

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



**RECIPIENT:** Greenup County Board of Education

**STATE:** KY

**PROJECT TITLE :** Going Green in Greenup: Improved Energy Efficiency with Ties to Student Learning

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002756	DE-SE0000718	GFO-SE0000718-002	GO718

**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.)

**B2.1 Workplace enhancements**

Modifications within or contiguous to an existing structure, in a previously disturbed or developed area, to enhance workplace habitability (including, but not limited to, installation or improvements to lighting, radiation shielding, or heating/ventilating/air conditioning and its instrumentation, and noise reduction).

**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.

**B5.16 Solar photovoltaic systems**

The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres 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.

**B5.23 Electric vehicle charging stations**

The installation, modification, operation, and removal of electric vehicle charging stations, using commercially available technology, within a previously disturbed or developed area. Covered actions are limited to areas where access and parking are 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:

The U.S. Department of Energy (DOE) is proposing to provide funding to Greenup County Board of Education (Greenup) to install high-efficiency light emitting diode (LED) lighting, a rooftop solar photovoltaic (PV) system, a rooftop solar thermal domestic hot water system, an ultraviolet air sanitation system, a solar PV canopy with electric vehicle infrastructure, and a geothermal well field with a water-source heating, ventilation, and air conditioning (HVAC) system within three schools in their district. The award also proposes to perform exterior window and door replacements, a roof replacement with associated roofing upgrades, HVAC equipment upgrades, and the purchase of two electric school buses. This funding opportunity is part of a DOE initiative to execute high impact energy efficiency and health improvements as well as innovative energy technology packages in K-12 schools across the country.

DOE previously completed one NEPA Determination (ND; GFO-SE0000718-001; A9 and B3.1; 01/12/2024) that covered Budget Period (BP) 1 activities. Greenup is now seeking a NEPA review for certain BP2 activities, i.e., BP2 Tasks 6.0 – 10.0 and Task 12.0.

This ND does not apply to BP2 Task 11.0 or BP3. DOE will complete the NEPA review for BP2 Task 11.0 and BP3 when sufficient information is available to conduct a meaningful review. Sufficient information includes completing all necessary agency coordination efforts for installation of the geothermal well field and water-source HVAC system at McKell Middle School.

Greenup proposes energy efficiency upgrades and installation of renewable energy systems at three schools: Greenup County High School (Greenup, KY), McKell Middle School (South Shore, KY), and Wurtland Middle School (Wurtland, KY). All three schools would receive high-efficiency LED lighting upgrades. In addition to lighting upgrades, McKell Middle School would also receive exterior entry door replacements. The existing doors and door frames would be removed and replaced with energy-efficient, weather-sealed doors and hardware.

The majority of award activities would occur at the Greenup County High School. This includes the installation of a 400 kilowatt (kW) direct current (DC) solar PV array on a fixed-tilt racking system and a solar thermal domestic hot water system on the roof of the school as well as the replacement of four rooftop HVAC gymnasium units and controls. As a result of these rooftop installation activities, the award proposes to replace the existing roof with a new reflective roof system including insulation that meets or exceeds applicable regulatory requirements. In addition to the new roof, eight existing roof hatches would be replaced with insulated roof hatches. To reduce drafts and condensation, eighteen exterior windows would be replaced with thermally broken, low-emittance, multi-pane windows. These windows would include aluminum sash finishes to match the existing windows. Inside the mechanical room of the high school, the existing hot water pumping motors would be replaced with high-efficiency motors and an ultraviolet air sanitation system and filters would be installed.

On high school grounds, immediately adjacent to an existing and paved parking lot, a 76 kW DC canopy-mounted solar PV system would be constructed to serve as a source of electricity for a school bus charging station. This structure includes the solar PV array, support structure, racking systems, and electrical equipment in addition to two electric bus charging stations and facility equipment with a battery energy storage system (BESS). The solar PV array would be installed on the canopy and the canopy would be elevated to allow a school bus to park underneath. The canopy structure would have room for four buses and require a total of 2,750 square feet of ground disturbance to construct.

DOE is required to consider floodplain management and wetland protection as part of its environmental review process (10 CFR 1022). The site of the canopy structure is within a 100-year floodplain but does not contain wetlands. In case of a flood, the two new charging stations as well as the lithium-ion BESS would be mounted on a concrete base, a minimum of 30 inches above finished grade. Following construction activities, all contours would be restored to previous conditions. Additionally, a floodplain permit would be required before construction can start. The award must adhere to all requirements put forth by the local floodplain administrator.

Award activities would involve typical hazards associated with construction activities, including handling and use of hazardous materials, electrical hazards, operation of potentially hazardous equipment and vehicles, and site-specific environmental hazards. Existing health, safety, and environmental policies and procedures would be followed to mitigate hazards to acceptable levels. Mitigated hazards would pose negligible risks to the public and environment. All activities would comply with existing federal, state, and local laws and regulations.

Under DOE's executed Historic Preservation Programmatic Agreement (PA) with Kentucky, Greenup completed consultation with the Kentucky Heritage Council. Greenup received a letter of concurrence from the Executive Director and State Historic Preservation Officer (02/28/2024) stating a finding of "No Historic Properties Affected". The letter also stated that the area proposed for the canopy-mounted solar PV system has been previously disturbed and that they have "no concerns regarding archaeological resources". Per Section XIV(c) of the executed PA, DOE requires that Greenup submit an annual Historic Preservation Report summarizing all award undertakings and reviews occurring from September 1st through August 31st. These reports are due to DOE annually for the life of the award

and are to be received no later than September 15th each year.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders aside from consultation that have already been mentioned.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

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

Budget Period (BP) 2 Tasks 6.0 – 10.0 and Task 12.0

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

BP2 Task 11.0 and BP3

Include the following condition in the financial assistance agreement:

Per Section XIV(c) of the Programmatic Agreement, DOE requires that Greenup County Board of Education submit an annual Historic Preservation Report summarizing all award undertakings and reviews occurring from September 1st through August 31st. These reports are due to DOE annually for the life of the award and are to be received no later than September 15th each year.

DOE is required to consider floodplain management and wetland protection as part of its environmental review process (10 CFR 1022). The site of the solar photovoltaic canopy structure is within a 100-year floodplain but does not contain wetlands. Following construction, all contours must be restored to previous conditions. Additionally, a floodplain permit would be required before construction can start. The award must adhere to all requirements put forth by the local floodplain administrator.

If during project work cultural or archaeological artifacts are encountered, the recipient shall stop work immediately and inform the DOE Project Officer and the Kentucky Heritage Council of the finding. If human remains are found the county coroner and the Kentucky Heritage Council shall be contacted immediately.

Notes:

Office of State and Community Energy Programs – Renew America's Schools  
This NEPA determination requires legal review of the tailored NEPA provision.  
NEPA review completed by Corrin MacLuckie, 07/12/2024.

## 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.

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:  **Electronically Signed By: Matthew Blevins** \_\_\_\_\_ Date: 7/12/2024  
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