

PMC-EF2a

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



(20402)

RECIPIENT:State of Alaska**STATE:** AK

PROJECT TITLE : Waste Heat Recovery at Village Power Plants: EECBG Program - Notice of Wetland Involvement - State of Alaska

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000013	DE-EE0000827	GFO-0000827-001	GO827

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:

B5.14 Combined heat and power or cogeneration systems Conversion to, replacement of, or modification of combined heat and power or cogeneration systems (the sequential or simultaneous production of multiple forms of energy, such as thermal and electrical energy, in a single integrated system) at existing facilities, provided that the conversion, replacement, or modification would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources.

Rational for determination:

The U.S. Department of Energy (DOE) provided funding to the State of Alaska under the DOE's American Recovery and Reinvestment Act of 2009 Energy Efficiency and Conservation Block Grant Program (EECBG). Alaska proposes to subgrant \$1.2 million to the City of Buckland and the City of King Cove to retrofit existing heat recovery systems using heat loops to provide recovered heat to nearby public facilities.

Project Site #1: The City of Buckland's power plant currently provides 7,000 gallons of diesel generated recovered heat to the existing Washeteria building. The proposed project would expand the existing power plant's heat recovery district heating system to provide additional recovered heat to the adjacent Water Treatment Plant, the Clinic, City offices, and the ANICA Store. The proposed site is located within Section 26, Township 7 North, Range 12 West, Kateel River Meridian, Buckland, Alaska, which is southwest of Buckland River and above the 100-year floodplain. The site is flat and slopes southwest. Soils at the site consist of gravel roads and fill pads.

The proposed project would involve 1) the installation of marine exhaust manifolds onto two existing CAT 3456 gen sets (691 horsepower each) to increase available recovered jacket water heat and 2) trenching and installation of 1,150 linear feet of heat recovery arctic piping. All work at the power plant would be conducted within the structure. Arctic piping loops would consist of 24 inch pipe buried 3 feet and installed within existing road right-of-ways and gravel pads. Propylene glycol, a food-grade antifreeze, would be used for freeze protection of the arctic piping. All fill would be placed in 12 inch lifts and compacted to 95% minimum density. A total of 400 cubic yards of material would be placed in 0.06 acre of previously disturbed uplands.

Threatened and Endangered Species – The City of Buckland is located within the range of polar bears (*Ursus maritimus*). USFWS expects the likelihood of encountering a polar bear near the proposed project, which is located 18 miles inland from Kotzebue Sound, to be extremely low. Given this low likelihood, in a letter dated April 12, 2012, the USFWS determined adverse effects to this species would be discountable and the proposed activities are "not likely to adversely affect polar bear." Based on this information, DOE has determined the proposed project would not adversely affect any listed, proposed or candidate species.

Cultural Resources – In a letter dated February 15, 2012, the Alaska State Historic Preservation Officer (SHPO) determined "No Historic Properties Affected" as a result of the proposed project. In a letter dated March 22, 2012, the Indian Reorganization Act (IRA), Buckland's federally-recognized tribal government, concurred with the finding of "No Historic Properties Affected" as result of the proposed project.

Air Emissions – The proposed project would reduce current levels of diesel exhaust emissions by using available recovered heat from the Buckland power plant to heat adjacent community facilities. By reducing fuel consumption for

space heating, associated diesel exhaust emissions would also be reduced.

Noise – Project construction would generate noise associated with the operation of heavy equipment, but this increased noise is anticipated to last no more than two months.

Traffic – an increase in traffic associated with construction is expected, but this increased traffic is anticipated to last no more than two months.

Project Site #2: The King Cove Electric Department (KCED) currently provides 22,000 gallons of diesel generated recovered heat to the King Cove School. The proposed project would expand the existing heat recovery district heating system to provide available recovered heat to the King Cove Clinic and adjacent Aleutians East Borough housing complex. The proposed site is located within Section 26, Township 59 South, Range 86 West, Seward Meridian, King Cove, Alaska. The site is located above the 100-year floodplain and slopes to the southwest. Soils at the site consist of sandy gravel and ash, with the exception of the wetland area adjacent to the Clinic.

The proposed project would involve 1) the installation of marine exhaust manifolds onto two existing CAT 3456 diesel gen sets (691 horsepower each) located at the KCED and 2) trenching and installation of 1,400 linear feet of heat recovery arctic piping. All work at the power plant would be conducted within the structure. Arctic piping loops would consist of 24 inch pipe buried 3 feet and installed within existing road right-of-ways and gravel pads. Propylene glycol, a food-grade antifreeze, would be used for freeze protection of the arctic piping. A total of 350 cubic yards of material would be placed in 0.1 acre, of which 30 cubic yards would be placed in less than 0.01 acre of wetland. Eighty feet of arctic piping would cross the wetland area between Slocum Drive and the existing Clinic gravel pad. Work within the wetland would consist of removing the organic surface materials to be set aside for reuse upon completion of trenching and installing the arctic pipe. All fill would be placed in 12 inch lifts and compacted to 95% minimum density.

Nationwide Permit – The King Cove project would involve placement of fill material into a small, isolated wetland. In a letter dated March 13, 2012, the Army Corps of Engineers authorized the proposed wetland disturbance by issuing a Nationwide Permit (NWP) No. 12 for Utility Line Activities (Permit Number POA-2012-77).

Threatened and Endangered Species – Three threatened and endangered species, the Steller's eiders (*Polysticta stelleri*), sea otters (*Enhydra lutris kenyoni*) and Kittlitz's murrelets (*Brachyramphus brevirostris*) could be affected by any impact to the marine environment. The project area is also adjacent to designated critical habitat for the sea otter. However, the proposed upgrades to the heat recovery system would take place entirely inland and would not impact the marine environment. In view of this information, USFWS determined, in a letter dated April 11, 2012, that the proposed project would have "No Affect" on these species. Based on this information, DOE has determined the proposed project would not adversely affect any listed, proposed or candidate species.

Cultural Resources – In a letter dated February 8, 2012, the Alaska SHPO determined "No Historic Properties Affected" as a result of the proposed project. In a letter dated March 22, 2012, the Agdaadux Tribe of King Cove concurred with the finding of "No Historic Properties Affected" as result of the proposed project.

Air Emissions – The proposed project would reduce current levels of diesel exhaust emissions by using available recovered heat from the KCED to heat adjacent community facilities. By reducing fuel consumption for space heating, associated diesel exhaust emissions would also be reduced.

Noise – Project construction would generate noise associated with the operation of heavy equipment, but this increased noise is anticipated to last no more than two months.

Traffic – an increase in traffic associated with construction is expected, but this increased traffic is anticipated to last no more than two months.

Based on review of project information and the above analysis, DOE has determined the project would not have a significant individual or cumulative impact to human health and/or the environment. DOE has determined the proposed project is consistent with the actions contained in DOE's categorical exclusion B5.14 "combined heat and power or cogeneration systems," and is 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:

Note to Specialist :

Cristina Tyler 5.9.2012

Per 10 CFR § 1022.12, this NEPA determination and Notice of Wetland Involvement will be posted for public review in the DOE Public Reading Room. DOE will not authorize funding for this project for at least 15-days from the date of posting.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____
NEPA Compliance Officer

Date: 5/10/2012

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: _____