APPENDIX 3A

Visual Resources Methodologies and Assumptions

INTRODUCTION

Appendix 4, Visual Contrast Rating Sheets for the East County (ECO) Substation/Tule Wind/Energia Sierra Juarez (ESJ) Gen-Tie Projects, contains supporting information on Impact VIS-3, Impacts to Visual Character or Quality (Visual Resource Degradation). Section D.3, Visual Resources, of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was prepared by Dudek, with senior support provided by View Point West. The Visual Resources EIR/EIS team consisted of Ms. Christine Keller and Mr. Tony Kovacic (View Point West) and Mr. Josh Saunders (Dudek).

Section D.3, Visual Resources, relies on baseline information provided by regulatory agencies and the project applicants' consultants. Information on scenic quality and visual sensitivity was provided by the Bureau of Land Management (BLM) for public lands, and by the applicants' consultants for lands potentially affected by each of their respective projects. BLM inventory data is contained in Appendix 3b, Visual Resource Inventory Summary. Baseline data provided by the project applicants is contained in the Visual Resources Technical Report, prepared by HDR Associates, Environmental Vision, and ICF Jones and Stokes.[1] Baseline data was also provided in the Sunrise EIR/EIS, a joint BLM/CPUC (California Public Utilities Commission) NEPA/CEQA (National Environmental Protection Act/California Environmental Quality Act) document (CPUC and BLM 2008).

The EIR/EIS Visual Resources team was responsible for documenting visual resource impacts and mitigation measures and is based on guidelines adopted by the BLM in the Visual Resource Management (VRM) system in their Manual 8431 (BLM 1986a). The EIR/EIS impact analysis relies upon the following information provided by the project applicants: (1) project descriptions for each of the three projects, including the location and design of various project facilities and access roads; (2) key observation points (KOPs) pertinent to each project; (3) photographic-quality visual simulations prepared from each of the KOPs; and (4) viewshed analyses, documenting the extent and location from which each project may be potentially visible. San Diego Gas & Electric Company's East County Substation Project Proponent's Environmental Assessment (SDG&E 2009), Pacific Wind Development's Environmental Document for the Tule Wind Project (Iberdrola Renewables, Inc. 2010), Energia Sierra Juarez U.S. Transmission,

[1] The baseline data on scenic quality and visual sensitivity, provided by the BLM and the project applicants, consists of narrative descriptions and worksheets. Visual resource inventory (VRI) maps have not been provided. The applicants' visual resources technical reports contained consultant impact findings for each of the proposed projects and alternatives; these findings and analyses were not used, nor adopted for the EIR/EIS. The applicants' technical information was reviewed, and the applicant-prepared simulations were used in the field to evaluate the type and degree of visual changes that would occur from each KOP. In many cases, however, the findings of the EIR/EIS team differed from the studies provided by the applicants.

LLC's Major Use Permit Application (ESJ 2009) and Visual Resources Report (March 2010) served as the primary sources for the project descriptions and description of alternatives.

Methods, Terms, and Data Limitations

Project Area

The project area for visual resources is defined by the on-site landscapes directly affected by the various components of the Proposed PROJECT or alternatives and the surrounding off-site areas from which the Proposed PROJECT or alternatives may be visible. A viewshed is defined as all surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a road or trail) (Federal Highway Administration 1988). Based on field review of other similar projects, the project areas for the ESJ and Tule wind turbines are defined to encompass lands within 15 miles of the project facilities. The height of the turbines (450+ feet), combined with their light color, blade movement, night-lighting requirements, and placement on ridgelines, create a maximum visibility potential for these structures to background distances of 10 miles and beyond. The project areas for the ECO, ESJ, and Tule 138 kV, 230 kV, and 500 kV transmission lines and substations are defined to extend 5 miles from these types of project facilities. The height of the transmission structures (typically less than 150 feet), combined with their neutral colors and predominant locations on slopes and valley floors would substantially lessen the distance at which these facilities would be perceived. For the purposes of this EIR/EIS, the project area lies in a transition zone between the California Peninsular Ranges to the west and the California desert to the east. Viewshed maps, prepared by the project applicants' visual resource consultants are enclosed at the back of this appendix and were used for determining the extents of the project area.

Scenic Quality

Scenic quality relates to the visual appeal of a landscape and is typically described according to seven contributing elements: landforms, vegetation, water, color, influences of adjacent scenery, cultural modifications, and scarcity. Scenic quality is described in the EIR/EIS according to the following terms or levels:

- Class A: Exceptional or High Scenic Quality, defined as rare, unique, or exemplary of the visual qualities typically associated with a given physiographic region
- Class B: Representative Scenic Quality, defined as landscapes that have visual qualities typically seen in a given physiographic region
- Class C: Common or Undistinctive, defined as landscapes lacking visual diversity or features typically associated with a given physiographic region. Information on scenic quality was provided by the BLM and project applicants' visual resource consultants.

Visual Sensitivity

Visual sensitivity is defined as a measure of public concern for scenic quality. Visual sensitivity is described in qualitative terms of high, medium, or low. Visual sensitivity is judged based upon user volume and attitudes toward changes to the visual environment. Factors considered include the number and types of viewers potentially affected and documented public concerns toward visual changes. Information on visual sensitivity was provided by the BLM and applicants' consultants. Visual sensitivity data was verified by the EIR/EIS team based on land use data and the public scoping report.

Viewer Groups – Number and Types of Viewers

Potentially sensitive viewers are based on the type and amount of use various land receives. Land uses that derive value from the quality of their settings are considered sensitive. Land uses within the project area that are considered sensitive to visual changes to their settings include residential areas; designated park, recreation, and natural areas; major transportation systems; and designated and eligible state historic routes and scenic highways.

Public Concerns

Public concerns toward visual changes are considered in this analysis based upon the type of land use affected and public comments received during the EIR/EIS scoping process. Visual issues were raised by a number of local residents, elected officials, and representatives of state and local organizations. A summary of the visual issues raised during scoping are contained in the Proposed PROJECT's Public Scoping Report (CPUC and BLM 2010).

Distance Zones

The distance from which a project component may be viewed affects the visual dominance and clarity that a feature or component may have within the visible landscape. Distance zones are described in this section according to "foreground views," "middleground views," and "background views." Foreground views pertain to viewing distances from which the viewer has close-range visibility to a given object (generally within 0.25 to 0.5 miles away). Middleground views typically pertain to viewing distances between 0.5 mile and 3 miles away, from which objects are still distinguishable from other adjacent visual features. Background views pertain to viewing distances up to 15 miles away, where visibility of objects is less distinctive, and where ridges and skylines provide the greatest potential viewing opportunities to an object.

The Tule and ESJ wind turbines were evaluated for sensitive viewing locations within foreground, middleground, and background distance zones. The ECO, Tule, and ESJ transmission lines and substations were evaluated for sensitive viewing locations within foreground and middleground distance zones (up to 5 miles away). In most instances, the

visibility of the transmission lines and substations would be substantially diminished beyond 2 miles by background screening of vegetation and topography. The wind turbines may be visible at background viewing distances, however, since multiple turbines may be openly visible and skylined on elevated ridgelines.

Viewer Exposure

In addition to the visual factors described above, the visual resources study considered viewer exposure. Viewer exposure varies depending upon the angle of view (i.e., normal, inferior, or superior viewing angles); the extent of visibility (i.e., whether views are panoramic or limited by vegetation, topography, or other land uses); and viewer screening conditions (e.g., whether the project facilities will be skylined on ridgelines, backscreened by topography and/or vegetation, or screened by structures or vegetation in the foreground). Viewer exposure also considers the duration of view based on type of use (e.g., travel route versus residential home). Viewer exposure is described as long-term for residents and short-term for travelers along roadways and visitors to park and recreation areas.

Key Observation Points

Key Observation Points (KOPs) are representative viewpoints evaluated in Section D.3, Visual Resources, of this EIR/EIS, for project visual impacts and mitigation measures. KOPs provide a range of sensitive viewers, distance zones, viewing conditions, and visual changes that would result from the Proposed PROJECT or alternatives. In total, 18 KOPs are described and evaluated. KOP locations are shown on Figure D.3-4 of the EIR/EIS. The KOP locations and view orientations were initially identified by the project applicants' visual resource consultants. KOPs were subsequently reviewed in the field by the EIR/EIS team to verify their suitability. While the KOPs were determined to provide an appropriate range of viewing locations, the KOP locations and/or orientations were modified in some instances by the EIR/EIS team where deemed necessary to more fully capture the project elements that would be visible and the extent of visual changes that would occur.

Visual Simulations

Simulations are defined as accurate, photorealistic images of proposed or alternative actions or facilities and are key to documenting visual changes and determining visual contrast levels from specific KOP viewing locations. Visual simulations were prepared by the project applicants' consultants and were reviewed in the field by the EIR/EIS team for completeness and photorealism.

The KOPs and supporting simulations prepared by each of the project applicants' consultants were determined by the EIR/EIS team to provide photorealistic representations for various

project components, covering a range of viewing locations and viewer types. However, since each of the applicant's consultants was responsible for, and focused on, their separate respective projects, the KOP view orientations and simulations were found to be limited and deficient in a number of instances with respect to illustrating the full visual effects of the Proposed PROJECT or alternatives from various KOPs. In such instances, the EIR/EIS team further documented the degree of views potentially affected by the Proposed PROJECT or alternatives. Supplemental photographs with narrative notations are provided in Section D.3 EIR/EIS figures to cover such instances. The lack of complete simulations for each KOP represents an analytical limitation that may affect the accuracy of some findings. Issues of concern include the lack of access roads shown in some simulations, as well as photographs with atypical lighting conditions. Simulation limitations are noted on Section D.3 figures as applicable.

Visual Contrast Ratings

Visual contrasts were evaluated by the EIR/EIS team and documented on the BLM's Visual Contrast Worksheets (BLM 1986a). Contrast ratings are defined according to four levels:

1) None: The element contrast is not visible or perceived
2) Weak: Element contrast can be seen but does not attract attention
3) Moderate: Element contrast begins to attract attention and is not easily overlooked
4) Strong: Element contrast attracts attention, will not be overlooked, and is dominant in the landscape.

Contrast rating forms were used by the EIR/EIS team to describe the existing landscape character and visual sensitivity at each KOP; to document the project and alternative facilities and actions that would be viewed at each KOP; and to estimate the degree of change in line, form, color, and texture that the Proposed PROJECT and alternatives would create from each KOP. Due to the complexity of the Proposed PROJECT, separate contrast rating worksheets were developed for each of the three projects at each applicable KOP. Contrast rating forms were used to determine the overall degree of visual change that would occur from a given KOP, as well as to determine what types of mitigation measures would reduce visual contrasts associated with specific project elements.

Summary of Findings

Table 1 contains a summary of the visual resources impact findings by KOP. The table identifies: the scenic quality, visual sensitivity, and viewing distance zones from each KOP; the highest contrast ratings for line, form, color, and texture elements, and the visual resource degradation (Impact VIS-3) impact classes for each project and alternative components. Figure references are to the EIR/EIS figures, which photographically document the existing settings and the

anticipated visual changes. All figures are organized according to KOP. Section D.3 visual resource sheets should be reviewed in conjunction with the Summary Table 1 herein and individual contrast rating worksheets (see Appendix 4) for full information on each KOP and project finding.

Summary Table 1
Visual Resources Appendix
Study Findings for Impact VIS-3: Degradation of Existing Visual Character or Quality of the Site or its Surroundings
East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
KOP 1 – I-8 Eastbound (S.Q. – Class B; V.S. – M-H; Distance Zone – FG/MG)	ECO – ECO Substation & Loop-In	Strong	Strong	Moderate	Moderate	Class I	D.3-6A and D.3-6B
	ECO – ECO Substation (w/ Landscape Plan) & Loop-In	Strong	Strong	Moderate	Moderate	Class I	D.3-6A and D.3-6C
	ESJ – Wind Turbines	Strong	Strong	Strong	Moderate	Class I	D.3-6A and D.3-6D
	ESJ – 500kV Gen-Tie	Moderate	Moderate	Moderate	Moderate	Class II	D.3-6A and D.3-6D
KOP 2 – Old Highway 80 Eastbound (S.Q. – Class B; V.S. – M-H; Distance Zone – FG/MG)	ECO – ECO Substation & Loop-in	Strong	Strong	Moderate	Moderate	Class I	D.3-7A and D.3-7B
	ECO – ECO Substation (w/ Landscape Plan) & Loop-in	Strong	Strong	Moderate	Moderate	Class I	D.37A and D.3-7C
	ECO – Alternative ECO Substation and Loop-in	Strong	Strong	Moderate	Moderate	Class I	D.3-7A and D.3-7D
	ECO – Alternative ECO Substation (w/Landscape Plan) and Loop-in	Strong	Strong	Moderate	Moderate	Class I	D.3-7A and D.3-7E
	ECO – 138kV transmission line (tl)	Weak-Moderate	Weak-Moderate	Weak	Weak	Class III	D.3-7A through D.3-7E
KOP 3 – Old Highway 80	ECO – ECO Substation & Loop-in	Strong	Strong	Moderate	Moderate	Class I	D.3-8A, 8C, 8D, 8E, 8F, 8G

Summary Table 1 (Continued)

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
Eastbound (S.Q. – Class B; V.S. – M-H; Distance Zone – FG/MG)	ECO – 138kV tl	Moderate	Moderate	Weak	Weak	Class III	D. 3-8A, 8C
	ESJ – 500kV Gen-tie	Moderate	Moderate	Moderate	Moderate	Class II	D.3-8B, 8D, 8E
	ESJ – 230kV	Moderate	Moderate	Moderate	Moderate	Class II	D.3-8B, 8F, 8G
	ESJ – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-8B, 8D through 8G
KOP 4 – Old Highway 80 Westbound (S.Q. – Class B; V.S – M-H; Distance Zone – FG/MG)	ECO – 138kV tl	Weak-Moderate	Weak-Moderate	Weak	Weak	Class III	D.3-9A, 9B
KOP 5 – Jacumba Comm. (S.Q. – Class B/C; V.S. – M-H; Distance Zone – FG/MG)	ECO – 138kV tl	Weak-Moderate	Weak-Moderate	Weak	Weak	Class III	D.3-10A, 10B
KOP 6 – Jacumba – Hill Street (S.Q. – Class B; V.S. – M-H; Distance Zone – MG & BG)	ECO – 138kV tl	Weak	Moderate	Weak	Weak	Class III	D.3-11A, 11C
	ESJ – Wind Turbines	Strong	Strong	Strong	Weak	Class I	D.3-11B, 11D
KOP 7 – Boulevard Comm. (Tule Jim & Jewell Valley Road) (S.Q. – Class B; V.S. – M-H;	ECO – 138kV tl	Strong	Strong	Moderate	Moderate	Class I	D.3-12A, 12B
	ECO Substation Site Alternative 138 kV tl	Strong	Strong	Moderate	Moderate	Class I	D.3-12A, 12C
	ECO – 138kV Partial Underground Alt.	None	Moderate (vegetation line	Moderate (vegetation color	Moderate (vegetation texture	Class IV	D.3-12A, 12D

Summary Table 1 (Continued)

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
Distance Zone – FG)			contrast)	contrast)	contrast)		
KOP 8 – Boulevard Comm. (Old Highway 80) (S.Q. – Class B/C; V.S. – M-H; Distance Zone – FG)	ECO – Boulevard Substation Rebuild	Strong	Moderate	Moderate	Moderate	Class II	D.3-13A, 13B
	ECO – Boulevard Substation Rebuild (w/ Landscape Plan)	Strong	Moderate	Moderate	Moderate	Class II	D.3-13A,13C
	ECO – 138kV tl	Moderate - Strong	Weak-Moderate	Moderate	Moderate	Class II	D.3-13A, 13B, 13C
KOP 9 – Boulevard Comm. South of Old Highway 80 (S.Q. – Class B; V.S. – M-H; Distance Zone – FG/MG)	ECO – Boulevard Substation Rebuild	Strong	Strong	Strong	Strong	Class I	D.3-14A, 14D, 14F
	ECO – Highway 80 138kV Trans. Route Alt.	Strong	Strong	Moderate-Strong	Moderate-Strong	Class I	D.3-14A, 14C, 14F, 14G
	ECO – Highway 80 Underground 138kV Trans. Route Alt.	Weak	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-14A, 14C, 14F, 14G
	Tule - Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-14B, 14E
	Tule – 138kV tl	Strong	Strong	Moderate	Moderate	Class I	D.3-14A, 14B, 14C,14D, 14E
	Tule – 138kV Route 2 Underground Alt.	Weak	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-14A, 14B, 14C, 14G
	Tule – 138kV Route 2 Overhead Alt.	Strong	Strong	Moderate	Moderate	Class I	D.3-14A, 14B, 14C, 14G
	Tule – 138kV Route 3 Underground Alt.	Weak	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-14A, 14F
	Tule – 138kV Route 3 Overhead Alt.	Strong	Strong	Moderate	Moderate	Class I	D.3-14A, 14F

Summary Table 1 (Continued)

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
KOP 10 – Boulevard Comm. – Ribbonwood Road (S.Q. – Class B; V.S. – High; Distance Zone – FG/MG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-15A, 15B, 15C
	Tule – 138kV tl Route 3 Overhead Alt.	Strong	Strong	Moderate	Moderate	Class I	D.3-15A, 15C
	Tule – 138kV tl Route 3 Underground Alt.	Weak	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-15A, D.3-15C
KOP 11 – McCain Valley Road at I-8 (S.Q. – Class B; V.S. – Medium; Distance Zone – FG/MG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-16A, 16C
	Tule – 138kV tl	Strong	Strong	Moderate	Moderate	Class I	D.3-16A, 16B, 16C
KOP 12 – McCain Valley Road/BLM Lands Entrance (S.Q. – Class B; V.S. – Medium; Distance Zone – FG/MG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-17A, 17C
	Tule – 138kV tl	Strong	Moderate	Moderate	Moderate	Class I	D.3-17A, 17C
	Tule – Rough Acres Ranch Alt Collector Substation and O&M Site	Strong	Moderate	Moderate	Moderate	Class I	D.3-17B, 17D
	Tule – 138kV tl Route 3 Overhead Alt.	Strong	Moderate	Moderate	Moderate	Class I	D.3-17B, 17D
	Tule – 138kV tl Route 3 Underground Alt.	Weak	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-17B, 17D
KOP 13 – Lark Canyon OHV Staging Area (S.Q. – Class C; V.S. – Medium; Distance Zone – FG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-18A, 18B

Summary Table 1 (Continued)

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
KOP 14 – Carrizo Overlook (S.Q. – Class A; V.S. – High; Distance Zone – FG/MG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-19A, 19B
	Tule – Collector Substation	Weak	Weak	Weak	Weak	Class III	D.3-19A, 19B
	Tule – 138kV tl	Strong	Strong	Strong	Strong	Class I	D. 3-19A, 19B
KOP 15 – Old Highway 80 Westbound (S.Q. – Class B; V.S. – M-H; Distance Zone – FG)	Tule – 138kV tl	Strong	Strong	Moderate	Moderate	Class I	D.3-20A, 20B
	Tule – 138 kV Route 2 Underground Alt.	None	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class II	D.3-20A, 20C
	Tule – 138 kV Route 2 Overhead Alt.	Strong	Strong	Moderate	Moderate	Class I	D.3-20A, 20C
	Tule – 138 kV Route 3 Underground Alt.	None	Moderate (vegetation line contrast)	Moderate (vegetation color contrast)	Moderate (vegetation texture contrast)	Class I	D.3-20A, 20D
	Tule – 138 kV Route 3 Overhead Alt.	Strong	Strong	Moderate	Moderate	Class I	D.3-20A, 20D
KOP 16 – BLM Lands Near In-Ko-Pah ACEC (S.Q. - Class A; V.S. – H; Distance Zone – FG/MG)	Tule – Wind Turbines	Strong	Strong	Strong	Strong	Class I	D.3-21A, 21B
	Tule – Reduction in Turbines Alt.	None	None	None	None	No Impact (project components not visible from KOP 16 under Tule Reduction in Turbines Alternative)	D.3-21A, 21C
KOP 17 – Old Highway 80 Westbound S.Q. – Class B; V.S. – M-H;	ECO – Highway 80 138kV Trans. Route Alt.	Strong	Weak	Moderate	Moderate	Class I	D.3-22A, 22B
	ECO – Highway 80 Underground 138kV	None	Weak (vegetation line contrast)	Moderate (vegetation color	Weak (vegetation texture contrast)	Class IV	D. 3-22A, 22B

Summary Table 1 (Continued)

KOP No. and Description	Project/Alt. and Components Evaluated	Contrast Ratings (Structure features -unless otherwise noted				Impact Class	Figure Reference
		Form	*Line*	*Color*	*Texture*		
Distance Zone – FG/MG)	Trans. Route Alt.			contrast)			
KOP 18 – Table Mountain ACEC (S.Q. – Class A; V.S. – H; Distance Zone – MG, BG)	ECO – ECO Substation & Loop-in	Moderate	Moderate	Moderate	Moderate	Class II	D.3-23A, 23B
	ECO – 138kV tl	Weak	Weak	Weak	Weak	Class III	D.3-23A, 23B
	ESJ – Wind Turbines	Strong	Strong	Strong	Moderate	Class I	D.3-23A, 23B
	ESJ – 500kV Gen-Tie	Moderate	Moderate	Moderate	Moderate	Class II	D.3-23A, 23B
	ESJ – 230kV Gen-Tie Alt.	Moderate	Moderate	Moderate	Moderate	Class II	D.3-23A, 23B

Notes and Abbreviations:
S.Q. – Scenic Quality (also termed "Visual Quality")
V.S. – Visual Sensitivity
FG – Foreground Distance Zone – within 0.5 mile
MG – Middleground Distance Zone – within 0.5 to 5.0 miles away
BG – Background Distance Zone – beyond 5 miles

Scenic Quality Definitions:
Scenic quality is a measure of the visual appeal of a landscape. Ratings range from Class A, Class B, or Class C, depending upon the influences of seven key factors: landform, vegetation, water, color, adjacent scenery and land uses, scarcity, and cultural modifications.
Class A – pertains to landscapes that exhibit high scenic quality and/or qualities that are scenically rare or unique within the physiographic region.
Class B – pertains to landscapes that are representative or typical of the physiographic region.
Class C – pertains to landscapes that lack visual elements typically seen in the physiographic region, or have been noticeable and substantially degraded by man-made activities or developments.

Visual Sensitivity Definitions:
Visual Sensitivity is a measure of public concern regarding the visual environment. Visual sensitivity is typically determined based on user volume and attitudes toward changes to the visual environment. Visual sensitivity is described according to three levels – high, medium and low, and takes into consideration: type of users, amount of use, public interest, adjacent land uses, and areas with special designations.

Visual Element Definitions:
Form – Contrast in form results from changes in the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those continuing to exist in the landscape.
Line – Contrasts in line result from changes in edge types and interruption or introduction of edges, bands, and silhouette lines. New lines may differ in their sub-elements (boldness, complexity, and orientation) from existing lines.
Color – Changes in value and hue tend to create the greatest contrast. Other factors, such as chrome, reflectivity, color, or temperature, may also increase the contrast.
Texture – Noticeable contrast in texture usually stems from differences in the grain, density, and internal contrast. Other factors, such as irregularity and directional patterns of texture, may affect the rating.

Contrast Rating Definitions:
None – The element contrast is not visible or perceived.
Weak – the element contrast can be seen but does not attract attention.
Moderate – The element contrast begins to attract attention and begins to dominate the characteristic landscape.
Strong – The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

Sources: BLM 1986a, 1986b.

REFERENCES

BLM (Bureau of Land Management). 1986a. Manual H-8431a, *Visual Resource Contrast Rating*. Accessed online April 6, 2010, at: http://www.blm.gov/nstc/VRM/8431.html.

BLM. 1986b. Manual H-8410, *Visual Resource Inventory*. Accessed online April 16, 2010, at: http://www.blm.gov/nstc/VRM/8410.html.

CPUC and BLM (California Public Utilities Commission and Bureau of Land Management). 2008. *Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement and Proposed Land Use Amendment. San Diego Gas & Electric Application for the Sunrise Powerlink Project.* SCH No. 2006091071. Agoura Hills, California: Prepared by Aspen Environmental Group for the CPUC and BLM. July 2008.

CPUC and BLM. 2010. *Public Scoping Report: Environmental Impact Report/Environmental Impact Statement, SDG&E East County Substation Project, Pacific Wind Development Tule Wind Project, and Energia Sierra Juarez U.S. Transmission, LLC, Energia Sierra Juarez Gen-Tie Project*. Encinitas, California: Prepared by Dudek. March 2010.

ESJ (Energia Sierra Juarez U.S. Transmission, LLC). 2009. Major Use Permit Package (submitted to the County of San Diego in 2009).

Federal Highway Administration. 1988. Visual Impact Assessment for Highway Projects. (Publication No. FHWA-HI-88-054). Washington, D.C.

Iberdrola Renewables, Inc. 2010. *Applicant's Environmental Document: Tule Wind San Diego County, California*. San Diego, California: Prepared by HDR Engineering, Inc. April 2010.

INTENTIONALLY LEFT BLANK