EXHIBIT B
FACILITY DESCRIPTION

OAR 345-021-0010(1)(b)

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INTRODUCTION

Archway Solar Energy LLC (Applicant) proposes to construct the Archway Solar Energy Project in Lake County, Oregon, with an alternating current generating capacity of 400 MW. The Facility may also contain a battery energy component with storage capacity of up to 400 MW and discharge capacity of up to 1,600 megawatt-hours. Exhibit B provides facility description information as required by Oregon Administrative Rules (OAR) 345-021-0010(1)(b).

B.1 DESCRIPTION OF PROPOSED FACILITY

OAR 345-021-0010(1)(b) *Information about the proposed facility, construction schedule and temporary disturbance of the site, including:*

B.1.1 Electrical Generating Capacity

OAR 345-021-0010(1)(b)(A)(ii) *A description of the proposed energy facility, including as applicable: (i) The nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300.*

Response: Archway Solar Energy LLC (Applicant) proposes to construct the Archway Solar Energy Facility (Facility) in Lake county, Oregon (see Figure B-1 map of vicinity). The Facility will consist of approximately 400 megawatts (MW) of nominal and average electric generating capacity[1]. The Facility may also contain a battery energy component with storage capacity of up to 400 MW and discharge capacity of up to 1,600 megawatt-hours.

B.1.2 Major Components, Structures, and Systems

OAR 345-021-0010(1)(b)(A)(ii) *Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate electricity and useful thermal energy.*

Response: The Facility will generate electricity using multiple arrays of PV solar panels connected to electrical infrastructure, arrays refer to panels wired in series and in parallel. Solar panels generate electricity by means of a photoelectric effect whereby the materials in the panels absorb the sun's energy in the form of photons and release electrons. The capture of these free electrons produces an electrical current that can be collected and supplied to the electrical power grid or stored in the battery energy storage system (BESS). The BESS will be sized to a maximum capacity of 400 MW for a duration of 4 hours, providing 1.6 GWh of battery storage.

Solar Power Blocks - Modules, Inverters, Trackers, and Racks. The PV solar panels, known in the industry and referenced here as modules, will be installed to form power blocks. Power block components will consist of the solar modules themselves, trackers, posts, cabling, inverters, and transformers. Additional detail on each component is provided below. Figure B-2 provides an example illustration of power block components. The approximate surface area of each module block, including inverters and transformers, will be 15 - 22 acres. The maximum height of the modules and inverters will be approximately 20 feet tall.

Solar Modules. The solar module specification used for the Facility design will be a Longi or similar Tier 1 module with a range from approximately 300 to 500 Watts mounted on a single-

[1] Based on the Oregon Revised Statute 469.300(4) definition of average generating capacity for all energy facilities besides wind and geothermal.

axis tracker. Each set of modules on trackers will be mounted on a single-axis tracker that rotates from east to west. Height of racking and module will be up to 20 feet at full tilt. The Facility will use a tracker manufactured by NEXTracker or a comparable firm. The trackers will be made of non-specular metal galvanized steel.

Posts. Each tracker will be supported by steel posts; post depth will vary depending on soil conditions but can range from 5 to 20 feet below the surface. If soil conditions require it, concrete foundations or different types of foundations will be used. Post locations will be determined by the ground coverage ratio (GCR).

Cabling. The current produced by solar modules is in the form of direct current (DC). Within each module block, several DC electrical cables on the back of modules may aggregate into a string. Electricity from approximately 28 modules will likely connect to a combiner box or load break disconnect. A larger DC cable will run between each combiner box or load break disconnect and then to the module block inverter. This cable will hang underneath the modules using the Cambria Association for the Blind (CAB) system or buried underground. The AC electricity is aggregated via underground 34.5-kV cables to the Facility substation.

Inverters. In order to be sent to the electrical grid, the DC current must be converted into alternating current (AC) power, and inverters serve this function. The conversion is accomplished by rapidly switching the DC power supply. By varying the length of time that the switch is on, as well as the polarity, the positive and negative swells of an AC wave are created. This waveform is then smoothed with an output filter. Inverters employ several advanced control systems, switching algorithms, and ancillary services for both the input and output stages. For the input stage, the inverters can manipulate the DC voltage to ensure maximum power harvest of input, and on the output various sensors ensure that AC power production is in accordance with regulatory requirements. The inverter specification will fully comply with the applicable requirements of the National Electrical Code and Institute of Electrical and Electronics Engineers (IEEE) standards.

Transformers. The inverter AC output voltage (typically 1500 volts) will be stepped up to a higher-voltage (34.5-kV) by pad-mounted transformers designed to integrate with the inverter.

Battery Energy Storage System (BESS) Battery Energy Storage System (BESS) The facility may contain up to 400 MW capacity and up to 1600 MWh of discharge capacity of battery energy storage. The battery and battery enclosure type will be selected closer to facility construction, and the most current battery and enclosure technology will be considered. The BESS system will comply with applicable requirements of the National Electrical Code (NEC), Institute of Electrical and Electronics Engineers (IEEE), National Fire Protection Association (NFPA), and Underwriters' Laboratories (UL) standards. The BESS will occupy 20 acres of the site, as shown on the facility layout in Exhibit C Figure C-1.

B.1.3 Site Plan

OAR 345-021-0010(1)(b)(A)(iii) *A site plan and general arrangement of buildings, equipment and structures.*

Response: An overall site plan showing the proposed general arrangement of buildings, equipment, and structures is provided in Figure C-1 (Facility Layout) of Exhibit C. Additional details are provided in Figure C-2 (Facility Layout Details) of Exhibit C.

B.1.4 Spill Containment

OAR 345-021-0010(1)(b)(A)(iv) *Fuel and chemical storage facilities, including structures and systems for spill containment*

Response: The transformers are the only structures that contain oil and a spill prevention control and countermeasure plan (SPCC plan) will be put in place prior to construction. As part of the SPCC plan, the transformers will be regularly monitored for leaks and measures will be put in place if any are found to quickly control and remove oil. The GSU transformer will have a concrete catchment system sized at approximately 1.25 times the amount of oil inside the transformer.

B.1.5 Fire Prevention

OAR 345-021-0010(1)(b)(A)(v) *Equipment and systems for fire prevention and control*

All facility equipment will meet National Electrical Code and Institute of Electrical and Electronics Engineers standards and will not pose a significant fire risk. Facility roads will be sufficiently sized for emergency vehicle access in accordance with 2019 Oregon Fire Code Section 503 and will act as fire breaks. The Facility will be managed in accordance with Oregon Fire Code requirements
In the rare event of an electrical fire in the module blocks or substation, it is likely that Facility staff will monitor and contain the fire, but not try to extinguish it. The control house and operations and maintenance (O&M) building will have smoke detectors, fire extinguishers, and eyewash stations to protect the buildings and workers.

No specific fire prevention or control system is required for the battery energy storage system. Local and state building and fire codes will be followed for the batteries and their enclosures.

B.2 RELATED OR SUPPORTING FACILITIES

OAR 345-021-0010(1)(b)(B) *A description of major components, structures and systems of each related or supporting facility.*

Related or supporting facilities consist of the collection system, 34.5-kV/500-kV generator step-up (GSU) transformer and substation, 500-kV transmission line, point of interconnection (POI) line tap, control house, O&M building, a main access road, private service roads and gates, and a temporary staging area.

B.2.1 Collection System

Underground AC electrical cables, buried to a minimum of 3 feet, will connect the electrical output of the Facility to the Facility substation. The cables will be arranged in several branch circuits, each circuit consisting of three 34.5-kV single conductor cables with jackets that connect solar module blocks at each inverter and transformer to a switch in the substation. The cable lengths will vary given how far the module blocks are from the substation. The inverter circuit will be daisy-chained to collect electricity from each transformer in series. The cables may have junction boxes positioned intermittently for voltage control and maintenance. The cable and junction boxes will be under or near private service roads within the module blocks.

B.2.2 Generator Step-up Transformer and Substation

A GSU transformer will be installed in the Facility substation, located in the southeast area of the Facility site boundary. The GSU transformer will increase the output voltage from the module blocks (34.5 kV) to the voltage of the transmission line (500 kV). The GSU transformer will contain approximately 10,000 gallons of oil.

The substation will include three open-air isolation switches that will connect the collection cables to the main 34.5-kV bus, a 34.5-kV main bus open-air isolation switch, the 34.5- to 500-kV GSU, and a 500-kV circuit breaker and open-air isolation switch. Open-air isolation switches allow visual confirmation that electrical disconnects between components have been made and are used during construction, commissioning, and maintenance. The substation will also include protective relay and metering equipment, utility and customer revenue metering, and a station service transformer to provide power to the substation and control house. The substation yard will be 250,000 square feet and located in the southwestern area of the Facility. It will be inside the perimeter fence and will have a gate opening in order to access the transmission line from this point.

B.2.3 Transmission Line

A new overhead 500-kV transmission line will connect the Facility substation to the POI with the existing electrical grid. The transmission line will be approximately 1.5 miles long.

B.2.4 Point of Interconnection

The POI will consist of a new substation where the new 500-kV transmission line intersects with the existing PacifiCorp Burns-Summer Lake 500-kV transmission line. The POI will consist of a new substation where the new 500-kV transmission line intersects with the existing PacifiCorp Burns-Summer Lake 500-kV transmission line. The substation will be located within unfenced land just south of the Burns-Summer Lake transmission line. The POI installation work will be completed by PacifiCorp.

B.2.5 Control House

A control house will be installed next to the substation to store protective relay and communications equipment. The control house will be a custom-designed, weatherproof structure with exterior walls and interlocking roof panels. The structural base and floor will be designed for applicable loading to allow the structure to be lifted and transported with most of the interior equipment installed. The size of the control house will be approximately 360 square feet. The control house will have fire and safety equipment such as smoke detectors, fire extinguishers, and an eyewash station. The control house will come with a heating, ventilation, and air conditioning system.

B.2.6 Operations and Maintenance Building

The O&M building will be located in the southern portion of the Facility next to the substation and will consist of a single-story, approximately 3,000-square-foot structure. The building will vary in height from approximately 10 to 20 feet, with office space, a high bay warehouse area, storage, bathroom, and breakroom facilities. A small well (providing no more than 5,000 gallons per day) may be installed to supply water, or water will be stored in aboveground water tanks if brought in from offsite (see Exhibit O for more details on water use).

The bathroom, kitchen, and utility sink will drain into an onsite septic system. Electric and telephone service will be provided by the local service providers and connect to the O&M building using overhead or underground lines. A graveled parking and storage area for employees, visitors, equipment, and emergency response vehicles will be located adjacent to the building.

B.2.7 Access Road

Access to the Facility will be from either 3 mile Road, a private gravel road that runs south to the Facility from Christmas Valley Highway, or a BLM road which runs South to the Facility from Christmas Valley along the East side of the Facility (Figure C-3). In both access road scenarios, the access road will be all-weather gravel compacted and up to 20 feet wide with an internal

turning radius of 28 feet and less than 10 percent grade. See Figure C-3 of Exhibit C for the site access plan.

B.2.8 Temporary Staging Areas

A main temporary staging area will be used to store supplies and equipment, and to process rock and mix concrete during construction. This approximate 10-acre area is planned along the north-south central road of the project, to the south of the substation.

There will also be a 10,000-square-foot temporary staging area for the Facility substation and a 10,000-square-foot temporary staging area for the POI line tap.

All staging areas will be restored in accordance with the *Revegetation and Noxious Weed Control Plan* (Attachment P-3 in Exhibit P).

B.3 DIMENSIONS OF MAJOR STRUCTURES AND FEATURES

OAR 345-021-0010(1)(b)(C) *The approximate dimensions of major facility structures and visible features.*

Response: The approximate surface area of each module block, including inverters and transformers, will be 15 - 22 acres. The maximum height of the modules and inverters will be approximately 20 feet tall. Internal service roads will be located throughout the module blocks for construction and maintenance.

The 500 kV gen-tie transmission line will run from a collector substation to the POI with the existing electric grid. The transmission line will be approximately 1.6 miles long and up to 135 feet in height. The transmission line will be supported by single steep monopole structures spaced approximately 400 feet apart.

The 34.5 / 500 kV facility substation will have a footprint of approximately 250,000 sq ft and up to 15 feet height. Lightning protection poles will extend up to 40 ft.

B.4 TRANSMISSION LINE

OAR 345-021-0010(1)(b)(D) *If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, a corridor selection assessment explaining how the applicant selected the corridor(s) for analysis in the application.*

Response: The Facility does not have a pipeline or a transmission line that, by itself, is an energy facility under the definition in ORS 469.300. Therefore, this rule is not applicable.

B.4.1 Length

OAR 345-021-0010(1)(b)(E)(i) *If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline of any size: (i) The length of the pipeline or transmission line*

Response: The overhead transmission line from the proposed Facility substation to the POI will be approximately 1.5 miles long, depending on the exact routing between the Facility substation and the POI line tap location on the PacifiCorp transmission line.

B.4.2 Right-of-Way

OAR 345-021-0010(1)(b)(E)(ii) *The proposed right-of-way width of the pipeline or transmission line, including to what extent new right-of-way will be required or existing right-of-way will be widened*

Response: The transmission line will have a new 100-foot-wide right-of-way within the Facility site boundary. Construction will occur within a 150-foot-wide right-of-way.

OAR 345-021-0010(1)(b)(E)(iii) *If the proposed transmission line or pipeline corridor follows or includes public right-of-way, a description of where the transmission line or pipeline would be located within the public right-of-way, to the extent known. If the applicant proposes to locate all or part of a transmission line or pipeline adjacent to but not within the public right-of-way, describe the reasons for locating the transmission line or pipeline outside the public right-of-way. The applicant must include a set of clear and objective criteria and a description of the type of evidence that would support locating the transmission line or pipeline outside the public right-of-way, based on those criteria.*

Response: The transmission line will not follow or include public right-of-way, as there is none in the general area where the transmission line is proposed.

B.4.3 Rating and Dimensions

OAR 345-021-0010(1)(b)(E)(iv) *For pipelines, the operating pressure and delivery capacity in thousand cubic feet per day and the diameter and location, above or below ground, of each pipeline.*

Response: The Facility does not have a pipeline. Therefore, this rule is not applicable.

OAR 345-021-0010(1)(b)(E)(v) *For transmission lines, the rated voltage, load carrying capacity, and type of current and a description of transmission line structures and their dimensions.*

Response: The proposed overhead transmission line will have a voltage rating of 500 kV and will be able to carry the full 400-MW output of the Facility. The transmission line will be supported by approximately 25 steel monopoles. The monopoles will range from 70 to 135 feet in height and will be spaced approximately 400 feet apart, depending on site conditions.

B.5 CONSTRUCTION SCHEDULE

OAR 345-021-0010(1)(b)(F) *A construction schedule including the date by which the applicant proposes to begin construction and the date by which the applicant proposes to complete construction. Construction is defined in OAR 345-001-0010. The applicant shall describe in this exhibit all work on the site that the applicant intends to begin before the Council issues a site certificate. The applicant shall include an estimate of the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, that the applicant anticipates or has performed as of the time of submitting the application.*

The Applicant proposes to begin construction by April 1, 2024, and complete construction by December 31, 2025. These 21 months constitute the entire construction period as construction is defined by OAR 345-001-0010.

The following activities have been completed, or will be completed, before the Council issues a site certificate:

- Geotechnical survey
- Cultural survey
- American Land Title Association survey
- Preliminary design
- Wetland survey
- Solar monitoring station installation
- Habitat characterization
- Sensitive species and Raptor nest survey
- Interconnection studies

- Land lease

The estimated cost of this work is under $250,000, in accordance with ORS 469.300(4) and OAR 345-001-0010(11).

FIGURES

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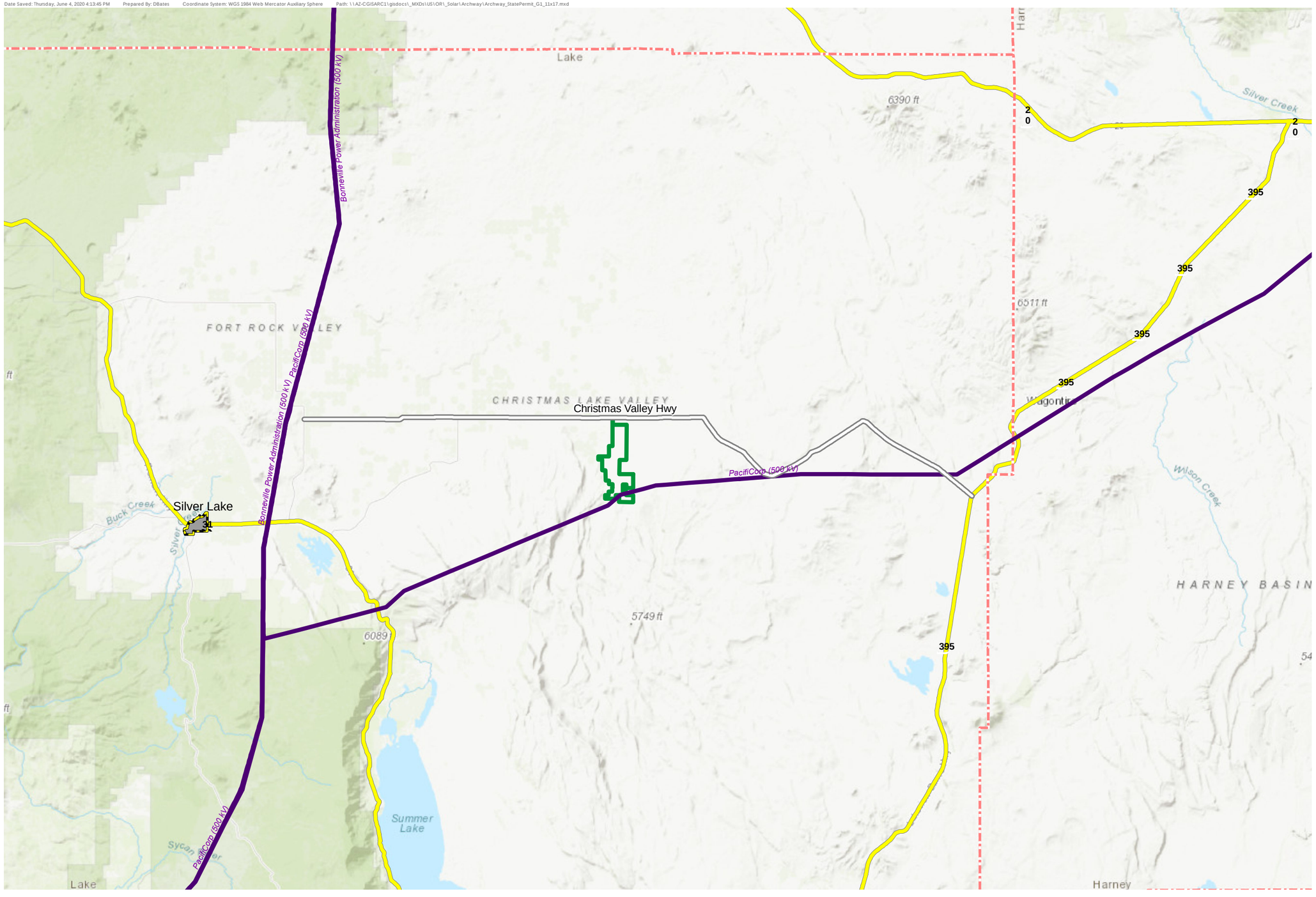

6.5 0 6.5
Miles

Legend

- Site Boundary
- City Limit
- County Line

Transmission Line

- 345 - 500 kV

Road Classification

- US/State Route
- County Road

Figure B-1 - Regional Vicinity Map

Archway Solar Energy Facility | Lake County, Oregon

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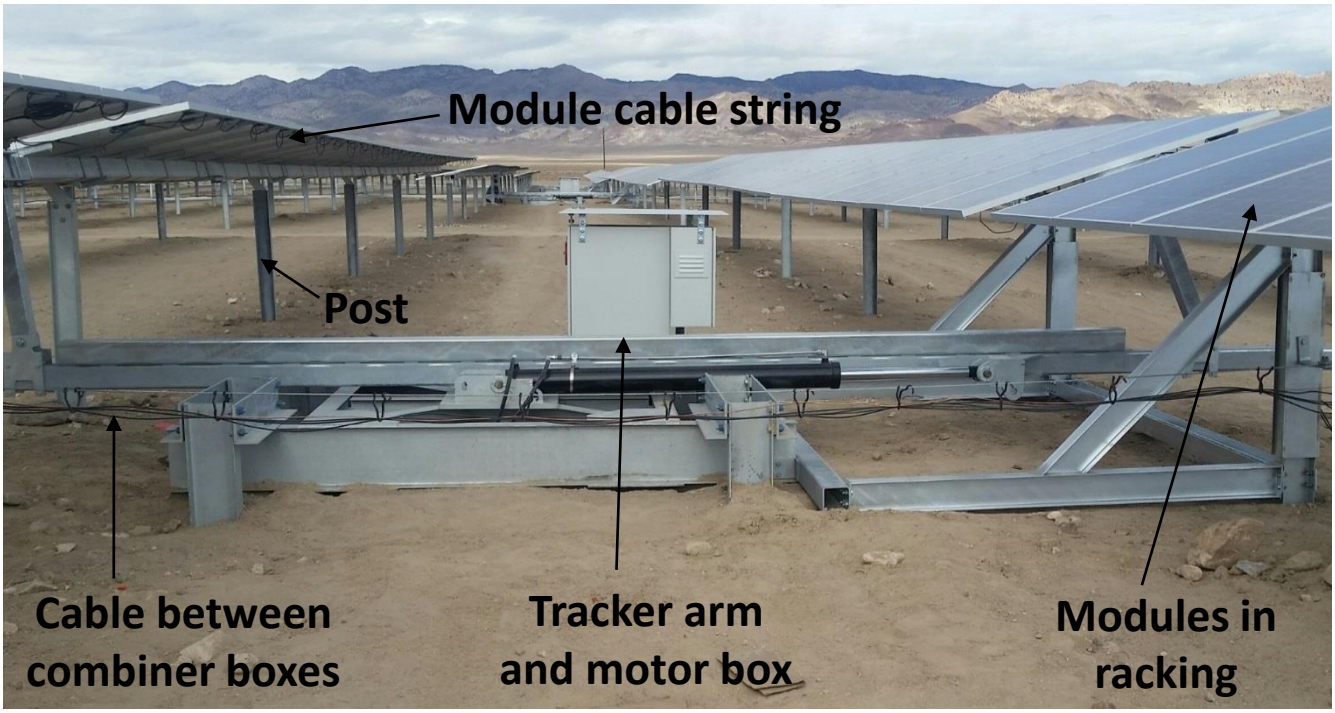

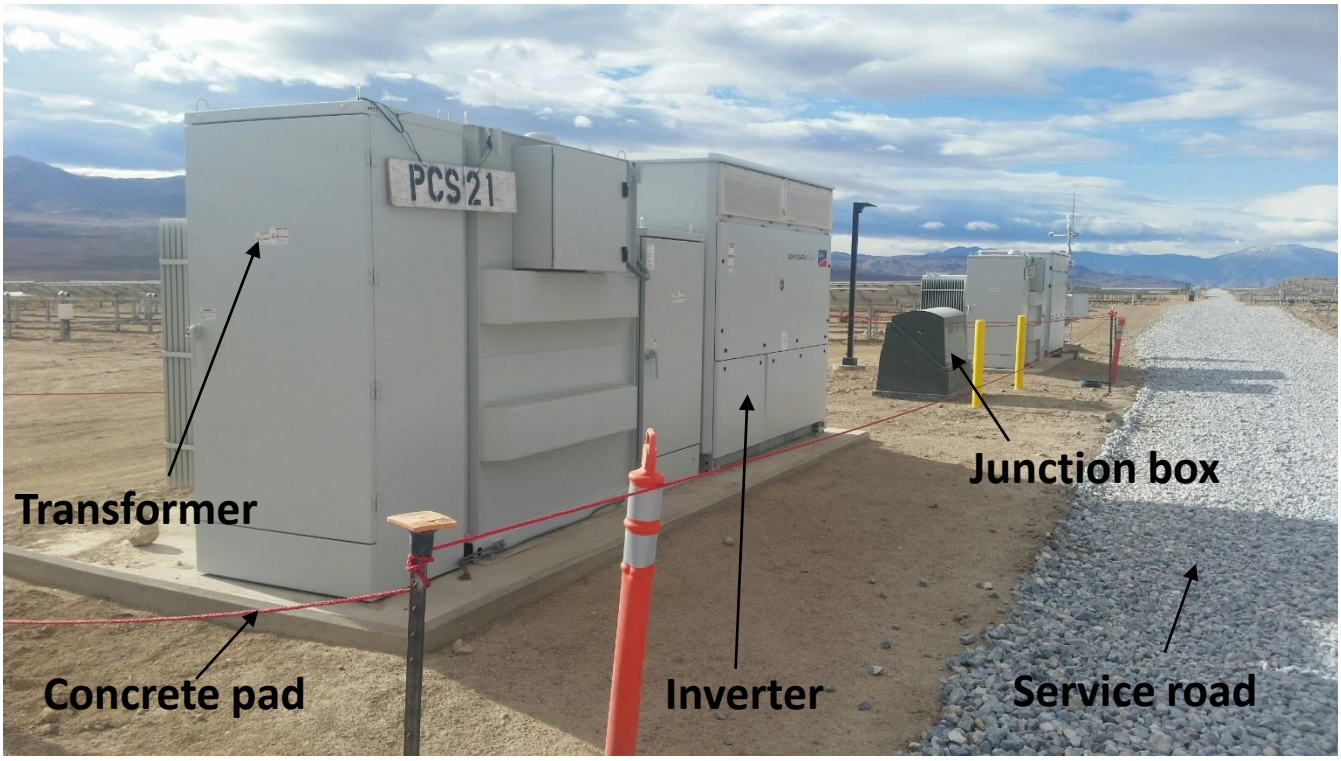

Figure B-2 - Components

Archway Solar Energy Facility, Lake County, Oregon

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