**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: \_\_\_\_\_