

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Colorado Energy Office**STATE:** CO

PROJECT TITLE: Agricultural Energy Efficiency

| | | | |
|--|--------------------------------------|----------------------------|-------------------|
| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
| | DE-EE0008644 | GFO-0008644-001 | |

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), 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.)
- B2.2 Building and equipment instrumentation** Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).
- B1.31 Installation or relocation of machinery and equipment** Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.
- B5.1 Actions to conserve energy or water** (a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix. (b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have

the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4) have the potential to cause a significant increase in energy consumption in a state or region.

B5.2

Modifications to pumps and piping

Modifications to existing pump and piping configurations (including, but not limited to, manifolds, metering systems, and other instrumentation on such configurations conveying materials such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water). Covered modifications would not have the potential to cause significant changes to design process flow rates or permitted air emissions.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to the State of Colorado Energy Office for activities under their Agricultural Energy Efficiency (AgEE) program. The AgEE program would help finance energy efficiency upgrades (identified through an energy audit) to Colorado farmers, ranchers and educational institutions. The AgEE program would only fund equipment replacement or additions, with installation and design activities being funded through a different funding source. The energy efficiency upgrades would occur in various agricultural fields, barns, greenhouses, cold storage facilities, feedlots, milking parlors, shops, and/or agriculturally-focused educational institutions (e.g. greenhouses used for educational purposes) throughout Colorado, with installation and verification of energy savings required upon project completion.

The proposed Bounded Categories of activities listed below would generally require the retrofit or replacement of an existing unit (such as a motor) to increase the energy efficiency of a piece of equipment. Instances where new equipment would be installed are noted below:

Bounded Categories:

Well Water plate heat exchanger: Typically indoor- replacement or addition of equipment with minor plumbing alterations only

Dairy refrigeration tune-up: Indoor-replacement of equipment only

Variable speed control vacuum pump: Indoor- replacement or addition of equipment only

Variable Speed Milk Pump: Indoor- replacement of equipment only

Refrigeration heat recovery: Indoor- addition of equipment with minor to major plumbing modifications

Electric Water Heaters: Typically indoor- replacement of equipment with minor plumbing and electrical modifications only

Variable frequency drive: Typically outdoor-replacement or addition of equipment

Ventilation/circulation fan: Indoor-replacement or addition of equipment with minor electrical modifications only. For ventilation fans, exterior envelope may require modifications

Irrigation well pump: Outdoor- replacement of equipment with minimal modifications only

Process pump: Indoor- replacement of equipment with minimal modifications only

Compressed air leak repair: Indoor- replacement of equipment with minimal modifications only

No Air-loss condensate drain: Indoor-addition of equipment with modifications to mounting location and drainage path only

Natural Gas Grain Dryer: Typically outdoor – replacement of equipment and could require natural gas service connection from another building on the property if gas line connection to grain dryer does not exist. This activity would NOT include installation a new gas line to the property if one does not already exist. Structural/footprint needs dependent on dryer configuration

Pump motor horsepower reduction: Could be indoor or outdoor- addition of equipment with minimal modifications only

Multi-trajectory sprinklers: Outdoor-replacement or addition of equipment with minimal modifications only

Flow controlling nozzle for impact sprinklers: Outdoor- replacement or addition of equipment with minimal modifications only

Hot water boilers: Indoor- replacement of equipment with minor plumbing modifications only

Unit heaters: Indoor – replacement of equipment with minor plumbing and electrical modifications only

Thermal curtains: Indoor – replacement or addition of equipment with minor roof and wall modifications only. Ceiling- and wall-mounted equipment may need to be relocated

Greenhouse climate controls: Indoor- replacement or addition of equipment with minor electrical modifications only

Motors/drives: Could be indoor or outdoor- replacement of equipment and if outdoor, applications would need appropriate enclosure

Electric Livestock waterers: Typically outdoor- replacement of equipment with minor to major electrical modifications

Downlight (LED) lighting: Indoor - replacement of equipment with minor electrical modifications only

High/low bay (LED) lighting: Indoor – replacement of equipment with minor electrical modifications only

Linear tubes lighting: Indoor – replacement of equipment with minor electrical modifications only
Refrigeration case lighting: Indoor- replacement of equipment with minor electrical modifications only
Troffers (LED) lighting: Indoor- replacement of equipment with minor electrical modifications only
Canopy (LED) lighting: Typically indoor- replacement of equipment with minor electrical modifications only
Exterior pole mounted LED lighting: Outdoor- replacement of equipment with minor electrical and mounting modifications only
Exterior building mounted LED lighting: Outdoor - replacement of equipment with minor electrical and mounting modifications only
Controls (occupancy sensor): Could be indoor or outdoor- replacement or addition of equipment with minor electrical modifications only
Controls (photocell): Indoor or outdoor- replacement or addition of equipment with minor electrical modifications only
Mogul Screw Base: Typically indoor – replacement of equipment with minor electrical modifications only

After evaluation of the potential impacts, DOE has determined that the proposed activities would not have short-term or long-term adverse impacts to the floodplain, if activities were to occur within a floodplain. Additionally, DOE has determined that the project activities are not subject to the preparation and distribution of a notice of floodplain action as required under Subpart B of 10 CFR 1022 "Compliance with Floodplain and Wetland Environmental Review Requirements", as the proposed activities are minor modifications or additions to existing facilities to improve environmental conditions and the requirement is not applicable (10 CFR 1022.5(d)(3)).

The proposed activities would have no potential to cause effects to historic properties, if any were identified.

DOE also conducted a review of potential issues relating to other resources of concern and found that no effects would be expected to result from activities anticipated to be selected that fit within the Bounded Categories described above.

This NEPA determination applies only to projects funded under award DE-EE0008644.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

This NEPA Determination only applies to projects funded by DE-EE0008644 that fit within the Bounded Categories listed above.

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

This NEPA Determination does NOT apply to activities that do not fit within the Bounded Categories listed above, including the installation of a new natural gas line to a property, if one does not already exist.

Include the following condition in the financial assistance agreement:

Activities/projects not listed under "Bounded Categories" are subject to additional NEPA review and approval by DOE. For activities/projects, requiring additional NEPA review, the recipient must complete the environmental questionnaire: <https://www.eere-pmc.energy.gov/NEPA.aspx> and receive notification from DOE that the NEPA review has been completed and approved by the Contracting Officer prior to initiating the project or activities.

Some activities listed under "Bounded Categories" are more restrictive than the Categorical Exclusion. The restrictions listed in the "Bounded Categories" must be followed.

Notes:

Office of Weatherization and Intergovernmental Programs – State Energy Program
This NEPA Determination requires a tailored NEPA provision.
NEPA review completed by Diana Heyder, 10/18/2019

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____



Casey Strickland

NEPA Compliance Officer

Date: 10/21/2019

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
 Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____