

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



RECIPIENT:Austin Energy dba City of Austin

STATE: TX

PROJECT TITLE : Austin SHINES

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001108	DE-EE0007177	GFO-0007177-002	GO7177

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:

- 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.)
- 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.
- B5.15 Small-scale renewable energy research and development and pilot projects** Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Austin Energy to install distributed battery storage systems, smart solar inverters, a distributed energy resource (DER) control platform, and other enabling technologies utilizing customer and utility locations and multiple aggregation models. Austin SHINES is a proposed project that involves the retrofit, replacement and/or modification of existing energy facilities and power generation infrastructure using the listed technologies. The proposed project is comprised of three Budget Periods (BP). A previous NEPA determination (GFO-0007177-001; CX A9, B3.6; 12/23/15) reviewed BP1 activities but restricted BP 2 and 3 pending further review of sites identified for deployment. This NEPA determination is to review all tasks/subtasks of BP 2 and BP 3.

BP 2 would involve the deployment of energy storage systems (ESS) and enabling communication/control equipment at various utility, residential and commercial sites in Austin, TX. Activities associated with BP 2 of the proposed project would include the installation and testing of battery storage and smart inverters and hardware/software devices for integrating the systems. BP 3 would involve a 12 month demonstration of the technologies deployed in BP 2. BP 3 activities would consist of equipment operation, performance monitoring, data collection, analysis and reporting. Desktop research, data analysis, and project management would occur at the headquarters for City of Austin Energy in Austin TX. Software development and equipment testing would take place at Doosan GridTech in Seattle, WA and Pecan Street Inc. in Austin, TX. The facilities in which indoor testing would occur are purpose-built for the type of activities being proposed; there would be no change in the use, mission or operation of existing facilities.

The locations for two proposed utility-scale ESS deployments in Austin TX have been identified: 1) City-owned land in the Mueller neighborhood, and 2) Austin Energy's Kingsberry substation.

1) An ESS with a 1.5MW capacity would be installed on City-owned land in the Mueller neighborhood of northeast Austin. The site is a retired parking lot at the former location of the Mueller airport. The system is composed of

batteries, Power Conversion Systems (PCS) and HVAC units and would be contained within seven 8ft x 10ft x 9ft structures with a footprint of approximately 800 sqft. All equipment and work required to install them would be located outdoors entirely on previously disturbed land with a pre-existing underground electric grid and stormwater system. Physical modifications to the site would include ground work to install duct banks, a grounding grid, conduit and connection cables, and to connect to an existing storm drainage pipe. A land survey has been completed prior to beginning any design for the drainage of stormwater and wastewater from the proposed site, and modifications would be completed in accordance with the City of Austin development permits. Installation would be performed by contractors STEM and IdealPower. To address potential visual impacts to the community, a wall would be built surrounding the ESS site accompanied by external landscaping. Austin Energy has conducted noise studies to ensure that the system proposed to be installed does not exceed noise limits established by ASHRAE and HUD.

2) A similar ESS would be installed at the Kingsberry substation on developed land inside the facility's existing walls and would be connected to its existing distribution grid. The substation is purpose-built for housing utility infrastructure, and no change in the use, mission or operation of the facility would occur as a result of the proposed deployment. All equipment would be located outdoors on previously disturbed land that is currently covered with crushed rock. Physical modifications to the site to accommodate the system would include building a dedicated entrance gate and fence to separate the ESS from the substation, plus security and lighting systems per safety requirements. Ground disturbing activities would include the installation of duct banks and conduit and connection cables. Installation would be performed by contractors and overseen by the commercial power partner.

The locations for proposed deployment activities at 24 private residences in the Mueller neighborhood have also been identified. All of these residences already have solar power systems, which would be updated with new technologies and linked to a central platform to coordinate energy control. At 18 of these sites, existing inverters would be swapped out for smart inverters. The smart inverter would occupy the same space as the previous inverter and would not involve any additional changes to the structure and finish of the existing buildings. At the other 6 sites, a Tesla power wall would be installed next to the existing inverter, likely inside the garage. This commercially available power wall is a slim, wall-mounted 3ft x 3ft battery engineered for small-scale home use. No physical modifications to existing structures or ground disturbance would result from the proposed installations.

The locations for proposed deployment activities at seven commercial sites have yet to be identified. Selected sites would be located near the other proposed residential/utility project sites and equipped with a solar PV system by the property owner. At these locations, the proposed installations would include an inverter and battery storage system. The inverter is approximately 6 cubic feet, and would be installed on the wall of an existing mechanical room. Each battery storage unit is self-standing and approximately 20 cubic feet per enclosure (2-5 enclosures would be installed at each site). At two of the commercial sites, the inverter would be connected to and control a customer-owned PV system. The inverter/battery system at the other five sites would operate separately from the existing PV system, which would remain in place. The equipment and work required to install them would be located indoors, specifically in areas that were previously designed and designated for the type of equipment and activities being proposed. Ground disturbance and installation of equipment outdoors are not anticipated at these sites. No change in the use, mission or operation of existing commercial facilities would arise out of this effort.

Activities associated with the proposed project would involve the use and handling of hazardous materials including lithium ion batteries and oil-filled electrical equipment. Austin Energy has safety procedures in place, including a Hazard Communication program, to ensure that employees are properly trained and equipped in compliance with federal, state, and local regulations. The ESS systems would include several layers of fire protection including design considerations, safety testing, early detection alarms and fire suppression systems. Non-hazardous waste generated during the proposed installations such as packaging, rock, and landscape soils would be disposed of following standard practices in accordance with Austin Energy's existing waste management program. No siting, construction or major expansion of waste storage, disposal, recovery, or treatment actions/facilities would be required.

At the end of the proposed project, Austin Energy would keep the utility-scale systems in operation in accordance with DOE guidelines. The commercial and residential systems would either remain in operation or be decommissioned. All decommissioning and disposal of materials would be conducted in accordance with pertinent federal, state, and local environmental regulations.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410 (2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal 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:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Solar Energy Technologies
This NEPA determination does not require a tailored NEPA Provision.
NEPA review completed by Whitney Doss, 3/17/2017

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  Date: 3/17/2017
 Kristin Kerwin
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager