1 PROJECT DESCRIPTION

1.1 Introduction

The applicant, Boulder Brush, LLC, is seeking approval of a Major Use Permit (MUP) for the construction and operation of the Boulder Brush Gen-Tie Line and Substation/Switchyard Facilities. The gen-tie line would carry energy from a wind energy project proposed on Campo Kumeyaay Tribal lands under the jurisdiction of the Bureau of Indian Affairs (BIA). This description includes an overview of the components that are anticipated to be constructed on private land under County jurisdiction in order for the County to provide an evaluation of the environmental and Major Use Permit processing requirements for the gen-tie line, substation/switchyard facilities and ancillary facilities such as service roads.

The footprint of the facilities is approximately 110 acres and consists of 12 parcels in southeastern San Diego County, California. The facilities would be located entirely on private land in the McCain Valley area of the unincorporated County, north of the community of Boulevard and Interstate (I) 8. The properties consist of largely undeveloped ranch land, a portion of which is grazed by cattle, and is surrounded by rural residential homes and ranches scattered throughout the region (see Figure 1-1, Project Location). Regional access is provided by I-8. Local access is provided by Ribbonwood Road. Land ownership surrounding these parcels consists of a mixture of private, State of California, Bureau of Land Management, and tribal lands.

The regional landscape consists of a mixture of large-lot rural residences and open space with mountainous terrain consisting of steep slopes, prominent ridgelines, and rock outcroppings. The 500-kilovolt (kV) Sunrise Powerlink traverses the northeast portion of these parcels. Wind turbines associated with the Tule Wind Project are located immediately adjacent to the east, north, and northwest. Wind turbines associated with the Kumeyaay Wind Project are located approximately 1 mile west of proposed gen-tie line and substation.

Construction and operation of the gen-tie line, substation and ancillary facilities would require a Major Use Permit (MUP) from the County of San Diego (County) and other permits as described herein. The estimated schedule anticipated for County approval of the MUP is provided in Table 1-1.

1.2 Components

The facilities to be approved under the MUP include the following components to be constructed and operated on private land:

- Overhead 230 kV gen-tie line
- Substation, including 34.5-230 kV and 230-500 kV main power transformers
- SDG&E 500 kV substation/switchyard
- In and out 500 kV connection legs between the Sunrise Powerlink and the SDG&E 500 kV substation/switchyard
- Temporary parking, construction trailer, and staging areas

- Construction of temporary and permanent access roads, as well as improvements to existing roadways to accommodate construction and delivery of equipment
- Temporary concrete batch plant

1.2.1 Roads

Where feasible, the existing network of permanent roads would be used to access the facilities during construction. In addition to the existing roads, additional roads would be constructed to provide access and circulation to the gen-tie line and substations.

Primary access would continue to be provided from I-8 with local access through Ribbonwood Road.

1.2.2 Substation

The substation is proposed to be located at the northern portion of the parcels adjacent to the Sunrise Powerlink transmission line, and interconnect directly to that line.

The substation would increase the voltage received from the underground electrical collection system from 34.5 kV to 500 kV in two steps: 34.5 kV to 230 kV, and 230 kV to 500 kV. The substation equipment would include transformers that would be connected through circuit breakers to a jumper link located within the fenced boundary of the substation to deliver power to the point of interconnection. The substation would include a control house and a parking area for utility vehicles. The substation would generally be an un-staffed facility, except in cases of maintenance and repair activities. The cleared area surrounding the substation would be covered with gravel. Security fencing (8 feet tall) would be installed around the perimeter of the substation site.

Most substation equipment would feature a low-reflectivity finish to minimize glare. Dull colored insulators would be used to minimize visibility. Outdoor nighttime lighting at the collector substation would be kept to the minimum required for security and safety, and all lighting would be hooded, directed downward, and turned off when not required.

1.2.3 SDG&E Substation/Switchyard and 500 kV Connection In and Out Legs to the Sunrise Powerlink

A new 500 kV substation/switchyard would be built to allow connection of the gen-tie line to the Sunrise Powerlink. The substation/switchyard would have a ring bus design with three 500 kV breakers and a control house. The connection to the Sunrise Powerlink would be done through in and out transmission line legs that would effectively route the power through the ring bus and the gen-tie's point of interconnection would be at an open position on that same bus.

Upon completion of construction of the facilities, ownership and control of the new 500 kV substation/switchyard, including connection in and out legs would be transferred to SDG&E.

1.2.4 Gen-Tie Line

An overhead 230 kV gen-tie line that would be constructed from the proposed wind energy project on the Campo Kumeyaay Tribal lands to the substation/switchyard. The gen-tie line would include approximately 32 steel poles. The steel poles would accommodate a fiber-optic ground wire attachment for lightning protection and internal communications. The height of the steel pole would vary by location up to a maximum height of 150 feet.

1.2.5 Temporary Staging, Parking, Batch Plant, and Construction Trailer Areas

Temporary staging areas would be used to stage and store components, construction equipment, construction trailers, and construction materials. Steel construction containers would be used to securely store specialized equipment. The temporary staging areas would be placed strategically within the parcels to optimize construction activities while also minimizing environmental impacts to the extent feasible. After construction, all temporary disturbances and construction containers associated with the temporary staging area would be removed and these areas would be restored.

The batch plant would generate concrete for construction of the steel pole foundations and other Project related improvements. Sand, aggregate, concrete, and water would be delivered to the temporary batch plant and stored in stock-piles until use.

1.3 Construction

Construction is anticipated to require 12 months to complete. A decision on the application is projected to occur by May 2019. If approved, construction would begin in June 2019. Operations are scheduled to begin in September 2020.

1.3.1 Substation and SDG&E Substation/Switchyard and 500 kV Connection In and Out Legs to the Sunrise Powerlink

Construction of the substation would begin with clearing vegetation and organic material from the substation site. The substation site would then be excavated to frame and pour foundations.

Structural footings and underground utilities, along with electrical conduit and grounding gird would be installed, followed by aboveground structures and equipment. A chain link fence would be constructed around the new substation for security and to restrict unauthorized persons and wildlife from entering the facility.

1.3.2 Gen-Tie Line

Work would begin with the construction of new access road to the new substation/switchyard and gen-tie line steel pole structures areas. The gen-tie line access roads would be graded level and generally 16

feet wide for straight sections and up to 20 feet wide at curves to allow the safe access of construction equipment and vehicles. Access roads to the gen-tie line structures will remain as 16' wide graveled roads, but the main access road to the substation/switchyard will ultimately be finished as a 30' wide paved road.

Engineered steel poles would be drilled on pier foundations for turning or dead end structures, and directly embedded structures for tangential poles. Holes would be drilled using a truck-mounted auger or similar equipment. Where required for pier foundations, steel cages and anchor bolt cages will be set in the open hole for reinforcement. Directly embedded structures will be backfilled with native excavated material or light concrete mixture, depending on specific conditions for each pole site. Any remaining excavated material would be placed around the holes or spread onto access roads and adjacent areas.

Installation of the new 230 kV conductor would require pull sites along the gen-tie line route. Generally, pull sites would be approximately 100 feet by 150 feet and would be required where 230 kV angle structures are located. The sites would be needed to load the tractors and trailers with reels of conductors and the trucks with tensioning equipment.

After the conductor has been pulled into place, the sag between the structures would be adjusted to a pre-calculated level and the line would then be installed. The conductor would then be attached to the end of each insulator, the sheaves would be removed, and the vibration dampers and other accessories would be installed.

1.4 Operations and Maintenance

1.4.1 Substation and SDG&E Substation/Switchyard and 500 kV Connection In and Out Legs to the Sunrise Powerlink

During operation, the substation and 500 kV substation/switchyard will be unmanned. All substation monitoring and control functions will be performed remotely. Warning signs will be posted and entry to the new substation and 500 kV would be restricted to authorized personnel. Routine operation will require a single pickup truck visiting the substation and 500 kV substation/switchyard several times a week for switching, as well as several larger construction and maintenance trucks visiting the substation several times a year for equipment maintenance. Maintenance activities will include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity.

Lighting will be installed inside the substation and 500 kV substation/switchyard fenced and enclosed areas for the purpose of emergency repair work. Since nighttime maintenance activities are not expected to occur more than once per year, the safety lighting inside the substation fence would normally be turned off. Some of the perimeter lighting in both facilities will remain on all night for safety purposes.

1.4.2 Gen-Tie Line

During operations, the gen-tie line will be regularly inspected, maintained, and repaired. Operations and maintenance activities will involve both routine preventive maintenance and emergency procedures to

maintain service continuity. Aerial and ground inspections of the facilities will be performed. Aboveground components would be inspected annually, at a minimum, for corrosion, equipment misalignment, loose fittings, and other common mechanical problems. Regular inspection of fuel free fire prevention zones along the entirety of the gen-tie line length will be conducted according to local ordinances.