4.1 Aesthetics

4.1.1 Introduction

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment (CEQA Guidelines, 2011). A person’s reaction and attachment to a given viewshed is subjective; therefore, visual change in a viewshed inherently affects viewers differently. Given this variability, aesthetics analysis, or visual resource analysis, uses a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. The Aesthetics section of this Environmental Impact Report (EIR) describes the existing landscape character of the project area, existing views of the area from various on-the-ground vantage points, the visual characteristics of the proposed project, and the landscape changes that would be associated with the construction and operation of the proposed project, as seen from various vantage points.

Sources that were consulted for information on existing and future visual resources in the project area included: the U.S. Geological Survey State topographic quadrangles, plans of development provided by the project proponent, the project proponent’s Aesthetics Technical Report (provided as Appendix B), highway maps, Pacific Crest National Scenic Trail (PCT) trail guide and map, Google Earth images, and other internet sources. Regulatory standards were investigated, including the Kern County General Plan (KCGP), the Kern County Zoning Ordinance, and the project proponent’s Applications for a Zone Change and Conditional Use Permit.

Visual Resource Terminology and Concepts

When viewing the same landscape, people may differ in their responses to that landscape and any proposed visual changes. Their responses are based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person’s attachment to and value for a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. However, generalizations can be made about viewer sensitivity to scenic quality and visual changes. Recreationists, hikers, equestrians, tourists, and people driving for pleasure are expected to have high concern for scenery and landscape character. People who are commuting daily through the same landscape generally have a moderate concern for scenery, while people working at industrial sites (such as wind farms) within the landscape generally have a lower concern for scenic quality or changes to existing landscape character. The visual sensitivity of a landscape is affected by the viewing distances from which it is seen, such as close-up or far away. The visual sensitivity of a landscape also is affected by the travel speed at which a person is viewing the landscape (e.g., high speeds on a highway, low speeds on a hiking trail, or stationary at a residence).

A particular feature of a project can be perceived differently by people depending on the distance between the observer and the viewed object. This distance is defined as “viewing distance” or “distance zones.” For the purpose of this analysis, distance zones are delineated as immediate foreground, foreground, middleground, and background. When a viewer is closer to a viewed object in the landscape, more detail can be seen and there is greater potential influence of the object on visual quality because of its form or scale (relative size of the object in relation to the viewer). When the same object is viewed at background distances, details may be imperceptible but overall forms of terrain and vegetation are evident, and the horizon and skyline are dominant. In the
middleground, some detail is evident and landscape elements are seen in context with landforms and vegetation patterns (like the background).

This analysis was conducted using the evaluative process set out by the Federal Highway Administration in *Visual Impact Assessment for Highway Projects* (FHWA, 1988). This approach is widely used to provide systematic and objective evaluations of visual change. The following is an overview of the fundamental methodology used throughout this analysis:

**Terminology:**

**Views** are what can be seen from the project area and what can be seen of the project area from outside the project. It is not feasible to depict every view of the project elements; therefore, viewpoints have been selected that are representative of views that would be available to the general public. These representative viewpoints are called Key Observation Points (KOPs).

**Viewshed** is the area surrounding a project from which the project is, or potentially could be, visible to viewers.

**Simulations** are depictions of how the project would appear as seen from a particular KOP. A photograph of the existing landscape is modified by computer modeling to incorporate project elements, thereby illustrating the appearance of the proposed project within the landscape.

**Viewers** are persons who have views of the project. Viewers are usually discussed in terms of general categories, or viewer groups, based on activities (such as residents, workers, recreationists [park users, boaters, or bicyclists], pedestrians, or motorists [both commuters and leisure travelers]).

**Viewer sensitivity** (or level of concern) is a combination of the following factors for a specific view:

- How many people have that view and what types of viewers are they?
- How long can they see the view? Residents and recreationists generally have views of long duration while bicyclists and motorists typically have short-duration views.
- What is their likely level of concern about the appearance, aesthetics, and quality of the view? Level of concern is a subjective response that is affected by factors such as the visual character of the surrounding landscape, the activity a viewer is engaged in, and their values, expectations, and interests. Generally, residents and recreationists are considered to be highly sensitive viewers, and local business staff and commuters are considered to be less sensitive.

Low viewer sensitivity occurs when there are few viewers who experience a defined view or they are not particularly concerned about the view. High viewer sensitivity exists when there are many viewers who experience a view frequently or over a long duration, as well as viewers (many or few), such as those in a residential neighborhood, who are likely to be very aware of and concerned about the view. Viewer sensitivity or level of concern does not imply support for or opposition to a proposed project.

**Visual character** is a description of what the landscape consists of and is defined by the visible relationships between the existing natural and built landscape features. These relationships are considered in terms of dominance, scale, diversity, and continuity. Visual character-defining resources and features include:

- Landforms: types, gradients, and scale.
- Vegetation: types, size, maturity, and continuity.
- Land uses: height, bulk, scale, and architectural detail of associated buildings and ancillary site uses.
• Transportation facilities: types, sizes, scale, and directional orientation.
• Overhead utility structures and lighting: types, sizes, and scale.
• Open space: type (e.g., parks, reserves, greenbelts, and undeveloped land), extent, and continuity.
• Viewpoints and views to visual resources.
• Water bodies, historic structures, and downtown skylines.
• Apparent “grain” or texture, such as the size and distribution of structures and unbuilt properties or open space in the landscape.
• Apparent upkeep and maintenance.

Viewing distance is the distance between the viewer and the object being viewed. The closer the viewer is to a viewed object the more detail can be seen and the greater the potential influence the object has on visual quality. For this analysis, three viewing distances were used. They are (1) foreground (between 0 and 0.5 mile of the viewer), (2) middleground (between 0.5 and 4 miles), and (3) background (beyond 4 miles).

Visual quality is an assessment of the composition of the character-defining features for selected views. Under the FHWA visual quality analysis system, the characteristics are evaluated in terms of vividness, intactness, and unity (which are defined below) and are scored for these characteristics. The scores are then averaged for a total visual quality score between 1 and 7, where a low score represents low visual quality and a higher score represents high visual quality. This assessment asks: Is this particular view common or dramatic? Is it a pleasing composition (a mix of elements that seem to belong together) or not (a mix of elements that either do not belong together or are eyesores and contrast with the other elements in the surroundings)?

Visual quality is evaluated and discussed using these terms:
• **Vividness** is the degree of drama, memorability, or distinctiveness of the landscape components. Overall vividness is an aggregated assessment of landform, vegetation, water features and human-made components in views.
• **Intactness** is a measure of the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well-kept urban and rural landscapes, as well as in natural settings. High intactness means that the landscape is free of unattractive features and is not broken up by features and elements that are out of place. Low intactness means that visual elements can be seen in a view that are unattractive and/or detract from the quality of the view.
• **Unity** is the degree of visual coherence and compositional harmony of the landscape considered as a whole. High unity frequently attests to the careful design of individual components and their relationship in the landscape or an undisturbed natural landscape.

**Viewing Zones:**
For this analysis, four viewing distances (or zones) were used. These are increasingly far from the viewer and take into account the distance between the viewer and the project. They are:
• Immediate Foreground (the area from the viewer to 300 feet away)
• Foreground (the area between 300 feet and 0.5 mile away)
• Middleground (the area between 0.5 and 4 miles away)
• Background (the area beyond 4 miles to the horizon)

Motion is one of the strongest visual attributes in a landscape, which is mostly static and motionless. Therefore, any motion in the landscape attracts and holds a viewer’s attention. The human eye
can detect motion in the landscape from very long distances (USDA Forest Service, 1973). The motion from large spinning rotors on wind turbine generators (WTGs) is an example of this factor that affects visual quality and attracts attention.

Baseline data for the project site were collected using an approach that incorporated a combination of information review, agency consultation, analysis of aerial photographs and satellite imagery, map review, field reconnaissance, and on-site photography. Existing information was used to the extent possible and appropriate, including the Aesthetics Technical Report (CH2M HILL, 2011) which is included in Appendix B of this EIR, the PdV Wind Energy Project Draft EIR, the Alta-Oak Creek Mojave Project EIR, the Antelope Transmission Project Segments 2 & 3 Final EIR (California Public Utilities Commissions (CPUC), 2007), and the Tehachapi Renewable Transmission Project Final EIR/Environmental Impact Statement (CPUC, 2009).

Baseline data were collected for the environmental setting using the following methodology:

1. A general overview and site reconnaissance was conducted with CH2M HILL staff, staff from Aspen Environmental Group, and Kern County Planning and Community Development Department staff in March 2011.

2. Locations of sensitive receptors were noted on maps showing local roads and trails.

3. Viewpoints from which the proposed project could be seen were identified in the Aesthetics Technical Report (CH2M HILL, 2011). Following discussions with the County, 4 key observation points (KOPs) were selected for detailed analysis, based on their ability to exemplify visual resource impacts at a particular location. The KOPs that were analyzed are representative of Project induced visual resource impacts to this particular landscape.

4. Landscape photographs were taken from the KOPs. Computerized photo-montages were prepared by CH2M HILL using existing landscape photography and computer models of proposed features. The resulting photomontages, based on the geographically referenced photograph points and WTG locations, were rendered for each observation point. According to Tables 3-3 and 3-4 (Proposed Wind Turbine Generator Characteristics for the North Sky River Wind Energy Project and the Jawbone Wind Energy Project) in Section 3.0 Project Description, the maximum height of the tallest WTG being considered, the 2.75 MW GE XL WTG, is 497 feet. The Aesthetics Technical Report used the same WTG heights for use in the simulations. The photo-montages provide a perspective of what the proposed project would look like after construction. These pairs of before and after landscape photographs/photomontages from the technical report are found at the end of Section 4.1.

In addition to the construction of WTGs and associated facilities on the project site, the project would also construct improvements to an existing transmission line between the site and an existing substation to deliver the generated power to the state’s electric grid. The options for transmission and their aesthetic impacts are discussed following the discussion of the WTG site.

The overall scenic quality of the landscape seen from the KOPs is rated according to the scheme presented in Table 4.1-1 Landscape Scenic Quality Scale.
### Table 4.1-1 Landscape Scenic Quality Scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Visual Quality</td>
<td>Landscapes of exceptionally high visual quality that are significant nationally or regionally. They usually contain exceptional natural or cultural features. They are what we think of as &quot;picture post card&quot; landscapes. People are attracted to these landscapes to view them.</td>
</tr>
<tr>
<td>High Visual Quality</td>
<td>Landscapes that have high quality scenic value. This may be due to cultural or natural features that cause the landscape to be visually interesting or particularly comfortable. These landscapes have high levels of vividness, unity, and intactness.</td>
</tr>
<tr>
<td>Moderately High Visual Quality</td>
<td>Landscapes that have above average scenic value but are not of high scenic value. Levels of vividness, unity, and intactness are moderate to high.</td>
</tr>
<tr>
<td>Moderate Visual Quality</td>
<td>Landscapes that are common or typical with average scenic value. They usually lack significant cultural or natural features. Levels of vividness, unity, and intactness are average.</td>
</tr>
<tr>
<td>Moderately Low Visual Quality</td>
<td>Landscapes that have below average scenic value but not low scenic value. They may contain visually discordant man-made alterations, but these features do not dominate the landscape. They often lack spaces that people will perceive as inviting and provide little interest in terms of two-dimensional visual attributes of the landscape.</td>
</tr>
<tr>
<td>Low Visual Quality</td>
<td>Landscapes that have below average scenic value. They may contain visually discordant man-made alterations, and often provide little. Levels of vividness, unity, and intactness are below average.</td>
</tr>
</tbody>
</table>

Source: CH2M HILL, 2011

### 4.1.2 Environmental Setting

#### Regional Character

The 13,535-acre project site is located in northeastern Kern County, in the southeastern Sierra Nevada, 6 miles east of the Mojave Desert and 25 miles west of the San Joaquin Valley. The area is rugged and woodland and desert scrub habitat types are common. Elevations across the site range between 2,680 and 5,600 feet above mean sea level. As is typical in the Sierra Nevada province, there is a climatic gradient across the site. Generally, conditions on the west side are characterized by a moderate supply of moisture. Conditions on the east side of the site are more arid, characterized by a severe lack of available water. Corresponding with the climate, the vegetation on the west side of the project site is typified by pinyon-juniper woodland and oak woodland and on the east side by grasslands and chaparral scrub.

Portions of the project area have been altered from its natural state by authorized and unauthorized off-highway vehicle (OHV) use and by livestock grazing. The Bureau of Land Management’s (BLM) Jawbone OHV Open Area is 8 miles east of the site, located along Jawbone Canyon Road. Existing development in the area includes rural access roads, cattle ranching, meteorological towers (met towers), and wind energy projects. A north-northwest trending segment of the PCT is located west of the proposed project. 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 between the PCT and the nearest WTG within the project site would be 1.9 miles.

Several residences are located 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 project site. The closest residence would be located 3,215 feet west from the nearest WTG. A few residences are located in the southern portion of Kelso Valley, 1.5 miles northeast of Weldon Peak along Jawbone Canyon Road.