

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



RECIPIENT: National Rural Electric Cooperative Association

STATE: VA

PROJECT TITLE : Rural Energy Recovery from Waste (REROW)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0010728	GFO-0010728-001	GO10728

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.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B3.6 Small-scale research and development, laboratory operations, and pilot projects

Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

B3.9 Projects to reduce emissions and waste generation

Projects to reduce emissions and waste generation at existing fossil or alternative fuel combustion or utilization facilities, provided that these projects would not have the potential to cause a significant increase in the quantity or rate of air emissions. For this category of actions, "fuel" includes, but is not limited to, coal, oil, natural gas, hydrogen, syngas, and biomass; but "fuel" does not include nuclear fuel. Covered actions include, but are not limited to: (a) Test treatment of the throughput product (solid, liquid, or gas) generated at an existing and fully operational fuel combustion or utilization facility; (b) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that requires only minor modification to the existing structures at an existing fuel combustion or utilization facility, for which the existing use remains essentially unchanged; (c) Addition or replacement of equipment for reduction or control of sulfur dioxide, oxides of nitrogen, or other regulated substances that involves no permanent change in the quantity or quality of fuel burned or used and involves no permanent change in the capacity factor of the fuel combustion or utilization facility; and (d) Addition or modification of equipment for capture and control of carbon dioxide or other regulated substances, provided that adequate infrastructure is in place to manage such substances.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to the National Rural Electric Cooperative Association (NRECA) for rural energy recovery from waste (REROW), to identify the nature of potential municipal solid waste (MSW) streams and identify storage and collection plans. The goal of the project is to increase future waste deployments in the co-op community by providing centralized support, in the form of tools that address identified gaps supplemented by a talent network to sustain support into the future and assist with new challenges.

The project would be executed over three Budget Periods (BP) and 3 tasks, including subtasks. BP1 and Task 1 includes development and execution of stakeholder engagement, an engagement plan, formation of advisory and stakeholder groups, identification and characterization of key waste streams, and development of support tools. BP2 and Task 2 includes development of engagement and support materials, support tools, and deployment of a waste collection plan. BP3 and Task 3 includes preparing the final engagement and outreach plan, development of final versions of support tools, and preparing pre-processing report. Waste collection would occur in all three budget

periods.

Activities would take place at NRECA in Arlington, WA; Idaho National Laboratory in Idaho Falls, ID; Cogent Energy Systems/Heartland Water Technology in Murfreesboro, TN; and the University of Idaho in Moscow, ID. Waste collection sites were not selected in the proposal, collection sites are likely to be private, county or city owned.

MSW will be collected and delivered to Idaho National Laboratory (INL) for bench-scale physical and chemical characterization using standard methods employed by Biomass Feedstock National User Facility. The material would be processed into conversion ready MSW samples and shipped to project contractors at Cogent Energy Systems and the University of Idaho for conversion, using Cogent/Heartland's HelioStorm conversion process, into energy products and byproducts. Physical conversion products would then be shipped back to INL for analysis and disposal. INL would then generate a techno-economic analysis based on the specific MSW streams available, conversion performance, and any projected need for feedstock formatting or processing.

Approximately 40 tons of waste material would be collected and processed throughout BP1, BP2, and BP3.

Award activities would involve hazards associated with the HelioStorm process, including electrical hazards. Feedstocks received and processed at the University of Idaho would be primarily organic waste, pathogens may be present. Research activities would be conducted according to a biosafety plan. Any risks working with hazards would be mitigated through established government safety and facility protocols. NRECA would observe all applicable health, safety, and environmental regulations.

The HelioStorm process requires an air emissions construction permit, which has been obtained. Significant air impacts are not anticipated as emissions would be temporary and intermittent.

Award activities, aside from MSW collection, would occur within existing research and development facilities that are purpose-built for the type and scale of activities being proposed. No change in the use, mission, or operation of existing facilities would arise out of this effort.

DOE has considered the scale, duration, and nature of the proposed activities to determine potential impacts on sensitive resources, including those of an ecological, historical, cultural, and socioeconomic nature, and found no effects that would be expected to result from the proposed project activities.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Building Technologies Office (BTO)
NEPA review completed by Dustin Hill, 4/3/2024

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.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  **Electronically Signed By: Matthew Blevins** Date: 4/4/2024
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager