

REVISED PROPOSED FEDERAL ACTION FOR THE VIDAL SOLAR INTERCONNECTION PROJECT DOE/EA-2170



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Subject: Updated National Environmental Policy Act (NEPA) Scoping for the Vidal Solar Interconnection Project

The purpose of this memo is to notify the Western Area Power Administration (WAPA) of a proposed change in scope to the Proposed Federal Action for the Vidal Solar Interconnection Project. The proposed revision to the Proposed Federal Action is a result of ongoing communication and coordination with the WAPA Staff. In short, and further discussed below, the Proposed Federal Action is revised to reflect the use of microwave as the primary form of communication between stations and the elimination of the required fiber optic upgrades between Headgate Rock and Blythe. The revision to the Proposed Federal Action would significantly reduce the requirements of interconnecting with WAPAs electrical transmission system and therefore would significantly reduce the environmental impacts associated with the Proposed Federal Action.

Presented below is an Introduction to the Project, the original Proposed Federal Action, the original Proposed Connected Actions, previous scoping efforts, and the revised Proposed Federal Action and Connected Actions.

Introduction

In October 2021, CDH Vidal LLC requested to interconnect its proposed photovoltaic solar plant, located near Vidal in the County of San Bernardino, California, to the WAPA electrical transmission system via the Headgate Rock-Blythe 161-kilovolt transmission. The transmission line is on lands managed by the Bureau of Land Management (BLM) in an existing right-of-way (ROW) held by WAPA. CDH Vidal LLC proposes to build, operate, and maintain an approximately 160-megawatt photovoltaic solar energy generation facility on up to 1,220 acres of private land. The original Proposed Federal Action and Connected Actions, along with the revised Proposed Federal Action and Connected Actions are described in further detail below.

Original Proposed Federal Action

The original Proposed Federal Action included construction of a new switchyard and associated interconnection facilities adjacent to the proposed Project and to WAPA's existing Headgate Rock-Blythe 161-kV transmission line. WAPA also proposed upgrades to its communication equipment along the entirety of the Headgate Rock-Blythe transmission line by replacing the existing overhead grounding wire with new fiber optic grounding wire.

Under the original Proposed Federal Action, WAPA would build, maintain, and decommission a new, approximately 4.2-acre switchyard and an interconnection looping in the new switchyard to the existing Headgate Rock-Blythe 161 kV transmission line. The interconnection would consist of new three-pole structures (four new poles in total) in the vicinity of existing structures 25/1 and 25/4, located directly adjacent to the south of the proposed Project's new substation. The new three-pole structures would be up to 100 feet tall and made of galvanized steel. Two of the three-pole structures would be constructed within the existing ROW. The two remaining three-pole structures would be constructed just outside of the new switchyard.

Additionally, approximately 52 miles of new 48-strand overhead fiber optic grounding wire would be installed, replacing the existing static wire, on the Headgate Rock-Blythe 161 kV transmission line between the Headgate Rock and Blythe Substations, looped through the WAPA interconnection switchyard. The fiber optic wire would serve as primary and temporary secondary communication until permanent secondary communication facilities are in place, in addition to its role in shielding the energized conductors from lightning strikes. When lightning strikes, the energy from the



lightning strike would travel along the overhead grounding wire to a location where the energy from the lightning strike can go to ground and safely dissipate, allowing for the transmission line conductors to remain energized.

Original Proposed Connected Actions

CDH Vidal LLC proposes to build, operate, and maintain an approximately 160-megawatt photovoltaic solar energy generation facility on up to 1,220 acres of private land. These actions are connected actions under the National Environmental Policy Act (NEPA) per 40 CFR § 1508.25 (a)(1), since they “cannot or will not proceed unless other actions are taken previously or simultaneously”. Therefore, these connected actions are subject to NEPA review, with WAPA assuming the role of Lead Federal Agency. Each Connected Action is described in further detail below.

Solar Generator and Power Conversion Stations (Inverters)

The Project would utilize up to 160 MW-AC Peak (46 MW-AC Average) PV system blocks to convert solar energy directly to electrical power for export to the electrical grid. The total BESS capacity for the PV site is 640 megawatt hours (MWh). Solar power is generated through PV modules converting sunlight striking the modules directly to low-voltage, direct-current (DC) power, which is subsequently transformed to alternating-current (AC) power via an onsite inverter. The Project would develop modules using either fixed-tilt or tracker technology. Trackers tilt the panels to follow the course of the sun, optimizing the incident angle of sunlight on their surface. The PV panel modules are mounted on steel support posts that are pile-driven into the ground. The arrays are typically placed on an aluminum rail, such that with a maximum tilt of 52 degrees, the top of the array would be a maximum of 18 feet above grade at the tallest point and approximately 2 feet above grade at the lowest point.

The PV modules are made of semiconductor material encapsulated in glass in which the PV effect converts light (photons) into electrical current. PV is best known as a method for generating electric power by using solar cells to convert energy from the sun into electricity. Energy from the sun is transmitted to the Earth as photons, which contain different levels of energy corresponding to different frequencies of the solar spectrum. When a photon is absorbed by a PV cell, the energy of the photon is transferred to an electron in an atom within the PV cell. This added energy allows the electron to escape from the atom to become part of the current in an electrical circuit.

Power conversion stations (PCS), also known as inverters, that would contain at a minimum one inverter and one transformer, would be within the proposed solar arrays located across the Project site. Inverters are typically housed in an enclosed structure that helps to reduce the resulting operational noise levels. In addition, PCS would also be anticipated to include an exhaust fan and a heating, ventilation, and air conditioning (HVAC) system that is typically mounted to the exterior of the enclosure. Noise levels generated by PCS would be associated with operation of the inverters, transformer, exhaust fans, and HVAC systems.

Access and Maintenance Roads

Primary access to the Project site from the regional transportation system would be gained by exiting from U.S. Route 95 directly onto a Project-controlled access road on the west side of the Project site. While existing roads would be used to the greatest extent possible, potential new unpaved roads may need to be constructed off site to serve as access roads from the existing road network to the Project site. Any new road surrounding the Project site would be a minimum of 20 feet wide for fire department and emergency vehicles use. Additional internal maintenance roads would be located throughout the Project site. Spacing between each row of solar panels would depend on final panel type, orientation, and County regulations. Internal access roads would be as wide as 20 feet and would be cleared and compacted for equipment and emergency vehicle travel and access to the solar blocks. These Project site access roads would remain in place for ongoing operations and maintenance activities after construction is completed and would be covered in gravel, or other method to provide commensurate dust control.



Battery Storage

The Project would include a BESS with a capacity of 640 MWh. The BESS would likely consist of containers housing batteries connected in strings and mounted on racks. The container would likely include a transformer and monitoring, lighting, and cooling equipment. However, some BESS equipment (e.g., inverters, auxiliary transformer to control the HVAC system) may be adjacent to the container instead of within it. The Project would use as many as 47 containers, depending on container dimensions. Each container would be up to 80 feet long, 8 feet wide, and 8 feet tall.

There are two different locations and methods of storage proposed for BESS; these include: (1) all BESS containers consolidated within the Project substation area, or (2) BESS equipment distributed throughout the Project's solar arrays by co-locating a single BESS container with each of the Project's block inverters with the BESS and the inverter housed in or near the same container. Method 1, if fully employed, would require approximately 7.1 acres within the Project substation area to house the BESS containers. Using Method 2, the BESS containers would contain batteries only and the inverters would remain central to the solar array blocks. Batteries would be co-located with PV arrays and DC coupled and would share the PV inverters and transformers and have their own DC/DC converter that would either be on its own foundation, on the same skid as the inverters, or in the container with the batteries (depending on the design).

The Project design includes shielded and motion-activated lighting and safety features within each container. The containers are equipped with a door on each end and include fire detection and fire suppression systems. Cables and cooling pipes would pass through the container floor. The container would have unobtrusive external painting that would blend in with the natural terrain and landscape.

Project Substations

The Project would include construction of one substation facility in the southeastern corner of the Project site. The substation would collect the power generated by the PV solar system blocks, transport the power via the underground/overhead power collection system, and then convert the power for transmission in WAPA's overhead 161-kV line. Additionally, the Project would construct a second substation, within the Project footprint, to be utilized by WAPA.

Equipment at the substations would include transformers, bus work, switches, breakers, and all associated equipment required to be compliant with utility grade interconnection services. The substation facilities would house the power generation control and relaying equipment, station batteries, and Supervisory Control and Data Acquisition System (SCADA) and communication systems. The Project substation would be remotely operated and periodically maintained, but would not be permanently staffed. The substation site would be cleared, graded, and graveled. A security fence would be installed around the perimeter for safety and security purposes. The fence would comprise a chain-link fence measuring as high as 6 feet tall, topped with as many as three strands of barbed wire, for a total maximum height of 8 feet. For safety and security purposes, this fence would not be adapted for wildlife movement. Construction and operations of the Project substation would affect approximately 7.5 acres. The BESS may also be co-located within or adjacent to the substation yard.

Previous Scoping Efforts

Previous public scoping for the Project was initiated on January 12, 2022. WAPA held a 30-day scoping period for the Project that ended on February 17, 2022. Scoping letters were mailed to interested parties and adjacent landowners to inform them of the Project, notify them of the scoping period, and request input on the Project. Letters were also sent on September 2, 2021, to the following five Native American tribes: Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Quechan Tribe of the Fort Yuma Reservation, and Twenty-Nine Palms Band of Mission Indians.



WAPA accepted scoping comments via telephone, email, and U.S. mail. The Project received a total of 12 submittals. Each submittal may have included multiple comments on environmental resources or topics for analysis. Documents were received from 11 individuals and one tribe (Colorado River Indian Tribes). All documents were unique, no form letters were received. In total, 15 comments were identified from submittals. Comments received concerned a range of environmental and impacts analysis issues relating to the proposed Project. The most common topic was general comments, with a total of seven comments. Two comments requested additional information and one expressed general support for the Project. Other topics raised in the comments included access to cultural resources, socioeconomics, and the NEPA process.

SUMMARY OF COMMENTS FROM INDIVIDUALS AND BUSINESSES

Individuals who submitted comments included concerned citizens and local property owners. Topics addressed in these comments ranged from requesting more information regarding the Project and Project location, land being for sale, and property value. Individual and business comments also expressed general support for as well as opposition to the proposed Project.

SUMMARY OF COMMENTS FROM TRIBES

Comments submitted by the Colorado River Indians Tribes during the scoping period expressed concern for the identification and avoidance of ancestral sites, cultural resources, and prehistoric archaeological sites. The Colorado Indian Tribe also requests a full environmental impact statement be prepared along with a mitigation and treatment plan be prepared prior to construction.

SUMMARY OF INTERNAL AGENCY SCOPING

WAPA invited BLM to be a cooperating agency in the preparation of the Environmental Assessment (EA), because of their jurisdiction by law or special expertise. BLM subsequently declined to be a cooperating agency. WAPA solicited input from internal staff and BLM to assess other agency issues pertaining to the project. No additional internal agency scoping issues were raised during WAPA's internal scoping meeting, a comprehensive list of resources and resource issues were reviewed for consideration in the EA analysis.

Revised Proposed Federal Action

The revised Proposed Federal Action would require the building, maintenance, and decommissioning of a new, approximately 4.2-acre switchyard and an interconnection looping in the new switchyard to the existing Headgate Rock-Blythe 161 kV transmission line. Underground fiber would be installed from the control building within the Project site to the take-off structure. Optical Ground Wire (OPGW) would be installed from the take-off structure, along the new overhead approach spans, then coiled up at existing structures 25-1 or 25-3.

Revised Proposed Connected Actions

The Proposed Connected Actions, as presented above, would be unchanged as a result of the revised Proposed Federal Action.



Conclusions

The elimination of the communication upgrades and grounding wire from the Proposed Federal Action is due to the establishment of microwave as the primary path of communication between stations. Therefore, the transmission line upgrades required under the original Proposed Federal Action are no longer required for the Project. This significantly reduces the scope of the Proposed Federal Action, while the Proposed Connected Actions would remain unchanged. The result would be significantly reduced overall project footprint and environmental impacts associated with the Project. Additionally, the revisions to the Proposed Federal Action, in our professional opinion, do not warrant a re-opening of the public scoping process due to the reduction in Scope.

Sincerely,

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