

National Environmental Policy Act (NEPA) Categorical Exclusion (CX) for Solar-assisted Electrical Vehicle Charging Stations (3564X)

The Department of Energy Oak Ridge Operations Office (DOE-ORO) proposes to conduct research that would lead to the conservation of energy by deploying electric vehicles and the associated charging infrastructure at various parking lots at the Oak Ridge National Laboratory (ORNL). This action is a collaborative effort with Nissan Corporation and Idaho National Laboratory to demonstrate the energy saving capabilities of electric vehicles. The Nissan electric vehicles that would be tested would be emission free and are expected to reduce the fuel cost of driving by a factor of 5-6. ORNL has been assigned the technical lead to develop the design, to demonstrate the vehicle charging infrastructure, and to provide solar power to supplement the electric grid power to the charging stations.

The proposed action would involve installing 25 charging stations at the proposed East Campus Parking Lot once it is constructed. An array of solar panels mounted in canopies (covering approximately 250 feet long by 16 feet wide at a height of approximately 12 feet) would be installed over these stations and would provide approximately 62 kW D.C. solar power. A small air conditioned enclosure (6 feet long by 6 feet wide by 6 feet high) would be installed to house the batteries for the unit. Power conversion equipment, control mechanisms, and electrical components would be installed to connect the system to the ORNL electrical grid. Duct banks constructed for the parking lot will contain spare conduits for electrical wiring. The proposed action would also involved installing non-solar charging stations at parking lots at various locations at ORNL. Minor excavation would be required to install a concrete base for the stations where needed. The stations would be connected to nearby electrical systems in the various areas.

No new permits or modifications to existing permits would be required for the proposed action. In addition, the proposed action would take place in previously developed areas and would not disturb sensitive resources. The proposed action has been evaluated by Pollution Prevention personnel for action options to reduce or eliminate the generation of waste materials.

Waste material will include a small amount of soil that will be generated in the installation of the support posts for the solar canopies and installing the base of the charging stations. This soil will either be dispersed evenly on the nearby ground or collected and used a fill material at other locations. Excavated soil no suited for reuse will be properly collected and disposed of according to existing waste disposal practices and procedures. No liquid waste will be generated, and the action will not generate airborne emissions.

This project would pose no threat of significant individual or cumulative environmental effects. The described action would not be part of an ongoing Environmental Assessment or Environmental Impact Statement. No extraordinary circumstances would be related to this action, and the proposal would not be connected to other actions with potentially significant impacts.

The applicable CX under 10 CFR 1021, Subpart D, Appendix B, for these actions are as identified below:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy

research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

SIGNED BY WILLIAM MARK BELVIN

4/27/10

W. Mark Belvin
DOE-ORO Program Manager

Date

Based on my review and the recommendation of the DOE-ORO Program Manager, I have determined that the proposed action is categorically excluded from further NEPA review and documentation.

SIGNED BY GARY S. HARTMAN

5/11/2010

G. S. Hartman
DOE-ORO NEPA Compliance Officer

Date