

Record of Categorical Exclusion
for
Arizona Public Service Company's
Agave Battery Energy Storage System Project
Loan Application #EIR0022

Description of Categorically Excluded Action

The United States Department of Energy (DOE) Title XVII Energy Infrastructure Reinvestment (EIR, 1706) Program was established pursuant to the Inflation Reduction Act of 2022, which amended Title XVII of the Energy Policy Act of 2005 to include the EIR Program. The EIR Program provides loan guarantees for projects that either: (1) retool, repower, repurpose, or replace energy infrastructure that has ceased operations; provided that if the project involves electricity generation through the use of fossil fuels, it is required to have controls or technologies to avoid, reduce, utilize, or sequester air pollutants and anthropogenic emissions of greenhouse gases; or (2) projects that enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases.

The DOE Loan Programs Office (LPO) is considering whether to issue a loan guarantee of a funding facility to the Arizona Public Service Company (APS) pursuant to its authority under the EIR 1706 Program. In its application, APS has identified the Agave Battery Energy Storage System (BESS) project (Project), in Arlington, Arizona, for inclusion in the funding facility that is the subject of DOE's loan guarantee. APS may request inclusion of multiple individual projects with independent utility in the funding facility that is the subject of the DOE loan guarantee; accordingly, DOE will complete an environmental review pursuant to the National Environmental Policy Act (NEPA) for these projects prior to their inclusion in the funding facility that is the subject of DOE's loan guarantee.

The Agave BESS Project will provide energy storage for the existing APS Agave solar facility. Accordingly, the Proposed Action considered in this record of categorical exclusion is LPO's issuance of Federal financial support for the Agave BESS Project.

Project Description

APS is proposing to construct and install the Agave BESS within the footprint of the existing Agave photovoltaic (PV) solar generating facility, adjacent to the existing Agave substation in Arlington, Arizona (Maricopa County), approximately 50 miles southwest of Phoenix. The site and site access are secured through APS-owned land and existing right-of-way agreements. The site is surrounded by utility infrastructure including the Sun Streams Solar Plant to the north and east, Redhawk Power Plant to the east, and Mesquite Generating Station to the west. The eastern and southern site boundaries are contiguous to the Hassayampa and Jojoba transmission lines and the Agave PV solar facility, respectively.

APS's existing Agave solar PV project was commissioned during the summer of 2023 and comprises 150 megawatts (MW) of PV generation capacity, located at 36801 W Southern Pacific Trail, Arlington, AZ 85322. The Agave BESS facility will be located within the current boundary of the Agave solar PV project site and interconnected to the APS's Agave collector substation at the 34.5kV bus. The BESS site is located approximately 1,000 feet west of the current APS Agave solar collector substation, which was pre-engineered to accommodate the Agave BESS Project.

The Agave BESS site will be enclosed within a fence line, and the rows of battery containers will be separated from the fence line and each other by an aggregate rock driving surface with compacted sub-base. The fenced area is approximately 14 acres within which the BESS structures will occupy approximately 7 acres. The driving surface will be a minimum of 20 feet wide and designed for proper drainage and fire department access. The laydown area for Project construction will be located to the north adjacent to the facility within the fence line. Construction of the Project will include grading and minor earthwork (i.e., excavation) to allow for placement of Project components. With the exception of the stormwater detention basin (discussed below), the area within the fence line will be elevated 3 feet (a total of 12.5 acres will be elevated). Fill material for the elevation will come from the onsite stormwater detention basin and, if necessary, supplemented with excess dirt from the nearby Redhawk Power Plant on APS property.

The Agave BESS is a 4-hour duration 150 MW/600 MWh, with the option to install additional storage capacity in the future. The project will use lithium-ion batteries in purpose-built enclosures configured to allow for potential future expansion of energy storage. Major BESS components include:

- 188 battery containers with associated concrete pads (15-foot-long long x 7.5-foot-wide x 9.5-foot-tall container, concrete pads 5.5 feet above floodplain)
- 188 power conversion systems (PCS) with 47 skid-mounted PCS step-up transformers
- 3 auxiliary switchboards
- 1 Energy Management System (EMS) Enclosure
- 1 Uninterruptible Power Supply backup battery system
- 1 backup feed from the grid
- 3 2.6-MVA auxiliary transformers

Each battery container includes fire detection and prevention systems to monitor and respond to battery fires. The balance of plant system includes fire alarm systems to aggregate and communicate site hazards to operators and responders. The water supply for the Agave BESS project construction will be supplied by an existing well that was installed to support the adjacent Redhawk Power Plant and Agave PV Solar facility. There are additional APS wells in the areas that can supplement water as needed.

Agave BESS will be AC-coupled and connected to the existing Agave Substation at 34.5kV. The Agave Substation will step up the voltage to 500kV for the existing Transmission Interconnection. Four new 34.5kV power circuit breakers will be procured and installed for connection to the existing Agave Substation.

AC collector lines (approximately 0.1 mile in length) will be installed underground; trenching will occur in previously disturbed areas to complete the connection to the existing Agave substation, which is located immediately to the east of the Project. The AC collector line corridor consists of approximately 3 acres between the east side of the fence line and the existing substation.

One 1.5-acre, 6-foot-deep stormwater detention basin will be constructed within the fence line immediately south of the battery containers to reduce stormwater runoff and to maintain natural hydrology.

Agave BESS has a minimum design life of 20 years based on expected use. The BESS will have a full 4-hour discharge cycle and one full charge cycle per day. The 188 battery containers will have a 656 MWhAC capacity (at the Point of Interconnection) when initially commissioned but are expected to degrade with usage. The current design allows for additional batteries and/or conduit to be installed within the existing site footprint if needed.

Prior to battery components arriving at the Project site, the supplier will provide APS with a Decommissioning Plan to address both planned and unplanned decommissioning. Batteries will be decommissioned in accordance with universal waste regulations and other applicable laws. APS will use best efforts along with battery manufacturer contacts and relevant project information to facilitate the return of battery modules to the battery manufacturer. Battery equipment disposal and recycling procedures will follow APS procedures, and APS will retain a copy of Certificate of Recycling and vendor receipt signature bill of lading documents.

Applicable permits include:

- Large Generator Interconnection Agreement - executed March 20, 2023
- Maricopa County Planning and Development Department, minor amendment to a Plan of Development, Case Number Z2024067 – approved November 5, 2024
- Maricopa County Air Quality Department Dust Control Permit – issued September 3, 2024
- Maricopa County Floodplain Permit – issued October 22, 2024
- Arizona Department of Environmental Quality Stormwater Construction General Permit / Stormwater Pollution Prevention Plan – issued August 30, 2024

In accordance with the Endangered Species Act, LPO's review of the Project found that there would be no effect to listed species or critical habitat. In accordance with the National Historic Preservation Act (NHPA), LPO consulted with the Arizona State Historic Preservation Office (SHPO). The Arizona SHPO concurred with LPO's finding of no historic properties affected for this project on August 28, 2024. DOE identified and contacted 10 federally recognized Native American Indian Tribes (Tribes) that may have an interest in the Project area (Ak-Chin Indian Community, Colorado River Indian Tribes of the Colorado River Indian Reservation, Fort McDowell Yavapai Nation, Gila River Indian Community of the Gila River Indian Reservation, Hopi Tribe of Arizona, Navajo Nation, Salt River Pima-Maricopa Indian Community of the Salt River Reservation, San Carlos Apache Tribe of the San Carlos Reservation, Tohono O'odham Nation, and White Mountain Apache Tribe of the Fort Apache Reservation). DOE received responses from five Tribes confirming that they do not have concerns with the Project. In addition to confirming the Tribe has no concerns, the Tohono O'odham encouraged LPO to conduct cultural

and landscape impact assessments. Given existing energy and industrial development surrounding the Project site and the limited footprint of the BESS (approximately 7 acres occupied with BESS structures), a cultural and natural landscape impact assessment of the Agave BESS site is not warranted.

The entirety of the BESS site is within the 500-year floodplain. Consistent with 10 CFR 1022, DOE prepared a floodplain assessment and provided notice of the proposed floodplain action to Federal, state, and Tribal government agencies and the public on September 25, 2024. The notice initiated a 15-day public comment period which ended on October 9, 2024. DOE received three responses to the notice: The White Mountain Apache Tribe confirmed no adverse effect to the Tribe's cultural heritage resources. The Tohono O'odham Nation indicated the Tribe had not received a copy; DOE responded confirming the hyperlink to where the document is available online. The Maricopa County Floodplain Permitting Division requested the applicant to submit their project plans for review. DOE's floodplain statement of findings follows:

Elevating 12.5 acres of the site within the fenceline by three (3) feet will result in a negligible change to the base flood elevation and flood flows in the surrounding area. In a 500-year flood event, the Project's stormwater detention basin will accommodate some, but not all, floodwaters displaced by the elevated site. Elevating the site 3 feet is designed to protect Project infrastructure from 500-year floodwaters, thereby minimizing effects to Project property and equipment as well as lives and property off-site that are dependent on reliable power. The Project site is located away from urban, residential, and otherwise populated areas. Changes to base flood elevations and flood flows may affect nearby structures, however, none are residences or otherwise occupied (e.g., hospitals, schools) which minimizes potential effects to life and private property.

Number and Title of Categorical Exclusion(s)

The actions being considered under the Proposed Action are consistent with and covered by DOE categorical exclusions in 10 Code of Federal Regulations (CFR) Part 1021, Appendix B4, Categorical Exclusions Applicable to Electric Power and Transmission, respectively. This Project is covered by DOE Categorical Exclusions B4.11 and B4.14.

B4.11 Electric power substations and interconnection facilities

Construction or modification of electric power substations or interconnection facilities (including, but not limited to, switching stations and support facilities).

B4.14 Construction and Operation of Electrochemical-Battery or Flywheel Energy Storage Systems

Construction, operation, upgrade, or decommissioning of an electrochemical-battery or flywheel energy storage system within a previously disturbed or developed area or within a small (as discussed at [10 CFR 1021.410\(g\)\(2\)](#)) area contiguous to a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as land use and zoning requirements) in the proposed project area and

the integral elements listed at the start of [appendix B of this part](#), and would incorporate appropriate safety standards (including the current National Fire Protection Association 855, Standard for the Installation of Stationary Energy Storage Systems), design and construction standards, control technologies, and best management practices.

Regulatory Requirements Defined in 10 CFR § 1021.410(b)

The Proposed Action was subjected to an environmental due diligence review by DOE LPO staff to ensure it is consistent with the specific category of actions (categorical exclusion) contained in Appendix B of 10 CFR Part 1021 and the conditions for applying categorical exclusions specified in Section 410 of Part 1021. To ensure the requirements of Appendix B were met, LPO staff reviewed project-related documents obtained between May 2024 and August 2024 and participated in conference calls with APS staff to ensure a complete understanding of the activities associated with the project.

The environmental due diligence review determined that there is no controversy regarding the potential environmental impacts of the Proposed Action, and that the activities associated with the Federal financial support would not adversely affect any physical, biological, or socio-cultural resources associated with the deployment of the project. The environmental due diligence review determined the Proposed Action has not been segmented to meet the definition of a categorical exclusion.

The Comment section below is provided for any necessary clarifications concerning the findings listed above. Signature by APS’s designated representative in the Corporate Validation section is an indication of APS’s concurrence with the findings and determinations presented above.

Comment(s)

Corporate Validation

Name and Title (Print):

Jeffrey Allmon, Associate General Counsel

Signature and Date:



November 7, 2024

Determination

Based on my review of information conveyed to me and in my possession concerning the actions associated with the proposed 1706 loan guarantee described above, as NEPA Compliance Officer (as prescribed in DOE Policy Directive 451.1), I have determined that the actions involve no extraordinary circumstances and fit within the specified category of actions in Appendix B of 10 CFR Part 1021 described above, and are hereby categorically excluded from further review under the National Environmental Policy Act (42 United States Code 4321, as amended).

Signature and Date

Todd Stribley, NEPA Compliance Officer
Director, Environmental Compliance
Loan Programs Office