3.4 Environmental Setting

Regional Setting

The proposed project is located in northeastern Kern County at the base of the Tehachapi and Piute mountain ranges within the Sierra Nevada, directly west of the Fremont Valley in the Western Mojave Desert (Figure 3-1). The Tehachapi Mountains are one of California’s largest areas for wind energy development, responsible for about 40% of the State’s total wind-generated power. Elevations range between 2,680 and 5,600 feet above mean sea level. The area is rugged and woodland and desert scrub habitat types are common.

The project area has been heavily impacted by authorized and unauthorized off-highway vehicle (OHV) use and livestock grazing. The BLM’s Jawbone Off-highway Vehicle Open Area is located off Jawbone Canyon Road, to the east of the site. Existing development in the area includes rural access roads, producing and non-producing water wells, cattle ranching and maintenance facilities, and existing meteorological towers (met towers). Water sources include Cottonwood Creek and Butterbredt Springs. The Pacific Crest National Scenic Trail (PCT) is located west of the proposed project site. The distance between the PCT and the project site boundary varies, ranging from 5.5 miles at the northwest corner of the project to 0.8 mile at the southwest corner of the project. The distance from the PCT to the nearest proposed WTG within the project site is 1.7 miles.

Several residences exist near the proposed project site; however, none of these residences are located within the project boundary. Two residences are located in Kelso Valley, within 1/2 mile west of the proposed project site. The closest residence is 3,215 feet west from the nearest WTG. The minimum distance between the proposed regional Wilderness transmission line reinforcement and a residence would be 107 feet. A few residences, which appear to be used for hunting or other recreation, are located in the southern portion of Kelso Valley, 1½ miles northeast of Weldon Peak along Jawbone Canyon Road.

Major transportation corridors in the region include SR 14 (north–south) and SR 58 (east–west), which intersect about 20 miles south of the project area in the community of Mojave. Population centers within 20 miles of the proposed project site include:

- Community of Lake Isabella (20 miles northwest of the proposed project site);
- City of California City (12 miles southeast of the proposed project site);
- City of Tehachapi (12 miles southwest of the proposed project site);
- Community of Mojave (12 miles south of the proposed project site); and
- Community of Twin Oaks (10 miles west of the proposed project site).

The proposed project site is located entirely within the U.S. Geological Survey (USGS) 7.5-Minute Series, Cross Mountain Topographic Quadrangle and the Emerald Mountain Topographic Quadrangle. The proposed project is located within Sections 35 and 36 of Township 29 South, Range 35 East; Section 31 of Township 29 South, Range 36 East; Sections 1, 2, 3, 10-16, 21-23, 25, 27, 28, and 33 of Township 30 South, Range 35 East; Sections 6, 7, and 9 of Township 30 South, Range 36 East.
Based on database searches and site reconnaissance efforts conducted during February 2011, the proposed project site consists of a number of woodland, mixed woodland habitats, scrub communities, and riparian scrub communities, including the following:

- California juniper woodland
- Singleleaf pinyon woodland
- Blue oak woodland
- Gray pine woodland
- Fremont cottonwood forest woodland
- Wright’s buckwheat scrub
- Black brush scrub
- Tucker oak chaparral
- Mojave mixed woody scrub
- Rubber rabbit brush scrub
- Mojave wash riparian scrub
- Southern willow riparian scrub
- Desert olive riparian scrub

There are several existing, permitted, and proposed wind energy and transmission projects in the region. The Los Angeles Department of Water and Power (LADWP) Pine Tree Wind Project, which is now fully online, is located immediately south of the proposed project site (access to the proposed project site is off SR 14 via Jawbone Canyon Road, which also serves the Pine Tree Wind Project). The Alta-Oak Creek Mojave Wind Project, located 14 miles south of the proposed project site, was approved by Kern County in December 2009 and is currently under construction. The 300-MW PdV Wind (recently referred to as Manzana Wind) Project and the 151-MW Pacific Wind Projects are located 25 miles south of the proposed project site. In addition, NextEra owns and operates the existing 77 MW Sky River wind energy facility located immediately south of the southwest portion of the proposed project site.

General Plan

The proposed project site is located within the Kern County General Plan (KCGP) (see Figure 3-5 for Map Code Designations). Within the KCGP, project site lands are designated:

- 8.3 (Extensive Agriculture, 20 acre min);
- 8.3/2.4 (Extensive Agriculture, 20 acre min/Steep Slope); and
- 8.3/2.5 (Extensive Agriculture, 20 acre min/Flood Hazard).

The transmission upgrade options could occur on lands designated:

- 1.1 (State or Federal Land);
- 3.1 (Park and Recreation Areas);
- 5.6 (Residential, 2.5 gross acres/unit);
- 5.7 (Residential, 5 gross acres/unit);
- 5.8 (Residential, 20 gross acres/unit);
- 6.2 (General Commercial);
- 8.2 (Resource Agriculture);
- 8.3 (Extensive Agriculture);
- 8.4 (Mineral and Petroleum); and
- 8.5(Resource Management).

Zoning

Onsite zoning is comprised of A (Exclusive Agriculture), and A-1 MH (Limited Agriculture, Mobilehome Combining). Existing zoning classifications are shown on Figure 3-5. Approval of a
zone change for the proposed project would combine the existing A zone districts with the WE Combining District overlay, would change the existing A-1 MH zone district to A WE, to A, and to A FP as appropriate. Transmission upgrades are proposed, as further discussed below. Upgrades occur on land zoned as A (Exclusive Agriculture), A-1 (Limited Agriculture), E (Estate), FPP (Flood Plain Primary), M-2 (Medium Industrial), and NR (Natural Resource). The potential transmission upgrades would all occur within zone districts for which transmission lines and substations are permitted uses. No zone changes are associated with the regional transmission upgrade components of the project.

The WE Combining District contains development standards that apply to the construction and siting of WTGs in this combining zone district. The WE Combining District is described in Chapter 19.64 of the Kern County Zoning Ordinance.

The WE Combining District promotes the development of wind energy in Kern County and may be combined with any of the following zoning districts:

- Exclusive Agriculture (A),
- Industrial (M-1, M-2 and M-3), and
- Natural Resource (NR) (with a minimum lot size of twenty acres), Recreation-Forestry (RF) (with a minimum lot size of 20 acres), Limited Agriculture (A-1) (with a minimum lot size of 20 acres), or Estate (E) (with a minimum lot size of 20 acres).

The A-1 and A zone districts are not consistent with the 8.3, 8.3/2.4 and 8.3/2.5 Map Codes that are present on the project site. Therefore; as noted above, those portions of the project zoned A-1 and A require changes to the base district to become consistent and allow for the incorporation of the WE Combining District.

Inclusion of the Flood Plain (FP) Combining District is necessary for a small portion located within the boundaries of a Zone A flood hazard area. The purpose of the FP Combining District is to protect the public health and safety and minimize property damage by designating areas that are potentially subject to flooding and by establishing reasonable restrictions on land use in such areas.

The FP Combining District shall be applied to those areas lying within Zone A on the FIRM or those areas potentially subject to flooding as designated by the Kern County Engineering, Surveying and Permit Services Department pending reclassification of such areas into the Floodplain Primary (FPP) Combining District or Floodplain Secondary (FPS) Combining District. The regulation established by the FP Combining District shall be In addition to the regulations of the base district with which the FP Combining District is combined.

The WE Combining District allows for a variety of wind-energy related uses, including wind-driven electrical generators, accessory administrative and maintenance structures and facilities, electrical substations, transmission lines, and other such facilities and electrical structures related to the main use. Development within a WE Combining District requires approval of a detailed plot plan demonstrating compliance with any mitigation measures incorporated into any environmental documents adopted for the implementation of a WE Combining District for specific parcels. The WE Combining District also regulates the development of wind energy projects in the district. For example, the WE Combining District regulates lot sizes, setbacks, and landscaping. In particular, the WE Combining District establishes 600 feet as the maximum height for WTGs (subject to the height restrictions outlined in Section 19.64 and Figure 19.08.160 of the Kern County Zoning Ordinance).
ZONING DESIGNATIONS
A - Exclusive Agriculture
A-1 - Limited Agriculture
E(20) - Estate 20 Acres
RF - Recreation Forestry
WE - Wind Energy
MH - Mobile Home

Figure 3-6
Existing Zoning – Kern County Zoning Classifications
Ordinance), and specifies that the color of turbine blades and towers must be non-reflective and unobtrusive and that each turbine or the total project perimeter must be fenced. The WE Combining District also requires that noise levels associated with turbine operations may not exceed 45 dBA for more than five minutes out of any one hour, measured within 50 feet of any existing residence. However, a waiver may be obtained by the affected property owners acknowledging that they are aware of the noise, but consent to the noise limit in excess of those permitted in the ordinance, not to exceed the maximum of 65dBA as established in the KCGP.

Implementation of the project would require amendments of Zone Maps 110, 111 131, and 132, as shown in Table 3-2, below:

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Zone Map</th>
<th>Zone Change Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>110</td>
<td>A (Exclusive Agriculture District) to A WE (Exclusive Agriculture, Wind Energy Combining District);</td>
</tr>
<tr>
<td>2</td>
<td>111</td>
<td>A-1 MH (Limited Agriculture, Mobilehome Combining) to A WE (Exclusive Agriculture, Wind Energy Combining District), and to A</td>
</tr>
<tr>
<td>8</td>
<td>131</td>
<td>A (Exclusive Agriculture District) to A WE (Exclusive Agriculture, Wind Energy Combining District) and A FP (Exclusive Agriculture, Floodplain Combining)</td>
</tr>
<tr>
<td>9</td>
<td>131</td>
<td>A (Exclusive Agriculture District) to A WE (Exclusive Agriculture, Wind Energy Combining District)</td>
</tr>
<tr>
<td>5</td>
<td>132</td>
<td>A (Exclusive Agriculture District) to A WE (Exclusive Agriculture, Wind Energy Combining District) and A FP (Exclusive Agriculture, Floodplain Combining)</td>
</tr>
</tbody>
</table>

### Existing Land Use

The proposed project site is essentially undeveloped, but it is currently and has historically been used as grazing land for cattle. Wind data is currently being collected by four met towers installed in accordance with Kern County Building Permits issued in July 2010. The potential transmission upgrades associated with the proposed project would occur along the existing “Wilderness” transmission line. Given the historical use of the proposed project site, there is a relatively extensive system of existing unpaved roads throughout the property.

The proposed project site entails a mix of parcels that have been purchased by the applicants or where leases have been acquired by the project proponents and where authorization has been obtained to include the land with the proposed project and to obtain a change in zoning designation to add the WE Combining District.

### Farmland

The proposed project site is not located within an area designated by the California Department of Conservation (CDC) as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The proposed project area is comprised primarily of land classified as “grazing land” according to the California Division of Land Resource Protection Farmland Mapping and Monitoring Program. As such, the proposed project property land is not prime, unique, or important farmland.

### Surrounding Land Use

The project area has been heavily impacted by authorized and unauthorized OHV use and livestock grazing. The BLM’s Jawbone Off-highway Vehicle Open Area is located off Jawbone Canyon.
Road, east of the site. Existing development in the area includes rural access roads, producing and non-producing water wells, cattle ranching and maintenance facilities, and existing met towers. As mentioned above, the PCT is located west of the proposed project site. The distance between the PCT and the project site boundary varies, ranging from 5.5 miles at the northwest corner of the project to 0.8 mile at the southwest corner of the project. The distance from the PCT to the nearest WTG within the project site is 1.7 miles.

Several residences exist near the proposed project site. Two residences are located in Kelso Valley, within 1/2 mile west of the proposed project site. The closest residence is 3,215 feet west from the nearest WTG. The minimum distance between the proposed regional Wilderness transmission line reinforcement and a residence would be 107 feet. A few residences, which appear to be used for hunting or other recreation, are located in the southern portion of Kelso Valley, 1½ miles northeast of Weldon Peak along Jawbone Canyon Road.

The proposed project area is located within an area identified by the California Public Utilities Commission (CPUC) as the TWRA in the EIR for the Tehachapi Renewable Transmission Project (TRTP).

**Site Access**

Access to the project site could be achieved from the north and east using Jawbone Canyon Road and Kelso Valley Road; or from the west utilizing State Route 58 and Caliente Creek Road.

Access from the north and east would be from Jawbone Canyon Road and Kelso Valley Road, a majority of which are paved (Figure 3-2). There is also an existing network of unpaved roads that allow for access throughout the site. Access to and throughout the proposed project site would be established by the use of existing roads and construction of limited access road improvements. In addition to access roads built on private land, the project would require 962 linear feet of new access roads on BLM land. The project proponents will be required to work with the BLM to obtain the appropriate permits to cross BLM lands.

BLM-managed land associated with the proposed ROW for WTG construction and operation access roads include portions of: Sections 20, 22, 27 of Township 30 South, Range 37 East; Section 24 of Township 30 South, Range 36½ East; Sections 22, 24, 28, 30 of Township 30 South, Range 36 East; and, Section 26 and 28 of Township 30 South, Range 35 East. The gen-tie/gen-tie access road ROW would include portions of Section 26, 28, and 32 of Township 30 South, Range 35 East.

Access from the west would utilize only private land; thereby avoiding the use of BLM lands for access. Use of this access route would entail improvements on up to 28 miles of existing access roads and construction of 2.5 miles (13,200 linear feet) of new roads through privately-owned land. This route would begin at the intersection of State Route 58 and Caliente Creek Road (via a short frontage road connection) and would follow Caliente Creek Road for 15 miles. Caliente Creek Road is an existing paved road that is narrow and winding and may require improvements to accommodate the delivery of WTG components. The route would then connect to Back Canyon Road where it would proceed west for approximately 13 miles. The route would then follow paved Back Canyon Road for approximately 4 miles and turn into an un-improved dirt road, traverse a mountain pass, and transition from a County road to a private road. The route would then proceed for another 7 miles along the unimproved dirt road. Final connection to the project site would then require construction of up to 2 miles of new road to the project site. A map showing the proposed access from the west is included in Appendix L of this EIR. Roadways will primarily be located
within the previously approved Pine Tree Wind Energy Project and the Sky River Wind Energy Project, which have already been analyzed in accordance with CEQA. The project proponent has not obtained land control of the lands needed to utilize this option.

3.5 Proposed Project Characteristics

The proposed project facilities would include WTGs, service roads, a power collection system, communication cables, a generation interconnection line to the existing Sky River Substation, underground transmission lines, electrical switchyards, project substation, temporary meteorological towers and O&M facilities. The proposed project’s temporary facilities would include construction access roads and turnaround areas, water storage areas for dust control and other limited construction-related needs, laydown/staging areas, construction office trailers, and concrete batch plants. Proposed project elements are shown on Figure 3.2 and include:

- Up to a maximum of 116 WTGs not to exceed 500 feet in height with associated generators, towers, foundations, and pad mounted transformers (each WTG could range from 1 MW to 3 MW), for a total generation capacity not to exceed 339 MW of electricity;
- Four existing and up to four additional unguyed permanent met towers (North Sky River Wind Energy Project);
- Four temporary met towers (Jawbone Wind Energy Project);
- On-site and off-site project access roads, control cables, power collection cables, and transmission lines necessary to serve the proposed project and connect to the California Independent System Operator (CAISO) grid;
- One project substation to step up the voltage generated by the WTG to meet the electrical transmission system’s 230-kV voltage;
- Two O&M facility areas (North Sky River Wind Energy Project – 5 acres; Jawbone Wind Energy Project – 6.5 acres);
- Two remote staging/office trailers; and
- One temporary mobile concrete batch plant.

Infrastructure locations as evaluated in this EIR are depicted in Figure 3-2. The proposed project site plan is not intended to reflect the precise location of proposed WTGs and structures. Prior to the preparation of final engineering plans, the project proponents would ensure that no WTGs or structures are located within the road reservation areas set forth in the Circulation Element of the KCGP. The proposed project facilities are described in detail below.

Project Components

Wind Turbines Generators. Up to 116 WTGs would be installed at the proposed project site. Tables 3-3 and 3-4 show examples of WTGs that may be installed at the proposed project site.

<table>
<thead>
<tr>
<th>Table 3-3 Proposed Wind Turbine Generator Characteristics for the North Sky River Wind Energy Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GE XLE 1.5 MW</strong></td>
</tr>
<tr>
<td>Tower/Hub Height</td>
</tr>
<tr>
<td>Tower/Hub Height</td>
</tr>
<tr>
<td>Rotor Radius</td>
</tr>
<tr>
<td>Rotor Diameter</td>
</tr>
</tbody>
</table>