F. CUMULATIVE SCENARIO AND IMPACTS

F.1 Introduction and Methodology

Both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) require an analysis of cumulative impacts as part of the evaluation and analysis of potential impacts. NEPA defines a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). Under NEPA, both context and intensity are considered. Among other considerations when considering intensity is "[w]hether the action is related to other actions with individually minor but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts" (40 CFR 1508.27(b)(7)).

Under CEQA, an Environmental Impact Report (EIR) must discuss cumulative impacts of a project if the project's incremental effect combined with the effects of other projects is cumulatively considerable, which means a project's incremental effects may be considerable when they are viewed in connection with the effects of past projects, current projects, and probable future projects (14 CCR 15130(a) and 15065(c)). A lead agency may find that the cumulative impact that will result from the combination of the project's incremental impact and the effects of other projects is not significant or may determine that the project's incremental effect is not cumulatively considerable and that the project's cumulative effect is therefore not significant (Kostka and Zischke 2009, Section 13.39, pp. 647–648). An EIR's analysis of cumulative impacts should consider all sources of related impacts and not focus only on projects that may be similar in nature. An EIR's discussion of cumulative impacts should provide a summary of the cumulative environmental effects that are anticipated and a reasonable analysis of those potential impacts and should focus on potentially significant cumulative impacts that a proposed project would contribute to and not on characteristics of other projects that do not contribute to the potential cumulative impact (14 CCR 15130(a)–(b)). While the level of detail and analysis should parallel the potential severity and likelihood of occurrence of the cumulative impacts, it does not need to provide as extensive detail as required for direct or indirect impacts attributed exclusively to the proposed project (14 CCR 15130(b)). As discussed by the court in *Association of Irritated Residents v County of Madera (Diamond H Dairy)* (2003) 107 Cal.App.4th 1383, 1404, a lead agency is not required to provide evidence supporting every fact underlying the EIR's evaluation of cumulative impacts, nor is an exhaustive analysis required. As stated by the court, "[a]ppellants' argument…is premised on the mistaken position that the

cumulative impacts section of an EIR must be as detailed as the consideration of the proposed project itself. This is incorrect…recent decisions demonstrate that exhaustive analysis is not required" (ibid.). Instead, the discussion of cumulative impacts will be guided by principles and standards of reasonableness and practicality (14 CCR 15130(b)).

The State CEQA Guidelines provide two methods to meet the standards for a satisfactory discussion of cumulative impacts: The list of projects approach and the summary of projects approach (14 CCR 15130(b)(1)). Either choice still requires appropriate discussion of the potential effects of the related projects with reasoned analysis and feasible mitigation for any significant cumulative impacts.

An EIR's evaluation of cumulative impacts may be based upon a ~~li~~st of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency" (14 CCR 15130(b)(1)(A)). The difficulty of such an approach can be making an appropriate and reasoned decision as to the cutoff date for new projects that will be included as part of the ~~p~~robable future projects." Given that projects are continually added to the potential list of possible future projects to be considered, a lead agency possesses the authority to set a reasonable cutoff date for such new projects (*San Franciscans for Reasonable Growth v City and County of San Francisco* (1984) 151 Cal.App.3d 61, 74 n14; *Gray v County of Madera* (2008) 167 Cal.App.4th 1099, 1128 (the County of San Francisco had the discretion to set the date of the application for the current project as the cutoff date to determine which projects should be included in the cumulative impacts analysis)). Key factors to consider as part of the list approach include the location and type of project being considered and the nature of the resource (14 CCR 15130(b)).

As part of the cumulative impact evaluation, the EIR should define the geographic scope of the potential area that may be impacted and provide a reasonable explanation of such a limitation (14 CCR 15130(b)(3)). This is a critical step in the process in order to control the scope of the analysis and provide sufficient detail to afford meaningful public review of potentially significant cumulative impacts. While no fixed standards apply under CEQA or the State CEQA Guidelines as to what will constitute an appropriate geographic scope, the lead agency is provided the discretion to make such a determination and the court will defer to the lead agency's determination of such a scope so long as the administrative record illustrates a reasonable basis for such a determination (*City of Long Beach v Los Angeles Unified Sch. Dist*. (2009) 176 Cal.App.4th 889, 908 (selection of the geographic area affected by the cumulative impacts falls within the lead agency's discretion); *Ebbetts Pass Forest Watch v Department of Forestry and Fire Protection* (2004) 123 Cal.App.4th 1331, 1351-1354; Kostka and Zischke 2009, Section 13.45, pp. 654–655).

For this Proposed PROJECT, including the Campo, Jordan, and Manzanita wind energy projects, the list includes those projects found within a geographic area sufficiently large to

provide a reasonable basis for evaluating cumulative impacts. Additionally, while the geographic scope does not necessarily change, the level of analysis can change depending upon the resource and potential physical impact being discussed. For example, the cumulative discussion as it relates to water resources or air quality, which likely proves more expansive, would differ from analysis related to geologic impacts and cultural resources, which tend towards being site specific in nature. The geographic scope of the analysis is based on the nature of the geography surrounding the Proposed PROJECT and the characteristics and properties of each resource and the region to which they apply. Such distinctions are provided in the individual analysis for each particular resource.

Applicant proposed measures (APMs) include environmental measures that are already required by existing regulations and/or requirements, or are standard practices that are already in place from San Diego Gas and Electric (SDG&E), Pacific Wind Development, and/or Energia Sierra Juarez (ESJ) in order to minimize or prevent any potential impacts. Such measures are typically included as part of the design process and are created in order to offset potential short-term and/or long-term impacts of the Proposed PROJECT. APMs are integrated into the overall design, and as such, the levels of significance are discussed within the EIR/Environmental Impact Statement (EIS) based on the assumption that these APMs are a part of the actual Proposed PROJECT as opposed to additional mitigation. Therefore, the impact determinations contained within the EIR/EIS focus on whether additional mitigation measures are needed to further limit or reduce any potential direct, indirect, or cumulative impacts to less-than-significant levels. When it is determined that additional project-specific measures are required, these measures are identified as project mitigation measures, as appropriate. Furthermore, due to the characteristics of the Proposed PROJECT, in order to ensure the same level of environmental protection and mitigation is afforded for the entire range of the ECO Substation, Tule Wind, and the ESJ Gen-Tie Projects, a number of APMs would need to be superseded by new mitigation measures within the EIR/EIS. By superseding certain APMs with new measures, the highest level of protection afforded from any mitigation would apply the same to all project applicants. Thus, where mitigation measures have been proposed for an individual project that would differ from the level of protection from another project, or in which the APM appears insufficient, the EIR/EIS would supersede that APM with new mitigation measures.

F.2 Applicable Cumulative Projects and Projections

F.2.1 Project Approach

For purposes of this cumulative impact analysis, the EIR/EIS utilized the list of projects approach for projects that are located geographically in the same vicinity and include a number of projects anticipated to be constructed roughly the same time or in the near future as the Proposed PROJECT, as well as the proposed Campo, Manzanita, and Jordan wind energy projects. It also encompasses a number of projects that have already been built, but that possess

the potential to cause a level of cumulative impact related to various resources that necessitated additional cumulative review and examination beyond an environmental baseline level. In creating the geographic assessment area for cumulative projects, the EIR/EIS utilized a conservative approach in order to capture the greatest number of projects that have the potential to create cumulatively considerable physical impacts when combined with the Proposed PROJECT. However, while certain projects beyond the geographic scope were reviewed for inclusion within the list, the geographic scope was limited to projects that did have some potential to create a cumulatively significant impact while also limiting the range of the scope in order to avoid an overly expansive assessment area that would essentially dilute the Proposed PROJECT's potential impacts. Moreover, in creating the cumulative impact list of potential cumulative projects, as projects moved further in geographic distance from the Proposed PROJECT, the properties of the cumulative projects were evaluated for their potential to cause cumulatively considerable significant impact. Therefore, for example, projects that would involve a tentative tract map to build 20 residential homes would be evaluated differently if it were located within 1 mile of the Proposed PROJECT as opposed to 10 miles.

In addition to the project list approach, the EIR/EIS utilized a number of planning and programmatic documents to both help develop the cumulative project list and provide a more in-depth level of review and understanding of the type and course of potential development regarding both energy infrastructure and renewable-project development within San Diego and Imperial counties (Table F-1, Plans and Environmental Documents Consulted in Cumulative Impact Analysis).

Table F-1
Plans and Environmental Documents Consulted in Cumulative Impact Analysis

Federal Plans
Bureau of Land Management – Eastern San Diego County Resource Management Plan (BLM 2008)
U.S. Department of Energy and BLM – West-Wide Energy Corridor Project Final EIR (2008)
U.S. Forest Service – Cleveland National Forest Plan Amendment (2009)
Regional and Local Plans
County of San Diego – County General Plan (2003)
County of San Diego – Mountain Empire Subregional Plan (1995)
San Diego Association of Governments – Regional Comprehensive Plan (2004)
San Diego County – An Ordinance Amending the San Diego County Zoning Ordinance Related to Solar Power and Wind Power (2010)

Information provided in Table F-2, Cumulative Scenario – Approved and Pending Projects, was gathered through correspondence with wind energy proponents in the project area, scoping, Internet searches, planning and programmatic documents, discussions with resource experts, comment letters from interested parties, and consultations with planning agencies and personnel. The cumulative impact section focuses on reasonably foreseeable projects in the project vicinity and also represents a reasonable and thorough analysis of the Proposed PROJECT's potential to create a cumulatively considerable physical impact on the environment and focuses on the potential for cumulative impacts as opposed to attributes of other projects that do not contribute to the cumulative impact.

As described in Section D.1, several wind energy projects are proposed in the immediate vicinity of the Proposed PROJECT (southeastern San Diego County) that are planned to interconnect with the Rebuilt Boulevard Substation. In addition, ESJ U.S. Transmission, LLC, is proposing several phases of wind projects with buildout anticipated to generate approximately 1,250 megawatts (MW) from wind energy in northern Baja California, Mexico, that are planned to interconnect with the ECO Substation (Map ID 1 on Figure F-1, Cumulative Projects Map). One wind project already exists on the Campo Indian Reservation located atop of the Tecate Divide: the Kumeyaay Wind Project. These turbines produce 50 MW of electricity.

Table F-2 includes the wind energy projects proposed by ESJ U.S. Transmission, LLC, in northern Baja California, Mexico. ESJ U.S. Transmission, LLC, currently has three projects in the California Independent System Operator (CAISO) queue that total 1,120 MW of energy produced that are proposed to interconnect with the ECO Substation Project (CAISO 2010). Total projected wind generation in southeastern San Diego County proposed to interconnect with the proposed rebuilt Boulevard Substation, Tule Wind, Campo, Manzanita, and Jordan wind energy projects, is 509 MW of energy produced by a total of 305 wind turbines.

F.2.2 Plans and Projections

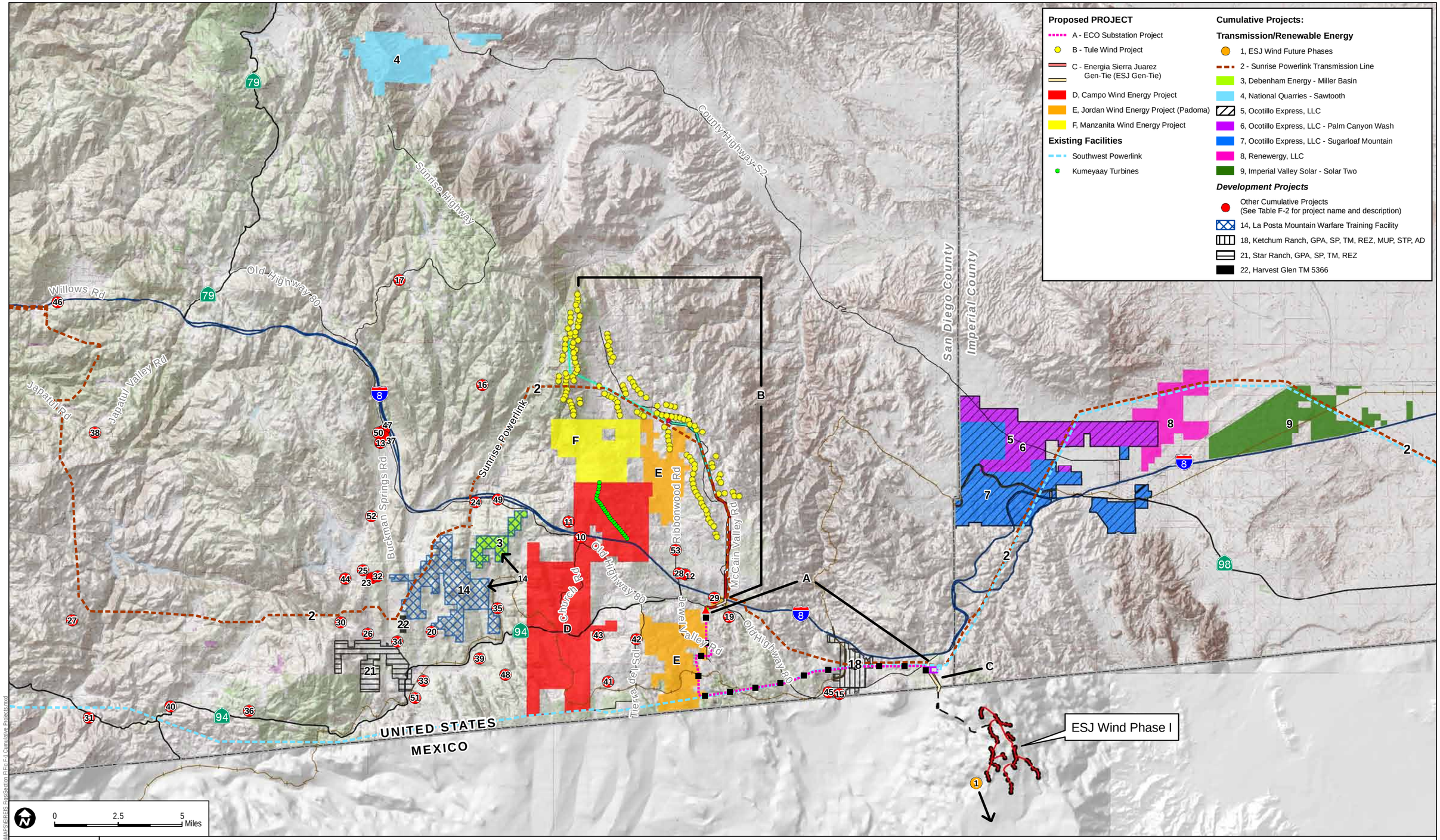
The EIR/EIS utilized a number of planning and programmatic documents to both help develop the cumulative project list and provide a more in-depth level of review and understanding of the type and course of potential development regarding both energy infrastructure and renewable project development within San Diego and Imperial counties. Table F-1 lists the plans and environmental documents consulted.

F.2.3 Specific Projects

As discussed in Section F.1, the cumulative impact analysis utilizes the project list approach pursuant to 14 CCR 15130(b)(1)(A). Table F-2 provides information regarding approved and pending projects for the cumulative scenario.

ESJ Wind Projects (Map ID 1) - ESJ has three interconnection requests before the CAISO, totaling 1,120 MW. The status of the interconnection requests is as follows:

- Queue 159a – 400 MW: Final Interconnection Study completed. Draft Interconnection Agreement provided for review.
- Queue 183 – 300 MW: In Transition Cluster. Interconnection Study is anticipated to be completed July 2010. The Interconnection Agreement is anticipated to be completed in December 2010.
- Queue 215 – 420 MW: In Transition Cluster. Interconnection Study is anticipated to be completed July 2010. The Interconnection Agreement is anticipated to be completed in December 2010.



Z:\Projects\6168\01\MAPDOC\MAPS\SERIES EnvSection F\Fig F-1 Cumulative Projects.mxd

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SOURCE: BLM; SanGIS; SANDAG; USFS; Tule Wind Project: HDR Engineering 2010;
ESJ U.S. Project: Entrix 2009; ESJ Wind Project: Entrix 2010;
ECO Substation Project: SDG&E 2009
ESRI Online Resource

East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects - EIR/EIS

FIGURE F-1

Cumulative Projects Map

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Table F-2
Cumulative Scenario – Approved and Pending Projects

Project	Project Type	Project Location	Status	Map ID
Wind Energy Projects				
ESJ WIND PROJECT I: Development of 400 MW of wind generation. Phase I (just north of the town of La Rumorosa) is proposed to generate approximately 100 MW of energy with 45 to 52 turbines. Point of interconnection proposed with the ECO Substation. Proposed to be online in July 2012 (CAISO 2010).	Public Facilities and Utilities (Wind)	Northern Baja CA, Mexico, In the Sierra Juárez mountains north of the town of La Rumorosa.	Final Interconnection Study completed. Draft Interconnection Agreement (IA) provided for review. (Queue No. 159a). The project would be built in multiple phases. Phase I is the Jacume phase and it expected to commence construction in 2011 and be completed in 2012.	1
ESJ WIND PROJECT II: Development of 300 MW of wind generation. Point of interconnection proposed with the ECO Substation. Proposed to be online in May 2013 (CAISO 2010).	Public Facilities and Utilities (Wind)	Northern Baja CA, Mexico. In the Sierra Juárez mountains.	In Transition Cluster. Interconnection Study is anticipated to be completed July 2010. The Interconnection Agreement is anticipated to be completed in December 2010. (Queue No. 183).	—
ESJ WIND PROJECT III: Development of 420 MW of wind generation. Point of interconnection proposed with the ECO Substation. Proposed to be online in February 2014 (CAISO 2010).	Public Facilities and Utilities (Wind)	Northern Baja CA, Mexico. In the Sierra Juárez mountains.	In Transition Cluster. Interconnection Study is anticipated to be completed July 2010. The Interconnection Agreement is anticipated to be completed in December 2010. (Queue 215).	—
Transmission and Other Renewable Projects				
SUNRISE POWERLINK: Development of a 150-mile transmission line from Imperial County to Sycamore Canyon near Poway.	Public Facilities and Utilities (Transmission)	Traverses southeastern San Diego County.	Permitting stage and under legal challenge. On May 14, 2010, SDG&E submitted to CPUC and BLM a final Project Modifications Report that defines changes made to the project along the entire route after publication of the Final EIR/EIS.	2
DEBENHAM ENERGY - CACA 0504855: Wind testing site. 2,169 acres.	Public Facilities and Utilities	West of the community of Boulevard, south of I-8.	Wind testing stage (Type II).	3

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
NATIONAL QUARRIES - CACA 050635: Wind testing site. 4,435 acres.	Public Facilities and Utilities (Wind)	Southeastern San Diego County, north of I-8, east of Sunrise Highway. Sawtooth Mountain.	Memorandum of Understanding/CRA signed. Application complete April 22, 2009 Wind testing stage (Type II) Testing.	4
OCOTILLO EXPRESS, LLC - CACA 051552. Development of 562 MW on 14,691 acres in two phases.	Public Facilities and Utilities (Wind)	Southwestern Imperial County, north and south of I-8	A Plan of Development (POD) prepared in September 2009. The project is currently in the wind testing stage (Type II) under CACA 047518 and CACA 050916 (MAP ID items 9 and 10)	5
GREENHUNTER, OCOTILLO EXPRESS, LLC - CACA 047518: Wind testing site. 6,280 acres.	Public Facilities and Utilities (Wind)	Southwestern Imperial County, north of I-8.	Finding of No Significant Impact and decision record posted. Testing and monitoring ROW issued. ROW expires 2/3/2012. Wind testing stage (Type II).	6
OCOTILLO EXPRESS, LLC - CACA 050916: Wind testing site. 9,247 acres.	Public Facilities and Utilities (Wind)	Southwestern Imperial County, north of I-8.	Wind testing stage (Type II).	7
RENEWERGY, LLC, CACA 048004: Wind testing site. 3,912 acres	Public Facilities and Utilities (Wind)	Southwestern Imperial County, north of I-8.	Meteorological Tower Environmental Assessment nearing completion. Pending Native American consultation. Cultural literature started. Wind testing stage (Type II).	8
IMPERIAL VALLEY SOLAR - SOLAR TWO, CACA 047740: Development of up to 750 MW of energy on 6,140 acres of Bureau of Land Management-administered public lands and on 360 acres of private lands.	Public Facilities and Utilities (Solar)	North of I-8 in southwestern Imperial County.	Application for Certification filed with California Energy Commission June 30, 2008. Application for Certification/POD determined adequate under minimal criteria. Notice of Intent published October 17, 2008. The Final EIS published July 2010.	9
Development Projects (Federal)				
GOLDEN ACORN CASINO AND TRAVEL CENTER: SCH No. 2007071097: 33-acre expansion consisting of 150-room hotel, 900-space parking garage, surface parking, RV park, casino expansion, bowling alley, arcade, offices, retail, restaurants/food service, wind turbines, and water and wastewater improvements in three phases.	Commercial	South of I-8 at Crestwood.	Draft off-reservation Environmental Evaluation complete. Public review ended August 2007.	10

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
CAMPO LANDFILL PROJECT: 493-acre landfill facility and a 657-acre buffer area surround landfill.	Public Facilities and Utilities	Southeast corner of Campo Reservation.	On May 27, 2010, the Campo General Council voted to rescind applicable lease agreements in order to terminate the Campo Sanitary Landfill Project. The vote occurred at a special General Council meeting resulting from a petition signed by the required number of tribal members. (Campo Kumeyaay Nation 2010).	—
LA POSTA CASINO: Existing casino consisting of a 20,000-square-foot casino facility on an approximately 20-acre portion of the La Posta Reservation.	Commercial	2 Crestwood Road, Boulevard, CA La Posta Reservation, just west of existing Kumeyaay Wind facility.	Final environmental document 2006. Started operation in 2007.	11
BOULEVARD BORDER PATROL STATION: 32-acre site proposed for an administrative and training/educational facility, operated 24 hours a day, 7 days a week. At least 250 personnel, over three shifts, would occupy the site throughout the week.	Public Facilities and Utilities	North of I-8, on the east side of Ribbonwood Road.	Final Environmental Assessment and Finding of No Significant Impact issued February 2010.	12
CAMPO (LA POSTA) BORDER PATROL STATION: 25-acre site that includes a heliport.	Public Facilities and Utilities	32355 Old Hwy 80, Pine Valley.	Station opened in 2008.	13
LA POSTA MOUNTAIN WARFARE TRAINING FACILITY: Construction of a special warfare operation and training facility on approximately 2,250 acres.	Public Facilities and Utilities	La Posta Road, south of I-8, Campo.	Final Environmental Assessment dated September 2007.	14
BORDER PATROL FENCE PROJECT: As of March 2009 the 18-foot-tall, 3-foot-deep fence has been completed in eastern San Diego County (Haseoton, pers. comm. 2010).	Public Facilities and Utilities	Along U.S.–Mexico border in eastern San Diego County.	Constructed in eastern San Diego County from July 2008 to March 2009.	15
WIND MEASUREMENT TOWERS: The Descanso Ranger District proposes to	Wind Measurement Testing	Cleveland National Forest. Descanso Ranger District.	U.S. Forest Service issued a permit in February 2010 for 3 towers in the area of La Posta Valley and Fred Canyon Road.	16

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
authorize temporary wind measurement towers. The towers would be approximately 160 feet high and testing would be 3 years or less in duration.		San Diego County. North side of I-8, LEGAL - T 16 S, R 5 E, Sections 1, 2, and 13.		
CONSOLIDATION AND REISSUANCE OF SDG&E PERMITS: The Forest Service is proposing a "master permit" to consolidate and reissue approximately 75 permits presently issued to SDG&E.	Public Facilities and Utilities	Cleveland National Forest.	Expected decision by the Forest Service in March 2011.	17
Development Projects (County)				
KETCHUM RANCH: TM 5524; subdivide 1,250 acres into 2,125 residential units, retail commercial development, elementary school site, public park, recreational center, open space, and associated infrastructure and utilities.	Residential	South of I-8, north of Old Highway 80 and west of Carrizo Gorge Road.	Department of Planning and Land Use (DPLU) letter dated July 2007 requesting an EIR. Project placed on idle status in January 2010.	18
ELDER: TPM 20981; subdivide 109 acres into five single-family residential lots. The proposed project is a minor residential subdivision with the Boulevard Community Planning Area. The project proposes to divide 109.29 net acres into four parcels and a remainder measuring 11.2 acres, 11.2 acres, 11.3 acres, 11.6 acres, and 63.9 acres.	Residential	South of Old Highway 80 and west of McCain Valley Road.	First Draft EIR was submitted in February 2006. No activity since 2006. Project owner changed February 2010.	19
DAVIS-INMAN: TPM 21081; subdivide 96.23 acres into four residential lots.	Residential	32062 Highway 94.	Problem with project site access identified. Appeal due to fire code filed October 2009.	20
STAR RANCH: TM 5459; subdivide 2,160.1 acres into 460 single-family residential lots, commercial uses, equestrian facility, helipad, water treatment facility, and wastewater treatment facility.	Residential	South of Big Potrero and west of Buckman Springs Road.	Scoping letter sent to DPLU on August 27, 2008. Project is on idle status.	21

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
HARVEST GLEN: TM 5366; subdivide 286.68 acres into 40 single-family residential lots .	Residential	Buckman Springs Road and Lake Morena Drive.	DPLU extension approval letter dated January 2006. The project was placed on idle status on January, 10, 2010.	22
VAUGHN: TM 5417; 14-lot TM with a 15th non-buildable lot for the roads and water system. The proposed lots range from 5.00 to 6.85 net acres. The project site is 81.24 acres.	Residential	30069 Canvasback Drive, Campo, just west of Buckman Springs Road.	DPLU first iteration review letter dated October 17, 2006.	23
VOLLI: TPM 20889; subdivision to create four 8-acre parcels, and one 7.9 parcel for a single family residence	Residential	Old Highway 80 and La Posta Road, near Boulder Oaks.	Project determined to have inactive status as of November 2009.	24
McCLINTOCK: TPM: 20755; minor subdivision of 10.0 gross acres into two residential parcels of 4.15 acres and 4.56 acres net.	Residential	Basso Road in the Campo/Lake Morena Community.	Project was approved on June 19, 2003.	25
BARTLETT: TPM: 20754: subdivide 164 acres into four single-family residential lots.	Residential	1850 Lake Moreno Drive.	Project was approved on June 17, 2003.	26
TIBBOT TPM: 20686: subdivide 35 acres into four single-family residential lots.	Residential	20774 Bee Valley Road.	Notice of Determination filed with County Clerk on Oct 17 2006.	27
DART TPM: 20675: 33.46-acre subdivision into three lots. Two lots for single-family residential (SFR) and one for general commercial uses.	Residential	Ribbonwood Road and Roadrunner Lane.	Project approved January 4, 2007.	28
GRIZZLE: TPM: 20719: subdivision of one lot into four parcels with a remainder parcel for SFR development.	Residential	McCain Valley Road and I-8.	Notice of Determination filed with County Clerk on Jun 29 2006.	29
ARELLANO: TPM: 20756 subdivide a 17.27-acre parcel into three parcels.	Residential	Hauser Creek Road west of Lake Morena Drive.	County staff completed review on January 26, 2009.	30
PIJNENBURG: TPM: 20778: five-lot subdivision on a 76-acre site.	Residential	Barrett Smith Road, North of Interstate 94.	Approved on August 6, 2009.	31

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
HEALD: TPM 21014: four-lot subdivision (5 net acres each) with a remainder lot (15 net acres) on a 36-acre site.	Residential	Southern terminus of Sunfish Way.	Project is on idle status as of February 2, 2010.	32
CAMPO HILLS COMMERCIAL BUILDING: site plan to develop a commercial building consisting of four attached units and a parking area.	Commercial Building	Evening Primrose Trail and Sheridan Road.	Project approved August 16, 2007.	33
BUCKMAN SPRINGS BORROW RECLAMATION PLAN: Allow for the continued use of Buckman Springs Borrow Pit to complete road repairs countywide by the County of San Diego, Department of Public Works. Additionally, a Reclamation Plan (RP 05-001) is being processed to ensure that the project site is reclaimed pursuant to the Surface Mining and Reclamation Act of 1975 (as amended) at the conclusion of each of the three phases of extraction on site. The Major Use Permit expired November 7, 2005, but the extension to the Major Use Permit was applied for prior to expiration of the original permit. The modification to the Major Use Permit would allow for continued extraction of materials for an additional 25 years, rather than 50 years. The project site is located on 19.31 acres.	Reclamation Plan	1588 Buckman Springs Road.	Project approved in January 2007.	34
BORROW PIT MILLER CREEK: Major Use Permit and Reclamation Plan for the RCP - Circle F Ranch project. The project proposes the extraction of sand resources within approximately 58.2 acres along the Miller Creek alluvial valley. A 16.4-acre	Reclamation Plan	East of La Posta Road and North of Highway 94.	Draft EIR currently in the process. Funds not available for EIR submittal. Inactive status January 2010.	35

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
area at the north end of the project site would be used for the creation of wetlands. The general operations for processing material and access would consist of an additional 61.9 acres.				
NEXTEL CELL TOWER: 35-foot faux broadleaf tree with antennas and equipment shelter.	Cell Tower	North of Highway 94 on Harris Ranch Road.	Project approved October 16, 2006.	36
BUCKMAN SPRINGS CELL TOWER: Installation and operation of telecommunication facility disguised as a faux monopine tree 50 feet high with six panel antennas located at a height of 46 feet. The associated equipment cabinets would include one electric meter panel, one telephone interface, and would be housed within an equipment enclosure measuring 20 feet by 11.5 feet by 10 feet.	Cell Tower	4277 Buckman Springs Road.	Mitigated Negative Declaration completed February 2007.	37
VERIZON CELL TOWER: 35-foot-high mono-pine mounted with 12 panel antennas. Associated equipment would include an emergency generator and two air-conditioning units that would be surrounded by an 8-foot-high concrete block wall and equipment cabinets that would be placed within an equipment shelter.	Cell Tower	22201 Mariah Way.	Draft Initial Study Checklist completed November 4, 2009.	38
VISTA CELL TOWER: 39-foot-high faux cross arm utility poles to accommodate four wireless carriers. Each of the proposed faux utility poles would consist of three panel antennas mounted to the cross arm and two sets of three antennas flush mounted to the utility pole. The facility would contain a total	Cell Tower	1524 Kimberly Way.	Scoping Letter submitted to project applicant on February 15, 2010 requesting additional information.	39

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
18 antennas when fully occupied by all wireless carriers. Associated equipment for AT&T, Sprint, and T-Mobile would consist of four outdoor equipment cabinets and one Global Positioning System (GPS) antennas for each carrier. Verizon's supporting equipment would consist of indoor equipment cabinets enclosed within a prefabricated equipment shelter, one GPS antenna, and one 30 kW emergency generator enclosed by a Concrete Masonry Unit (CMU) wall with a s solid metal gate. The proposed utility poles and supporting equipment would be surrounded by a 34-foot by 70-foot by 6-foot CMU enclosure.				
BARRETT WIRELESS: Nextel wireless facility in Potrero on occupied property. Antenna pole would be camouflaged as a monopine and access road to facility would need to be improved.	Cell Tower	Highway 94, west of Saxon Road and east of Emery Road.	Notice of Exemption sent to County Clerk on October 9, 2007.	40
HORIZON TOWER: 30-foot-tall faux monobroadleaf and associated equipment contained within a shelter 20 feet long by 11.5 feet wide. The lease area is 41.2 feet wide by 48 feet long and would be surrounded by a 6-foot-high fence.	Cell Tower	Cam Del Monte Road and Shasta Way.	Approved in March 2010.	41
WHITE STAR CELL TOWER: Replace one existing panel antenna with a new panel antenna and add four additional panel antennas on top of the existing 100-foot-tall lattice tower	Cell Tower	1680 Tierra del Sol at Shasta Way.	Approved in April 2008.	42
OUTDOOR WORLD TOWER: The project consists of a 30-foot-tall faux monobroadleaf	Radio Antenna	37113 Highway 94.	Approved in March 2010.	43

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
and associated equipment contained within a shelter 20 feet long by 11 feet and 6 inches wide. The lease area is 41 feet and 2 inches wide by 48 feet long and would be surrounded by a 6-foot-high fence.				
RADIO ANTENNA: 100-foot lattice FM radio broadcast antenna tower and associated transmitting equipment. The FM transmit antenna measures approximately 40 feet and is mounted vertically parallel to the top portion of the tower; it does not extend beyond the height of the tower. The equipment would be concealed within a 8-foot by 8-foot by 10-foot tall prefabricated equipment shelter located adjacent to the tower, to the north. The exterior finish of the equipment shelter is to be textured and painted (earth tone) to blend with the existing natural environment. Access would be provided through the existing 10-foot-wide dirt access road (within a 30-foot easement) off Lake Morena Drive.	Radio Antenna	2456 A Lake Morena Drive.	Approved in September 2009.	44
PACIFIC BELL CELL SITE: Construct a cell tower site.	Cell Tower	44441 Old Highway 80.	Approved in March 2001.	45
CALLE NADA CELL SITE: 50-foot faux cypress and related power and radio equipment for cell site.	Cell Tower	4737 Calle Nada.	Approved in August 2007.	46
VERIZON WIRELESS CELL SITE: Addition of one 2-foot diameter microwave antenna mounted inside of the existing faux water tank (permit P04-019), two GPS antennas mounted to the outside of the previously approved 11-foot 6-inch by 28-foot concrete, prefabricated equipment shelter, and the	Cell Tower	31906 Old Highway 80.	Approved in March 2009.	47

Table F-2 (Continued)

Project	Project Type	Project Location	Status	Map ID
installation of a 30 kw emergency backup generator with a 52-gallon diesel fuel tank The generator would be located inside the previously approved concrete equipment shelter. The equipment shelter would need to be slightly modified to allow an extra door for access and two vents for ventilation.				
GASOLINE CURVE CELL TOWER: Project proposes a 30-foot faux broadleaf tree cellular antenna and 230-square foot equipment shelter	Cell Tower	Shockey Road and Campo Road.	Categorical Exemption approved in September 2007.	48
OZBIRN CINGULAR CELL TOWER: Construction of a wireless telecommunications facility of a 45-foot camouflage utility pole with three antennas.	Cell Tower	1524 Kimberly Way, Campo.	Approved in March 2005.	49
SDG&E MTN EMPIRE OPERATOR TRAINING FACILITY: Major Use Permit modification for the operation of an explosives storage facility.	Commercial	30763 Old Hwy 80.	Approved in March 2009	50
ADELAIDES ROMAN CATHOLIC CHURCH: Major Use Permit to allow a religious assembly use with an elementary school on an approximately 5.13-acre site to be constructed in three phases.	Church	Sheridan Road and Custer Road.	Approved in November 2007.	51
BUCKMAN SPRINGS ROAD BRIDGE: Construct a new 450-foot bridge over Cottonwood Creek.	Public Facilities and Utilities	Southwest of I-8, north of Morena Stokes Valley Road, Campo.	Estimated completion date Summer 2013.	52
RIBBONWOOD ROAD SIGHTLINE IMPROVEMENT: Approximately 270-foot improvement to sightline on a horizontal curve.	Public Facilities and Utilities	North of I-8 along Ribbonwood Road approximately 0.25 miles south of Opalocka Road, near Boulevard.	Estimated completion date Spring 2011.	53

F.2.3.2 Transmission Projects

Sunrise Powerlink 500 kV Transmission Line Project – SDG&E (Map ID 2). As proposed, SDG&E would construct a new 91-mile, 500 kV transmission line from the existing Imperial Valley Substation (near El Centro) to the new Suncrest Substation (approximately 10 miles west of Pine Valley) and a new 59-mile, 230 kV transmission line with overhead and underground segments from the new Suncrest Substation to the existing Penasquitos Substation (CPUC and BLM 2008). As proposed, SDG&E would construct the Sunrise Powerlink in 25 segments. In addition to new transmission lines and structures, the project would also include upgrades to SDG&E's existing Sycamore Canyon, South Bay, Encina, San Luis Rey, Pomerado, and Scripps substations. The Final Environmentally Superior Southern Route was approved by the California Public Utilities Commission (CPUC) on December 18, 2008, and the Bureau of Land Management (BLM) issued a Record of Decision approving the same route on January 20, 2009. After the Final Environmentally Superior Southern Route was approved, SDG&E began the process of completing final project design and engineering. Some project components were modified as engineering was completed. Modifications resulted from engineering design requirements, and also from compliance with mitigation measures requiring resource avoidance to minimize or avoid environmental impacts. On May 14, 2010, SDG&E submitted to CPUC and BLM a final Project Modifications Report (PMR) that defines changes made to the project along the entire route after publication of the Final EIR/EIS. An agency memorandum will be prepared by CPUC and BLM to document the changes presented in the final PMR and to determine whether additional CEQA/NEPA review is required. The modified project includes 443 structures (lattice towers, poles, substation deadends, and risers):

- 337 structures for the 500 kV line
- 99 structures for the overhead 230 kV line
- 7 structures within substations (1 at Imperial Valley, 3 at Suncrest, and 3 at Sycamore Canyon).

In addition to constructing the 443 structures, the modified project entails replacing 17 existing poles as part of the reconductoring of 69 kV lines from the Sycamore Canyon Substation, as well as provisions for microwave telecommunication equipment at seven locations. Construction of the project was expected to begin in April/May 2010, and the majority of construction was expected to start in June/July 2010 (CPUC 2010). Construction will commence once the CPUC issues Notices to Proceed on each individual transmission line segment.

F.2.3.3 Large-Scale Development Projects

Federal

Golden Acorn Casino and Travel Center Expansion, Campo Indian Reservation (Map ID 10). This project site is located off of Old Highway 80 on the south side of the Interstate 8 (I-8)/Crestwood Road exit. The existing facility was constructed and began operations in 2001 (Golden Acorn Casino 2009). The project proposes to expand the existing Golden Acorn Casino and Travel Center with 17,800 square feet of additional gaming and non-gaming casino area; construction of a 3-story, 150-room hotel; 900-space parking structure; RV Park; up to two wind turbines; and improvements to the water and wastewater systems. Non-gaming areas are to include a trading post, arcade, coffee bar, administrative offices, bowling center, snack bar, entertainment hall, and retail/restaurant uses. The project is to be constructed in three phases over a period of approximately 7 years. A new hotel and other facilities are planned just southwest of the Kumeyaay Wind facility (Campo Kumeyaay Nation 2007).

Boulevard Border Patrol Station (Map ID 12). A Final Environmental Assessment was prepared for this project by the U.S. Army Corps of Engineers in February 2010. A new border patrol facility is proposed on the east side of Ribbonwood Road, just north of I-8. The project proposes construction, operation and maintenance of an administration building, detention center, maintenance garage, dog kennels, equine facilities, emergency helipad, a 160-foot communications tower, an indoor shooting range, and security fencing and lighting on a 32-acre site. Construction is proposed to be completed by September 2012, depending on available funding.

La Posta Mountain Warfare Training Facility (Map ID 14). In 2007, the BLM and Department of the Navy prepared an Environmental Assessment for the expansion at La Posta Road Navy SEAL facility. The parcels of land are located approximately 4 miles south of I-8 on La Posta Road. This project involves withdrawing land from public use for military uses and proposes to enhance existing on-site facilities and construct new training facilities, including a new multistructure training complex.

Wind Measurement Towers (Map ID 16). The Descanso Ranger District has been issued a permit to construct three 160-foot-high towers to test wind measurements in the area of La Posta Valley and Fred Canyon Road. Testing would be completed for a period of 3 years or less.

Consolidation and Reissuance of SDG&E Permits (Map ID 17). The Descanso Ranger District is in process of developing a ~~"m~~master" permit to consolidate and reissue approximately 75 permits presently issued to SDG&E. The master permit would allow for SDG&E to complete routine maintenance and operations associated with utilities located throughout the Cleveland

National Forest. The master permit would include activities associated with pole replacements, maintaining access roads, and restoration of access roads that are no longer being utilized by SDG&E. The U.S. Forest Service (USFS) is expected to make a decision on the permit issuance by June 2011.

USFS' decision on the Sunrise Powerlink EIR/EIS and Forest Plan Amendment (portion of Map ID 2 in Cleveland National Forest). The USDA Forest Service has authorized the construction, operation, and maintenance of the Sunrise Powerlink within the Cleveland National Forest. The signed Record of Decision adopts the CPUC/BLM Final EIR/EIS.

The decision adopts the comprehensive mitigation measures detailed in the Final EIR/EIS and the Fish and Wildlife Service's Biological Opinion. Fire mitigation will include the construction and maintenance of defensible space on USFS land adjacent to communities at risk along the route of the transmission line, and the funding to plan, design, and construct fire suppression facilities and improvements. The decision also provides for additional mitigation measures on USFS lands to further minimize the impacts of the project on the environment.

The decision amends the Cleveland National Forest Land Management Plan (LMP) to provide a project-specific exception to the LMP requirements regarding scenic integrity along the transmission line route, riparian conditions and biological resource condition goals in Riparian Conservation Areas, and for the construction of the transmission line in a back-country non-motorized area (USFS 2010).

San Diego County

Ketchum Ranch (Map ID 18). This project includes a General Plan Amendment, a Specific Plan, a Rezone, a Vesting Tentative Map, a Major Use Permit, an Administrative Permit, and a Site Plan for approval by San Diego County. This project is currently on idle status at the County. The current project proposes three commercial areas and 2,100 residential units, including detached town homes and single-family homes on 1,250 acres. In addition, the project proposes approximately 5 miles of trails, a neighborhood park, a recreation area, an elementary school site, a water reclamation facility, an agricultural area, and perimeter open space.

Star Ranch (Map ID 21). Star Ranch Specific Plan proposes 460 residential units on 2,150 acres northwest of the community of Campo. In addition to residential uses, the project also proposes a village commercial center, approximately 9 miles of trails, common open space area, a community park, a reclaimed water system, and a recreational vehicle park. The project proponent has submitted applications to the County for a Specific Plan, General Plan Amendment, Tentative Map, and Rezone. This project is currently on idle status at the County.

Harvest Glen (Map ID 22). This project proposes to subdivide approximately 287 acres into 40 single-family residential lots located south of I-8, northwest of the community of Campo.

F.3 Cumulative Impact Analysis

This section presents the analysis of the potential for the Proposed PROJECT, along with the Campo, Manzanita, and Jordan wind energy projects, to create cumulatively considerable impacts when the impacts of projects listed in Table F-2 are considered together with the impacts of the Proposed PROJECT. As previously discussed, "cumulatively considerable" impacts are when incremental effects of a project are found significant when they are viewed in correlation with the effects of past projects, other current projects, and probable future projects. The following analysis attempts to quantify each potential cumulative impact as it relates to the Proposed PROJECT, provided sufficient information is available to make informed and sound judgments regarding such analysis. Where quantification is not feasible, the document evaluates the potential for cumulative effects on a qualitative and programmatic level of detail. Furthermore, due to a lack of detail regarding the Campo, Manzanita, and Jordan wind energy projects, analysis is limited to a qualitative and programmatic level of review regarding those project components within the cumulative impact section. Once those projects have moved forward in the planning process, a cumulative analysis related to those projects in addition to other relevant foreseeable projects would be required.

F.3.1 Biological Resources

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with biological resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County and western Imperial County, as shown in Figure F-1. These cumulative projects are summarized in Table F-2.

Existing Cumulative Conditions

The southeastern San Diego County and western Imperial County area is considered a transition zone between biogeographic regions. The California Floristic Province occurs in the western portion of the cumulative analysis area, which encompasses a majority of California west of the extreme dry regions, and the Desert Province occurs in the eastern portion of the cumulative analysis area, which encompasses the dry desert regions. In the west, the Peninsular Ranges subregion (i.e., an area of similar climatic and plant community associations) stretches from southern Los Angeles County along the valley, foothills, and mountains south to Baja Mexico. In the east, the Sonoran Desert subregion (also known as the Colorado Desert) stretches from central Riverside County and eastern San Diego County into Arizona (Hickman 1996).

In the western and central portion of the analysis area in and around the McCain Valley, the mountain and foothill areas are characterized by a mosaic of chaparral and scrub communities that grade into oak woodlands and grasslands in the valleys. Many of the valleys are also characterized by grazing uses and rural residential development. The eastern portion of the analysis area, including the far eastern portion of San Diego County and Imperial County, is characterized by semi-desert chaparrals, juniper woodlands, and desert scrub communities. The assemblage of plant and wildlife species, including special-status species, in the western and central portion of the analysis area is largely the same as that identified for the Proposed PROJECT. In the eastern portion of the analysis area, the plant and wildlife species are characteristic of the desert habitats that dominate this more arid region.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.2.3.3.

Impact BIO-1: Construction activities would result in temporary and permanent losses of native vegetation.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, the Proposed PROJECT would result in temporary and permanent direct impacts to native vegetation communities resulting from the construction of substations, transmission lines, wind turbines, access roads, other support facilities, and temporary construction areas. Implementation of mitigation measures in the Proposed PROJECT will ensure permanent impacts to native vegetation communities will not be adverse and, under CEQA, will be considered less than significant (Class II) through avoidance and minimization during construction and the restoration of and/or compensation for these communities after construction.

A majority of the reasonably foreseeable cumulative projects would result in impacts to native vegetation communities. In order for a cumulative impact to native vegetation communities to occur, the reasonably foreseeable cumulative projects would have to result in the loss of the same vegetation communities as the Proposed PROJECT such that those vegetation communities become limited in acreage or extent within the cumulative analysis area. Additionally, a cumulative impact to native vegetation communities could occur if the cumulative projects use all available land for mitigation such that the loss of native vegetation communities cannot be adequately compensated within the cumulative analysis area.

The reasonably foreseeable cumulative projects that occur in the eastern portion of the analysis area would not likely impact the same vegetation community types as the Proposed PROJECT. Therefore, the Proposed PROJECT, when combined with the reasonably foreseeable cumulative projects in Imperial County, would not result in an adverse or significant cumulative impact to native vegetation communities (Class III).

The reasonably foreseeable cumulative projects that occur in the western and central portion of the analysis area would have the potential to impact the same vegetation community types as the Proposed PROJECT, as well as the Campo, Manzanita, and Jordan wind energy projects. Given the largely undeveloped nature of the area, the vegetation communities in this region are not likely to become limited in acreage or extent. Although land ownership and other factors determine the availability of land for mitigation, a sufficient supply of land suitable to provide mitigation for the long-term maintenance of vegetation communities is available within the analysis area. The impacts to vegetation communities resulting from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not be an adverse cumulative impact and, under CEQA, would result in a less-than-significant cumulative impact to native vegetation communities (Class II).

Impact BIO-2: Construction activities would result in adverse effects to jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, and degradation of water quality.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed in Section D.2.3.3, construction of the Proposed PROJECT would result in direct and permanent unavoidable impacts to jurisdictional resources totaling approximately 1.26 acres. The loss of jurisdictional waters and wetlands resulting from the Proposed PROJECT would be less than significant under CEQA with the implementation of Mitigation Measures BIO-1a through BIO-1d, BIO-1f, BIO-1g, and BIO-2a through BIO-2c (Class II) and no adverse impacts would result.

The reasonably foreseeable cumulative projects have the potential to result in impacts to jurisdictional resources. In order for a cumulative impact to jurisdictional resources to occur, the cumulative projects combined with the Proposed PROJECT would have to result in the loss of the same jurisdictional resources such that these resources become limited in acreage or extent within the cumulative analysis area. Additionally, a cumulative impact to jurisdictional resources could occur if the cumulative projects utilize all available land for mitigation such that the loss of jurisdictional resources cannot be adequately compensated within the cumulative analysis area. Given the largely undeveloped nature of the area, the jurisdictional resources in this region are

not likely to become limited in acreage or extent. Although land ownership and other factors determine the availability of land for mitigation, a sufficient supply of land suitable to provide mitigation for jurisdictional resources is available within the analysis area. Similar to mitigation imposed as part of this project such as working with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game for impacts to jurisdictional features prior to project construction and the creation of new habitat or habitat restoration, these projects would be required to mitigate or at least reduce any potential impacts to such resources. The impacts to jurisdictional resources resulting from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would be adverse but mitigated, and would result in a less-than-significant cumulative impact under CEQA to jurisdictional resources (Class II).

Impact BIO-3: Construction and operation/maintenance activities would result in the introduction of invasive, non-native, or noxious plant species.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, the ground disturbance activities and increased vehicle and human uses associated with construction of the Proposed PROJECT have the potential to introduce and spread invasive, non-native, or noxious plant species in the area, which is generally characterized by undisturbed native vegetation communities with low levels of invasive or noxious plant species. The introduction of invasive, non-native, or noxious plant species resulting from the Proposed PROJECT would be adverse but mitigated, and under CEQA would be less than significant with the implementation of mitigation (Class II) requiring avoidance, minimization, and best management practices during construction and operation.

In order for a cumulative impact related to the introduction and spread of invasive, non-native, or noxious plant species to occur, the reasonably foreseeable cumulative projects would have to result in the introduction and spread of these species across the cumulative analysis area. The analysis area is a largely undeveloped area characterized by large expanses of undisturbed native vegetation communities. The reasonably foreseeable cumulative projects have the potential to result in impacts to the introduction and spread of invasive, non-native, or noxious plant species due to the cumulative increase in ground disturbance and vehicle traffic in areas of largely undeveloped, native vegetation. The impacts to introduction and spread of invasive, non-native, or noxious plant species resulting from the Proposed PROJECT would be mitigated below a level of significance. Furthermore, mitigation measures such as developing a noxious or invasive weed control plan would significantly reduce the potential noxious or invasive plant impacts caused by these reasonably foreseeable cumulative projects. The Proposed PROJECT, when combined with the reasonably foreseeable cumulative projects, would not result in an adverse

impact or create a significant impact under CEQA due to the introduction and spread of these plant species (Class II).

Impact BIO-4: Construction activities would create dust that would result in degradation of vegetation.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, the ground disturbance activities and increased vehicle and human uses associated with construction of the Proposed PROJECT have the potential to generate dust that could degrade vegetation communities in the area, which is generally characterized by undisturbed native vegetation communities. With the incorporation of Mitigation Measure BIO-4a requiring the development and implementation of a dust control plan, the creation of dust leading to the degradation of vegetation resulting from the Proposed PROJECT would not create an adverse impact and would be less than significant under CEQA (Class II).

In order for a cumulative impact related to construction dust generation resulting in vegetation degradation to occur, the cumulative projects would have to be constructed at the same time and in close enough proximity to cumulatively result in the vegetation degradation from construction dust across the cumulative analysis area. The reasonably foreseeable cumulative projects are spread over the entire cumulative analysis area and involve a variety of project types. Many of the reasonably foreseeable projects are located a substantial distance from the Proposed PROJECT and would not be in close enough proximity to act cumulatively with the Proposed PROJECT in this respect or the project would not result in any substantial dust generation. Additionally, the reasonably foreseeable cumulative projects are not likely to be constructed simultaneously. Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for cumulatively significant construction dust generation resulting in vegetation degradation is low; however, the simultaneous construction of the Proposed PROJECT and the reasonably foreseeable cumulative project in sufficiently close proximity could result in a significant cumulative impact of construction dust generation. However, such impacts would need to work in concert together in order to create an actual cumulative impact. With the creation of a dust control plan, impacts of construction dust generation from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the cumulative projects would not result in an adverse impact or in a significant cumulative impact under CEQA due to construction dust generation (Class II).

Impact BIO-5: Construction activities would result in direct or indirect loss of listed or sensitive plants or a direct loss of habitat for listed or sensitive plants.

All Reasonably Foreseeable Cumulative Projects (Class I)

As described in Section D.2.3.3, the Proposed PROJECT area is characterized by a diverse assemblage of vegetation communities that supports or has the potential to support numerous special-status plant species, and construction of the Proposed PROJECT would result in the direct loss of special-status plant species, indirect effects to special-status plant species, and the loss of suitable habitat for special-status plant species. The direct and indirect loss of special-status plant species and their suitable habitat resulting from the Proposed PROJECT would be adverse but mitigated, and would be less than significant under CEQA with the implementation of Mitigation Measures BIO-1a through BIO-1g, BIO-3a, BIO-4a, and BIO-5a through BIO-5b (Class II) through avoidance and minimization during construction and species-specific compensation.

In order for a cumulative impact to special-status plant species to occur, the cumulative projects would have to result in the loss of the same special-status plant species or their habitat as the Proposed PROJECT such that those species become more limited in their distribution, population size, or available suitable habitat within the analysis area. The reasonably foreseeable cumulative projects that occur in the western and central portion of the analysis area would have the potential to impact the same special-status plant species as the Proposed PROJECT. Given the largely undeveloped nature of the area and that the impacts to suitable habitat for special-status plant species resulting from the Proposed PROJECT would be mitigated below a level of significance, the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not result in an adverse cumulative impact and, under CEQA, would be a less-than-significant cumulative impact, on suitable habitat for special-status plant species (Class II).

Many of the occurring or potentially occurring special-status plant species in the analysis area are found only in and around the McCain Valley. The Proposed PROJECT combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more of these special-status plant species such that they are vulnerable to environmental variability and are at a higher risk of becoming imperiled. Therefore, the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would result in an adverse impact to such species and a direct significant cumulative impact, under CEQA, to special-status plant species due to the potential reduction in the distribution and reduction in overall species populations in the cumulative analysis area (Class I).

Impact BIO-6: Construction, including the use of access roads, would result in disturbance to wildlife and result in wildlife mortality.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, increased vehicle and human presence, noise, and other construction-related activities would result from construction of the Proposed PROJECT. Except where such activities resulted in the mortality of and/or disturbance to special-status wildlife species, which is addressed under Impact BIO-7, the potential construction-related mortality of and disturbance to common wildlife species would not represent an adverse impact and would remain less than significant under CEQA (Class III). Mitigation measures implemented to avoid, minimize, and mitigate construction-related impacts to special-status wildlife species would also be protective of other common wildlife species.

The reasonably foreseeable cumulative projects are spread over the entire cumulative analysis area and involve a variety of project types. Many of the reasonably foreseeable projects are located a substantial distance from the Proposed PROJECT or would not result in any substantial construction-related wildlife disturbance or mortality. Additionally, the reasonably foreseeable cumulative projects are not likely to be constructed simultaneously. Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for significant cumulative construction-related wildlife disturbance and mortality is low; however, if all of the reasonably foreseeable cumulative projects in close proximity to the Proposed PROJECT were to be constructed simultaneously, increased human presence, vehicle traffic, and construction noise could cause wildlife behavior modifications and avoidance of the area. These disruptions could result in changes in habitat usage and potentially affect species fitness and productivity. The potential mortality resulting from increased vehicle use in the area and construction area hazards (e.g., trenches) across the Proposed PROJECT and reasonably foreseeable cumulative project areas could lead to decreased population numbers and reduced productivity. Through avoidance and minimization measures during construction, permanent physical cumulative impacts to wildlife are unlikely. Suitable habitat will remain as well as long-term species preservation once all construction is complete. Furthermore, all projects being built simultaneously represents a worst-case scenario and is highly improbable. The impacts of construction-related wildlife disturbance and mortality from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not result in an adverse cumulative impact and would remain less than significant under CEQA (Class II).

Impact BIO-7: Construction activities would result in direct or indirect loss of listed or sensitive wildlife or a direct loss of habitat for listed or sensitive wildlife.

All Reasonably Foreseeable Cumulative Projects (Class I)

As described in Section D.2.3.3, construction of the Proposed PROJECT would result in direct impact to occupied habitat for federally listed species (i.e., Quino checkerspot butterfly). Additionally, the Proposed PROJECT has the potential to result in direct and indirect impacts to numerous other occurring or potentially occurring special-status species and their habitat. The direct loss of designated critical habitat for Quino checkerspot butterfly resulting from the Proposed PROJECT would represent an adverse impact and would be significant and unmitigable under CEQA despite the proposed Mitigation Measures for the species, Mitigation Measures BIO-7f through BIO-7i (Class I). Aside from the Quino checkerspot butterfly, the direct and indirect impact to numerous special-status wildlife species resulting from the Proposed PROJECT would be less than significant under CEQA with the implementation of Mitigation Measures BIO-1a through BIO-1g, BIO-3a, BIO-4a, and BIO-7a through BIO-7j (Class II) and would not represent an adverse impact to these species.

In order for a cumulative impact to special-status wildlife species to occur, the cumulative projects would have to result in the loss of the same special-status plant species or their habitat as the Proposed PROJECT such that those species become more limited in their distribution, population size, or available suitable habitat within the analysis area. The reasonably foreseeable cumulative projects that occur in the western and central portion of the analysis area would have the potential to impact the same special-status wildlife species as the Proposed PROJECT. The reasonably foreseeable cumulative projects have the potential to result in the direct loss of critical habitat for Quino checkerspot butterfly; therefore, the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would result in an adverse cumulative impact and would be significant and unmitigable under CEQA (Class I). Given the largely undeveloped nature of the area and that the impacts to suitable habitat for special-status wildlife species resulting from the Proposed PROJECT would be mitigated below a level of significance, the Proposed PROJECT combined with the reasonable foreseeable cumulative projects would not result in an adverse cumulative impact and would represent a less-than-significant cumulative impact under CEQA to suitable habitat for special-status wildlife species (Class II). The Proposed PROJECT and the reasonably foreseeable cumulative projects are situated in a transition zone between the Peninsular Ranges subregion in the west and the Sonoran Desert subregion in the east. As such, the cumulative analysis area is located near or at the edge of the known range of several special-status wildlife species. The Proposed PROJECT combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project, would have the potential to reduce the distribution and/or the overall population size of one or more of these special-status wildlife species such that they are vulnerable to environmental variability and are at a higher risk of becoming imperiled. The Proposed PROJECT combined with the reasonably foreseeable

cumulative projects would, therefore, result in an adverse cumulative impact and, under CEQA, a direct significant and unmitigable cumulative impact to special-status wildlife species due to the potential reduction in the distribution and reduction in overall species populations in the cumulative analysis area (Class I).

Impact BIO-8: Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act).

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, construction of the Proposed PROJECT would result in the removal of vegetation potentially supporting nesting birds protected by the Migratory Bird Treaty Act. The direct and indirect impact to nesting birds resulting from the Proposed PROJECT would not result in an adverse cumulative impact and, under CEQA, would be less than significant with the implementation of Mitigation Measures BIO-1a through BIO-1c, BIO-4a, BIO-7b through BIO-7e, and BIO-7j (Class II).

The reasonably foreseeable cumulative projects are spread over the entire cumulative analysis area and involve a variety of project types. Many of the reasonably foreseeable projects are located a substantial distance from the Proposed PROJECT or would not result in any substantial loss of vegetation potentially supporting nesting birds. Additionally, the reasonably foreseeable cumulative projects are not likely to be constructed simultaneously. Given the nature, location, and timing of the reasonable foreseeable cumulative projects, the potential for cumulatively significant construction loss of nesting birds is low; however, if all of the reasonably foreseeable cumulative projects in close proximity to the Proposed PROJECT were to be constructed simultaneously, increased human presence, vehicle traffic, and construction noise could cause modification of bird nesting behavior such that nests are never started, are subsequently abandoned, or have reduced success, which could lead to reduced population numbers. Furthermore, similar mitigation related to bird nesting would be implemented as part of the other cumulative projects in the area and the likelihood of all, or even a substantial number, of projects being constructed at the same time is remote. The impacts of construction-related loss of nesting birds from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not result in an adverse cumulative impact due to construction loss of nesting birds and, under CEQA, would represent a less-than-significant cumulative impact (Class II).

Impact BIO-9: Construction or operational activities would adversely affect linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites.

All Reasonably Foreseeable Cumulative Projects (Class III)

As described in Section D.2.3.3, the Proposed PROJECT area encompasses a largely undeveloped landscape with few barriers to movement, except for the I-8, the U.S.–Mexico border fence, and, to a lesser extent, scattered rural development and property fencing. Given the permeable nature of a majority of the Proposed PROJECT, the effect of the construction and operation of the Proposed PROJECT on linkages or wildlife movement corridors would not represent an adverse impact and, under CEQA, would be less than significant (Class III). The Proposed PROJECT would have no effect on the movement of fish or native wildlife nursery sites (No Impact).

A cumulative impact to linkages or wildlife movement corridors, the movement of fish, and/or native wildlife nursery sites would occur if the reasonably foreseeable cumulative projects, combined with the Proposed PROJECT, result in constraining or blocking known habitat linkages or result in a cumulative barrier to wildlife movement through the cumulative analysis area. The reasonably foreseeable cumulative projects that occur in the western and central portion of the analysis area would have the potential to impact the same wildlife movement areas as the Proposed PROJECT. Many of the reasonably foreseeable cumulative projects would not result in any substantial constraints or blockages to wildlife movement due to their nature, size, and/or location. The Proposed PROJECT combined with the reasonably foreseeable cumulative projects would result in energy-related and other development throughout the McCain Valley and along the Tecate Divide from the northern end of the Proposed PROJECT south to the U.S.-Mexico Border. Although this has the potential to disrupt wildlife movement patterns for wildlife species utilizing the McCain Valley and surrounding ridgelines, the analysis area is largely undeveloped and wildlife movement through and around the reasonably foreseeable cumulative project areas would still be possible. Despite the development of the reasonably foreseeable cumulative projects, the area would remain predominantly rural with significant open space and wildlife movement opportunity. Therefore, the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not represent an adverse cumulative impact and, under CEQA, would remain a less-than-significant cumulative impact to habitat linkages and wildlife movement corridors (Class III). There would be no cumulative effect to the movement of fish or native wildlife nursery sites (No Impact).

Impact BIO-10: Presence of transmission lines and wind turbines may result in electrocution of, and/or collisions by, listed or special-status bird and bat species.

All Reasonably Foreseeable Cumulative Projects (Class I)

As described in Section D.2.3.3, the risk of electrocution and collision to special-status bird species from transmission lines and towers of the Proposed PROJECT would be significant but

can be mitigated so as not to represent an adverse impact and, under CEQA, to a level that is less than significant based on the APMs and the proposed mitigation measures (Class II). Given the known bird use and identified nesting birds in the vicinity of the Proposed PROJECT, several special-status bird and bat species have a significant risk of mortality. The risk of mortality due to collision with operating turbines by golden eagle resulting from the Proposed PROJECT would be significant and unmitigable under CEQA despite implementation of Mitigation Measures BIO-10a through BIO-10i (Class I) and would therefore represent an adverse impact. The risk of mortality due to collision with operating turbines by Vaux's swift and special-status bat species would be significant but can be mitigated to a level that is less than significant under CEQA (Class II) and would therefore not represent an adverse impact. The risk of mortality due to collision with operating turbines by other special-status bird species resulting from the Proposed PROJECT would not be adverse and, under CEQA, would be less than significant (Class III).

A majority of the reasonably foreseeable cumulative projects would not result in structures with the potential to result in electrocution or collision by special-status bird or bat species. The energy-related reasonably foreseeable cumulative projects, which includes the Sunrise Powerlink Project, would result in a significant increase in risk of electrocution by special-status bird and bat species; therefore, the Proposed PROJECT, combined with the reasonably foreseeable cumulative projects, would result in an adverse cumulative impact and, under CEQA, would represent a cumulatively significant and unmitigable impact due to potential electrocution or collision with transmission lines, particularly by golden eagle species (Class I).

Impact BIO-11: Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.2.3.3, operations and maintenance of the Proposed PROJECT would result in the removal of vegetation potentially supporting nesting birds protected by the Migratory Bird Treaty Act. The disturbance to or direct mortality of special-status wildlife resulting from maintenance activities of the Proposed PROJECT would be adverse but mitigated, and under CEQA would be less than significant with the implementation of Mitigation Measures BIO-3a, BIO-4a, BIO-7b through BIO-7d, and BIO-11a (Class II). The disturbance to or direct mortality of common wildlife resulting from maintenance activities of the Proposed PROJECT would also not be adverse and would remain less than significant under CEQA (Class III).

A majority of the reasonably foreseeable cumulative projects would not include maintenance activities with the potential to result in wildlife disturbance or mortality. However, if operations and maintenance of the reasonably foreseeable cumulative projects were to occur in close

proximity to and at the same time as the Proposed PROJECT, they could result in a significant cumulative impact of wildlife disturbance and mortality. The impacts of maintenance-related wildlife disturbance and mortality from the Proposed PROJECT would be mitigated below a level of significance, and the Proposed PROJECT combined with the reasonably foreseeable cumulative projects would not result in an adverse cumulative impact and, under CEQA, would be a less-than-significant cumulative impact on maintenance-related wildlife disturbance and mortality (Class II).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

The ECO Substation Alternative Site would have the same or similar impacts as evaluated under the Proposed PROJECT and would not change any impact determinations for the following impacts: BIO-1 through BIO-9, and BIO-11. Both the project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT. Furthermore, adverse cumulative impacts would remain regarding impacts to special-status plant species with this alternative, combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project. This would result in an adverse cumulative impact, and under CEQA would continue to be significant and unmitigable (Class I).

The ECO Substation Alternative Site would also have similar impacts on Impact BIO-10 related to the electrocution by listed or special-status bird or bat species as discussed under the Proposed PROJECT. While the project-specific alternative impacts would be likely mitigated, when the alternative is evaluated with the reasonably foreseeable cumulative impacts, the impacts would be adverse and significant and unmitigable under CEQA (Class I). The reasonably foreseeable cumulative projects would result in a significant increase in risk of electrocution and collision by special-status bird and bat species, a conclusion that would not be altered by moving the disturbance footprint for the substation under this alternative 700 feet east. Therefore, impacts would remain similar to the Proposed PROJECT for impacts to special-status bird and bat species due to electrocution and collision impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact BIO-9 related to linkages or wildlife movement corridors would be largely the same as those assessed for the Proposed PROJECT. The project-specific

and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any adverse impacts that could not be reduced with mitigation. Furthermore, project-specific and cumulative impacts related to Impacts BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT; and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

Both project-specific and cumulative impacts related to Impacts BIO-1 through BIO-8 would be greater than the Proposed PROJECT. This is particularly due to increased ground disturbance associated with the undergrounding of a portion of the transmission line. However, this increase in potential impacts caused by the ground disturbance is relatively minor, and the alternative would not substantially alter the cumulative impact evaluation as discussed under the Proposed PROJECT. All cumulative impact categories would remain the same or similar.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact BIO-3 through BIO-5, BIO-8, and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-1, BIO-6, BIO-10, and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, while temporary and permanent impacts to native vegetation communities and impacts caused by the construction of access roads under this alternative would potentially be less due to the shorter distance of transmission line (approximately 2.7 miles shorter than the 138 kV transmission line proposed for the ECO Substation Project), difficult construction techniques and potentially greater impacts to sensitive natural communities may be necessary to implement this alternate route. Regardless, these impacts would continue to be mitigated, and the increase in impacts would not alter the impact determinations when coupled with the reasonably foreseeable cumulative projects for this alternative. Additionally, the adverse impacts to species due to electrocution and/or collision would remain adverse since the transmission lines for the Proposed PROJECT, while reduced, would remain.

Both project-specific and cumulative impacts to Impact BIO-2 and BIO-7 under this alternative would be greater than the Proposed PROJECT. Although this alignment is approximately 2.7 miles shorter than the 138 kV transmission line proposed for the ECO Substation Project, impacts to jurisdictional resources may be unavoidable and would be greater due to the adjacent floodplain on the north side of Old Highway 80. This alternative would also result in direct loss

of designated critical habitat for Quino checkerspot butterfly, which would be an adverse impact and, under CEQA, would be significant and unmitigable despite the proposed mitigation measures for the species (Class I). Thus, while the overall impact determinations would remain the same as those evaluated under the Proposed PROJECT, the additional unmitigable impacts to Quino checkerspot butterfly species and habitat would create greater cumulative impacts. Cumulative impacts would remain adverse as evaluated under the Proposed PROJECT.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact BIO-8 and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

This alternative would create a number of greater impacts than evaluated under the Proposed PROJECT. Both project-specific and cumulative impacts due to construction activities would cause greater impacts to Impact BIO-1 through BIO-7 under this alternative than evaluated under the Proposed PROJECT. Although this alignment is approximately 2.7 miles shorter than the 138 kV transmission line proposed for the ECO Substation Project, impacts to jurisdictional resources may be unavoidable and would be greater due to the adjacent floodplain on the north side of Old Highway 80. The increased construction area associated with undergrounding and difficult construction techniques would cause potentially greater impacts to sensitive natural communities in the northern portion of this alternate route. This alternative would also result in direct loss of designated critical habitat for Quino checkerspot butterfly, which would be an adverse impact and, under CEQA, would be significant and unmitigable despite the proposed mitigation measures for the species (Class I). Thus, while the overall cumulative impact determinations for all reasonably foreseeable cumulative projects would remain the same as those evaluated under the Proposed PROJECT, the additional unmitigable impacts to Quino checkerspot butterfly species and habitat would create greater cumulative impacts (due to an increase in project-specific impacts) and the cumulative impacts would remain adverse.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact BIO-3, BIO-4, BIO-6, BIO-8, and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

Both project-specific and cumulative impacts to Impact BIO-1, BIO-2, BIO-5, and BIO-7 would be greater under this alternative than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. Adverse cumulative impacts would remain regarding impacts to special-status plant and wildlife species with this alternative combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project. This would result in an adverse cumulative impact and under CEQA would be significant and unmitigable (Class I). All cumulative impact categories would remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact BIO-6, BIO-8, and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT; and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

Both project-specific and cumulative impacts to Impact BIO-1 through BIO-5, and BIO-7 under this alternative would be greater than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. This is particularly due to increased ground disturbance associated with the undergrounding of a portion of the transmission line. However, this increase in potential impacts caused by the ground disturbance is relatively minor, and the alternative would not substantially alter the cumulative impact evaluation as discussed under the Proposed PROJECT. All cumulative impact categories would remain the same or similar.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact BIO-3, BIO-4, BIO-6, BIO-8, and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT; and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

Both project-specific and cumulative impacts to Impact BIO-1, BIO-2, BIO-5, and BIO-7 under this alternative would be greater than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. Adverse cumulative impacts would remain regarding impacts to special-status plant and wildlife species with this alternative combined with the reasonably foreseeable cumulative projects, despite species avoidance, minimization, and mitigation measures that would likely be implemented by each project. This would result in an adverse cumulative impact and under CEQA would be significant and unmitigable (Class I). All cumulative impact categories would remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact BIO-6, BIO-8, and BIO-9 would be largely the same as that assessed for the Proposed PROJECT. The project-specific and cumulative impacts would

remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. However, this reduction in impact would not alter the cumulative impact determinations as evaluated under the Proposed PROJECT; and, in particular, the alternative coupled with the reasonably foreseeable alternatives would continue to result in a significant increase in risk of electrocution and collision by special-status bird and bat species since the transmission component of the alternative would remain.

Both project-specific and cumulative impacts to Impact BIO-1 through BIO-5, and BIO-7 under this alternative would be greater than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. This is particularly due to increased ground disturbance associated with the undergrounding of a portion of the transmission line. However, this increase in potential impacts caused by the ground disturbance is relatively minor, and the alternative would not substantially alter the cumulative impact evaluation as discussed under the Proposed PROJECT. All cumulative impact categories would remain the same or similar.

Tule Wind Alternative 5, Reduction in Turbines

This alternative would reduce impacts to biological resources to all of the impact categories by reducing the number of turbines by 62 and therefore reducing both the permanent and temporary impacts to land under this alternative. This would reduce the overall cumulative impacts for Impact BIO-1 through BIO-9 and BIO-11, but would not alter the significance conclusions for all reasonably foreseeable projects as identified under the Proposed PROJECT. However, the reduction in these particular turbines, while not altering the cumulative impact analysis for electrocution of species under Impact BIO-10, would have a more substantial reduction of impacts to collisions to the golden eagle in particular. Although all turbines considered high risk for golden eagle collision would be removed under this alternative and this would substantially reduce the risk of golden eagle mortality, the risk of mortality due to collision with operating turbines by golden eagle remains adverse and under CEQA would continue to be significant and unmitigable despite implementation of the proposed mitigation measures (Class I). Therefore, while cumulative impacts from all reasonably foreseeable cumulative projects would be reduced overall, the cumulative impacts would remain adverse.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact BIO-2, BIO-8, and BIO-9 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. This alternative would, in particular, reduce the impacts on the electrocution of and/or collision by listed or special-status bird or bat species to a level that is substantially less than that assessed for the ESJ Gen-Tie Project due to the complete undergrounding of the transmission line. Therefore, in regards to the ESJ Gen-Tie Project alone, there would not be any adverse cumulative impacts, and under CEQA the project would not represent a significant impact. However, impacts would remain adverse overall due to other components within the Proposed PROJECT.

Both project-specific and cumulative impacts to Impact BIO-1 and BIO-3 through BIO-7 under this alternative would be greater than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. This is particularly due to increased ground disturbance associated with the undergrounding of a portion of the transmission line. However, this increase in potential impacts caused by the ground disturbance is relatively minor, and the alternative would not substantially alter the cumulative impact evaluation as discussed under the Proposed PROJECT. All cumulative impact categories would remain the same or similar.

ESJ Gen-Tie Overhead Alternative Alignment

Under this alternative, all cumulative impacts would be reduced from those evaluated under the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact BIO-2, BIO-8, and BIO-9 would be largely the same as that assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, project-specific and cumulative impacts related to Impact BIO-10 and BIO-11 would be less than what was evaluated under the Proposed PROJECT. This alternative would, in particular, reduce the impacts on the electrocution of and/or collision by listed or special-status bird or bat species to a level that is

substantially less than that assessed for the ESJ Gen-Tie Project due to the complete undergrounding of the transmission line. Therefore, in regards to the ESJ Gen-Tie Project alone, there would not be any adverse cumulative impacts, and under CEQA the project would not represent a significant impact. However, impacts would remain adverse overall due to other components within the Proposed PROJECT.

Both project-specific and cumulative impacts to Impact BIO-1 and BIO-3 through BIO-7 under this alternative would be greater than the Proposed PROJECT. The overall impacts would only be slightly greater for any of these impacts and would not result in a substantial change from the cumulative impacts evaluated under the Proposed PROJECT. This is particularly due to increased ground disturbance associated with the undergrounding of a portion of the transmission line. However, this increase in potential impacts caused by the ground disturbance is relatively minor, and the alternative would not substantially alter the cumulative impact evaluation as discussed under the Proposed PROJECT. All cumulative impact categories would remain the same or similar.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan wind energy projects would not be built and the existing conditions would remain at these sites. Biological resources impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. The construction and O&M-related impacts to

biological resources would be reduced when compared to the Proposed PROJECT since the wind turbines attributed to Tule would be eliminated. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built. Therefore, overall cumulative impact evaluations are anticipated to remain. However, there would be no impact as it relates to collisions with turbines under this alternative, which would eliminate this aspect as a cumulative impact. However, as discussed under Impact BIO-10, electrocution would continue to be an issue due to potential collision with transmission lines and would likely remain an adverse cumulative impact overall.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built, and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar, as evaluated under the Proposed PROJECT.

F.3.2 Visual Resources

Geographic Extent

Cumulative impacts to visual resources would occur where construction activities and project structures, facilities, or components occupy the same field of view as other built facilities or impacted landscapes. The cumulative study area for visual resources would include the viewshed in which the cumulative projects are visible. Although most cumulative impacts would occur within 5 miles of the Proposed PROJECT, the expansiveness and openness of the existing visual landscape, the availability of scenic vistas and viewpoints, as well as the massive scale and height of proposed wind turbines and transmission projects could expand the viewshed for specific projects to distances greater than 5 miles. For the purposes of this cumulative analysis, the visual effect of the Proposed PROJECT was considered in conjunction with other existing and foreseeable projects up to 8 miles away. Beyond this distance threshold, the combined effects of the Proposed PROJECT with other developments would be difficult to visually discern.

Existing Cumulative Conditions

The cumulative study area is predominantly rural in character and comprises a natural, undeveloped desert landscape typical of eastern San Diego County. Vegetation consists of predominantly creosotebush and other low lying desert scrub communities and exposed soils and large boulders contribute to the rather homogenous visual environment. Communities in

the area are small and are typified by single-family homes on relatively large rural lots. In addition to the natural landscape characteristics, a number of man-made industrial elements also contribute to the visual character of the area. The Southwest Powerlink and associated steel lattice towers and conductors traverse the study area, and along with the highly visible Campo Indian Reservation wind farm, contribute large-scale industrial elements to a slowly changing visual environment. While past development has consisted primarily of small-scale residential projects (lot splits, subdivisions), the large-scale development that has occurred (e.g., Golden Acorn Casino and Travel Center, Campo Indian Reservation wind farm) has tended to be sited at highly visible, prominent locations and resulted in strong visual contrasts with the surrounding natural environment.

As identified in Section D.3 Visual Resources, the Proposed PROJECT would dramatically alter the visual character of the area by introducing multiple highly visible industrial elements to prominent ridgelines and within the visible landscape as viewed from residential homes, transportation facilities (I-8, Old Highway 80), and wilderness and recreation areas. While dramatic visual change to the natural landscape character has occurred as a result of past projects, the Proposed PROJECT would affect the existing landscape character, scenic vistas, and existing visual resources, with the severity of visual impacts being high where the proposed wind turbines are viewed in conjunction with other Proposed PROJECT elements. Future development of the study area would further degrade existing visual resources and would continue to alter the rural character that typifies the backcountry of eastern San Diego County.

Cumulative Visual Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.3.3.3.

Impact VIS-1: The project would have a substantial adverse effect on a scenic vista.

All Reasonably Foreseeable Cumulative Projects (Class I)

As discussed in Section D.3.3.3, implementation of the Proposed PROJECT would result in significant impacts to scenic vistas occurring within the project area. Due to the large-scale size, light color, and blade movement, scenic vista impacts attributed to wind turbines viewed from the Table Mountain ACEC, Carrizo Overlook, and Ribbonwood Trail and the Ribbonwood Road Pathway (County facilities established in the Boulevard Community Trails and Pathways Plan) would be adverse and cannot be mitigated. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). There is no known mitigation (other than selecting an entirely different location for wind turbines) that would reduce these scenic vista impacts to a level less than significant. Similar, due to the visibility of

the ECO 138 kV transmission line within a foreground viewing distance, scenic vista impacts would occur at the Jewel Valley Trail and the Jewel Valley Road Pathway (Boulevard Community Trails and Pathways Plan) between approximate MP 9 and the rebuilt Boulevard Substation. Identified impacts would be adverse and cannot be mitigated. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). In addition to Class I impacts, the Proposed PROJECT would also result in less severe scenic vista impacts (Class II) at transmission line and gen-tie line crossings at I-8 and Old Highway 80. However, given the severity of identified impacts at the Table Mountain ACEC, Carrizo Overlook, and at County trails and pathways, the scenic vista impacts associated with the Proposed PROJECT would be significant.

Similar to the Proposed PROJECT, several of the reasonably foreseeable projects identified in Table F-2 would be visible from scenic vistas occurring within the project area including the Carrizo Overlook, Table Mountain ACEC, and County trails and pathways. Although Phase II of the ESJ Wind Project in Mexico would be located more than 10 miles south of hiking trails and higher elevation areas in the Table Mountain ACEC, the open visibility conditions and the relative lack of large, intervening landforms suggest that the wind turbines would be visible from this viewing location. Contrasting with the ESJ Wind Phase II project in Mexico which would be visible from southern oriented views at background viewing distances from the Table Mountain ACEC, the Sunrise Powerlink transmission line would also be visible from this viewing location at foreground to middleground viewing distances. The linear transmission line and vertical transmission structures would be apparent from an east to west view and even though an existing extra high voltage transmission line is established and has industrialized the character of the area, the introduction of a second, large-scale extra high voltage transmission line would visually impact the existing landscape as viewed from the Table Mountain ACEC. However, similar to the visibility of the existing SWPL transmission line structures, the Sunrise Powerlink structures would be backscreened by the desert landscape and due to distance, and the resulting visual contrast would be relatively weak.

The Sunrise Powerlink transmission line would be highly visibly at foreground viewing distances along I-8 through southwestern Imperial County and southeastern San Diego County and at foreground viewing distances along Old Highway 80 in southeastern San Diego County. The transmission line would cross I-8 twice (at McCain Valley Road where the line would cross I-8 from the south and at/ near La Posta Road (west of the Campo Indian Reservation) where the line crosses I-8 from the north) and would cross Old Highway 80 once just north of the ECO Substation site. Based on GIS data provided by the applicant, the Sunrise Powerlink transmission line would also traverse the BLM McCain National Cooperative and Wildlife Management Area, primarily adjacent to McCain Valley Road, and would clearly be visible at foreground viewing distances from southern and western oriented views at the Carrizo Overlook. Although these

features would be located ~~–b~~behind" proposed wind turbines of the Tule Wind Project, the overall bulk and scale of the transmission line structures is expected to increase the visibility of these project components.

Due to the elevated viewing location and lack of intervening landforms, several renewable energy projects proposed in Imperial County could also impact scenic views from the Carrizo Overlook. As indicated in Table F-2, the Ocotillo Express, LLC and Renewable Energy projects are currently identified as wind testing sites (based on their locations as identified on Figure F-1 these projects would be located more than 10 miles east of the Carrizo Overlook). Assuming build out of these identified locations as wind farm developments, the bulk, scale, and color of foreseeable turbines would likely be visible from the Carrizo Overlook which offers panoramic views of the Imperial County desert landscape at a superior viewing angle. Similarly, the superior viewing angle afforded at the Carrizo Overlook would likely also increase the visibility of the Imperial Valley Solar-Solar Two project (potential glare from solar panels would also increase the visibility of these project features). Whereas the Proposed PROJECT and Campo, Manzanita, and Jordan wind energy projects would largely keep eastern oriented views from the Carrizo Overlook intact, the development of the renewable energy projects in Imperial County would degrade the overall aesthetic value of the overlook as a scenic vista.

It is unknown at this time whether renewable energy projects located in Imperial County would include features that would span I-8 and therefore, potential impacts associated with freeway spanning are unknown.

Other cumulative development projects (primarily those proposed in the southeastern corner of the County) would be visible from the Table Mountain ACEC. The Ketchum Ranch development, for example, would develop a large expanse of desert land in the vicinity of the community of Jacumba into a master planned residential neighborhood. The size of the development (in excess of 2,000 homes) and the alteration to the existing natural landscape would be clearly evident from the elevated viewing location of the Table Mountain ACEC. Since a large scale residential development would not be complimentary to a primarily undeveloped and natural desert landscape, the development is anticipated to attract the attention of viewers provided southwestern oriented views from this location. Given that wind turbines would intrude upon southern oriented views and a large scale residential development would intrude upon southwestern oriented views, the overall value of the Table Mountain ACEC as a scenic vista would be diminished. Therefore, since the Proposed PROJECT would introduce industrial elements to the visual environment viewed from the Table Mountain ACEC, the Proposed PROJECT's contribution to a potentially significant impact would be significant and unmitigable under CEQA (Class I). Impacts would remain adverse.

Impact VIS-2: The project would substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway.

All Reasonably Foreseeable Cumulative Projects (No Impact)

Although Old Highway 80 and I-8 are classified as eligible state scenic highways, neither has been officially designated. Consequently, there are no identifiable state scenic highway cumulative visual impacts.

Impact VIS-3: The project would substantially degrade the existing visual character or quality of the site and its surroundings.

Section D.3.3 described the Proposed PROJECT's potential effects on the existing visual character or quality of the landscape according to 22 key observation points (KOPs) that represent typical views from sensitive roadways, residential areas, and designated park, recreation and natural areas. Table F-3, Summary of Cumulative Visual Impacts, by Key Observation Point and Contributing Projects, summarizes the potential projects that may contribute to cumulative visual impacts at each KOP, previously evaluated in Section D.3.3.3.

Table F-3
Summary of Cumulative Visual Impacts, by
Key Observation Point and Contributing Projects

KOP	All Reasonably Foreseeable Cumulative Projects[1]
1	2,15, 18
2	2,15, 18
3	2,15,18
4	15
5	15,18
6	2, 18
7	
8	2, 19
9	2, 19
10	2, 12, 28, 53
11	2, 29
12	2
13	2
14	2,5,6,7,8 (5-8 out of cumulative study area),
15	2, 19
16	2
17	15
18	2,15, 18

Table F-3 (Continued)

KOP	All Reasonably Foreseeable Cumulative Projects[1]
19	10,11
20	
21	2, 12, 28, 53
22	2,5,6,7,8 (5-8 out of cumulative study area),

[1]Projects listed in column are as follows:
2-Sunrise Powerlink Project
5-Ocotillo Express, LLC
6-Ocotillo Express, LLC-Palm Canyon Wash
7-Ocotillo Express, LLC-Sugarloaf Mountain
8-Renewergy, LLC
10-Golden Acorn Casino and Travel Center
11-La Posta Casino
12-Boulevard Border Patrol Station
15-Border Patrol Fence Project
18-Ketchum Ranch TM 5524
19-Elder TPM 20981
28-Dart TPM 20675
29-Grizzle TPM 20719
53-Ribbonwood Road Sightline Improvement

All Reasonably Foreseeable Cumulative Projects (Class I)

As stated in Section D.3.3.3, the visual impacts resulting from the Proposed PROJECT would be substantial within this part of eastern San Diego County as many views would be transformed from predominantly natural or mixed natural and community settings to landscapes with strong industrial character. Although some visual impacts experienced during construction (for instance, visual impacts associated with construction night lighting) could be reduced to less than significant with mitigation (Class II), other impacts including short-term visibility of vehicles, equipment, and workers would remain significant (Class I) due to the geographical extent and duration of construction activities and due to the numerous viewer types impacted. For the same reasons, VIS-3 long-term landscape alteration impacts were determined to be significant (Class I). Proposed PROJECT components would be highly visible from numerous sightlines throughout the project area and therefore, the long-term visual contrasts resulting from the Proposed PROJECT were assessed as an adverse impact and under CEQA would represent a significant and unmitigable impact (Class I).

Due to the various stages of completeness regarding environmental studies and reviews, construction of several of the cumulative projects identified in Table F-2 could coincide with construction of the Proposed PROJECT. For example, the Sunrise Powerlink transmission project was scheduled to begin construction in June 2010 but has since been delayed. According to SDG&E, construction of the project would take approximately 34 months (CPUC and BLM 2008, p. B-70) and therefore, construction of the Sunrise Powerlink and the Proposed PROJECT

could occur simultaneously. Several of the smaller development projects including tentative maps, tentative parcel maps, the Boulevard Border Patrol Station, and the La Posta Mountain Warfare Training Facility could also occur within the same timeframe as the Proposed PROJECT. For those projects where construction activities would occur simultaneously with construction activities of the Proposed PROJECT, visual impacts associated with construction lighting and the noticeable presence of construction workers, vehicles, and equipment could be similar to those anticipated for the Proposed PROJECT. Similar construction timeframes would result in a temporary influx of construction workers and vehicles to the area and the resulting visual impacts would be significant. Assuming that several of the cumulative projects would have a similar construction schedule as the Proposed PROJECT, the Proposed PROJECT's VIS-3a short-term visibility of construction impacts would represent an adverse impact and under CEQA would be significant and unmitigable (Class I).

Construction activities associated with all reasonably foreseeable cumulative projects is assumed to require varying levels of grading for site preparation and new access roads. Given the climate of the cumulative project study area the visual change associated with construction-related land disturbances would be relatively long-term, highly visible, and significant. Coupled with the landscape alterations resulting from the Proposed PROJECT and all reasonably foreseeable cumulative project, the natural landscape of the southwestern Mountain Empire subregion would be permanently altered. In addition, construction of cumulative renewable energy projects occurring in Imperial County would likely require extensive grading for turbine foundations, ancillary facility foundations, and new access roads. Therefore, construction activities associated with the Proposed PROJECT, as well as the Campo, Manzanita, and Jordan wind energy projects, and all reasonably foreseeable cumulative projects would permanently alter the natural desert landscape. Therefore, the Proposed PROJECT's VIS-3b long-term landscape alteration impacts would represent an adverse impact and under CEQA would be significant and unmitigable (Class I).

Future development of the cumulative study area would degrade the existing natural and rural character of the area and would further industrialize the visual landscape. Although the Southwest Powerlink is an established industrial use in the study area, a second existing extra high voltage transmission line (the 500 kV Sunrise Powerlink), would introduce visual elements, similar in scale, line and structure to the Southwest Powerlink, thus furthering the industrialization of the region. The Sunrise Powerlink transmission line would be visible to residents in Jacumba and Boulevard (KOPs 6, 8, 9 and 10) motorists travelling on I-8 (KOP 1), Old Highway 80 (KOPs 2, 3, and 15) and local roads in Jacumba and Boulevard, and recreationists within the McCain National Cooperative Land and Wildlife Management Area (KOPs 12, 13, 14 and 16). As proposed, the Sunrise Powerlink Project would be located in close proximity to project components of the Tule Wind Project including turbines, the 138 kV

transmission line, and the collector substation/O&M facility. Additional projects including the Ketchum and Star Ranch developments and the Imperial County cumulative renewable energy projects would also contrast with the existing natural visual environment currently evident in southeastern San Diego County. The Ketchum and Star Ranch developments would include residential development completely out of scale with the existing land use pattern of the area (large lots containing single-family residences). The Imperial County cumulative renewable energy projects (the Ocotillo Express LLC Projects) would result in similar visual impacts as discussed in Section D.3.3.3 for the Tule Wind Project by adding highly visible industrial wind turbines to an area currently void of development of any kind. Since future development of the cumulative project study area would further industrialize the existing visual landscape and would produce primarily strong visual contrasts, the Proposed PROJECT's VIS-3c long-term visual change impacts would represent an adverse impact and under CEQA would be significant and unmitigable (Class I).

Impact VIS-4: The project would create a substantial new source of light or glare, which would adversely affect day or nighttime views in the area.

All Reasonably Foreseeable Cumulative Projects (Class I)

Although nighttime lighting impacts would be minimized by incorporating the Obstacle Collision Avoidance System (OCAS) on Tule Wind Project wind turbines (the OCAS has been approved by the FAA as an alternative to typical wind turbine obstruction lighting), the Proposed PROJECT would result in significant impacts (Class I) associated with new sources of light and potential effects to the nighttime views in the project area. According to FAA Advisory Circular 70/7460-1K wind turbine farms (wind turbine developments consisting of three or more wind turbines greater than 200 feet above ground level) must provide a site specific lighting scheme that provides for the safety of air traffic (FAA 2007). Due to proposed height of wind turbines (all wind turbines would be over 200 feet above ground level) the Tule, Campo, Manzanita, and Jordan wind energy projects would also be required to install FAA obstruction lighting on wind turbines (not all turbines within an installation need to be lighted). The addition of over 300 wind turbines and required obstruction lighting to the McCain Valley area would likely result in a constant source of visual nuisance for area residents as obstruction lighting (flashing red and white lighting), which could trespass outside of the individual project boundaries and into residential areas and sensitive nighttime viewing areas. Since the Proposed PROJECT would introduce new sources of nighttime lighting to the project area and since the wind project components would also be required to install FAA nighttime obstruction lighting, the Proposed PROJECT's VIS-4 visual impacts would represent an adverse cumulative impact and under CEQA would be significant and unmitigable (Class I).

While not specifically known at this time, the nighttime lighting requirement of all reasonably foreseeable cumulative projects would likely vary. For example, nighttime lighting is not proposed to be installed atop transmission structures supporting the Sunrise Powerlink but wind turbines associated with Imperial County Ocotillo Express LLC. renewable energy projects are assumed to be of sufficient height (over 200 feet above ground level) to require FAA obstruction lighting. Large residential developments such as Ketchum Ranch and Star Ranch would likely require nighttime lighting (street lamps) along new access roads and could include nighttime ornamental lighting. Lighting associated with safety and security at the La Posta Mountain Warfare Training Facility would likely operate during the night (Department of the Navy 2007). As several reasonably foreseeable cumulative project would likely add new sources of nighttime lighting to the project area and since the Proposed PROJECT would include nighttime FAA obstruction lighting which could impact nighttime views, the Proposed PROJECT's VIS-4 impacts would represent an adverse cumulative impact and under CEQA would be significant and unmitigable (Class I).

Impact VIS-5: Construction of the project or the presence of project components would result in an inconsistency with federal, state, or local regulations, plans, and standards applicable to the protection of visual resources.

All Reasonably Foreseeable Cumulative Projects (Class I)

Construction and operation of all foreseeable cumulative projects in the Mountain Empire subregion would further industrialize the area and could result in conflicts with plans and policies established by the County of San Diego for the protection of visual resources. For example, the Sunrise Powerlink transmission line would be visible from the Table Mountain ACEC, would result in impacts to scenic resources including scenic vistas, and would likely conflict with Policy COS-11.1 (Protection of Scenic Resources) of the County of San Diego General Plan Update-Conservation and Open Space Element. The Sunrise Powerlink would also be installed aboveground in the project area and would therefore conflict with Policy COS-11.7-Underground Utilities. Also, the scale of the Ketchum Ranch development just north of the small, rural community of Jacumba would not be of appropriate scale, materials, and design to compliment the surrounding natural environment and would therefore likely conflict with Policy COS-11.3 (Development Siting and Design) of the County of San Diego General Plan Update-Conservation and Open Space Element. In addition, as stated about under VIS-4 (all reasonably foreseeable cumulative projects) several of the identified project could introduce new sources of nighttime lighting to the area and would therefore likely be inconsistent with the Mountain Empire Subregional Plan (Conservation Environmental Resources, Policy 4-Protection of the Dark Sky Environment) and the Light Pollution Code if appropriate measures are not included to limit light trespass and comply with the lamp type and shielding requirements of the code. Therefore, since the Proposed PROJECT would not be consistent with all applicable policies

established for the protection of visual resources and since cumulative projects are also likely to result in conflicts with applicable policies and plans, the Proposed PROJECT's VIS-5 impacts would represent an adverse impact and under CEQA would be significant and unmitigable (Class I).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT. Shifting the substation site 700 feet to the east would neither increase nor decrease the scenic vistas impacts discussed in Section D.3.3.3 for the proposed ECO Substation Project. Identified short-term visibility of construction activities and long-term landscape alteration impacts associated with all project components would continue to be adverse when considered with all of the reasonably foreseeable cumulative projects. Furthermore, as several reasonably foreseeable cumulative projects would likely add new sources of nighttime lighting to the project area, and since the Proposed PROJECT would include nighttime FAA obstruction lighting that could impact nighttime views, impacts to nighttime views would remain adverse. While this alternative component may be mitigated in order to be consistent with the applicable visual resource policies and goals contained in the Eastern San Diego County RMP, the other project components would continue to not be consistent with all applicable policies established for the protection of visual resources. Since cumulative projects are also likely to result in conflicts with applicable policies and plans, this would continue to represent an adverse cumulative impact and under CEQA would remain significant and unmitigable (Class I). Overall, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Undergrounding the transmission lines under this alternative would significantly reduce some of the visual impacts between MP 9 and the rebuilt Boulevard Substation under the ECO Substation component of the Proposed PROJECT. However, the other project components would remain and would interact with the reasonably foreseeable cumulative projects to continue to create adverse visual impacts related to short-term construction, long-term development, and nighttime impacts. Since the Proposed PROJECT coupled with cumulative projects is likely to result in

conflicts with applicable policies and plans, this would continue to represent an adverse cumulative impact and under CEQA would remain significant and unmitigable (Class I). Overall, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to or greater than those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Compared to the proposed transmission line, the long-term visual contrasts associated with the 138 kV transmission line would be greater under this alternative due to its location adjacent to Old Highway 80. Furthermore, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. Overall, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Undergrounding the transmission lines under this alternative would significantly reduce some of the visual impacts along Old Highway 80. However, the other project components would remain and would interact with the reasonably foreseeable cumulative projects to continue to create adverse visual impacts related to short-term construction, long-term development, and nighttime impacts. Since the Proposed PROJECT coupled with cumulative projects is likely to result in conflicts with applicable policies and plans, this would continue to represent an adverse cumulative impact and under CEQA would remain significant and unmitigable (Class I). Overall, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The wind turbines would still result in significant scenic vista

impacts as viewed from the Carrizo Overlook and from the Ribbonwood Trail and Ribbonwood Road Pathway, and overall impacts to scenic vistas during both construction and operations would be similar to those identified for the proposed Tule Wind Project. Identified impacts would be adverse and cannot be mitigated. Under CEQA, impacts would be significant and unmitigable (Class I). Furthermore, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The wind turbines would still result in significant scenic vista impacts as viewed from the Carrizo Overlook and from the Ribbonwood Trail and Ribbonwood Road Pathway, and overall impacts to scenic vistas during both construction and operations would be similar to those identified for the proposed Tule Wind Project. While undergrounding of some of the project components would reduce some of the visual impacts, the overall adverse cumulative impacts would remain. Furthermore, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The wind turbines would still result in significant scenic vista impacts as viewed from the Carrizo Overlook and from the Ribbonwood Trail and Ribbonwood Road Pathway, and overall impacts to scenic vistas during both construction and operations would be similar to those identified for the proposed Tule Wind Project. Furthermore, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The wind turbines would still result in significant scenic vista impacts as viewed from the Carrizo Overlook and from the Ribbonwood Trail and Ribbonwood Road Pathway, and overall impacts to scenic vistas during both construction and operations would be similar to those identified for the proposed Tule Wind Project. While undergrounding of some of the project components would reduce some of the visual impacts, the overall adverse cumulative impacts would remain. Furthermore, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 5, Reduction in Turbines

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be largely the same as that assessed for the Proposed PROJECT. The alternative would continue to impact visual resources in the area. While the reduction in turbines would reduce the overall visual impacts, it would not alter the cumulative impact conclusions as they relate to short- and long-term cumulative visual impacts or nighttime visual impacts. The visual impacts resulting from this alternative would continue to be substantial within this part of eastern San Diego County as many views would continue to be transformed from predominantly natural or mixed natural and community settings to landscapes with strong industrial character. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would have no impact in regards to inconsistencies with plans and policies established for the protection of visual resources in the project area, the Tule Wind and ECO Substation components would continue as proposed, resulting in similar adverse cumulative impacts. The alternative would not alter the cumulative impact conclusions as they relate to

short- and long-term cumulative visual impacts or nighttime visual impacts, and cumulative impacts would remain adverse. The changes from this alternative would not alter any of these cumulative impact determinations.

ESJ Gen-Tie Overhead Alternative Alignment

Under this alternative, cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would not alter the cumulative impact conclusions as they relate to short- and long-term cumulative visual impacts. Moreover, this alternative would continue to have adverse cumulative impacts related to nighttime views and inconsistencies with plans and policies established for the protection of visual resources in the project area. As such, these cumulative impacts would remain adverse when compared with the reasonably foreseeable cumulative projects.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact VIS-1 through VIS-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would have no impact in regards to inconsistencies with plans and policies established for the protection of visual resources in the project area, the Tule Wind and ECO Substation components would continue as proposed, resulting in similar adverse cumulative impacts. The alternative would not alter the cumulative impact conclusions as they relate to short- and long-term cumulative visual impacts or nighttime visual impacts, and cumulative impacts would remain adverse. The changes from this alternative would not alter any of these cumulative impact determinations.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan wind energy projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in

order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. This alternative would remove a significant visual impact from the analysis. Nonetheless, both short-term construction and long-term visual impacts would remain due to the construction of the ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT. While this reduction would reduce the overall visual impacts, since the other components would remain, the cumulative impacts, when considered with the reasonably foreseeable cumulative impacts, are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built, and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.3 Land Use

Geographic Extent

While actual land use impacts tend to be localized in nature and specific impacts tied either directly or indirectly to the specific action, the Proposed PROJECT may have the potential to work in concert with other past, present, or future projects to cause either unintended land use impacts such as reducing available open space or accommodating increased growth that may result in more intensive land uses. Therefore, the geographic scope of consideration is fairly large and, while not necessarily covering the entire spectrum of all listed projects from Table F-2, the impacts to land use as addressed here tend towards larger policy areas as opposed to the more focused project-specific impacts. Regardless, as part of the cumulative analysis, the project must still work in concert with other projects to create a cumulative impact; if no such

relationship exists then the Proposed PROJECT would not be deemed to create a cumulatively considerable impact.

Existing Cumulative Conditions

Section D.4.3.3 covers in greater detail the existing and planned land uses in the geographic area. Existing land uses in the study area can be characterized as predominately rural, large-lot ranches and single-family homes with a mixture of small-scale agriculture, recreational, and open space. Rural land uses are generally located between the communities of Jacumba and Boulevard, and tribal lands are located north and south of I-8 near Boulevard. North of I-8, the landscape is a mixture of large-lot rural residences and open space with mountainous terrain consisting of steep slopes, prominent ridgelines, and rock outcroppings within state park, tribal, and BLM lands. South of I-8, the landscape is predominantly rural with desert vegetation and terrain primarily within County of San Diego (County) jurisdictional lands. BLM lands are located throughout the area (west of the ECO Substation for instance); however, most of these lands are discontiguous and relatively small. Tribal lands are generally located west of the Boulevard. The U.S.–Mexico border fence is a dominant feature on the landscape south of I-8 and is highly visible from the community of Jacumba and from ECO Substation and ESJ Gen-Tie Project components.

Planned land uses are those designated in long-ranging planning documents including resource management plans and general plans that are intended to guide the future development and growth patterns of a given jurisdiction. For BLM-administered lands in the project area, the Eastern San Diego County Resource Management Plan/Record of Decision (BLM 2008) is the applicable long-range planning document. For County of San Diego jurisdictional lands, the County of San Diego General Plan is the applicable long-range planning document.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.4.3.3 and/or create a cumulatively considerable impact to land use due to the increase in impacts caused by the Proposed PROJECT.

Impact LU-1: Construction would temporarily disturb land uses at or near project components

All Reasonably Foreseeable Cumulative Projects (Class II)

As indicated in Section D.4.3.3, while temporary land use impacts associated with construction of the Proposed PROJECT would be adverse, such impacts can be reduced with implementation of mitigation measures identified for the ECO Substation and Tule Wind Projects. While construction activities would temporarily disturb rural residences in the vicinity of project components including (but not limited to) the proposed 138 kV transmission line associated with

the ECO Substation Project, the proposed transmission line associated with the Tule Wind Project, and improvements to existing access roads in support of the Tule Wind Project, mitigation has been incorporated into the projects to reduce those impacts through the use of notification plans, mailings, advertisements, availability of liaisons, and appropriate site access. Residences would be disturbed by the presence of heavy equipment on project area roadways, truck operation, and general construction activities including excavation for transmission line and transmission line structures, but this impact would be less than significant, under CEQA, once mitigation has been incorporated (Class II).

While such impacts would be temporary and limited to construction periods and would be reduced to less than significant with appropriate mitigation, if all cumulative wind projects were constructed at the same time, the impact on residences in the area may be exacerbated.

Most projects would be required to minimize impacts regarding temporary affects to surrounding land uses due to construction. The Sunrise Powerlink Transmission Project, Elder TPM20981 (Map ID 19), Grizzle TPM20719 (Map ID 29), and/or the Ketchum Ranch TM5524 (Map ID 18), have the greatest potential to cause cumulative impacts during construction if any or all of the projects were constructed simultaneously due to increases in dust, noise, construction traffic, and other disruptions that are typical of large construction projects. Again, with appropriate mitigation incorporated, most of these project-specific impacts would not represent an adverse impact and would be reduced to less than significant under CEQA. Furthermore, with specific mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given these reasonably foreseeable cumulative projects being built at the same time, the Proposed PROJECT would not substantively contribute to any potentially significant impacts on land uses in the area during construction.

The Ketchum Ranch project is significantly larger in its construction profile as opposed to the other developments in this area and a greater intensity of land development in order to construct approximately 2,125 homes with associated retail, park, school, and recreational opportunities. Even if the proposed PROJECT was built at the same time, the impacts related to the Proposed PROJECT would be minimal after mitigation is incorporated. Even without mitigation required on the part of the Ketchum Ranch development, the Proposed PROJECT would not be anticipated to create an adverse cumulative impact and would remain less than significant under CEQA (Class II).

Impact LU-2: Presence of a project component would divide an established community or disrupt land uses at or near project components.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described under Section D.4.3.3, residences and other land uses adjacent to or in the vicinity of project components would be subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts as further described in this EIR/EIS. In addition, the Proposed PROJECT would introduce numerous industrial elements to an existing land use setting primarily characterized as rural residential. Section D.4.3.3 determined that appropriate mitigation would reduce land conflicts by notifying residents of construction activities and revising project elements such that reasonable reroutes could be accommodated. Therefore, with appropriate mitigation, any identified impacts would be adverse but mitigated, and would be considered less than significant under CEQA (Class II).

Similar to the Proposed Project, construction and operation of all reasonably foreseeable cumulative projects would indirectly impact residences and land uses adjacent to project components. While mitigation cannot eliminate entirely the effects resulting from the increase of additional industrial elements into the rural land use setting, incorporation of mitigation can minimize the land use conflicts that may occur through working with landowners of parcels impacted by the transmissions lines and project components for the approved final route. Although the area is predominantly rural residential, the land uses have been steadily trending towards more development and a greater intensity of development. Such development represents a change from the surrounding rural residential uses that have been predominant throughout the area. Construction and operation of all reasonably foreseeable projects are not anticipated to result in the removal of existing structures such that residents would become displaced. In addition, the functionality of land uses in the area would remain intact as development of all reasonably foreseeable projects would implement appropriate mitigation measures to ensure that projects would not result in significant land use disruptions. Therefore, cumulative impacts attributed to Impact LU-2 would be adverse, but mitigated, and under CEQA would be reduced with mitigation to a less than significant impact as it relates to the disruption of land uses at or near project components due to the increase of industrial aspects of the various wind projects and associated energy infrastructure, as well as other industrial, commercial, and residential developments (Class II).

Impact LU-3: The project would conflict with applicable land use plans, policies, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating environmental effect.

All Reasonably Foreseeable Cumulative Projects (Class II)

As identified in Section D.4.3.3, with mitigation included, the Proposed PROJECT would not result in substantial conflicts with applicable plans, policies, and regulations. The identified impacts would be adverse; therefore mitigation has been included to reduce this adverse impact. Under CEQA, impacts would be reduced with mitigation to a less-than-significant level of impact (Class II).

The land use analysis from the Sunrise Powerlink 500 kV Transmission Line Project determined that the Sunrise project at that time was not significantly inconsistent with the applicable plans, policies, and regulations for the Sunrise project area. While the inclusion of the Sunrise Powerlink 500 kV Transmission Line Project would further interact with the Proposed PROJECT and other proposed wind energy projects, such a cumulative interaction would not likely create an adverse cumulative impact. This impact would be potentially aggravated by some of the larger development projects in the area such as the Golden Acorn Casino, La Posta Casino, Ketchum Ranch, and Star Ranch residential projects. However, these projects would likely include mitigation to reduce any potential inconsistencies and it is improbable that these projects would conflict with applicable land use plans, policies, or regulations and interact with the Proposed PROJECT to create a significant cumulative impact. Cumulative impacts would be adverse, but mitigated, and under CEQA would be reduced with mitigation to a less-than-significant level of impact (Class II) in regards to a conflict with applicable land use plans, policies, or regulations.

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would move the substation 700 feet to the east and, compared with the proposed ECO Substation site, would be located farther away from the nearest residences, the overall cumulative impacts to land use would remain similar to those evaluated under the Proposed PROJECT as it relates to the reasonably foreseeable cumulative projects. While impacts as they relate to the ECO Substation alone may not be adverse under LU-2, the alternative would continue to contribute to potential significant land use impacts as it relates to the disruption of land uses at or near project components due to the increase of industrial aspects of the various wind projects and associated energy infrastructure, as well as other industrial,

commercial, and residential developments. Thus, cumulative impacts are anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would underground the portion of the proposed 138 kV transmission line between MP 9 and the rebuilt Boulevard Substation, the overall cumulative impacts to land use would remain similar to those evaluated under the Proposed PROJECT as it relates to the reasonably foreseeable cumulative projects. In particular, the alternative would continue to contribute to impacts as it relates to the disruption of land uses at or near project components due to the increase of industrial aspects of the various wind projects and associated energy infrastructure, as well as other industrial, commercial, and residential developments. While undergrounding the transmission route would reduce this impact as it relates exclusively to the 138 kV transmission line, the overall project elements and components would continue to interact with the reasonably foreseeable cumulative projects, which include the Sunrise Powerlink 500 kV Transmission Line Project. Thus, cumulative impacts are anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ECO Highway 80 138 kV Transmission Route Alternative

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would relocate the transmission lines, which would actually impact a greater number of residences overall. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements. Thus, cumulative impacts are anticipated to remain the same as or similar to those evaluated under the Proposed PROJECT.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would underground the transmission lines, which would actually impact a greater number of residences overall during construction. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts are anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would reduce the 138kV transmission lines but would increase overhead connectors and put the collector substation and O&M facility components closer to a greater number of residences overall. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would underground the 138kV transmission lines but would continue to impact residences within 1,000 feet of the alternative and would continue to disrupt existing land uses around the alternative project components. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would continue to impact land uses in the area. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would underground the 138kV transmission lines but would continue to impact residences within 1,000 feet of the alternative and would continue to disrupt existing land uses around the alternative project components. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 5, Reduction in Turbines

Under this alternative, cumulative impacts related to Impacts LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While impacts related to construction and permanent impacts to land would be reduced with the reduction of 62 wind turbines, the alternative would continue to impact land uses in the area. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

This alternative, when evaluated with the ESJ Gen-Tie Project components alone, would reduce the overall project-specific impacts to land use but would not change the overall cumulative impacts evaluation for Impact LU-1 through LU-3. While the alternative would reduce direct impacts to a number of residences, land uses would continue to be impacted. Furthermore, while the alternative's project-specific impacts to LU-2 are not adverse, when compared to the reasonably foreseeable cumulative projects, the alternative would continue to increase industrial elements and interruption with rural residential uses. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Overhead Alternative Alignment

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The alternative would not alter the cumulative impact conclusions as they relate to an increase in industrial elements and interruption with rural residential uses when compared with the reasonably foreseeable cumulative projects.

ESJ Gen-Tie Underground Alternative Alignment

Under this alternative, cumulative impacts related to Impact LU-1 through LU-3 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. This alternative, when evaluated with the ESJ Gen-Tie Project components alone, would reduce the overall project-specific impacts to Impact LU-1. While the alternative would reduce direct impacts to a number of residences, land uses would continue to be impacted. Cumulative impacts would be anticipated to remain the same as or similar to those evaluated under the Proposed PROJECT.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan wind energy projects would not be built and the existing conditions would remain at these sites. Land use impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ gen-tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. Therefore, overall cumulative impact evaluations are anticipated to remain since, coupled with the reasonably foreseeable cumulative projects, the area would continue to be adversely impacted with the increase in industrial elements related to the alternative.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built, and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.4 Wilderness and Recreation

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with wilderness and recreation includes the wilderness areas and recreation facilities that would be traversed by or adjacent to the Proposed PROJECT as well as the viewsheds of these affected wilderness and recreation areas. These areas consider both direct and indirect impacts to wilderness and recreation areas and this geographic scope is appropriate as it considers the effects of other projects within this region on the resources impacted by the Proposed PROJECT.

Existing Cumulative Conditions

Federal and state wilderness and recreational areas in the general vicinity of the Proposed PROJECT include Cuyamaca Rancho State Park, Cleveland National Forest, McCain Valley National Cooperative Land and Wilderness Management Area, and the Anza-Borrego Desert State Park. Numerous federal wilderness areas and areas of environmental concern, along with several state wildernesses and local parks and facilities, are also located in the area. Wilderness and recreation areas in the project area are managed by the BLM, USFS, the California Department of Parks and Recreation, and the County of San Diego. In general, the recreation and wilderness areas in the vicinity of the Proposed PROJECT support a variety of activities including camping, hunting, fishing, and hiking while at the same time placing an emphasis on habitat preservation and conservation efforts. In addition to the projects listed in Table F-2, plans

and environmental documents listed in Table F-1 were considered when identifying development activities that could contribute to cumulative wilderness and recreation impacts.

Cumulative Impact Analysis

The criteria by which wilderness and recreation impacts would be cumulatively considered significant are the same as those considered for the Proposed PROJECT, which are discussed in Section D.5. Table F-2 lists projects included in the cumulative wilderness and recreation analysis. A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.5.3.3 and/or create a cumulatively considerable impact to wilderness and recreation due to the increase in impacts caused by the Proposed PROJECT.

Impact WR-1: Construction activities would temporarily reduce access and visitation to wilderness or recreation areas.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed within Section D.5.3.3, there are several popular recreation areas located in the vicinity of components of the Proposed PROJECT and construction activities such as grading and excavation and would impact access to wilderness and recreation areas. Noise and dust would impact these areas and cause some temporary closures to recreational areas. However, with the incorporation of Mitigation Measures WR-1, regarding appropriate notification and coordination, and WR-2, regarding appropriate continued access to McCain Valley Road, the temporary impacts of the Proposed PROJECT would not represent an adverse impact. Therefore, with incorporation of mitigation measures, under CEQA, impacts would be reduced to less than significant (Class II).

Past projects would not be under construction and would therefore not contribute to this potential cumulative impact. Other than the Sunrise Powerlink Project there are likely no reasonably foreseeable projects within the area that would be located close enough to the recreation areas impacted by the Proposed PROJECT to create a substantial cumulative impact. Similar to the Proposed PROJECT, the Sunrise Powerlink Project would traverse the Airport Mesa Recreation Management Zone (a BLM-administered area) and would traverse land within the McCain National Cooperative Land and Wildlife Management Area. Although these projects would potentially affect the same area, the Proposed PROJECT's impacts would be reduced to less than significant levels under CEQA with the implementation of Mitigation Measures WR-1 and WR-2 and would not combine with the impacts of all reasonably cumulative projects to create a cumulatively considerable impact (Class II). With mitigation, cumulative impacts related to construction activities causing temporary impacts to access and visitation to wilderness or recreation areas would not be considered adverse.

Impact WR-2: Presence of a project component would permanently preclude recreational activities.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed in greater detail under Section D.5.3.3, the Proposed PROJECT would not result in the permanent closure of trails or recreation areas. Project facilities would be located on either private, undeveloped land or on BLM-administered land made available for wind energy development and where major modifications to the characteristic landscape are permitted. Facilities, structures, and transmission lines would not permanently preclude recreational activities at any of the identified wilderness and recreation areas in the vicinity. Any identified impacts would not be adverse and, under CEQA, impacts would be considered less than significant (Class III). While the Proposed PROJECT and associated wind energy projects would clearly be visible from nearby recreation areas and would change the character of these areas by introducing multiple industrial elements to the existing visual landscape, operation of the Proposed PROJECT and the identified wind projects would not permanently preclude recreational activities

Most of the identified cumulative projects would be located outside of wilderness and/or recreation lands, trails, or camping grounds. The Sunrise Powerlink Project would, however, locate large scale transmission structures within the McCain National Cooperative Land and Wildlife Management Area, in the Cleveland National Forest, and in close proximity to campgrounds surrounding Lake Morena. The placement of transmission structures within these recreation areas is not anticipated to result in the permanent closure of recreational trails or camping grounds. While large scale industrial transmission structures would permanently alter the existing character of these areas, structures are not anticipated to result in the permanent closure of hiking trails or campgrounds. The wind testing sites in Imperial County would be located on BLM-administered land within the Yuha Desert Recreation Area which contains miles of hiking trails and open area for OHV use. Based upon limited project information, it does not appear that the wind testing sites have been located on trails or camping grounds which would permanently preclude recreational activities. Lastly, the National Quarries Project would be located within the BLM-administered Oriflamme Semi-Primitive Recreation Management Zone (the boundary of the National Quarries Project coincides with the boundary of the RMZ) and according to the BLM, this area is a limited OHV use designation area in which hiking, horseback riding, and wildlife viewing also occurs (BLM 2008). However, since the RMZ has been made available for wind energy development by the BLM (BLM 2008), the BLM has determined that wind energy development and recreational activities can coexist in the RMZ and therefore, the National Quarries Project would not permanently preclude recreational activities. Since the Proposed PROJECT would not result in the permanent preclusion of recreation

activities, the Proposed PROJECT's cumulative impacts would not be adverse and, under CEQA, would not represent a significant cumulative impact (Class III).

Impact WR-3: Presence of a project component in a designated wilderness or wilderness study area would result in loss of wilderness land.

All Reasonably Foreseeable Cumulative Projects (No Impact)

As depicted on Figure F-2, all reasonably foreseeable projects would be located outside of designated wilderness or wilderness study areas. According to the BLM's Eastern San Diego County Resource Management Plan, wilderness areas are withdrawn from all forms of land entry including land use authorizations for commercial purposes and no structures or installations within these areas are allowed (BLM 2008). Therefore, since all reasonably foreseeable projects and the Proposed PROJECT would be located outside of designated wilderness land or designated wilderness study areas, the Proposed PROJECT would not create a cumulatively adverse impact and would not cumulatively contribute to a loss of wilderness land under CEQA (No Impact).

Impact WR-4: Presence of a project component would result in increased unauthorized access to specially designated or restricted areas.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed in Section D.5.3.3, the Proposed PROJECT could result in increased unauthorized access into the In-Ko-Pah ACEC. The Proposed PROJECT would locate wind turbines and associated access roads adjacent to the ACEC which is also located in close proximity of the Lark Canyon OHV Area (it is assumed that riders could utilize project access roads and trespass into the ACEC). However, as identified in Section B Project Description, all new permanent spur access roads would be gated off the main access road to prevent unauthorized access. Therefore, because gates would be installed on all new permanent spur access roads and instances of unauthorized access would be minimized through project design, identified WR-4 impacts would not be adverse and under CEQA, impacts would be less than significant (Class III).

A potential cumulative impact would exist if construction and operation of the reasonably foreseeable cumulative projects resulted in increased unauthorized access to a specially designated or restricted wilderness area. For purposes of this discussion (and consistent with the BLM definition of specially designated areas), specially designated areas include wilderness areas, wilderness study area, ACECs, and the Pacific Crest National Trail. Restricted wilderness areas are those areas that are withdrawn from all forms of land entry and those in which motor vehicles, motorized equipment, or other form of mechanical transport is not allowed. Based on the location of all reasonably foreseeable projects as identified in Figure F-2, it appears that only

the Sunrise Powerlink Project would impact the same recreation areas as the Proposed PROJECT. Similar to the Proposed PROJECT, the Sunrise Powerlink Project would traverse land within the McCain National Cooperative Land and Wildlife Management Area and would place large-scale transmission structures along McCain Valley Road in close proximity to the In-Ko-Pah Mountain ACEC. The Sunrise Powerlink Project would generally be located adjacent to McCain Valley Road and, because pole location could be accessed from McCain Valley Road, would not likely require the construction of access roads which could result in increased unauthorized access to the In-Ko-Pah ACEC. Impacts would not result in an adverse impact and, under CEQA, cumulative impacts would be less than significant (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

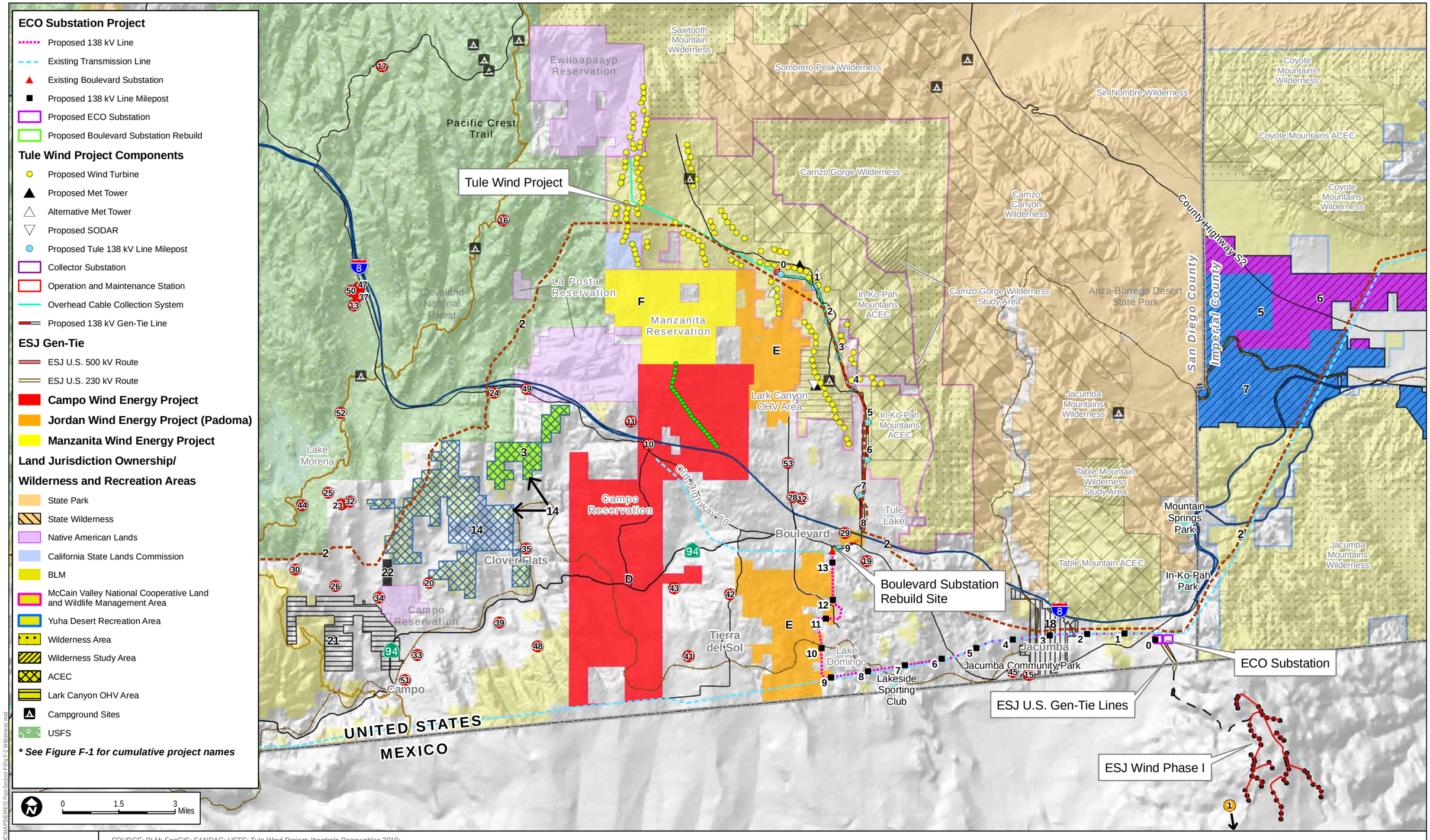
ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impacts WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Shifting the ECO Substation site 700 feet east would not alter the overall impact conclusions. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as that assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Undergrounding of the transmission lines at this location would not alter the overall impact conclusions. However, it may increase some impacts regarding access due to longer construction timelines. Regardless, the project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.



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SOURCE: BLM; SanGIS; SANDAG; USFS; Tule Wind Project: Iberdrola Renewables 2010;
ESJ U.S. Project: Entrix 2009; ESJ Wind Project: Entrix 2010;
ECO Substation Project: SDG&E 2009

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FIGURE F-2

Wilderness and Recreation Cumulative Projects Overview Map

East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects - EIR/EIS

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ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 may help reduce overall cumulative impacts related to temporary reductions in access; however, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 may help reduce overall cumulative impacts related to temporary reductions in access; however, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch may reduce some access issues related to construction. However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch may increase access issues related to construction in order to underground the transmission lines. Regardless, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch may increase access issues related to construction in order to underground the transmission lines. Regardless, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch may reduce some access issues related to construction to some areas, but increase the impact in other areas. However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While a reduction in turbines adjacent to wilderness areas would provide an increased buffer between wilderness areas resulting in the decreased potential for unauthorized access opportunities, the alternative would not substantially alter the cumulative impacts as identified under the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial

new or reduced adverse cumulative impacts. Undergrounding of the gen-tie line would not alter the overall impact evaluation as analyzed under the Proposed PROJECT.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as that assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact WR-1 through WR-4 would be largely the same as those assessed for the Proposed PROJECT. The project-specific and cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives.

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan wind energy projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-

Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce impacts to the McCain Valley by not locating the wind towers in the project areas. Cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.5 Agriculture

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with agricultural resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County and western Imperial County, as shown in Figure F-3, Department of Conservation Farmland Mapping and Monitoring Cumulative Project Map. Cumulative impact analysis for agricultural resources has been conducted using the projects in Table F-2, and data obtained from the state DOC FMMP.

Existing Cumulative Conditions

San Diego and Imperial counties possesses extensive existing rural land uses, including agriculture (see Section D.6). However, as shown in Figures D.6-1, Department of Conservation Farmland Mapping and Monitoring Overview Map, and D.6-2, Department of Conservation Farmland Mapping and Monitoring ECO Project Components, DOC Farmlands do not occur to a large extent in the project vicinity. As described in Section D.6.1.1, the main instance of DOC Farmlands occurs near Jacumba. Also, due to a lack of water resources and poor soil quality, there are no lands within the study area that are under a Williamson Act contract (DOC 2008).

Proposed PROJECT

- A - ECO Substation Project
- B - Tule Wind Project
- C - Energia Sierra Juarez Gen-Tie (ESJ Gen-Tie)
- D, Campo Wind Energy Project
- E, Jordan Wind Energy Project (Padoma)
- F, Manzanita Wind Energy Project

Existing Facilities

- Southwest Powerlink
- Kumeyaay Turbines

Cumulative Projects:

Transmission/Renewable Energy

- 1, ESJ Wind Future Phases
- 2 - Sunrise Powerlink Transmission Line
- 3, Debenham Energy - Miller Basin
- 4, National Quarries - Sawtooth
- 5, Ocotillo Express, LLC
- 6, Ocotillo Express, LLC - Palm Canyon Wash
- 7, Ocotillo Express, LLC - Sugarloaf Mountain
- 8, Renewergy, LLC
- 9, Imperial Valley Solar - Solar Two

Development Projects

- Other Cumulative Projects (See Table F-2 for project name and description)
- 18, La Posta Mountain Warfare Training Facility
- 22, Ketchum Ranch, GPA, SP, TM, REZ, MUP, STP, AD
- 25, Star Ranch, GPA, SP, TM, REZ
- 26, Harvest Glen TM 5366

Farmland Designations:

- Urban and Built-Up Land
- Grazing Land
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Water
- Other Land
- Area Not Mapped
- Farmland of Local Importance

Sunrise Highway
County Highway S2
Willows Rd
Japatul Rd
Japatul Valley Rd
Buckman Springs Rd
Sunrise Powerlink
Old Highway 80
San Diego County
Imperial County
UNITED STATES
MEXICO
ESJ Wind Phase I

0 2.5 5 Miles

SOURCE: BLM; SanGIS; SANDAG; USFS; Tule Wind Project: HDR Engineering 2010; ESJ U.S. Project: Entrix 2009; ESJ Wind Project: Entrix 2010; ECO Substation Project: SDG&E 2009 California Department of Conservation 2006

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FIGURE F-3

Department of Conservation Farmland Mapping and Monitoring Cumulative Project Map

East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects - EIR/EIS

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Cumulative Impact Analysis

For the Proposed PROJECT, only the ECO Substation Project would impact DOC Farmland, but impacts would be less than significant. The other two projects (Tule Wind and ESJ Gen-Tie) would result in no impacts to DOC Farmland. Overall, as indicated in Section D.6.3.3, impacts resulting from implementation of the Proposed PROJECT were determined to be less than significant (Class III).

The construction and operation of the Proposed PROJECT would result in an incremental contribution to existing and anticipated cumulative effects on agricultural and forest resources. Impacts to agricultural and forest resources would occur where project structures would occupy agricultural land that includes DOC Farmland, Williamson Act lands, agricultural operations, or forest resources. Table F-2 lists projects included in the cumulative agriculture analysis.

Impact AG-1: Construction and operation activities would interfere with active agricultural operations.

All Reasonably Foreseeable Cumulative Projects (Class III)

As described in Section D.6.3.3, the Proposed PROJECT would temporarily remove from active agricultural operations approximately 0.8 acre, or 0.3% of the total acreage (approximately 320 acres) of Ketchum Ranch. The project would also impact, on a permanent basis, 0.14 acre for road construction. The combined analysis of the three projects indicates that only the ECO Substation Project would temporarily interfere with active agricultural operations. The other two projects would not result in environmental effects. Based on the locations of the proposed Manzanita, Jordan, and Campo wind energy projects, these sites do not appear to be located on active agricultural lands and their potential to cause any interference with ongoing agricultural operations would be remote. Therefore, project-level impacts to agricultural resources were determined not to be adverse and, under CEQA, to be less than significant (Class III).

Based on the locations of the reasonably foreseeable projects (as shown in Figure F-1), only the Sunrise Powerlink Transmission Project would affect active agricultural or grazing land. The Sunrise project would traverse a total of approximately 44.6 linear miles of agricultural land, of which approximately 30.3 linear miles are active agricultural operations. The Sunrise project would temporarily interfere with active agricultural operations by impeding access to certain fields or plots of land, obstructing farm vehicles and equipment, and disrupting grazing activities, all of which could result in the temporary reduction of agricultural productivity. None of the other reasonably foreseeable projects appear to have the potential to result in impacts to active agricultural lands. Based on the relatively small acreage of agricultural land that would be affected by the Proposed PROJECT, it is unlikely the Proposed PROJECT would impact the same farmland at the same time as the Sunrise project, leading to a significant cumulative

impact. Therefore, the Proposed PROJECT's impacts would not combine with other cumulative impacts to result in a cumulative impact and would not provide a significant incremental effect that would be cumulatively considerable. The Proposed PROJECT's cumulative impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Impact AG-2: Operation would permanently convert DOC Farmland to non-agricultural use.

All Reasonably Foreseeable Cumulative Projects (Class III)

Regionally, conversion of agricultural lands has been ongoing throughout most areas of the cumulative study area for decades. Per Figure F-3, the following reasonably foreseeable cumulative projects would potentially impact DOC Farmlands: Sunrise Powerlink, Jordan Wind Energy, Ketchum Ranch, the two small scale office and church project in Campo Hills, and the Borrow Pit Miller Creek reclamation project. Some projects, particularly those occurring in Imperial County, lie within areas designated "Area Not Mapped." However, given the arid conditions and rocky soils prevalent in this area, DOC Farmlands are considered unlikely to be affected by these projects.

The Sunrise project would traverse a total of approximately 44.6 linear miles of agricultural land, of which approximately 29.4 linear miles are DOC Farmlands. Ketchum Ranch would be located on an area of approximately 90 acres that is designated Prime Farmland and Farmland of Statewide Importance, although it is unknown how much of the proposed 1,250 acres of the project would impact these DOC farmlands. Impact acreages for the other four projects are unknown.

The Proposed PROJECT would temporarily convert approximately 0.8 acre, or 0.3% of the 320 acres of DOC Farmland to non-agricultural use, with a lesser amount (0.14 acre) that would be permanently impacted for road construction. Although project-specific information for the Jordan wind energy project has not been developed and the extent to DOC Farmland are not known at this time, preliminary analysis indicates that the Jordan wind energy component of the Proposed PROJECT would impact an area designated Farmland of Local Importance and Farmland of Statewide Importance totaling approximately 46.4 acres. The Campo and Manzanita wind energy projects would not result in any impacts to DOC Farmland. Therefore, while there are overall impacts to DOC Farmlands within the cumulative project area, the largest impacts appear to be caused by the Ketchum Ranch and the Sunrise projects as opposed to the Proposed PROJECT. While the actual acreage is not a large amount of agricultural land, given the nature of DOC Farmland losses and the lack of mitigation to offset this loss, the conversion of DOC Farmland caused by these other projects does likely constitute an adverse or cumulatively significant impact. However, the Proposed PROJECT would only temporarily impact 0.3% of the 320 acres of DOC Farmland and once construction is complete, would only permanently

impact 0.14 acre for road construction. Thus, while even very minor increases for some potential impacts may prove cumulatively considerable, here there would be no substantial permanent reduction of DOC Farmland and impacts to farming operations would only be temporary. The Proposed PROJECT's cumulative impacts regarding the permanent loss of acreage would not be adverse and, under CEQA, would be less than significant (Class III).

Impact AG-3: Operation would conflict with existing zoning for agricultural use or permanently convert Williamson Act lands to non-agricultural use.

All Reasonably Foreseeable Cumulative Projects (Class III)

As analyzed in Section D.6.3.3, Proposed PROJECT impacts to existing agricultural zoning and Williamson Act lands would not result in an adverse impact and, under CEQA, would be less than significant (Class III).

Conversion of agricultural lands, including Williamson Act lands has been ongoing in the vicinity of the Proposed PROJECT. The Sunrise project would impact approximately 19.8 miles of Williamson Act lands. As discussed in Section D.6.3.3, however, the Proposed PROJECT would not convert any Williamson Act lands to non-agricultural uses. Therefore, the Proposed PROJECT's impacts would not combine with impacts from other cumulative wind projects to result in an adverse cumulative impact on Williamson Act lands or contracts, and impacts under CEQA would be less than significant (Class III).

Impact AG-4: Operation would conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

All Reasonably Foreseeable Cumulative Projects (No Impact)

The Proposed PROJECT would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No impact would result (No Impact). As such, the Proposed PROJECT would not represent an adverse cumulative impact and, under CEQA, would not contribute to a cumulatively considerable impact to forest land or timberland resources (No Impact).

Impact AG-5: Operation would result in the loss of forest land or conversion of forest land to non-forest use.

All Reasonably Foreseeable Cumulative Projects (No Impact)

Since the Proposed PROJECT would not result in the loss of forest land or conversion of forest land to non-forest use, no adverse impact would result and the Proposed PROJECT would not contribute to a cumulatively considerable impact (No Impact).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Shifting the ECO Substation site 700 feet east would not alter the overall impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as that assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While undergrounding of the transmission lines at this location may further reduce Impact AG-3 from an impact that is already not adverse and under CEQA is less than significant, this reduction would not alter the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as that assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 may help reduce overall cumulative impacts related to active agricultural land and uses; however, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 may help reduce overall cumulative impacts related to active agricultural land and uses; however, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would actually increase some of the direct impacts to agricultural land, particularly on the Rough Acres Ranch site. However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would actually increase some of the direct impacts to agricultural land, particularly on the Rough Acres Ranch site. However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would actually increase some of the direct impacts to agricultural land, particularly on the Rough Acres Ranch site. . However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative

projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would actually increase some of the direct impacts to agricultural land, particularly on the Rough Acres Ranch site. However, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact AG-1 through AG-5 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While a reduction in 62 turbines would mean a reduction in construction impacts related to the Tule Wind Project component and thus less impacts on agricultural land or uses, the alternative would not substantially alter the cumulative impacts as identified under the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact AG-1 through AG-5 would be less than or largely the same as that assessed for the Proposed PROJECT. While the Tule Wind and ECO Substation impacts would all be the same, the alternative component itself would not impact any agricultural land or uses. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact AG-1 through AG-5 would be less than or largely the same as that assessed for the Proposed PROJECT. While the Tule Wind and ECO Substation impacts would all be the same, the alternative component itself would not impact any agricultural land or uses. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact AG-1 through AG-5 would be less than or largely the same as that assessed for the Proposed PROJECT. While the Tule Wind and ECO Substation impacts would all be the same, the alternative component itself would not impact any agricultural land or uses. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce some agricultural impacts by not locating those wind towers in the project areas. Cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.6 Cultural and Paleontological Resources

Geographic Extent

The geographic scope for the analysis of cumulative impacts on cultural and paleontological resources is the southeastern section of San Diego County and southwestern portion of Imperial County, as shown in Figure F-1. These areas include the relatively undeveloped portions of the ancestral Kumeyaay territory, and those rural areas outside of the historically developed urban population centers in San Diego and southwestern Imperial County. Related projects within this geographic extent are capable of collectively contributing, along with the Proposed PROJECT's Area of Potential Effect, to impacts on prehistoric resources associated with Kumeyaay lifestyles. This geographic area also includes relatively undeveloped areas within which potentially sensitive paleontological rock formations exist.

Existing Cumulative Conditions

Cultural resources, including archaeological sites and historical structures, and paleontological resources are impacted by ground disturbing activities associated with development. Grading and other ground disturbing activities associated with land development can destroy archaeological sites, which are usually on the surface or within several feet below the surface. Archaeological and paleontological resources are finite resources that have been substantially disturbed throughout the Proposed PROJECT vicinity and Southern California within the last 40 years, due to intensified urban development and development of energy infrastructure in rural areas of Imperial and San Diego County. Though it is impossible to quantify precisely, a substantial number of prehistoric and historic archaeological sites have been adversely affected by direct impacts (including grading) and indirect impacts (including increased public access and illicit artifact collection, graffiti, etc.). Effects on Native American heritage values resulting from damage to prehistoric sites have also been substantially adverse. These past cumulative effects on cultural resources are considered substantially adverse. Similarly, cumulative effects on significant fossils and paleontological resources are considered substantially adverse.

Cumulative Impact Analysis

As described in Table F-2, there are numerous projects in the planning or construction phase within the cumulative study area that have the potential to adversely affect cultural and paleontological resources. The actual number and type of resources that might be adversely affected by these cumulative scenario projects is impossible to precisely define, as a comprehensive inventory of the each related project area within the geographic scope of the cumulative analysis is not available. Projects on federal lands, however, require a systematic inventory of all cultural and paleontological resources as a component of permit processing. Imperial and San Diego County CEQA Guidelines also require an equivalent level of investigation to identify significant resources. Applicable laws and regulations, as discussed in Section D.7.2, provide for preservation of significant resources where feasible, and mitigation through data recovery of those that cannot otherwise be avoided by project redesign.

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.7.3.1.

Impact CUL-1: Construction of the project would cause an adverse change to significant prehistoric or historic archaeological sites.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.7.3.3, grading of access roads, pads for project facilities, and excavation of holes for the installation of the transmission line poles and clearance structures associated with the Proposed PROJECT have the potential to impact both surface and buried prehistoric archaeological sites. Intensive surveys of the Proposed PROJECT Area of Potential Effect (APE) have identified several sites that appear to be potentially ~~h~~historic properties" eligible for NRHP listing and ~~h~~historic resources" eligible for CRHR listing. Of these, numerous sites would be feasibly avoided by minor project redesign. Those sites that would not be feasibly avoided and would be impacted would need to be formally evaluated to determine if they are significant. Therefore, identified impacts would be adverse, but an HPTP and MOA/PA will be completed to comply with Section 106 in order to mitigate any adverse effects. Implementation of Mitigation Measures CUL-1A through CUL-1E would reduce under CEQA, any potentially significant impacts to cultural resources to be less than significant (Class II) by ensuring avoidance or, if necessary, testing and data recovery. Therefore, impacts would be adverse but mitigated.

Current and reasonably foreseeable projects that would be constructed within the same vicinity could affect the similar prehistoric archaeological resources impacted by the Proposed PROJECT. Without mitigation, resources would likely be destroyed through construction

activities of these related projects, resulting in a cumulatively significant impact. As these projects are subject to federal Section 106 requirements and Imperial and San Diego County General Plan policies, similar mitigation measures would be required to reduce potential impacts to prehistoric cultural resources to less than significant through avoidance or data recovery mitigation. Therefore, the Proposed PROJECT's impact on prehistoric or historic archaeological resources would be reduced to be less than significant and would not be cumulatively considerable (Class II). Therefore, cumulative impacts on prehistoric or historic archaeological resources would be adverse but mitigated, and under CEQA any cumulative impacts on such resources would be less than significant (Class II).

Impact CUL-2: Construction of the project would cause an adverse change to sites known to contain human remains either in formal cemeteries or buried Native American remains.

All Reasonably Foreseeable Cumulative Projects (Class II)

As analyzed in Section D.7.3.3, because no known cemeteries exist and no recorded Native American or other human remains have been found within or adjacent to the project area, the potential for the inadvertent discovery of Native American or other human remains during subsurface construction is considered low. However, one site has the potential to contain human remains in the Tule Wind project area. Also, the potential exists for human remains to be found during survey of the unsurveyed portion of the Proposed PROJECT or during future surveys or construction activities. This consists of collector lines and access roads along the western side of the Proposed PROJECT. Most of the unsurveyed land lies within the Campo and Manzanita Reservations, and a portion within California State Lands Commission jurisdiction. Any adverse effect to human remains is considered a significant impact. Implementation of Mitigation Measures CUL-1A, CUL-1B, CUL-1C, and CUL-2 would prevent impacts to human remains and under CEQA would reduce impacts to be less than significant (Class II).

Reasonably foreseeable cumulative projects that would be constructed within the same vicinity as the Proposed PROJECT could affect the human remains similar to the Proposed PROJECT. Without mitigation, resources would likely be destroyed through construction activities of these related projects, resulting in a cumulatively significant impact. As these projects are subject to federal Section 106 requirements and Imperial and San Diego County General Plan policies, similar mitigation measures would be required to reduce potential impacts to these sensitive cultural resources to be less than significant through avoidance. Therefore, a significant cumulative impact is unlikely and the Proposed PROJECT's cumulative impact on human remains would be adverse but mitigated, and under CEQA would represent a less than significant cumulative impact (Class II).

Impact CUL-3: Construction of the project would have a potential to cause an adverse change to Traditional Cultural Properties.

All Reasonably Foreseeable Cumulative Projects (Class I)

As described in Section D.7.3.3, the Proposed PROJECT would have a low potential to cause an adverse effect to the characteristics of a historic property or Traditional Cultural Property (TCP) as defined by federal guidelines. Implementation of CUL-4 would reduce impacts, but in some cases given the expansive geographic nature of some of these resources, impacts to TCPs would be adverse and residually significant, and under CEQA would represent a significant and unmitigable impact (Class I).

Without mitigation, resources would likely be destroyed through construction activities of these related projects, resulting in a cumulatively significant impact. As these projects are subject to federal Section 106 requirements and Imperial and San Diego County General Plan policies, similar mitigation measures would be required to reduce potential impacts to TCPs to be less than significant through avoidance. Therefore, the impact to TCPs would be reduced to less than significant under CEQA (Class II). In some cases, avoidance of all impacts to TCPs would not necessarily be feasible given the expansive geographic nature of some of these resources, such that they would be adverse even after mitigation. Under CEQA this would represent a significant and unmitigable cumulative impact (Class I).

Impact CUL-4: Operation and long-term presence of the project would cause an adverse change to known significant historic architectural (built environment) resources.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed in Section D.7.3.3, the Proposed PROJECT would not result in direct or indirect impacts to known potentially significant historic architectural (built environment) resources. Two potentially significant historic resources—the San Diego and Arizona Railroad and Old Highway 80—are within the proposed ECO Substation Project 138 kV transmission line alignment; however, these resources would be spanned by the line and would not be physically altered during construction or operation. Therefore, there would be no direct impacts to these resources. Transmission lines presently cross these areas, so visual changes caused by replacing wooden poles with higher steel poles would be minor. No other potentially significant historic resources have been identified within the Proposed PROJECT APE, and therefore impacts to historical built resources due to long-term project operation would be less than significant under CEQA (Class III) and would not represent an adverse impact.

However, the collector lines and access roads along the western side of the project have not yet been surveyed for these historic-period resources. Most of the unsurveyed land lies within the

Campo and Manzanita Reservations, with a portion in California State Lands Commission jurisdiction. If any historic-period resources are found in the remaining surveys, the project shall accommodate the area by changing project design or shall apply mitigation measures to eliminate significant impacts. Implementation of mitigation measure CUL-1A would reduce CEQA impacts to historic-period built environment resources to less than significant (Class II).

Significant built historic resources may be impacted as a result of development of all reasonably foreseeable cumulative projects. Without mitigation, resources would likely be destroyed through construction activities of these related projects, resulting in a cumulatively significant impact. As these projects are subject to federal Section 106 requirements and Imperial and San Diego County General Plan policies, similar mitigation measures would be required to reduce potential impacts to built historic resources to be less than significant through avoidance or data recovery mitigation. Furthermore, the Proposed PROJECT would not have any significant impacts on built historic resources. Therefore, the cumulative impact would be adverse but mitigated and under CEQA would be reduced to be a less-than-significant cumulative impact (Class II).

Impact PALEO-1: Construction of the project would destroy or disturb significant paleontological resources.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.7.3.3, extensive excavations of up to 35 feet in depth for the ECO Substation would result in potentially significant impacts to the low to moderate sensitivity older alluvium and fanglomerate deposits in this area. Likewise, these deep pad excavations would also result in extensive and potentially significant impacts to the high sensitivity Table Mountain Formation.

The rest of the Proposed PROJECT consists of Class 1, low sensitivity, and Class 2, moderate sensitivity, rock formations according to the Paleontological Resource Map listed in the BLM Resource Management Plan. San Diego County has identified the Proposed PROJECT area as possessing a ~~l~~low" rating of possessing paleontological resources. As analyzed in Section D.7.3.3, project-level impacts to paleontological resources would be adverse but mitigated, and under CEQA would be reduced to be less than significant with incorporation of mitigation measures including monitoring and data recovery (Class II).

Given the wide geographic distribution of reasonably foreseeable cumulative projects, sensitive rock formations and unrecorded paleontological resources would potentially be encountered during construction of the reasonably foreseeable cumulative projects. The related projects would be subject to federal and local legal requirements designed to protect them, similar to

Mitigation Measure PALEO-1, thereby reducing the impact to such resources. Proposed PROJECT impacts, when combined with the impact from all reasonably foreseeable cumulative projects, would be adverse but mitigated, and under CEQA would not create a significant cumulative impact with incorporation of project-level mitigation measures (Class II).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 under this alternative would be largely the same as those assessed for the Proposed PROJECT. While this alternative would move the substation 700 feet to the east avoiding potentially significant prehistoric sites when compared with the proposed ECO Substation site. The overall cumulative impacts to cultural resources would remain similar to those evaluated under the Proposed PROJECT as it relates to the reasonably foreseeable cumulative projects. This alternative would continue to contribute to potential significant cultural resources impacts due to potential for related projects to disturb unknown cultural and paleontological resources during grading. Thus, cumulative impacts are anticipated to remain the same as or similar to those evaluated under the Proposed PROJECT.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 under this alternative would be largely the same as those assessed for the Proposed PROJECT. While this alternative would underground the portion of the proposed 138 kV transmission line between MP 9 and the rebuilt Boulevard Substation, the overall cumulative impacts to cultural resources would remain similar to those evaluated under the Proposed PROJECT as it relates to the reasonably foreseeable cumulative projects. In particular, the alternative would continue to contribute to potential significant cultural impacts due to the potential for related projects to disturb unknown cultural and paleontological resources during grading. The undergrounding of the transmission route would slightly increase this impact as it relates exclusively to the 138 kV transmission line. The overall project elements and components would continue to interact with the reasonably foreseeable cumulative projects, which include the proposed Campo, Manzanita, and Jordan wind energy projects and the Sunrise Powerlink 500 kV Transmission Line Project. Thus, cumulative impacts are anticipated to remain the same as or greater than those evaluated under the Proposed PROJECT and would remain adverse.

ECO Highway 80 138 kV Transmission Route Alternative

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed PROJECT. The alternative would relocate the transmission lines, which would actually result in additional potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts to cultural and paleontological resources are anticipated to remain the same as or greater than to those evaluated under the Proposed PROJECT and would remain adverse.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed PROJECT. The alternative would underground the transmission lines, which would actually result in additional potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts to cultural and paleontological resources are anticipated to remain the same as or greater than to those evaluated under the Proposed PROJECT and would remain adverse.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed PROJECT. The alternative would reduce the 138kV transmission lines but would increase overhead connectors and put the collector substation and O&M facility components closer to a greater number of residences overall. The change would not alter the cumulative impact conclusions as they relate to an increase in additional potential for ground disturbances and impacts to unknown cultural and paleontological resources when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed

PROJECT. The alternative would underground the 138kV transmission lines, resulting in an increased potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts would be anticipated to remain the same as or greater than those evaluated under the Proposed PROJECT.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed PROJECT. The alternative would continue to pose potential impacts due to ground disturbances on unknown cultural and paleontological resources. Furthermore, the change would not alter the cumulative impact conclusions as they relate to an increase in ground disturbances and impacts to unknown cultural and paleontological resources when compared with the reasonably foreseeable cumulative projects. Thus, cumulative impacts would be anticipated to remain the same as or similar to those evaluated under the Proposed PROJECT.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as or greater than those assessed for the Proposed PROJECT. The alternative would underground the 138kV transmission lines, resulting in an increased potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts would be anticipated to remain the same as or greater than those evaluated under the Proposed PROJECT.

Tule Wind Alternative 5, Reduction in Turbines

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be the same as or less than those assessed for the Proposed PROJECT. A reduction of 62 wind turbines would avoid temporary and permanent ground disturbance impacts associated with construction of the turbines, access roads, and collector lines. Therefore, while the alternative would continue to result in ground disturbances and impacts to unknown cultural and paleontological resources, the overall footprint would be reduced, thereby lessening the potential impact. Thus, cumulative impacts would be anticipated to remain the same as or less than those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

This alternative, when evaluated with the ESJ Gen-Tie components alone, would potentially increase the overall project-specific impacts to Impacts CUL-1 through CUL-4 and PALEO-1. The alternative would underground the 230kV Gen-Tie transmission line, resulting in an increased potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts would be anticipated to be greater than those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Overhead Alternative Alignment

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be less than considered for the Proposed PROJECT. The alternative would avoid significant prehistoric archaeological sites near the original ECO Substation location. Thus, cumulative impacts would be anticipated to remain the same as or less than those evaluated under the Proposed PROJECT.

ESJ Gen-Tie Underground Alternative Alignment

Under this alternative, cumulative impacts related to Impact CUL-1 through CUL-4 and PALEO-1 would be largely the same as considered for the Proposed PROJECT. The alternative would underground the 230kV gen-tie transmission line, resulting in an increased potential for ground disturbances and impacts to unknown cultural and paleontological resources. Thus, cumulative impacts would be anticipated to be greater than those evaluated under the Proposed PROJECT.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Cultural resources (including paleontological resources) impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change

overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. This could result in future improvements and ground disturbances impacting unknown cultural and paleontological resources elsewhere. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. Therefore, overall cumulative impact evaluations are anticipated to remain since, coupled with the reasonably foreseeable cumulative projects, the potential for ground disturbances impacting unknown cultural and paleontological resources, as well as related effects resulting from the proposed cumulative wind energy projects, would occur.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built, and the Tule Wind Project and ECO Substation Project would continue to be constructed. Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. This could result in future improvements and ground disturbances impacting unknown cultural and paleontological resources elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts. Cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.7 Noise and Vibration

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to noise is generally limited to areas within approximately one-quarter mile of the Proposed PROJECT routes and project components. This area is defined as the geographic extent of the cumulative noise impact area because noise impacts would generally be localized, mainly within approximately 500 feet from any noise source; however, it is possible that noise from different sources within one-quarter mile of each other could combine to create a significant impact to receptors at any point between the projects. At distances greater than one-quarter mile, construction noise would be briefly audible and steady construction noise from the Proposed PROJECT would generally dissipate into quiet background noise levels. The baseline for assessing cumulative noise impacts includes

the noise sources associated with other projects in the immediate vicinity of the Proposed PROJECT (Figure F-1 and Table F-2) and the existing and future sensitive receptors near project-related activities or noise sources.

Existing Cumulative Conditions

The character of the area along the project routes is predominantly rural. Cumulative noise levels within the Counties of Imperial and San Diego and throughout the incorporated cities include and would continue to include an expanded number of sources of man-made noise, mainly due to increased roadway traffic, air traffic, and other human activity including construction projects and an expanded geographic area of impact as urbanization spreads and population grows. Approved, pending, and reasonably foreseeable projects, listed in Table F-2 would add to the future expected noise levels throughout the geographic area. However, varying noise levels would continue to occur depending on the proximity to human activity. Rural communities or unpopulated lands would remain the quietest.

Cumulative conditions would introduce new residences or other sensitive receptors to areas near the Proposed PROJECT. Reasonably foreseeable cumulative projects listed in Table F-2 would bring an increased number of noise sensitive land uses (NSLUs) to the area.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.8.4.1.

Impact NOI-1: Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances.

All Reasonably Foreseeable Cumulative Projects (Class I)

As indicated in Section D.8.3.3, there are many sensitive receptors in the vicinity of the Proposed PROJECT site that are likely to be affected by construction noise related to development of the Proposed PROJECT. APMs ECO-NOI-1 through ECO-NOI-4, TULE-NOI-2, TULE-NOI-4, and TULE-NOI-5 through TULE-NOI-16, and ESJ-NOI-1, along with Mitigation Measures NOI-1, would be implemented as part of the Proposed PROJECT. However, even with mitigation, the construction noise from the Proposed PROJECT would result an adverse noise impact and, under CEQA, a significant and unmitigated noise impact (Class I) as a result of nighttime construction, blasting, and helicopter operations associated with the ECO Substation portion of the Proposed PROJECT; and blasting and drill rig operations, and roadway and transmission line construction associated with the Tule Wind portion of the Proposed PROJECT.

Some of the projects identified in Table F-2, including the Ketchum Ranch, Dart TPM, Grizzle TPM, and Elder TPM would bring new NSLUs closer to the Proposed PROJECT. The impact at each new receptor would be similar to that identified in this analysis for existing noise-sensitive receptors. SDG&E would implement ECO APM-NOI-2 to notify sensitive receptors. However, this cumulative impact would be significant without additional measures. Therefore, impacts of the Proposed PROJECT, when combined with impacts from reasonably foreseeable projects would be considered adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). As discussed in Section D.8.3.3, Mitigation Measures NOI-1 and NOI-2 would be implemented to reduce the Proposed PROJECT's construction noise impacts. However even with mitigation, the Proposed PROJECT's incremental impacts would persist and would still be considered adverse and a significant and unmitigable cumulative impact (Class I).

Impact NOI-2: Construction activity would temporarily cause groundborne vibration.

All Reasonably Foreseeable Cumulative Projects (Class I)

As described in Section D.8.3.3, groundborne vibration as a result of construction of the Proposed PROJECT would result in an adverse impact and, under CEQA, would represent a significant and unmitigable impact due to blasting activities (Class I).

Blasting would likely be required to construct many of the various reasonably foreseeable projects, given the similar geologic units in the vicinity of the Proposed PROJECT. It is considered unlikely, given the projects' distance from various sensitive receptors and the variability in construction schedules coupled with the distance of the larger scale projects that would have the ability to interact with vibration sources from the Proposed PROJECT site, that the combined effects of vibration generated would adversely impact sensitive receptors cumulatively. However, project-specific impacts would still remain adverse despite the incorporation of mitigation due to blasting. Therefore, it is presumed that if the other cumulative projects are constructed at the same time as the Proposed PROJECT, then there would be some cumulative interaction during blasting activities. The Proposed PROJECT would represent an adverse cumulative impact and, under CEQA, the Proposed PROJECT's contribution to a cumulative impact would be significant and unmitigable (Class I).

Impact NOI-3: Permanent noise levels would increase due to corona noise from operations of the transmission lines and noise from other project components.

All Reasonably Foreseeable Cumulative Projects (Class II)

There are many sensitive receptors in the vicinity of the Proposed PROJECT site, as described in Section D.8.3.3, that are likely to be affected by corona noise from operations of the transmission lines and noise from other project components. There are also two residences in the vicinity of

turbines that would be adversely impacted by noise from 1.5 MW turbines, as well as additional residences that may be impacted by 3.0 MW turbines. APMs along with Mitigation Measure NOI-2 and NOI-3 requiring proper conductor configuration and developing a suitable site specific noise mitigation plan would be implemented as part of the Proposed PROJECT which would ensure the adverse impact was mitigated, and under CEQA would reduce this noise impact to be less than significant with mitigation (Class II). Operational humming noise from the corona effect from a 500 kV line typically would produce noise levels up to 36 dBA when measured at the edge of the transmission line ROW during dry conditions. The three other proposed wind energy projects would also likely result in operational corona noise along their respective transmission lines, although the precise location of these lines is unknown.

The proposed residential developments (the Ketchum Ranch, Dart TPM, Grizzle TPM, and Elder TPM) identified in Table F-2 would bring new NSLUs closer to the Proposed PROJECT. Aside from the Sunrise Powerlink Transmission Project, none of the other reasonably foreseeable projects would result in corona noise effects. Impacts of the Proposed PROJECT, when combined with impacts from all reasonably foreseeable future projects would be considered adverse but mitigated, and under CEQA would not represent a cumulative significant impact (Class II). As discussed in Section D.8.3.3, APMs along with Mitigation Measure NOI-3 would be implemented as part of the Proposed PROJECT to reduce the Proposed PROJECT's noise impact to be less than significant with mitigation. Given the expected distance of other cumulative projects to NSLUs and to the Proposed PROJECT, and likely mitigation measures they would incorporate to ensure that corona noise is under the County's noise criteria, it is considered unlikely that the Proposed PROJECT's contribution to a potentially significant impact would be cumulatively considerable and any potential cumulative impacts would be adverse but mitigated, and under CEQA would not represent a significant cumulative impact (Class II).

Impact NOI-4: Routine inspection and maintenance activities would increase ambient noise levels.

All Reasonably Foreseeable Cumulative Projects (Class III)

Proposed PROJECT noise impacts resulting from routine inspection and maintenance activities would not result in an adverse impact and, under CEQA, would be a less than significant noise impact (Class III), as analyzed in Section D.8.3.3.

The proposed residential developments (the Ketchum Ranch, Dart TPM, Grizzle TPM, and Elder TPM) identified in Table F-2 would bring new NSLUs closer to the Proposed PROJECT. Helicopter and ground-level inspection and maintenance would cause noise at levels similar to transmission line construction. The impact at each new receptor would be identical to that

identified in this analysis for existing noise-sensitive receptors. Other proposed projects would contribute to episodic and short-term construction noise, although many of the cumulative projects are located 5 miles away from the Proposed PROJECT and hence unlikely to contribute cumulatively to noise effects. The contribution of impacts from the Proposed PROJECT, when combined with impacts from all reasonably foreseeable cumulative projects, would not be adverse and, under CEQA, any potential cumulative impacts are considered less than significant (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Shifting the ECO Substation site 700 feet east would not alter the overall impact conclusions. Regardless of the less-than-significant finding for impacts under Impact NOI-2, the overall Proposed PROJECT would continue to have an adverse cumulative impact that is significant and unmitigable (Class I) under CEQA when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The overall Proposed PROJECT would continue to have an adverse cumulative impact that is significant and unmitigable (Class I) under CEQA when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 would continue to have similar adverse construction noise impacts, including blasting, helicopter flights, and

nighttime construction. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission route along Highway 80 would continue to have similar adverse construction noise impacts, including blasting, helicopter flights, and nighttime construction. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as that assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would continue to have similar adverse construction noise impacts, including blasting and nighttime construction. Similar to the Proposed PROJECT, cumulative impacts would remain adverse related to vibration impacts due to blasting. Therefore, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would continue to have similar adverse construction noise impacts, including blasting and nighttime construction. Impacts may be even greater due to open trenching in order to underground the 138 kV transmission line. Similar to the Proposed PROJECT, cumulative impacts would remain adverse related to vibration impacts due to blasting. Therefore, the overall

cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would continue to have similar adverse construction noise impacts, including blasting and nighttime construction. Similar to the Proposed PROJECT, cumulative impacts would remain adverse related to vibration impacts due to blasting. Therefore, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The relocation of the O&M facility and collector substation to Rough Acres Ranch would continue to have similar adverse construction noise impacts, including blasting and nighttime construction. Impacts may be even greater due to open trenching in order to underground the 138 kV transmission line. Similar to the Proposed PROJECT, cumulative impacts would remain adverse related to vibration impacts due to blasting. Therefore, the overall cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While a reduction in turbines would reduce construction and operational noise impacts, the alternative would not substantially alter the cumulative impacts as identified under the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact NOI-2 and NOI-4 would be similar, and to NOI-1 and NOI-3 would be less than assessed for the Proposed PROJECT. While the Tule Wind and ECO Substation impacts would all be the same, the alternative component itself would not create any corona noise and would not impact any nearby receptors due to construction of the alternative component. Regardless, the Proposed PROJECT would continue to have adverse cumulative impacts related to construction noise and vibration, as well as adverse, but mitigated cumulative impacts due to corona noise. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact NOI-1 through NOI-4 would be largely the same as those assessed for the ESJ Gen-Tie component of the Proposed PROJECT. The Proposed PROJECT would continue to have adverse cumulative impacts related to construction noise and vibration, as well as adverse, but mitigated cumulative impacts due to corona noise. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact NOI-2 and NOI-4 would be similar, and to NOI-1 and NOI-3 would be less than assessed for the Proposed PROJECT. While the Tule Wind and ECO Substation impacts would all be the same, the alternative component itself would not create any corona noise and would not impact any nearby receptors due to construction of the alternative component. Regardless, the Proposed PROJECT would continue to have adverse cumulative impacts related to construction noise and vibration, as well as adverse, but mitigated cumulative impacts due to corona noise. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Noise impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce some construction and vibration noise impacts by not locating the wind towers in the project areas, but overall cumulative impacts would remain due to the other project components. Cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed. Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.8 Transportation and Traffic

Geographic Extent

After construction, the Proposed PROJECT would have little transportation or traffic associated with it other than for routine inspection and maintenance activities and operations. Therefore, the only opportunity for cumulatively significant transportation and/or traffic impacts to occur would be during the approximate two-year construction phase of the project. Construction-related traffic impacts would mostly result from lane closures that would occur within the immediate

vicinity of the Proposed PROJECT. Therefore, the geographic extent for the analysis of cumulative traffic and transportation impacts is defined as the area up to three miles from the Proposed PROJECT. This scope is appropriate because traffic impacts caused by the Proposed PROJECT would be limited to local streets and would be of short duration and based on the project impact analysis presented in Section D.9, are unlikely to cause substantial delays or traffic congestion.

Existing Cumulative Conditions

The character of the area along the project route is predominantly rural. As discussed in greater detail in Section D.9.1.1, project components would be located in close proximity to regional and local transportation facilities including I-8, State Route (SR) 94, Old Highway 80, the San Diego and Arizona Eastern Railroad, county and private airstrips, and one regional bus route. In addition, numerous local roads and unnamed dirt roads are spread throughout the area. Although SANDAG and Imperial Valley Association of Governments and other transportation planning and management entities are developing additional roadways, roadway widening and transit projects, it is anticipated that the roadways in the project area would continue to experience increased levels of traffic congestion as additional future land use developments are approved and population growth occurs.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.9.4.3.3 and/or create a cumulatively considerable impact to transportation and traffic due to the increase in impacts caused by the Proposed PROJECT.

Impact TRA-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow.

All Reasonably Foreseeable Cumulative Projects (Class I)

As indicated in Section D.9.3.3, a maximum of approximately 1,600 truck trips per day would be required to construct the Proposed PROJECT. While truck trips associated with the proposed Campo, Manzanita, and Jordan wind energy components of the Proposed PROJECT are currently unknown, they would likely use similar construction routes particularly along the I-8, Old Highway 80, and Ribbonwood Road. Impacts would be significant, but with implementation of Mitigation Measure TRA-1 requiring the preparation and implementation of a traffic control plan, impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

Reasonably foreseeable projects would likely require temporary lane closures along I-8, Old Highway 80, Ribbonwood and McCain Valley roads, and SR-94, but it is currently unknown to what extent such closures would be likely or necessary or if they would occur at the same time as lane closures associated with the Proposed PROJECT. While it is unlikely many of the reasonably foreseeable cumulative projects would be constructed at the same time, if lane closures of reasonably foreseeable projects were required for extended durations, and occurred at the same time as the Proposed PROJECT, traffic flow would be disrupted. While closures associated with the Proposed PROJECT and the Campo, Manzanita, and Jordan wind energy projects would be temporary and mitigated to be less than significant, the cumulative effect resulting from development of large reasonably foreseeable projects at the same time as the Proposed PROJECT such as Ketchum and Star Ranch, Sunrise Powerlink Transmission Project, and the tentative map projects in the near vicinity could create a cumulatively significant impact. Therefore, based on such a potential, despite mitigation incorporated, the addition of 1,600 truck trips to this potential impact may be deemed to represent an adverse cumulative impact and, under CEQA, would be a significant and unmitigable cumulative impact (Class I).

Impact TRA-2: Construction activities would restrict the movements of emergency vehicles (police cars, fire trucks, ambulances, and paramedic units), and there are no reasonable alternative access routes available.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in detail in Section D.9.3.3, the Proposed PROJECT would indirectly and temporarily impact emergency access during construction activities. With implementation of a traffic control plan as described in Mitigation Measure TRA-1, construction would not restrict the movements of emergency vehicles, and impacts would be adverse but mitigated, and under CEQA would be mitigated to a less-than-significant impact (Class II).

Many of the reasonably foreseeable cumulative projects would use similar construction routes as the Proposed PROJECT, especially I-8, Old Highway 80, and Ribbonwood and McCain Valley roads. It is unknown if these projects would be constructed at the same time as the Proposed PROJECT. If these projects required lane closures in the same vicinity of and at the same time as the Proposed PROJECT impacts to emergency service providers would be significant. However, the Proposed PROJECT would include implementation of a traffic control plan as described in Mitigation Measure TRA-1, which requires construction activity to be coordinated in advance with emergency service providers to avoid restricting movements of emergency vehicles.

While it was determined under Impact TRA-1 that the addition of 1,600 truck trips during construction could be cumulatively significant, that determination was made on the basis of the impact temporarily disrupting traffic flow overall and not on a determination based specifically

on creating a significant impact to emergency vehicles. The mitigation requiring the coordination in advance with emergency service providers would be deemed to reduce the Proposed PROJECT's contribution to any potentially significant impacts on emergency vehicles during construction which would represent an adverse but mitigated cumulative impact. Under CEQA, with mitigation, cumulative impacts would remain less than significant (Class II).

Impact TRA-3: Construction activities would result in unstable flow, or fluctuations in volumes of traffic that temporarily restrict flow; or an unacceptable reduction in performance of the circulation system, as defined by an applicable plan (including a congestion management program), ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

All Reasonably Foreseeable Cumulative Projects (Class I)

As discussed, the maximum of approximately 1,600 truck trips per day would be required for construction of the Proposed PROJECT. This could create a substantial, short-term increase in traffic that would result in unstable flow or an unacceptable reduction in performance of the circulation system. Implementation of Mitigation Measure TRA-1 requiring a detailed traffic control plan would ensure the impacts would be adverse but mitigated, and under CEQA would reduce the project-level impacts to be less than significant (Class II).

As discussed under Impact TRA-1 above, reasonably foreseeable projects would likely require temporary lane closures and traffic flow reductions along I-8, Old Highway 80, Ribbonwood and McCain Valley roads, and SR-94 if such projects such as Ketchum and Star Ranch, Sunrise Powerlink Transmission Project, and the tentative map projects in the near vicinity were constructed at the same or similar time as the Proposed PROJECT. While Mitigation Measure TRA-1 would minimize the Proposed PROJECT's contribution to this impact, there would still be the potential to add 1,600 truck trips due to the Proposed PROJECT. Thus, the potential cumulative traffic effect resulting from construction of all reasonably foreseeable projects, including the tentative map projects, would result in an adverse impact and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I).

Impact TRA-4: The project would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

All Reasonably Foreseeable Cumulative Projects (Class III)

As described in detail in Section D.9.3.3, the Proposed PROJECT, including the Campo, Manzanita, and Jordan wind energy projects would include oversized construction trucks in order to haul project equipment during construction activities. Access roads would be designed to appropriate sizing to allow safe passage of construction vehicles, including oversized trucks.

Sharp curves or dangerous intersections are not proposed. The Proposed PROJECT would be expected to obtain transportation permits and encroachment permits from Caltrans. In addition to encroachment permits, the County Department of Public Works would also require the project to obtain County construction and traffic control permits. These permits would ensure the safe travel of vehicles within construction work zones. Therefore, it was determined the impacts would not be adverse and, under CEQA, would be less than significant (Class III).

The reasonably foreseeable projects would likely require similar controls and permit requirements during construction depending on construction equipment needs. The reasonably foreseeable cumulative projects in the area would need to control for safety and design hazards for road construction as well as compatibility risks that may be encountered during construction or operations. Given the low risk level of such impact attributed to the Proposed PROJECT, it is not anticipated that any adverse cumulative impacts will result. Under CEQA, impacts would be less than significant (Class III).

Impact TRA-5: Construction would substantially disrupt bus or rail transit service, and there would be no suitable alternative routes or stops; or it would impede pedestrian movements or bike trails, and there are no suitable alternative pedestrian/bicycle access routes or accommodation through construction zones; or it would conflict with planned transportation projects in the project area.

All Reasonably Foreseeable Cumulative Projects (Class II)

As analyzed in Section D.9.3.3, with incorporation of Mitigation Measure TRA-1, the Proposed PROJECT would not substantially disrupt bus or rail transit service, or pedestrian movements or bike trails, and would not conflict with planned transportation projects in the project area. Therefore, project-level impacts would be adverse but mitigated, and under CEQA would be mitigated to less than significant (Class II).

Due to the high number of reasonably foreseeable cumulative projects and the relatively large scale of some of these developments, the other reasonably foreseeable projects would have a higher potential to restrict transit service routes, or impact bike trails and pedestrian movements. However, many of these larger projects would not interact with the Proposed PROJECT in close enough vicinity to cause a cumulative impact. Moreover, given the rural nature and small number of transit operations in the cumulative study area, the incorporation of Mitigation Measure TRA-1 which would be implemented as part of the Proposed PROJECT, and short-term duration of lane closures associated with the Proposed PROJECT, the Proposed PROJECT's contribution to a potential significant impact would be adverse but mitigated, and under CEQA would be mitigated to less than significant (Class II).

Pedestrian and bicycle circulation could be affected by construction activities if pedestrians and bicyclists were unable to pass through the construction zone or if established pedestrian and bike routes were blocked. If concurrent construction projects restricted pedestrian and/or bicycle movement within the immediate vicinity of such restrictions associated with the Proposed PROJECT, impacts would be significant. However, implementation of Mitigation Measure TRA-1 would ensure any cumulative impacts of the Proposed PROJECT are adverse but mitigated, and under CEQA would remain less than significant (Class II).

The Proposed PROJECT and any other cumulative project that would interface with a roadway or other transportation facility would be required to obtain an encroachment permit or other such agreement from the applicable jurisdictional agency, such as Caltrans. Complying with local permits and agreements would ensure appropriate coordination between project applicants and the affected agencies so that conflicts would be avoided or minimized. Therefore, impacts of the Proposed PROJECT would not be adverse and, under CEQA, would have a less than significant contribution to a cumulative impact (Class III).

Impact TRA-6: Construction or staging activities would increase the demand for and/or reduce the supply of parking spaces, and there would be no provisions for accommodating the resulting parking deficiencies.

All Reasonably Foreseeable Cumulative Projects (Class III)

As analyzed in Section D.9.3.3, construction of the Proposed PROJECT would not substantially increase the demand for and/or reduce the supply of parking spaces, and project-level impacts would not be adverse and, under CEQA, would be less than significant (Class III).

The Proposed PROJECT would feature adequate construction parking and would not eliminate existing parking. While the reasonably foreseeable cumulative projects would increase the potential to impact parking, particularly for the larger scale projects such as the Golden Acorn and La Posta Casinos, or the Ketchum Ranch and Star Ranch residential projects, the Proposed PROJECT would not significantly combine with the impacts of these reasonably foreseeable cumulative projects in regards to parking impacts and cumulative impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Impact TRA-7: A noticeable increase in deterioration of roadway surfaces used for the construction zone would occur as a result of heavy truck or construction equipment movements.

All Reasonably Foreseeable Cumulative Projects (Class II)

Section D.9.3.3 indicates that the Proposed PROJECT could result in a noticeable increase in deterioration of roadway surfaces used for construction zones. During construction, unexpected

damage to roadways by construction vehicles and equipment (overhead line trucks, crew trucks, concrete trucks, etc.) along the project site could occur by vehicles entering and leaving roadways and construction of the project. Some construction vehicles are oversized trucks with up to 38 wheels and would require accompanying pilot trucks. These large construction vehicles have the potential to damage roadways over the course of project construction. This would be a significant impact, and Mitigation Measure TRA-2 would ensure that the roads would be repaired and properly restored to the original condition. Implementation of this mitigation would ensure that damaged roadways are restored to previous conditions and/or improved conditions and impacts would be adverse but mitigated, and under CEQA would be reduced to less than significant (Class II).

Cumulatively, considering the reasonable foreseeable projects, these projects would likely also require heavy equipment for construction and would use at least some of the same roads utilized by the Proposed PROJECT; as such, construction vehicles could result in similar damage to roads. If left unmitigated, road damage caused by the Proposed PROJECT, when combined with road damage from all reasonably foreseeable cumulative projects, would combine to result in a significant cumulative impact; however, appropriate mitigation would render the Proposed PROJECT's contribution to be less than cumulatively considerable because it would require repair of roads damaged by Proposed PROJECT construction activities. Therefore, cumulative impacts would be adverse but mitigated, and under CEQA would represent a less-than-significant impact (Class II).

Impact TRA-8: A project structure, crane, or wires would be positioned such that it could adversely affect aviation activities, or the project proposes a land use that conflicts with the applicable Airport Land Use Compatibility Plan.

All Reasonably Foreseeable Cumulative Projects (Class II)

The Proposed PROJECT would not propose a land use that conflicts with the applicable Airport Land Use Compatibility Plan (ALUCP) (No Impact). Furthermore, according to the Jacumba ALUCP, structures such as cell phone towers, wind turbines and transmission lines are compatible land uses (i.e., they would not interfere with aircraft) when located at least 1,500 feet beyond either end of the runway (San Diego Airport Land Use Commission 2006). Therefore, the project would not interfere with aircraft activity. Regardless, the Proposed PROJECT, as disclosed in Section D.9.3.3, could significantly affect aviation activities particularly to firefighting, crops dusting, or border patrol activities; implementation of Mitigation Measure TRA-3 would ensure that pilots and border patrol staff would be notified of the project location and components, and pilots would be alerted to significant dangers that would exist as a result of development of the project. This mitigation would ensure impacts are adverse but mitigated, and under CEQA would reduce impacts to be less than significant (Class II).

Similar to the Proposed PROJECT, both the Campo, Manzanita, and Jordan wind energy project components as well as the reasonably foreseeable cumulative projects may use cranes and other construction equipment that could adversely affect aviation activities within the impacted area. It is anticipated that each would be required to coordinate with applicable agencies and entities to ensure that significant impacts are avoided. Given the Proposed PROJECT's incorporation of mitigation to minimize potential conflicts, and the likelihood that other cumulative projects would need to mitigate for similar impacts, a significant cumulative impact is not anticipated. Identified cumulative impacts would be adverse; therefore, mitigation has been provided that would mitigate this impact. Under CEQA, cumulative impacts would be significant but can be mitigated to a level that is considered less than significant (Class II).

The other cumulative projects are mostly located outside the noise and safety zones of Jacumba Airport. Projects located within the noise and safety zones of the Jacumba Airport ALUCP would be required to obtain a consistency determination with the San Diego County Regional Airport Authority on a case-by-case basis. Because the Proposed PROJECT would not conflict with the ALUCP, it would not contribute to any cumulatively considerably conflicts, and impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects due to the need for upwards of 1,600 truck trips during construction. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. As discussed previously, Impacts TRA-1 and TRA-3 were found to be

cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects due to the need for upwards of 1,600 truck trips during construction. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects due to the need for upwards of 1,600 truck trips during construction. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative, including the change in location of part of the project to Rough Acres Ranch, would not alter any of these cumulative impact determinations.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative, including the change in location of part of the project to Rough Acres Ranch, would not alter any of these cumulative impact determinations.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects due to the need for upwards of 1,600 truck trips during construction. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative, including the change in location of part of the project to Rough Acres Ranch, would not alter any of these cumulative impact determinations.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative, including the change in location of part of the project to Rough Acres Ranch, would not alter any of these cumulative impact determinations.

Tule Wind Alternative 5, Reduction in Turbines

Despite the reduction of these 62 turbines, cumulative impacts related to Impacts TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the

reasonably foreseeable cumulative projects. While there would be a reduction in the estimated 1,600 truck trips needed during construction due to the reduction of turbines, this reduction would not be substantial enough to alter the cumulative impact determinations. The other two components (ECO Substation and the ESJ Gen-Tie components) would remain, along with the Campo, Manzanita, and Jordan wind energy projects, which would continue to have similar impacts as evaluated under the Proposed PROJECT. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. While this component itself under this alternative was determined to not be adverse, the Proposed PROJECT would continue to have the other two components (ECO Substation and Tule Wind components), which would continue to have similar impacts as evaluated under the Proposed PROJECT. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this component itself under this alternative was determined to not be adverse, the Proposed PROJECT would continue to have the other two components (ECO Substation and Tule Wind components), which would continue to have similar impacts as evaluated under the Proposed PROJECT. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative

impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact TRA-1 through TRA-8 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, under this alternative the undergrounding of the transmission lines would increase the level of construction, which would increase the number of truck trips likely beyond the estimated 1,600-truck-trip level. While this component itself under this alternative was determined to not be adverse, the Proposed PROJECT would continue to have the other two components (ECO Substation and Tule Wind components), which would continue to have similar impacts as evaluated under the Proposed PROJECT. As discussed previously, Impacts TRA-1 and TRA-3 were found to be cumulatively adverse and under CEQA represented a significant and unmitigable cumulative impact (Class I) when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan wind energy projects would not be built and the existing conditions would remain at these sites. Traffic impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. This alternative would remove a significant number of truck trips needed during construction of the Proposed PROJECT. While this reduction would certainly lessen the overall impacts related to construction impacts caused by the number of trucks on the impacted roadways, since the other components would remain, the cumulative impacts, when considered with the reasonably foreseeable cumulative impacts, are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.9 Public Health and Safety

Geographic Extent

The cumulative study area for public health and safety would primarily focus on the immediate vicinity of the Proposed PROJECT site. Similar to other potential impacts, such as those related to geology and soils, risks related to public health and safety are typically localized in nature since they tend to be related to on-site existing hazardous conditions and/or hazards caused by the Proposed PROJECT's construction or operation. While the Proposed PROJECT may increase additional development of the surrounding area, particularly for additional wind energy projects, it would not result in a cumulatively considerable contribution to any impact related to public health and safety.

Existing Cumulative Conditions

The character of the area along the project route is predominantly rural. The Proposed PROJECT traverses land utilized for a variety of uses, including: open space, recreational, general rural uses (large lot ranches, single-family homes, and small-scale agricultural operations), rural commercial, and limited industrial uses. Many industrial sites, historic and current, are known to have soil or groundwater contamination by hazardous substances. Other hazardous materials sources include leaking underground storage tanks (LUSTs) in commercial, rural, and

agricultural areas, surface runoff from contaminated sites and agricultural fields treated with pesticides and herbicides, and migration of contaminated groundwater plumes from areas of past and current commercial or industrial use.

As part of various database and records searches performed for the Proposed PROJECT components, a number of potentially contaminated soil or groundwater sites were identified within the study area. Many of the areas of concerns in the area are LUST sites, primarily associated with gas/oil facilities, such as gasoline station and auto repair facilities. As a result, the soils and groundwater in the vicinity of these areas potentially contain varying amounts and types of petroleum hydrocarbons (e.g., gasoline and diesel) and fuel additives. The same uses and potential for contamination correspond in similarity to much of the cumulative conditions throughout the area. Again, given the nature of public health and safety impacts, the geographic scope is limited to a large degree to the conditions as described for the Proposed PROJECT under Section D.10, Public Health and Safety.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would result in significance criteria presented in Section D.10.3.1 and/or create a cumulatively considerable impact to public health and safety due to the increase in impacts caused by the Proposed PROJECT as presented in Section D.10.3.3.

Impact HAZ-1: Impacts to soil or groundwater could result from an accidental spill or release of hazardous materials due to improper handling or storage of hazardous materials during construction activities.

All Reasonably Foreseeable Cumulative Projects (Class II)

As indicated in Section D.10.3.3, during construction, the Proposed PROJECT would involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. These materials would be used and stored in designated construction staging areas within the Proposed PROJECT site boundaries. Although the materials alone, and use of these materials for their intended purpose, would not pose a significant risk to the public or environment, accidental spills or unauthorized releases of hazardous materials during construction could potentially result in soil contamination and the exposure of workers and/or the public to such contamination.

Hazardous materials contained in solid and industrial wastes during construction may also pose a risk to human health and the environment. While such impacts would be potentially adverse and significant, implementation of Mitigation Measure HAZ-1a (Hazardous Materials Management Plan), Mitigation Measure HAZ-1b (Health and Safety Program), and Mitigation

Measure HAZ-1c (Waste Management Plan) would reduce the likelihood of improper handling, storage, or release of hazardous substances, and would mitigate potential hazards to the public or the environment resulting from foreseeable upset or accidental conditions related to hazardous materials. In addition, Mitigation Measure HAZ-1d and APMs ECO-HAZ-2 (Phase II ESA for existing Boulevard Substation parcel after demolition) and ECO-HAZ-3 (testing of existing equipment at Boulevard Substation) related to demolition of the existing Boulevard Substation and surrounding buildings would mitigate potential health hazards from encountering hazardous substances during demolition and construction activities. Identified impacts would be adverse; therefore, mitigation has been provided that would mitigate this impact. Under CEQA, impacts would be significant but can be mitigated to a level that is considered less than significant (Class II).

The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential risk associated with accidental spills or hazardous material releases during the course of construction and apply all feasible mitigation to lessen such potential impacts. Implementation of mitigation measures similar to Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, HAZ-1d, and APMs ECO-HAZ-2 and ECO-HAZ-3, would reduce potential hazards to the public or the environment resulting from foreseeable upset or accidental conditions related to hazardous materials to be less than significant. Therefore, the Proposed PROJECT would create an adverse but mitigated cumulative impact as a result from an accidental spill or release of hazardous materials due to improper handling or storage of hazardous materials during construction activities and impacts under CEQA would be mitigated to be less than significant (Class II).

Impact HAZ-2: Residual pesticides and/or herbicides could be encountered during grading or excavation.

All Reasonably Foreseeable Cumulative Projects (Class II)

The Proposed PROJECT traverses land utilized for a variety of uses, including: open space, recreational, general rural uses (large lot ranches, single-family homes, and small-scale agricultural operations), rural commercial, and limited industrial uses. Areas currently or historically used for farming or other agricultural uses may potentially contain residual levels of pesticides and/or herbicides in the surface soil, which may be disturbed during the construction phases of the Proposed PROJECT. This would result in a significant impact to the health of construction workers and the public who may be exposed to pesticide or herbicide contaminated soils and/or groundwater. By implementing Mitigation Measure HAZ-2a and HAZ-2b potential hazards to the public or the environment resulting from residual pesticides and/or herbicides encountered during grading activities, impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

With mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given all the reasonably foreseeable cumulative projects, the Proposed PROJECT would not contribute to any potentially significant impacts caused by any residual pesticides and/or herbicides that could be encountered during grading or excavation. By implementing Mitigation Measures HAZ-2a and HAZ-2b potential hazards to the public or the environment resulting from residual pesticides and/or herbicides encountered during grading activities would be mitigated to a less-than-significant level for the Proposed PROJECT under CEQA. Therefore, the Proposed PROJECT's contribution to a potentially significant impact would represent an adverse but mitigated cumulative impact, and under CEQA would be mitigated to be less than significant (Class II).

Impact HAZ-3: Previously unknown soil and/or groundwater contamination could be encountered during grading or excavation.

All Reasonably Foreseeable Cumulative Projects (Class II)

According to the analysis under D.10.3.3, two LUSTs and several informal shooting ranges have been identified in the area. Construction of the Proposed PROJECT is not anticipated to impact either LUST site or any site with potentially affected soils and it is unlikely that hazardous materials would be encountered during excavation, with the exception of lead that may exist on informal shooting ranges. Nonetheless, there is the potential for contaminants from sites identified within the standard records review and site reconnaissance to have migrated to the transmission corridor. Furthermore, pesticides, herbicides, and contaminants from the surrounding properties identified as data gaps may be present in soil and/or groundwater along the transmission corridor which may be disturbed during construction activities. This potential for contamination may adversely affect the health of construction workers and the public who may be exposed to contaminated soils and/or groundwater. Therefore, with the implementation of Mitigation Measure HAZ-2a, HAZ-2b, and HAZ-3 requiring soil testing for residual pesticides/herbicides, a contingency plan if suspected contamination is identified, and soil testing to determine lead contamination near informal shooting ranges, any potential direct or indirect impacts would be mitigated and would represent an adverse but mitigated impact. Under CEQA, impacts would be reduced to less than significant (Class II).

Given the localized nature of the discovery during grading or excavation of any previously unknown soil and/or groundwater contamination, any cumulative impacts for this potential impact are remote. Additionally, most reasonably foreseeable cumulative projects that would be close enough to the Proposed PROJECT to combine with such potential impacts related to hazardous materials and public safety are small in nature and typically encompass subdividing existing larger lots into individual residential lots such as the Elder TPM 20981 (Map ID 19) or Grizzle TPM 20719 (Map ID 29); none of which have the potential to create a cumulative impact

related to unknown soil and/or groundwater contamination that could be encountered during grading or excavation.

Ketchum Ranch TM 5524 (Map ID 18), is a large-scale development that would have a heightened potential for such discoveries given its greater intensity of development. Nonetheless, even if a significant impact did exist from the Ketchum Ranch project, sufficient mitigation would be required for this project such that the Proposed PROJECT would result in an adverse but mitigated cumulative impact. Under CEQA, impacts would be mitigated to a less-than-significant level (Class II).

Impact HAZ-4: Potential safety hazards could adversely affect construction workers or the general public accessing the project site during construction, operation, or decommissioning.

All Reasonably Foreseeable Cumulative Projects (Class II)

Under Section D.10.3.3, the Proposed PROJECT evaluates any potential adverse risks due to access of the site during construction, operation, or site decommissioning. In addition to project design features described in Section D.10.3.3, implementation of Mitigation Measures HAZ-1b, HAZ-4a and HAZ-4b (requiring the Proposed PROJECT to conduct a safety assessment for each Proposed PROJECT site, develop and implement a Health and Safety Program, and prepare a pre-blast survey and blasting plan) would reduce any potential safety hazards to workers or the public during construction and operation to be less than significant under CEQA (Class II). Identified impacts would be adverse; therefore, mitigation has been provided that would mitigate this impact.

In order to address potential safety hazards to construction workers and the general public unique to the Proposed PROJECT site, the project has incorporated mitigation to reduce potential impacts to a less -than -significant level. Therefore, the Proposed PROEJCT would not create or contribute to a significant cumulative impact regarding safety concerns during construction, operation, or decommissioning of the site and any impacts would remain less than significant with mitigation under CEQA (Class II).

Impact HAZ-5: Impacts to soil or groundwater contamination could result from accidental spill or release of hazardous materials during operations and maintenance.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed under Section D.10.3.3, during operation and maintenance of the Proposed PROJECT, similar to the chemicals and hazardous materials used during construction, hazardous materials (as defined under federal and state environmental laws) would be used and stored. However, while the amount stored on site once the project is operational would be less than the

amount used and stored during construction, use and storage of hazardous materials during operation and maintenance of the Proposed PROJECT may result in potential health and safety hazards to workers, residents, and the environment adjacent to the Proposed PROJECT components. The Proposed PROJECT would incorporate Mitigation Measure HAZ-5a and HAZ 5b which require developing and implementing a site-specific Spill Prevention Control and Countermeasure (SPCC) Plan and Hazardous Materials Business Plan (HMBP). The implementation of this mitigation would ensure potential hazards to the public or the environment resulting from accidental spill or release of hazardous materials during operation and maintenance of the Proposed PROJECT would represent an adverse but mitigated impact, and under CEQA would be mitigated to be less than significant (Class II).

The reasonably foreseeable cumulative projects would likely use similar chemicals and hazardous materials during operation of their respective projects and would be faced with the similar challenges related to such hazardous materials and the opportunity for accidental spills and exposure. However, comparable to the Proposed PROJECT, these types of issues can and would likely be mitigated to be less than significant and would not represent an adverse impact. With mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given all the reasonably foreseeable cumulative projects, the Proposed PROJECT would not contribute to any potentially significant impacts caused by an accidental spill or release of hazardous materials due to improper handling or storage of hazardous materials during operations or maintenance activities. Proper mitigation is in place to ensure any direct, indirect, or cumulative impacts would remain less than significant under CEQA (Class II). Cumulative impacts related to accidental spills or release of hazardous materials during operations and maintenance would represent an adverse but mitigated cumulative impact.

Impact HAZ-6: Herbicides used for vegetation control around towers and other project facilities could result in adverse health effects to the public or maintenance workers.

All Reasonably Foreseeable Cumulative Projects (Class III)

This discussion under Section D.10.3.3 determines herbicide application during operation and maintenance of the Proposed PROJECT may potentially impact personnel applying the chemical, maintenance workers in the ROW, or members of the public that enter the affected ROW areas if the soil application was recent and excessive dust was inhaled. However, the analysis also determined that herbicide related impacts would be minimized by adhering to manufacturer's recommendations for mixing and applying the chemicals, and for use of protective clothing and respiratory protection. The analysis determined that herbicide use for vegetation control would not represent an adverse impact and would result in less-than-significant impacts to health under CEQA (Class III).

While there is the potential for the herbicide to mix with dust in the soil and become airborne, the occurrence of such would continue to be localized aside from potential projects in the very near vicinity. Considering all reasonably foreseeable cumulative projects and the fact that the use of such herbicides during operation and maintenance is a potentially localized impact, any cumulative impacts related to such an impact is not anticipated. Mitigation is in place to ensure that the Proposed PROJECT would not have a significant impact on the environment due to herbicide use and would not interact with other projects to create a cumulatively significant impact under CEQA (Class III). No adverse cumulative impacts would result.

Impact HAZ-7: Undue risks could result due to the breaking of a rotor blade, also called ~~-b~~lade throw".

All Reasonably Foreseeable Cumulative Projects (Class II)

Blade throw is also a uniquely localized potential impact and would only have the potential to result in a cumulative impact when combined with wind projects that are located in close proximity to the Proposed PROJECT site. None of the other reasonably foreseeable cumulative projects would have the unique potential impacts related to blade throw, and therefore, would not increase the cumulative impacts. Cumulative impacts would be adverse but mitigated, and under CEQA impacts would be mitigated to be less than significant (Class II).

Impact HAZ-8: Undue risks could result due to the potential collapse of a wind turbine.

All Reasonably Foreseeable Cumulative Projects (Class II)

Similar to the discussion under Impact HAZ-7 regarding blade throw, tower collapse is a uniquely localized potential impact and would only have the potential for a cumulative impact for projects that are immediately close in proximity. None of the other reasonably foreseeable cumulative projects have the unique potential impacts related to wind turbine collapse and therefore, would not increase the cumulative impacts. Cumulative impacts would be adverse but mitigated, and under CEQA impacts would be mitigated to be less than significant (Class II).

Impact PS-1: Operation could result in electromagnetic interference (EMI), including interference with radar, radio, television, and electrical equipment.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described in Section D.10.9.2, the Proposed PROJECT may result in high frequency radio and television interference impacts, depending upon several factors including the strength of broadcast signals. Interference is anticipated to be very localized if it occurs. Individual sources of adverse radio/television interference impacts can be located and corrected on the power lines.

Conversely, magnetic field interference with electronic equipment such as computer monitors can be corrected through the use of software, shielding, or changes at the monitor location.

The proposed wind turbines may impact communication signals in two ways: (1) the wind turbines and their associated transmission lines may generate electro-magnetic noise, which can interfere with telecommunications services such as radar, microwave, television, and radio transmissions; or, more commonly, (2) the wind turbines would create physical obstructions that distort communications signals. The types of communications systems that may be affected include microwave systems, off-air television broadcast signals, land mobile radio operations, and mobile telephone services. According to the internet-based Preliminary Screening Tool developed by the Federal Aviation Administration (FAA) and Department of Defense (DOD), the Tule Wind Project area is identified as having a high likelihood to impact Air Defense and Homeland Security radars and minimal to no impact to Weather Surveillance Radard-1988 Doppler radar weather operation. Potential interference with public safety communication systems (e.g., radio traffic related to emergency activities) is not anticipated to occur and there are no potential conflicts between the paths of non-government microwave telecom systems and the proposed turbines.

Through incorporation of Mitigation Measure PS-1a, the Proposed PROJECT would minimize EMI, comply with Federal Communications Commission (FCC) regulations, conduct signal strength studies when proposed locations have the potential to impact transmissions, and avoid potential interference with public safety communication systems. Due to the potential for the wind turbines to impact Air Defense and Homeland Security radars, an aeronautical study would be prepared as provided for in Mitigation Measure PS-1d. Additional measures as provided in Mitigation Measures PS-1b and PS-1c to limit conductor surface potential and document complaints of broadcast interference. Implementation of Mitigation Measures PS-1a, PS-1b, PS-1c, and PS-1d would ensure impacts are adverse but mitigated, and under CEQA would be reduced to be less than significant (Class II).

The extent to which all reasonably foreseeable cumulative projects and the Proposed PROJECT would result in significant cumulative impacts depends on the proximity of wind turbines and relationship of the other projects to any resources of the DOD and Department of Homeland Security. Other projects such as large-scale residential subdivisions, expansion of a tribal casino/hotel, and commercial/industrial developments within the cumulative study area may result in EMI, including interference with radar, radio, television, and electrical equipment. Similar mitigation would likely be necessary for potential cumulative projects as for the Proposed PROJECT to reduce potential impacts to be less than significant. Mitigation would include measures to minimize EMI, comply with FCC regulations, conduct signal strength studies when proposed locations have the potential to impact transmissions, and avoid potential

interference with public safety communication systems. When combined with all reasonably foreseeable cumulative projects, the Proposed PROJECT'S contribution to a significant impact related to EMI would be adverse but mitigated, and under CEQA would represent a less-than-significant cumulative impact with mitigation incorporated (Class II).

Impact PS-2: Operation could result in induced currents or shock hazards in joint use corridors.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed in Section D.10.9.2, induced currents and voltages on conducting objects near transmission lines represent a potentially significant impact; however, these impacts do not pose a threat in the environment if the conducting objects are properly grounded. Objects that have the potential for induced voltages (such as fences, conductors, pipelines, and transmission lines) proposed as part of other projects would need to incorporate proper grounding procedures and measures prior to energizing the line(s). Due to the Proposed PROJECT'S minimal contribution to this potential impact and the straightforward implementation of grounding measures, the Proposed PROJECT would not represent a cumulatively considerable impact to induced currents. Cumulative impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

Impact PS-3: Electric fields could affect cardiac pacemakers.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed in Section D.10.9.2, the electric fields associated with the Proposed PROJECT'S transmission lines may be of sufficient magnitude to impact operation of a few older model pacemakers, resulting in an asynchronous pacing of the unit. Cardiovascular specialists do not consider prolonged asynchronous pacing to be a problem; periods of operation in this mode are commonly induced by cardiologists to check pacemaker performance. Therefore, while the transmission line's electric field may impact operation of some older model pacemakers, the result of the interference is of short duration and is considered to not be adverse and, under CEQA, to be less than significant (Class III).

While the electric fields associated with the Proposed PROJECT may be of sufficient magnitude to impact the operation of pacemakers, it would not combine with the impacts of other projects because the impact would only occur in the immediate area of the Proposed PROJECT. The addition of other new lines (e.g., Sunrise Powerlink, transmission lines of proposed wind. projects) would not change the level of effect at any specific location. Similarly, impacts associated with EMF exposure from transmission lines would only occur in the immediate vicinity of the line. The Proposed PROJECT would not represent a cumulatively considerable

impact to cardiac pacemakers. Cumulative impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Impact PS-4: Project structures could be affected by wind or lightning hazards.

All Reasonably Foreseeable Cumulative Projects (Class III)

Although considered rare, lightning strikes do occur to wind turbines due to their height and metal composition. Industry standards require wind turbines to withstand lightning strikes. Turbines are grounded and shielded to protect against lightening. Rotor blades are equipped with a strike sensor mounted in the blade tip. Additionally, a solid copper conductor from the blade tip to root provides a grounding path that leads to the grounding system at the base of the tower foundation. Although lightning is an unpredictable force of nature, the potential for lightning strikes has necessitated that lightning protection is engineered in the equipment. Furthermore, the metal construction of the turbines would not be susceptible to catching on fire and spreading to the vegetation below. Further discussions regarding potential cumulative impacts related to fire hazards are discussed in Section F.3.14 of this EIR/EIS.

The Proposed PROJECT would not result in significant impacts related to hazards precipitated by high winds or fires initiated by arcing of downed conductors or lightning. The Proposed PROJECT would be designed in accordance with safety requirements such as the CPUC's General Order 95 and other applicable requirements. Other projects proposed within the cumulative study area would also incorporate safety requirements to reduce potential hazards associated with high winds or lightning in accordance with applicable safety regulations and building standards. Due to the Proposed PROJECT'S minimal contribution to these potential hazards through the design of the Proposed PROJECT in accordance with applicable safety requirements, the Proposed PROJECT would not represent a cumulatively considerable impact to hazards associated with high wind, earthquake, or lightning. Therefore, cumulative impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Impact PS-5: Facilities could suffer an outage from intentional destruction or terrorism.

All Reasonably Foreseeable Cumulative Projects (Class III)

The risk of damage to the Proposed PROJECT from intentional destructive acts would be considered very low, in line with or less than the risk to similar generation facilities in the United States. Theft or opportunistic vandalism is more likely than sabotage or terrorist acts, which are considered to be a negligible risk. The results of any such acts could be expensive to repair, but no substantial impacts to continued electrical service would be anticipated. Impacts expected from physical damage to the Proposed PROJECT or from loss of power delivery would not be adverse and, under CEQA, would be less than significant (Class III).

Other projects such as large-scale residential development, expansion of a tribal casino/hotel, and commercial/industrial development proposed within the cumulative area may result in acts of intentional destruction such as theft and vandalism; however, the risk of damage as a result of these acts is unpredictable. Protections against theft include basic security measures such as security lighting, fencing, and surveillance. The presence of workers, security guards, or local residents also discourages theft. The presence of high-voltage electricity also presents a certain deterrent to theft. Prosecution of thieves and monitoring of metal recycling operations may also deter theft of metals and equipment. Similarly, prosecution of vandals damaging transmission system equipment may discourage vandalism if it should become a problem. Due to the relatively unpredictable nature of theft or vandalism and the lack of association between the Proposed PROJECT and other reasonably foreseeable projects in terms of increased occurrence of theft or vandalism, the Proposed PROJECT would not result in an adverse cumulative impact and, under CEQA, would be a less than significant cumulative impact (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

The following analysis focuses on the hazardous impacts portion of the analysis from the Public Health and Safety impact component only. The analysis determined that safety and non-EMF concerns for alternatives evaluated in the EIR/EIS would be similar to those described for the Proposed PROJECT in Section D.10.9.2. As each alternative evaluated in this EIR/EIS would occur within substantially the same alignment as the Proposed PROJECT, safety and non-EMF issues applicable to the alternatives would not differ significantly from the Proposed PROJECT. Therefore, the alternatives were not evaluated as to their cumulative impact comparison with the Proposed PROJECT in light of the reasonably foreseeable cumulative projects.

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impacts HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The shifting of the substation site would not alter any of the cumulative impact determinations as evaluated under the Proposed PROJECT. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impacts HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. Also, there may be reduced risk of exposure to pesticides and herbicides. Such changes would be small and would not be sufficient to change the impacts as evaluated under the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impacts HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission line along Highway 80 would not alter any of the cumulative impact determinations as evaluated under the Proposed PROJECT. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impacts HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Relocating the transmission line along Highway 80 underground would not alter any of the cumulative impact determinations as evaluated under the Proposed PROJECT. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Due to the relocation of the collector substation and O&M facility to Rough Acres Ranch, construction of this alternative may result in impacts to a greater number of sensitive receptors. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. Furthermore, due to the relocation of the collector substation and O&M facility to Rough Acres Ranch, construction of this alternative may result in impacts to a greater number of sensitive receptors. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The change to the overall Proposed PROJECT due to the implementation of this alternative would not alter the overall analysis, and the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Due to the relocation of the collector substation and O&M facility to Rough Acres Ranch, construction of this alternative may result in impacts to a greater number of sensitive receptors. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. Furthermore, due to the relocation of the collector substation and O&M facility to Rough Acres Ranch, construction of this alternative may result in impacts to a greater number of sensitive receptors. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The change to the overall Proposed PROJECT due to the implementation of this alternative would not alter the overall analysis, and the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impacts HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Under this alternative, the wind turbines attributed to the Tule Wind Project component would be reduced; however, the ECO Substation and the ESJ Gen-Tie components of the overall project and the Campo, Manzanita, and Jordan wind energy projects would remain. Construction and operations would remain similar, as would the impacts tied to potential hazardous conditions. While the reduction in turbines would reduce impacts related to blade throw and tower collapse, this reduction would not be substantial enough to alter the cumulative impact determinations. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. No commercial or industrial uses have occurred on the project property, including

agricultural uses; therefore, the presence of residual pesticides and/or herbicides is unlikely. While Impact HAZ-2 is identified as not being adverse and, under CEQA, less than significant (Class III), the existing ECO Substation and Tule Wind components would continue to be adverse but mitigated. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact HAZ-1 through HAZ-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact HAZ-1 through HAZ-8 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. This alternative would potentially increase some risks of exposure to contaminated soil and/or impact groundwater due to greater amounts of land disturbance in order to underground the transmission lines. The reasonably foreseeable cumulative projects would, similar to the Proposed PROJECT, be required to evaluate the potential impacts associated with hazards and apply all feasible mitigation to lessen such potential impacts. The change to the overall Proposed PROJECT due to the implementation of this alternative would not alter the overall analysis, and the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce some of the overall impacts related to the amount of hazardous materials used, stored, and transported during construction and operation would be less than under the Proposed PROJECT. However, due to the other components being built, this change would still find an adverse but mitigated cumulative impact would remain for Impacts HAZ-1 through HAZ-6. However, as no wind turbines would be built with respect to Tule, under this alternative, impacts related to potential blade throw or tower collapse for that area would not occur (HAZ-7 and HAZ-8) therefore, impacts to public safety would be less than under the Proposed PROJECT.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.10 Air Quality

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to air quality includes the southeastern corner of the San Diego Air Basin (San Diego County). Furthermore, the primary air quality impacts of the Proposed PROJECT would occur during construction, since the operational impacts would result from limited vehicle trips for operation, maintenance, and inspection and would be substantially less than construction impacts. Due to the nonattainment status of the San Diego Air Basin, the primary air pollutants of concern would be oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), which are ozone precursors, and particulate matter less than 10 microns (PM_{10}) and particulate matter less than 2.5 microns ($PM_{2.5}$). NO_x and VOC are primarily emitted from motor vehicles and construction equipment, while PM_{10} and $PM_{2.5}$ are emitted primarily as fugitive dust during construction. Because of the nature of ozone as a regional air pollutant, emissions from the entire geographic area for this cumulative impact analysis would tend to be important, although maximum ozone impacts generally occur downwind of the area in which the ozone precursors are released. PM_{10} and $PM_{2.5}$ impacts, on the other hand, would tend to occur locally; thus, projects occurring in the same general area and in the same time period would tend to create cumulative air quality impacts.

Wind and solar projects in western Imperial County would result primarily in construction-related air quality impacts and little operational impacts, similar to those associated with the Tule Wind component of the Proposed PROJECT. Given the prevailing westerly wind patterns in this area, the construction emissions from these projects would tend not to impact air quality in southeastern San Diego County. Thus, the projects in western Imperial County are not considered within the geographical extent for this air quality cumulative impact analysis.

Existing Cumulative Conditions

Air quality management in the geographic area for the cumulative impact assessment is the responsibility of the San Diego Air Pollution Control District (SDAPCD). Existing levels of development in San Diego County have led to the nonattainment status for ozone with respect to the California and national ambient air quality standards (CAAQS and NAAQS) and for PM_{10} and $PM_{2.5}$ with respect to the CAAQS. The nonattainment status is based on ambient air quality monitoring generally conducted in the urban portions of the County. No monitoring stations exist in the geographic area for the cumulative impact assessment, but it would generally be better than that in the urban areas in the western portion of the County due to the lack of major air pollutant sources. The air quality plans prepared by the SDAPCD reflect future growth under local development plans but are intended to reduce emissions countywide to levels that would

comply with the NAAQS and CAAQS through implementation of new regulations at the local, state, and federal levels.

Cumulative Impact Analysis

Impact AIR-1: Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants.

All Reasonably Foreseeable Cumulative Projects (Class I)

As evaluated under Section D.11.3.3, construction of the Proposed PROJECT along with Campo, Manzanita, and Jordan wind energy projects would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. As shown in Table D.11-11, Proposed PROJECT San Diego County Estimated Daily Construction Emissions, the Proposed PROJECT is expected to remain below the daily significance thresholds for criteria air pollutants for SO_x. However, construction-related emissions would exceed the VOC, CO, NO_x, PM_{10}, and $PM_{2.5}$ thresholds, and the Proposed PROJECT would result in a significant impact to air quality. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce criteria pollutant emissions; however, impacts would remain adverse and would represent a significant and unmitigable impact under CEQA (Class I).

The extent to which all reasonably foreseeable cumulative projects and the Proposed PROJECT would result in significant cumulative impacts depends on their proximity and construction time schedules. The Proposed PROJECT would be constructed from 2010 to 2012; however, specific time schedules for individual projects within the cumulative study area have not yet been established by their respective applicants. Projects within the cumulative study area would include a few large-scale residential subdivisions, unmanned wireless telecommunications facilities, commercial developments, minor residential lot splits, expansion of a tribal casino/hotel, and construction or expansion of several federal facilities, several of which would result in significant construction-related air quality impacts. Construction of these projects would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials and worker vehicular trips. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from grading and site preparation activities. NO_x and CO emissions would primarily result from the use of construction equipment and motor vehicles. Generation of these criteria pollutant emissions, particularly those occurring simultaneously during various construction periods, would result in a temporary unavoidable significant cumulative impact to air quality. The NO_x, CO, VOC, PM_{10}, and $PM_{2.5}$ emissions

from the Proposed PROJECT were found to be individually significant; therefore, the Proposed PROJECT's contribution to a significant impact would be adverse and, under CEQA, cumulatively would represent a significant and unmitigable cumulative impact (Class I).

Impact AIR-2: Operation, maintenance, and inspections would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants.

All Reasonably Foreseeable Cumulative Projects (Class III)

Proposed PROJECT operational emissions would result from vehicle use associated with maintenance, repair, and inspection of the project components. The ECO Substation component is expected to require approximately six trips per year by a 2- to 4-person crew. Typically, a major inspection for the Tule Wind Project would take place annually, requiring approximately 20 personnel for approximately 1 week. During its operation, the project is expected to be supported by 12 permanent full-time employees utilizing light-duty automobiles and trucks. The ESJ Gen-Tie Project would require approximately 2 to 3 workers accessing the site on a periodic basis. As shown in the analysis in Section D.11.3.3, operational emission levels would remain well below the significance thresholds. Operation of the project would not require a substantial number of vehicle trips; therefore, the Proposed PROJECT is not expected to exceed the thresholds, and mitigation is not required. The only operational stationary source of toxic air contaminants would be two diesel-fired emergency generators at the ECO substation, which would emit diesel exhaust particulate matter (DPM). Given the limited operation of the generators, the DPM emissions would not likely result in unacceptable health impacts. No sources of toxic air contaminants would be associated with the operation, maintenance, and inspections except for the limited use of chemicals, lubricants, and cleaning agents for maintenance. Operational impacts to air quality would not be adverse and, under CEQA, would be less than significant (Class III).

Based on the anticipated online dates, while specific details unknown in order to provide a quantitative air quality analysis, the Campo, Manzanita, and Jordan wind projects would result in contributing operational emissions commencing in 2013. It is assumed that these other wind projects likewise would result in similar activity levels during operation similar to the discussion above and that significant operational emissions would be unlikely.

Operation and maintenance of the Proposed PROJECT, including the Campo, Manzanita, and Jordan wind energy projects would not result in significant operational impacts to air quality; however, other projects such as large-scale residential subdivisions, expansion of a tribal casino/hotel, and commercial/industrial developments within the cumulative study area (e.g., Ketchum Ranch, Star Ranch, Golden Acorn Casino, La Posta Casino, Sunrise Powerlink Transmission) would generate significant criteria pollutant emissions including VOC, NO_x, CO,

SO_x, PM_{10}, and $PM_{2.5}$. Other projects such as the telecommunication facilities, minor residential lot splits, and some of the federal facilities would not generate significant emissions on their own, but they would contribute to the cumulative impacts in the geographic area. Generation of these emissions would result from project land uses, as well as mobile and stationary sources including vehicular traffic from residents and visitors in and around residential subdivisions, space heating and cooling, water heating, and general electrical use. Due to the Proposed PROJECT's minimal contribution to these otherwise significant emission levels, and the general nature of the Proposed PROJECT as a source of renewable energy, even if a significant cumulative impact did exist for air quality impacts during operation, the Proposed PROJECT itself would not represent a cumulatively considerable operational impact to air quality and impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Impact AIR-3: Construction would not generate exhaust emissions of VOC and NO_x, that would exceed the general conformity de minimis thresholds.

All Reasonably Foreseeable Cumulative Projects (Class III)

Because the federal actions associated with the Proposed PROJECT would be conducted separately for the ECO Substation and Tule Wind Projects, general conformity would be evaluated on a project-by-project basis. Therefore, the general conformity requirements would not apply to the entirety of the Proposed PROJECT. Furthermore, direct annual emissions of VOC and NO_x, would not exceed the de minimis thresholds as a result of construction of the ECO Substation or the Tule Wind components of the Proposed PROJECT as discussed in Section D.11.3.3.

Several of the other cumulative projects would entail an action by a federal agency. For some of these projects, a NEPA document has been prepared in which the applicability of general conformity has been addressed. As previously discussed, general conformity requirements would not apply to the Proposed PROJECT or the cumulative projects as a whole because the applicability of these requirements to the federal actions would be evaluated separately. Accordingly, the Proposed PROJECT would not interact with all reasonably foreseeable cumulative projects in order to create a cumulatively significant impact. Cumulative impacts would therefore not be adverse and, under CEQA, would be less than significant (Class III).

Impact AIR-4: Construction and operational activities would not conflict with or obstruct the implementation of applicable local air quality plans.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed previously as well as in Section D.11.3.3, the Proposed PROJECT would result in a less than significant impact due to operational emissions from maintenance operations. In

general, if a project is consistent with the local community and general plans, it has been accounted for in the pollutant attainment demonstrations contained within the State Implementation Plan. Moreover, the Proposed PROJECT would not generate significant criteria pollutant emissions or toxic air contaminants after completion of all construction phases as operational emissions are expected to remain well below significance thresholds. While there would be a change in land use from that assumed in development of the SDAB air quality plans, the resultant air emissions would not be substantially different (e.g., minimal vehicle trips would be associated with both the existing and proposed land use designations) and the Proposed PROJECT would not conflict with local air quality attainment or maintenance plans. Furthermore, the construction of the Proposed PROJECT would comply with applicable SDAPCD rules, which are implemented to achieve the NAAQS and CAAQS.

In general, if a project is consistent with the local community and general plans, it has been accounted for in the pollutant attainment demonstrations contained within the State Implementation Plan. However with regard to projects located within the cumulative study area of the Proposed PROJECT, various projects are consistent with applicable local community and general plans, and others would require a general plan amendment or amendment to local plans as they pertain to their respective geographic locations. Those that would require an amendment to a local or general plan may not have been accounted for in projections established by the SDAPCD, which accounts for emissions associated with specific planned land uses throughout the county. For those cumulative projects not currently in compliance with applicable local plans, those impacts to air quality would be considered cumulatively considerable. However, as these projects would need to be evaluated on a project-by-project basis to determine local and general plan consistency, they cannot be effectively analyzed with respect to their cumulative impacts. Cumulative impacts would therefore not be adverse and, under CEQA, would be less than significant (Class III).

Impact AIR-5: Construction and operational activities would not expose sensitive receptors to substantial pollutant concentrations.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed in Section D.11.3.3, there are multiple sensitive receptors in the vicinity of the Proposed PROJECT site that are likely to be affected by particulate matter and diesel exhaust emitted during construction of the Proposed PROJECT. Because there would not be a concentration of construction equipment in any one area for an extended period of time, particulate matter and diesel exhaust emissions would be distributed throughout the project sites and would, therefore, occur in relatively low concentrations at existing sensitive receptors. Implementation of Rule 55, which requires that all projects within the San Diego Air Basin take steps to restrict visible emissions of fugitive dust beyond the project property line, would also

ensure that nearby sensitive receptors would not be significantly impacted by emissions of PM_{10}, and $PM_{2.5.}$

All reasonably foreseeable cumulative projects within the Proposed PROJECT vicinity would be required to comply with Rule 55, which limits fugitive dust emissions to their respective project sites. Because fugitive dust is the pollutant most likely to affect nearby sensitive receptors, compliance with Rule 55 and County grading requirements would ensure that all cumulatively considerable impacts remain less than significant. Therefore, with compliance with Rule 55 and County grading requirements the Proposed PROJECT's contribution to a potentially significant impact would represent an adverse but mitigated cumulative impact, and under CEQA would be mitigated to be less than significant (Class II).

Impact AIR-6: Construction and operational activities would not create objectionable odors affecting a substantial number of people.

All Reasonably Foreseeable Cumulative Projects (Class III)

As previously discussed in Section D.11.3.3, the analysis determined that while typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions, no significant sources of these pollutants would exist during construction, operation, or maintenance activities for the Proposed PROJECT. An additional potential source of odor is diesel engine emissions, which would be reduced by limiting idling times for construction equipment. Because there would only be a few sources of odor in proximity to sensitive receptors, and construction would be short term and localized near these sensitive receptors along the transmission line route, odor-related project-specific impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Similar to the Proposed PROJECT, typical odor nuisances include hydrogen sulfide, ammonia, chlorine, and other sulfide-related emissions. No significant sources of these pollutants would exist during construction, operation, or maintenance activities. An additional potential source of odor is diesel engine emissions for the construction of the cumulative projects; however, similar to the Proposed PROJECT, diesel-powered equipment idling times would likely be limited in order to reduce such a potential impact. The Proposed PROJECT's contribution to a potentially significant impact would be less than cumulatively considerable and any cumulative impacts related to odor impacts from the Proposed PROJECT interacting with the reasonably foreseeable cumulative projects would not be adverse and, under CEQA, would be less than significant (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact AIR-1 through AIR-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously under the Proposed PROJECT for construction emissions NO_x, CO, VOC, $PM_{10,}$ and $PM_{2.5}$, emissions were found to be individually significant; therefore, the Proposed PROJECT's contribution to a cumulative impact when considered with the reasonably foreseeable cumulative projects would be adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). Due to the alternative's relocation 700 feet east of the Proposed PROJECT site, this alternative would be located farther from sensitive receptors, thereby reducing air quality impacts related to operation and maintenance. Additionally, the proposed alternative would reduce a number of criteria pollutants, and yet it would still represent an adverse impact for construction emissions. Therefore, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impact determinations.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AIR-1 through AIR-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously under the Proposed PROJECT for construction emissions NO_x, CO, VOC, $PM_{10,}$ and $PM_{2.5}$, emissions were found to be individually significant; therefore, the Proposed PROJECT's contribution to a cumulative impact when considered with the reasonably foreseeable cumulative projects would be adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). Due to the alternative's additional trenching activity and soil disturbance, construction-generated emissions for criteria pollutants when compared to the proposed substation project would slightly increase, resulting from both trenching equipment emissions and an increase in fugitive dust levels. However, underground activity could reduce some of the use of a helicopter for aboveground transmission line installation. Regardless, under this alternative, construction emissions would remain adverse. Therefore, when considered with the reasonably foreseeable cumulative projects, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impact determinations.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AIR-1 through AIR-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously under the Proposed PROJECT for construction emissions NO_x, CO, VOC, $PM_{10,}$ and $PM_{2.5}$, emissions were found to be individually significant; therefore, the Proposed PROJECT's contribution to a cumulative impact when considered with the reasonably foreseeable cumulative projects would be adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). While the proposed alternative would reduce a number of criteria pollutants, the construction emissions would continue to represent an adverse impact. Therefore, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impact determinations.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact AIR-1 through AIR-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously under the Proposed PROJECT for construction emissions NO_x, CO, VOC, $PM_{10,}$ and $PM_{2.5}$, emissions were found to be individually significant; therefore, the Proposed PROJECT's contribution to a cumulative impact when considered with the reasonably foreseeable cumulative projects would be adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). Due to the alternative's additional trenching activity and soil disturbance, construction-generated emissions for criteria pollutants when compared to the proposed substation project would slightly increase, resulting from both trenching equipment emissions and an increase in fugitive dust levels. Under this alternative, construction emissions would remain adverse. Therefore, when considered with the reasonably foreseeable cumulative projects, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impact determinations.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1. Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative

projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2. Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While construction emissions would slightly increase due to additional ground disturbance during trenching, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3. Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While construction of this alternative would temporarily increase exhaust emissions of criteria pollutants along the proposed alternative route as a result of heavy construction equipment and an increased vehicle presence along Ribbonwood Road and Old Highway 80 and the resulting dust generated by construction activities, this would not alter the cumulative impact determinations when considered with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4. Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While construction emissions would slightly increase due to additional ground disturbance during trenching, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5. Reduction in Turbines

Cumulative impacts related to Impacts AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously under the Proposed PROJECT for construction emissions NO_x, CO, VOC, $PM_{10,}$ and $PM_{2.5}$, emissions were found to be individually significant; therefore, the

Proposed PROJECT's contribution to a cumulative impact when considered with the reasonably foreseeable cumulative projects would be adverse and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I). Despite the reduction of 62 turbines which would reduce the overall construction emissions, the project-specific emissions would continue to be adverse and interact with the reasonably foreseeable cumulative projects in order to create an adverse cumulative impact as it relates to construction emissions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While construction emissions would slightly increase due to additional ground disturbance during trenching, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts. Furthermore, since general conformity does not apply to San Diego County's action on the ESJ Gen-Tie Project, there would be no cumulative impacts as related to this part of the overall project under Impact AIR-3. However, since the Tule Wind and ECO Substation components of the Proposed PROJECT would continue, the overall cumulative impact when considered with the reasonably foreseeable cumulative impacts would remain similar to those discussed under the Proposed PROJECT.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact AIR-1 through AIR-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While construction emissions would slightly increase due to additional ground disturbance during trenching, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative

impacts. Furthermore, since general conformity does not apply to San Diego County's action on the ESJ Gen-Tie Project, there would be no cumulative impacts as related to this part of the overall project under Impact AIR-3. However, since the Tule Wind and ECO Substation components of the Proposed PROJECT would continue, the overall cumulative impact when considered with the reasonably foreseeable cumulative impacts would remain similar to those discussed under the Proposed PROJECT.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Air quality impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. Both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce some of the overall impacts related to construction emissions tied to the Tule Wind aspect of the project under this alternative. However, due to the other components being built, this change would still find an adverse impact related to construction emissions. Additionally, there would be an overall loss of this resource as a source of renewable energy. Under this alternative, cumulative impacts, when considered with the reasonably foreseeable cumulative impacts, are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.11 Water Resources

Geographic Extent

The cumulative study area for potential impacts to water resources includes the southwestern portion of the Anza-Borrego watershed in the Colorado River Basin and the eastern portion of the Tijuana watershed in the San Diego River Basin (refer to Figure D-12.1, Surface Water Resources Occurring in the Proposed Project Area). Water quality management in this area is governed by the Colorado River Regional Water Quality Control Board (RWQCB) and San Diego County. Cumulative impacts such as potential impacts relating to erosion, flooding, and depletion of the water supply, could result from related impacts caused by other past, present, and reasonably foreseeable future projects throughout the cumulative water resources study area. Projects resulting in impacts related to hydrology and water resources consist of all development, construction and agricultural projects within the cumulative water resources study area. While portions of the Tule Wind component of the Proposed PROJECT extend into the San Diego River Basin, water from this area is not expected to be used as a source for construction or operations; therefore impacts to water resources in the San Diego River Basin would be negligent and are therefore not considered cumulative.

Existing Cumulative Conditions

Water resources in the cumulative study area include named and un-named creeks, and Tule Lake within the Jacumba and Agua Caliente hydrologic areas of the Anza-Borrego watershed, and the area's underlying groundwater, including the Jacumba Valley Groundwater Basin, and other un-named alluvial aquifers. As described in further detail in Section D.12 of this EIR/EIS, annual precipitation in the area ranges from 3 inches to 25 inches. Boundary Creek and Carrizo creek provide beneficial uses for agricultural supply, groundwater recharge, non-contact water recreation and wildlife habitat. Surface waters in the Anza-Borrego watershed ultimately flow to the Salton Sea. Wells in the Proposed PROJECT area provide potable water from the Jacumba Valley Groundwater Basin and other un-named alluvial aquifers.

Cumulative Impact Analysis

A wide variety of past, present and reasonably foreseeable future development projects contribute to the cumulative conditions for hydrology and water quality in the cumulative study area. These cumulatively considered projects are listed above in Table F-2, and include transmission and other renewable energy projects, such as the Sunrise Powerlink 150-mile Transmission Line Project, and over 30 other federal and local development projects. Of these, eight projects are located within the Anza-Borrego watershed, and the remaining projects are located in the Tijuana watershed.

A cumulative impact would result if Proposed PROJECT impacts would combine with impacts of other past, present, and future projects to exceed the significance criteria presented in Section D.12.3.3 and/or create a cumulatively considerable impact to water resources due to the increase in impacts caused by the Proposed PROJECT.

Impact HYD-1: Construction activity could degrade water quality due to erosion and sedimentation.

All Reasonably Foreseeable Cumulative Projects (Class II)

As indicated in Section D.12.3.3, construction of the Proposed PROJECT would include grading and excavation activities that could degrade water quality due to soil erosion and sedimentation during periods of extended rainfall. Implementation of Mitigation Measure HYD-1 and Mitigation Measure GEO-1 would include measures to minimize alteration of drainage patterns and increases in erosion or siltation.

Implementation of the reasonably foreseeable cumulative projects would also contribute to water quality impacts to downstream water-bodies. Over time, sediment from multiple projects would be expected to eventually accumulate in downstream water-bodies, such as Tule Lake, and ultimately the Salton Sea. However, potential impacts from erosion and sedimentation are regulated by multiple entities such as the Regional Water Quality Control Boards, the Clean Water Act, U.S. Army Corps of Engineers, California Department of Fish and Game, etc. The cumulative projects would also be required to comply with the applicable permits and regulations that require implementation of specific measures to prevent soil erosion and sedimentation from entering local waterways. Such measures are anticipated to include stoppage of work and use of physical barriers to prevent sedimentation from flowing off site during periods of extended rainfall. These measures would reduce the impact of individual projects. Also, with mitigation measures applied to the Proposed PROJECT, the Proposed PROJECT would not contribute to any potentially significant water quality impacts due to erosion and sedimentation during construction. Proper mitigation is in place to ensure any direct, indirect, or

cumulative impacts would be adverse but mitigated, and under CEQA would remain less than significant with mitigation (Class II).

Impact HYD-2: Construction activity could degrade water quality through spills of potentially harmful materials.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed under Section D.12.3.3, the Proposed PROJECT could degrade surface or groundwater quality through accidental releases of hazardous materials used during construction, such as diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. Implementation of Mitigation Measures HYD-1, and GEO-1, as well as HAZ-1a through HAZ-1d, HAZ-2a and HAZ-2b would reduce impacts of the Proposed PROJECT because these measures would ensure that construction activities comply with federal, state, and County of San Diego water pollution control laws; require the preparation and implementation of a specific SWPPP; and would require compliance with hazardous materials management plans for preventing the inadvertent release of hazardous materials and to provide measures for containment and cleanup in the event of a spill. Therefore, project-specific direct impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

Construction of the reasonably foreseeable cumulative projects would also pose the risk of water quality contamination in the area from the potential accidental release of harmful materials during construction. These other projects in the area would be subject to the same laws and regulations requiring that the projects prepare specific SWPPPs, Hazardous Materials Management Plans, and Health and Safety Programs. Adherence to all applicable requirements would reduce the likelihood that a spill would occur, and, in the event of an accidental spill, ensure that proper measures would be taken to contain and clean up the spill on site. Therefore, cumulative impacts would be adverse but mitigated, and under CEQA would remain less than significant (Class II).

Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater.

All Reasonably Foreseeable Cumulative Projects (Class II)

Excavation could contaminate groundwater through accidental material spills. This impact is unlikely to occur because groundwater is not anticipated to be encountered. With implementation of appropriate mitigation including compliance with federal, state, and County of San Diego water pollution control laws, avoidance procedures, and dewatering as needed, cumulative impacts to groundwater quality would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

The reasonably foreseeable cumulative projects would require grading and excavation and therefore, may also require groundwater dewatering during construction. Similar to the Proposed PROJECT, the groundwater in the area of the other cumulative projects are likely to be below the depth of excavation for the majority of these projects. If dewatering is necessary it would likely be in a limited area and only for a short duration. Furthermore, reasonably foreseeable cumulative projects would be subject to the same water quality laws and regulations as the Proposed PROJECT. Proper mitigation is in place to ensure any direct, indirect, or cumulative impacts of the Proposed PROJECT would remain less than significant. Therefore, cumulative impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

Impact HYD-4: The project could deplete local water supplies.

All Reasonably Foreseeable Cumulative Projects (Class I)

It is not likely that groundwater would be encountered during PROJECT construction, and impacts to groundwater due to dewatering are unlikely. Other wind projects in the area would have the same likelihood of encountering groundwater during construction, assuming that they would not be excavating or trenching to the depth of groundwater resources, or where substantial excavation were necessary it would be for limited areas and short durations. Cumulative impacts associated with groundwater depletion due to dewatering during construction are not anticipated to represent an adverse impact and, under CEQA, are considered less than significant (Class III).

Construction of all reasonably foreseeable cumulative projects, in conjunction with the Proposed PROJECT, would increase the need for water in the project area. Construction of the Sunrise Powerlink and other renewable projects, as well as the Ketchum Ranch and Star Ranch residential projects, and the casino projects would all require a constant water source over the construction period to be utilized for dust suppression, foundation construction and various other construction activities. Water would either be supplied by individual groundwater wells or by local water purveyors/agencies. Concurrent construction of the Proposed PROJECT and all reasonably foreseeable cumulative projects could temporarily stress the ability of local water purveyors/sources to deliver water supplies in accordance with existing entitlements; however, only some of the reasonably foreseeable cumulative projects would be constructed at the same time and water needs for construction purposes would be temporary in nature. Impacts of the Proposed PROJECT would be reduced through implementation of Mitigation Measure HYD-3 (identification of sufficient water supply). Therefore, the Proposed PROJECT's water needs during construction would not result in a cumulative considerable impact and the impact would be less than significant.

During operation and maintenance (O&M), the Proposed PROJECT would use local water supplies for temporary irrigation, fire protection, and other standard facility uses. With implementation of mitigation measures included under the Proposed PROJECT, the relatively small amount of water used for O&M for the combined Proposed PROJECT and Campo, Manzanita, and Jordan wind energy projects, would not substantially deplete area groundwater supplies. Therefore, impacts to the local groundwater supply from O&M would not represent an adverse impact and, under CEQA, would be less than significant (Class III).

As stated previously the relatively small amount of water used for ongoing O&M for the Proposed PROJECT is not expected to deplete local groundwater supplies. Other projects in the area, including commercial and residential development, would require water use on an ongoing basis. Several of the cumulative projects identified in Table F-2 (Ketchum and Star Ranch, for example) are proposing residential uses which could exacerbate local water supply and quality concerns, along with impacts from the Golden Acorn Casino, and La Posta Casino. Therefore, while operational water usage associated with the Proposed PROJECT and wind projects would be relatively minor and less than significant, the cumulative effect resulting from the development of large reasonably foreseeable projects such as the Ketchum Ranch and Star Ranch projects and the map plan projects would be substantial. Therefore, the Proposed PROJECT would have an adverse cumulative impact and, under CEQA, would be a significant and unmitigable cumulative impact (Class I).

Impact HYD-5: Creation of new impervious areas could cause increased runoff resulting in flooding or increased erosion downstream.

All Reasonably Foreseeable Cumulative Projects (Class II)

The Proposed PROJECT would include the construction of impervious surfaces on approximately 114 acres, and semi-pervious surfaces on 173 acres. Proposed PROJECT features that require impervious surfaces include concrete foundations and pads for towers. Semi-pervious surfaces would include access roads and parking areas that would be maintained with gravel. These impervious and semi-pervious surfaces would alter existing drainage patterns and result in adverse impacts associated with an increase in surface runoff. The amount of new impervious surface created by the Proposed PROJECT would be negligible in comparison to the amount of permeable surface throughout the watershed. Implementation of Mitigation Measure HYD-4 would further reduce impacts by ensuring measures are taken to prevent significantly altering drainage patterns or increase erosion or siltation. The proposed Campo, Manzanita, and Jordan, wind energy components are also not expected to add considerable impervious areas to the watershed and would be required to comply with the same laws and regulations.

The developments provided in Table F-2, particularly the larger developments such as the Sunrise Powerlink Transmission Line Project, Golden Acorn Casino, La Posta Casino, the Boulevard and Campo Border Patrol Stations, La Posta Mountain Warfare Training Facility, Ketchum Ranch, and Star Ranch developments would all be required to comply with applicable laws and regulations, as would the Proposed PROJECT, and it is reasonably anticipated that similar mitigation would be incorporated as appropriate. With compliance with the same laws and regulations, as well as likely mitigation to any impacts related to the alteration of drainage patterns or an increase in erosion or siltation, cumulative impacts would not be adverse and, under CEQA, would be less than significant (Class II).

Impact HYD-6: Project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion, or expose people or structures to significant risk.

All Reasonably Foreseeable Cumulative Projects (Class II)

The Proposed PROJECT would include placing the ECO Substation component within existing dry wash tributaries of Carrizo Creek and trenching portions of the electronic transmission system between turbines across ephemeral streams. One unnamed dry wash crosses a 144-foot-long segment of the proposed 138 kV transmission line between Tule Jim Lane and the south end of the Boulevard Substation. This water feature is a non-wetland jurisdictional streambed. Additionally, the underground portion of the Tule Wind Project cable system that would connect the turbines would cross ephemeral drainages that are non-wetland jurisdictional drainages. Impacts to these jurisdictional resources from installation of the transmission lines would be considered adverse without implementation of avoidance and mitigation measures. However, implementation of Mitigation Measures BIO-1a through BIO-1d, BIO-1f, and BIO-2a through BIO-2c would mitigate impacts to jurisdictional waters. Where other water features intersect with the Proposed PROJECT site, these features would be avoided. Project features that do not intersect water features would add impervious surfaces that could indirectly alter the existing drainage patters on the site and thereby result in adverse impacts from flooding off site. However, with implementation of Mitigation Measures HYD-1 and HYD-4 impacts would be mitigated because Mitigation Measures HYD-1 and HYD-4 would ensure measures are taken to prevent construction of on-site features from creating drainage patterns that would result in erosion or flooding during construction and operations. These measures would ensure that the Proposed PROJECT's contribution to any cumulative impacts in the area associated with locating features in floodplains would be adverse but mitigated, and under CEQA would be mitigated to less than significant (Class II).

Other foreseeable cumulative projects in the Proposed PROJECT area would be required to prepare and implement Stormwater Pollution Prevention Plans and Stormwater Management Plans, and would likely attempt to avoid direct impacts to drainages where crossings of drainages

cannot be avoided. With implementation of mitigation measures included under the Proposed PROJECT, proper mitigation would be in place to ensure any direct, indirect, or cumulative impacts would represent an adverse but mitigated cumulative impact, and under CEQA would remain less than significant (Class II).

Impact HYD -7: Accidental releases of contaminants from project facilities could degrade water quality.

All Reasonably Foreseeable Cumulative Projects (Class II)

Oil and other contaminants from new electrical equipment at project facilities could be released accidentally and contaminate local surface water or groundwater. Past and future uses within the Proposed PROJECT area include agricultural, alternative transmission and other renewable energy development, residential, and commercial. These types of developments do not typically use or require substantial quantities of hazardous materials but do require common hazardous materials such as gasoline, oils, grease, and solvents which can be accidentally released from vehicles, residences, businesses, and non-point sources. Mitigation Measures HAZ-5a and HAZ-5b, as described in Section D.10, Public Health and Safety, would require development and implementation of a Spill Prevention Control and Countermeasure Plan and a Hazardous Materials Business Plan for PROJECT operations. With mitigation, the incremental impact of a release of contaminants from the Proposed PROJECT would represent an adverse but mitigated cumulative impact, and under CEQA would be mitigated to be less than significant (Class II).

With mitigation measures applied to the Proposed PROJECT, the Proposed PROJECT would not contribute to any potentially significant water quality impacts due to the release of hazardous materials during operations and maintenance. Other cumulative projects in the area would also be required to prepare and implement similar measures per relevant laws and regulations. Proper mitigation is in place to ensure any direct, indirect, or cumulative impacts would represent an adverse but mitigated cumulative impact, and under CEQA would be mitigated to remain less than significant (Class II).

Impact HYD-8: Where septic tanks are proposed, such facilities would impact local water quality.

All Reasonably Foreseeable Cumulative Projects (Class II)

While it is not specifically known whether other projects are planning to use septic systems in the PROJECT area, it is reasonable to assume that due to a lack of a comprehensive wastewater system in the cumulative impact area, other projects would likely require septic systems as well.

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Shifting the ECO Substation site 700 feet east would not alter the overall impact conclusions. The reasonably foreseeable cumulative projects, similar to the Proposed PROJECT, would be required to evaluate the potential impacts associated with hydrology and water quality issues and would apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Under this alternative, there may be some reduction in potential pesticide and herbicide exposure during construction. Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The reasonably foreseeable cumulative projects, similar to the Proposed PROJECT, would be required to evaluate the potential risk associated with such impacts and would apply all feasible mitigation to lessen such potential impacts. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While different waterways and drainages may be impacted as described under Impact HYD-6, similar to the Proposed PROJECT, they would be avoided and mitigated. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Additionally, greater amounts of water may be needed for construction (HYD-4). There could also be greater impacts to creeks and washes that previously may have been avoided under the Proposed PROJECT. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Additionally, greater amounts of water may be needed for construction (HYD-4). There could also be greater impacts to creeks and washes that previously may have been avoided under the Proposed PROJECT. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Additionally, greater amounts of water may be needed for construction (HYD-4). There could also be greater impacts to creeks and washes that previously may have been avoided under the Proposed PROJECT. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While a reduction in turbines would mean a substantial reduction in construction and thus less cumulative impacts on water resources and water quality, the alternative would not substantially alter the cumulative impacts as identified under the Proposed PROJECT due to the continued construction and impacts on water resources associated with the other project components. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Additionally, greater amounts of water may be needed for construction. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact HYD-1 through HYD-8 would be largely the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. However, Impact HYD-1 and HYD-3 could have greater potential for risk to water quality due to undergrounding activities as part of this alternative. Additionally, greater amounts of water may be needed for construction. Regardless, while these project-specific impacts attributed to the alternative component would remain adverse, they would be mitigated; this increase in potential impacts would not change the overall cumulative impact conclusions. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative component alone would reduce water quality impacts and water resource needs during construction by not locating the wind towers in the project areas. Cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.12 Geology, Mineral Resources, and Soils

Geographic Extent

The cumulative study area for geology, mineral resources, and soils would primarily focus on the immediate vicinity of the Proposed PROJECT site. The geographic scope for considering cumulative impacts to geology, mineral resources, and soils is the Proposed PROJECT corridor itself (including proposed substations). This is because geologic materials, minerals, and soils occur at specific locales and are unaffected by activities not acting on them directly and any impacts of the Proposed PROJECT would be site-specific.

Existing Cumulative Conditions

In the Proposed PROJECT area, the Peninsular Ranges region can be divided into two geomorphic zones: mountains of the Peninsular Ranges to the east and the Coastal Plain to the west. The mountains of the Peninsular Ranges are a group of predominantly north–south trending ranges that stretch 900 miles from Southern California to the southern tip of Mexico's Baja California peninsula. They are part of the North American Coast Ranges that run along the Pacific coast from Alaska to Mexico. Elevations range from about 500 to 11,500 feet AMSL. Mountains of the Peninsular Ranges are primarily composed of extensive Mesozoic granitic plutons, overlain in areas by metasedimentary rocks such as marbles, slates, schist, quartzites, and gneiss

Within the Proposed PROJECT area, the Peninsular Mountain Ranges include the In-Ko-Pah and Jacumba mountain ranges. Geologic units in the project areas are from the Jurassic, Triassic, Cretaceous, Miocene, Pleistocene and Holocene ages. Southern California is dominated by a major active tectonic structure delineated as the San Andreas Fault. The San Andreas Fault trends along a roughly northwest–southeast alignment and is located 55 miles northeast of the northern portion of the project area. Other active faults in the area include the San Jacinto and Elsinore faults that parallel the San Andreas Fault system. The nearest active named fault to the Proposed PROJECT is the Coyote Mountain Segment of the Elsinore Fault, located approximately 7.1 miles northeast of the proposed Tule Wind Project area. Other active named faults in the area include the Laguna Salada Fault, the Borrego Mountain section and the Superstition Hills section of the San Jacinto Fault zone, the Imperial Fault, the Julian Segment of the Elsinore Fault zone, and an unnamed fault of the Brawley seismic zone.

The soil types associated with granitic rock in the project area are highly susceptible to erosion due to the large, loose grains generated by the weathering of crystalline granite. Erodible soils generally correspond to those on the hillsides and mountains where granitic bedrock is close to or at the surface. The majority of the area has sandy soils over granitic rocks.

Cumulative Impact Analysis

Past, existing, and future projects could contribute to the cumulative effects of geology and soils creating any of the following conditions: triggering or acceleration of erosion or slope failures; ground shaking, earthquake-induced ground failure, and fault rupture. These conditions would be limited to the areas within and adjacent to the boundaries of individual projects. In order to be cumulatively considerable, such conditions would have to occur at the same time and in the same location as the same or similar conditions of the Proposed PROJECT. Seismic impacts (ground shaking, earthquake-induced ground failure, and fault rupture) from the numerous local and

regional faults comprise an impact of the geologic environment on individual projects and would not introduce cumulatively considerable impacts.

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.13.3.3 and/or create a cumulatively considerable impact to geology, mineral resources, and soils due to the increase in impacts caused by the Proposed PROJECT.

Impact GEO-1: Erosion would be triggered or accelerated due to construction activities.

All Reasonably Foreseeable Cumulative Projects (Class II)

As indicated in Section D.13.3.3, grading during construction would expose soil to erosion by removing the vegetative cover and compromising the soil structure. Rain and wind may potentially further detach soil particles and transport them off site. With the implementation of Mitigation Measures HYD-1 and GEO-1, soil erosion would be minimized and would represent an adverse but mitigated impact. Under CEQA, impacts would be reduced to be less than significant (Class II).

With mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given all the reasonably foreseeable cumulative projects, the Proposed PROJECT would not contribute to any potentially significant impacts caused by an acceleration of erosion during construction. The potential impact is localized to the Proposed PROJECT site and proper mitigation is in place to ensure any direct, indirect, or cumulative impacts would represent an adverse but mitigated cumulative impact, and under CEQA would remain less than significant (Class II).

Impact GEO-2: The project would expose people or structures to potential substantial adverse effects as a result of problematic soils.

All Reasonably Foreseeable Cumulative Projects (Class II)

As described under Section D.13.3.3, the Proposed PROJECT determined that both corrosive and expansive soils exist on the site and have the potential to compromise structures through corrosion and shifts in the underlying soils. Implementation of Mitigation Measure GEO-2 would make certain appropriate foundation designs are incorporated into the process and would ensure that impacts due to expansive or corrosive soils at the Proposed PROJECT site would be adverse but mitigated, and would be less than significant under CEQA (Class II).

Similar to Impact GEO-1, expansive and corrosive soils are a site specific impact category and would not interact with the reasonably foreseeable cumulative projects in order to create a

cumulative impact. With mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given all the reasonably foreseeable cumulative projects, the Proposed PROJECT would not contribute to any potentially significant impacts caused by corrosive or expansive soils. The potential impact is localized to the Proposed PROJECT site and proper mitigation is in place to ensure any direct, indirect, or cumulative impacts would represent an adverse but mitigated impact, and under CEQA would remain less than significant (Class II).

Impact GEO-3: Project would expose people or structures to potential substantial adverse effects as a result of seismically induced ground shaking, ground failure, or fault rupture.

All Reasonably Foreseeable Cumulative Projects (Class II)

One potentially active fault transects the Proposed PROJECT area, however, implementation of Mitigation Measure GEO-3 would reduce impacts associated with potential fault rupture to be less than significant under CEQA (Class II) and would represent an adverse but mitigated impact because they would ensure that the Proposed PROJECT adheres to all applicable engineering design and construction codes that would reduce adverse effects resulting from fault rupture. Strong earthquake-induced ground shaking, as well as ground failure, can result in damage to aboveground structures. Given that wind turbines, transmission lines, and support structures can withstand strong ground shaking and moderate ground deformations, impacts associated with strong seismic shaking are anticipated to be mitigated under CEQA to be less than significant with Mitigation Measures GEO-2 through GEO-4 (Class II). Therefore, with mitigation incorporated, impacts would be adverse but mitigated.

With mitigation measures applied to the Proposed PROJECT, even if a cumulative impact did exist given all the reasonably foreseeable cumulative projects, the Proposed PROJECT would not contribute to any potentially significant impacts related the exposure of people or structures to potential substantial adverse effects as a result of seismically induced ground shaking, ground failure, or fault rupture. While any cumulative project in the area would need to incorporate measures as appropriate, in no way would these risks to the public or other projects be any greater due to the development of the Proposed PROJECT and any cumulatively considerable impacts. The potential impact is localized to the Proposed PROJECT site and proper mitigation is in place to ensure any direct, indirect, or cumulative impacts would not represent an adverse cumulative impact and, under CEQA, would remain less than significant (Class II).

Impact GEO-4: Project would expose people or structures to potential substantial adverse effects as a result of landslides, earthflows, rockfall, and/or subsidence.

All Reasonably Foreseeable Cumulative Projects (Class II)

Under Section D.13.3.3, the Proposed PROJECT incorporates mitigation in order to identify areas within the site that may cause potential issues due to steep slopes and potential slope instability. Additionally, the PROJECT is proposing to use over 47.5 million gallons of local groundwater during construction, which, although very unlikely, may pose a subsidence risk. With Mitigation Measure GEO-5 and HYD-3 incorporated, the Proposed PROJECT would be less than significant with respect to adverse effects as a result of landslides, earthflows, rockfalls, or subsidence (Class II). Furthermore, similar to other geologic hazards, such risks of landslides are limited to site specific impacts within the project area and it would be unlikely for any project to work in concert with other projects in order to create a significant cumulative impact regarding such risks. There would be no cumulatively considerable significant impacts related to adverse effects as a result of landslides, earthflows, rockfalls, or subsidence and cumulative impacts would be adverse but mitigated. Cumulative impacts under CEQA would be mitigated to less than significant (Class II).

Impact GEO-5: Project would impact mineral resources.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed under Section D.13.3.3, the Proposed PROJECT is in an area that has not been classified for mineral resources by the California Geological Survey, and therefore has not been assigned a mineral resource zone (MRZ) classification. No active mining operations are within the Proposed PROJECT site. Mineral deposits have been found in the vicinity of the Tule Wind Project, and two active tungsten ore mines are located near proposed Turbines N-7, N-8, and P-5. Approximately 74 acres of the Proposed PROJECT is underlain by Quaternary alluvium, which represents 0.015% of the total mapped Quaternary alluvium in San Diego County. While mineral resources and active mining claims are within the Proposed PROJECT area, the Proposed PROJECT would not interfere with the active claims. Therefore, impacts to mineral resources as a result of the Proposed PROJECT would not be adverse, and under CEQA impacts would be considered less than significant (Class III).

Given the large number of projects, the potential to create a cumulatively significant impact increases if more and more projects were to remove important mineral resources. The immediate area has the potential for manganese, gemstones, semi-precious gemstones, beryllium, tungsten, strontium, feldspar, and silica. There are active mines and inactive mines throughout the cumulative impact area and the overall project area is identified as having moderate potential for construction materials, nonmetallic/industrial, and locatable (metallic) minerals. Regardless, mining activities for existing operations do not have to be necessarily impacted due to related projects. Also, major mining operations are only suitable for unique parcels, as opposed to other

similar impacts for lost resources such as agricultural resources. Furthermore, upon review of the description of the reasonably foreseeable cumulative projects, most are residential developments where such mining uses would be highly unlikely and speculative. Given the remote nature of the cumulative project area, the lack of significant impacts related to the Proposed PROJECT, lack of identified mining zones illustrating where significant resources may be located, cumulative impacts related to the loss of mineral resources would not represent an adverse cumulative impact and, under CEQA, would be less than significant (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative

projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would increase the amount of land disturbance by 2.0 acres, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain

similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would increase the amount of land disturbance by 7.5 acres, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact GEO-1 through GEO-5 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no additional cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would lessen the impacts due to reduced construction requirements by eliminating 62 wind turbines, some of which would be located on steep slopes or near active faults, this change would not be sufficient to alter the overall cumulative impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact GEO-1 through GEO-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to geology are localized, and no cumulative impacts would be anticipated from this alternative component coupled with any reasonably foreseeable cumulative projects. While this alternative would install the gen-tie transmission line underground and would increase the potential for soil erosion due to additional trenching, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project /No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built, and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. While this alternative would reduce some impacts overall, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.13 Public Services and Utilities

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with public services and utilities consists of southeastern San Diego County and western Imperial County. This geographic extent is appropriate because public services and utilities are provided by local jurisdictions or districts**.** Cumulative impact analysis for public services and utilities has been conducted using the projects in Table F-2.

Existing Cumulative Conditions

Past development and population growth within southeastern San Diego and western Imperial County have impacted the provision of public services and facilities. As the area becomes increasingly developed and the permanent population grows, the existing service systems can become overwhelmed. This in turn leads to an increased demand for public services including fire and police protection, schools, parks, and libraries. As discussed in Section D.14.1.1, southeastern San Diego (and western Imperial County) consists of several small rural communities lacking municipal water and sewer utility systems (these areas tend to rely on groundwater for water supply and private septic systems for sewer). In addition, local communities are generally served by local volunteer and state fire departments, County law enforcement agencies, and small school districts. SDG&E (electricity) and the Jacumba Community Service District (water) have utility infrastructure in the Proposed PROJECT area. So while increased development and population growth can lead to additional public services and facilities in order to maintain existing service ratios, the lack of water and sewer infrastructure in the Proposed PROJECT area severely limits the potential for utilities to be augmented by development.

Cumulative Impact Analysis

The Proposed PROJECT would not result in a substantial increase to the permanent population and would result in a minimal contribution to existing and anticipated cumulative effects on public services. Construction of the Proposed PROJECT would result in an incremental contribution to existing and anticipated cumulative effects regarding disruption to existing utility services, water usage, and area landfill capacities. Impacts to public services and utilities would occur where construction activities conflict with existing service systems or if operations would result in permanent population growth and long-term increased demands for public services. A cumulative impact would result if the Proposed PROJECT, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.14.3.3. Table F-2 lists projects included in the cumulative public service and utilities analysis.

Impact PSU-1: Construction of the project would disrupt the existing utility systems or cause a co-location accident.

All Reasonably Foreseeable Cumulative Projects (Class II)

As discussed within Section D.14.3.3, construction of the Proposed PROJECT could result in disruptions to the existing buried utility lines during construction activities. Any development project proposing ground disturbance could potentially disrupt existing buried utilities located adjacent to project components or proposed work areas. Since utilities are sited in specific locations, the potential for utility disruption tends to be project-specific. With implementation of Mitigation Measures PSU-1a, PSU-1b, and PSU-1c, related to notification of service interruptions, plans to protect underground utilities, and close coordination with utility providers, project-specific impacts would be adverse but mitigated, and under CEQA would be mitigated to be less than significant (Class II).

The construction of all reasonably foreseeable projects (specifically those proposing ground disturbances) could result in disruptions to existing utility systems and co-location accidents. In conjunction with the Proposed PROJECT the construction of the projects identified in Table F-2 would substantially increase the potential for utility system disruptions; however, as required by law, each individual project excavator would contact Underground Services Alert which would require potentially affected utility providers to mark their utilities (thus minimizing the potential for conflicts to arise during construction). Compliance with California Government Code Section Code Section 4216(a)(1), along with project-specific mitigation, would minimize the potential cumulative impacts and would therefore represent an adverse but mitigated cumulative impact, and under CEQA would be reduced to be less than significant (Class II).

Impact PSU-2: Project construction and operation would increase the need for public services and facilities.

All Reasonably Foreseeable Cumulative Projects (Class I)

According to the analysis provided in Section D.14.3.3, neither construction nor operation of the Proposed PROJECT is anticipated to result in a substantial permanent increase to the local population. During construction, few workers are anticipated to temporarily relocate to the project area. The addition of up to 12 families to the project area during operation of the Proposed PROJECT would not substantially increase long-term demands for public services and facilities such that the construction of new or physically altered facilities would be required in order to maintain acceptable service ratios or response times. With the exception of fire services (discussed separately), the Proposed PROJECT's contribution to cumulative impacts on local public services and facilities would be minimized and less than significant under CEQA (Class III). Impacts would not be adverse.

While the construction of all reasonably foreseeable cumulative projects identified in Table F-2 would result in the temporary influx of construction workers to the project area, the demands placed on local public services and facilities would be short-term, intermittent, and would not require the construction and/or expansion of existing facilities. Increased construction vehicle and equipment presence would significantly increase the need for fire protection services during construction (see Section F.15 for discussion regarding cumulative impacts to fire protection services). Construction of the Proposed PROJECT would not result in long-term increases to the local population and the Proposed PROJECT would not have a substantial incremental effect on impacts to public services and facilities resulting from the construction of all reasonably foreseeable cumulative projects. Impacts would not be adverse and, under CEQA, would be less than significant (Class III).

The majority of the projects identified in Table F-2 (including the renewable wind energy projects, the Ketchum and Star Ranch Development, and small subdivision lot splits) would result in permanent increases to the local population. Although Ketchum Ranch and Star Ranch are proposing to develop project-serving amenities including parks and recreation centers, school sites (Ketchum Ranch only), and utility infrastructure, these developments (and all other County of San Diego developments identified) would rely on local and regional fire protection and police protection services. Since the Golden Acorn Casino is located on the Campo Indian Reservation it is assumed that the casino is served by tribal utility systems and protection services. Therefore, with all of the reasonably foreseeable cumulative projects built, the increase in permanent employees could substantially affect public services and facilities. However, a number of those positions would come from the existing population and there is no evidence to support the level of full-time employees that may move to the area or where they would necessarily relocate throughout the cumulative impact area. Furthermore, the contribution of 12 employees and their potential family members is a small contribution and unlikely to create a significant project-specific impact. Nonetheless, due to the size of a number of these projects and the existing rural nature of the area, an adverse cumulative impact may exist and, under CEQA, the impact would be significant and unmitigable (Class I).

Impact PSU-3: Sufficient water supplies are not available to serve the project from existing entitlements, and resources and new or expanded entitlements would be needed.

All Reasonably Foreseeable Cumulative Projects (Class I)

As stated in Section D.14.3.3, it is assumed that water used for construction purposes if not available from local groundwater resources would be trucked in from local sources including the Sweetwater Authority, Jacumba Community Services District, and the Live Oak Springs Water Company. Due to the temporary nature of construction and the temporary increase in demand placed on water districts to provide water for construction, needs of the Proposed PROJECT are

not anticipated to be excessive when compared with the regional water supply and the existing deliveries and capabilities of potential water sources/purveyors. Therefore, impacts would not be adverse and, under CEQA, would be considered less than significant (Class III).

Operation of the Proposed PROJECT would not generate a substantial need for water and water would both be trucked in to the site based on need as well as utilizing a groundwater well during operations to supply water to the O&M facility. Due to the low pumping rate anticipated for the O&M groundwater well, impacts to the local groundwater basin are anticipated to be minimal. Therefore, due to the relatively minor volumes of water anticipated to be required during operation of the Proposed PROJECT, impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Construction of all reasonably foreseeable cumulative projects, in conjunction with the Proposed PROJECT, would substantially increase the need for water in the project area. Construction of the Sunrise Powerlink and other renewable projects, as well as the Ketchum Ranch and Star Ranch residential projects, and the casino projects would all require a constant water source over the construction period to be utilized for dust suppression, foundation construction and various other construction activities. Water would either be supplied by individual groundwater wells or by local water purveyors/agencies. With implementation of Mitigation Measure HYD-3 (identification of sufficient water supply) impacts of the Proposed PROJECT would be monitored and ultimately, if nearby water wells were being impacted, the water would be imported from Sweetwater Authority, Jacumba Community Services District, and the Live Oak Springs Water Company. Due to the temporary increase in demand placed on water districts to provide water during construction of the Proposed PROJECT, the Proposed PROJECT's water needs would not result in an adverse cumulative impact and, under CEQA, the impact would be less than significant (Class II).

The Proposed PROJECT would use a relatively small amount of water during operations. Although the water usage anticipated for the Proposed PROJECT would be minor and was identified under CEQA as less than significant (Class III) and not adverse in Section D.14.3.3, when viewed in conjunction with the reasonably foreseeable cumulative projects identified in Table F-2, the Proposed PROJECT would incrementally contribute to a foreseeable cumulative impact regarding water supply. Several of the cumulative projects identified in Table F-2 (Ketchum and Star Ranch, for example) are proposing residential uses which could exacerbate local water supply and quality concerns, along with impacts from the Golden Acorn Casino, and La Posta Casino. Therefore, while operational water usage associated with the Proposed PROJECT and proposed wind projects would be relatively minor, the cumulative effect resulting from the development of large reasonably foreseeable projects such as the Ketchum Ranch and the map plan projects would be significant. Therefore, for purposes of this analysis it was

determined the Proposed PROJECT would represent an adverse cumulative impact and, under CEQA, would be significant and unmitigable (Class I).

Impact PSU-4: The applicable wastewater treatment provider that serves or may serve the project determines that adequate capacity to serve the project's projected demand (in addition to the provider's existing commitments) is not available.

All Reasonably Foreseeable Cumulative Projects (Class III)

With the exception of the Tule Wind Project, components of the Proposed PROJECT would not include facilities that would generate wastewater during project operations. The Tule Wind Project would install a self-contained septic system in the proposed O&M facility to be used by temporary and permanent O&M staff. The septic system would be serviced by a local septic service on an as-needed basis. Similar to the Tule Wind Project, the proposed wind projects are expected to generate a relatively minor amount of wastewater. Therefore, since the Proposed PROJECT would not generate wastewater which would be treated by a wastewater treatment provider, the Proposed PROJECT would not result in an adverse impact and impacts would be less than significant would occur under CEQA (Class III).

With the exception of the Tule Wind Project, components of the Proposed PROJECT would not include facilities that would generate wastewater during project operations. The Tule Wind Project would install a self-contained septic system in the proposed O&M facility to be used by temporary and permanent O&M staff. The three proposed wind projects are anticipated to use a similar septic tank. Therefore, since the Proposed PROJECT would not generate wastewater which would be treated by a wastewater treatment provider, the Proposed PROJECT would not result in an adverse cumulative impact and impacts would be less than significant under CEQA (Class III).

Impact PSU-5: The project would not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

All Reasonably Foreseeable Cumulative Projects (Class III)

As discussed in detail in Section D.14.3.3, construction of the Proposed PROJECT would generate construction wastes. However, the waste generated by construction is not anticipated to overwhelm the remaining capacity of local landfill facilities such that these facilities would not be able to serve existing demand. Wastes generated during operations would consist primarily of food packaging from O&M staff (Tule Wind Project) and packaging for new equipment installed during maintenance. Area landfills have sufficient capacity to accommodate the minor volume of waste expected to be generated during operation of the Proposed PROJECT. Therefore, impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Although exact volumes are unknown, construction of reasonably foreseeable projects would generate wastes which would be transported to a landfill for disposal. The same landfills may be used by waste haulers to dispose of wastes generated in the project area. Due to the temporary nature of construction and due to the remaining capacities of area landfills as identified in Section D.14.3.3, local and regional landfills are assumed to have sufficient remaining capacity to serve all reasonably foreseeable cumulative projects. Therefore, the Proposed PROJECT's construction impacts would not be adverse and, under CEQA, would be less than significant (Class III).

Operation of the Proposed PROJECT, as well as all reasonably foreseeable cumulative projects, would generate waste. Residential developments (e.g.; Ketchum Ranch and Star Ranch) identified in Table F-2 would continually generate waste throughout the life of the developments and likely beyond the anticipated closure dates of local and regional landfills identified in Section D.14.3.3. The cumulative effect resulting from the development of large reasonably foreseeable cumulative projects such as Ketchum Ranch, Star Ranch, the map projects, and the casino projects may create a significant amount of operational waste and a cumulative impact could potentially exist regarding landfill space. However, the operational wastes generated by the Proposed PROJECT, as well as from the three proposed wind projects and the Sunrise Powerlink project, would be relatively minor and less than significant. Thus, the contribution to this operational waste stream is not anticipated to represent an adverse cumulative impact and, under CEQA, would remain a less than significant impact regarding landfill capacity (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The shifting of the substation site would not alter any of the cumulative impact determinations as evaluated under the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative

projects. While this alternative would occur in close proximity to existing residences, and potential conflicts with existing overhead and underground utility systems could occur as a result of excavation and other construction activities, such a potential impact would not be sufficient to change the impacts as evaluated under the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to PSU-1 would actually be greater with this alternative component only since approximately 44 residences would be located within 1,000 feet of the alternative transmission line alignment, and each customer would experience an interruption in service while his/her connection is transferred from the existing to the new distribution facility. However, this increase in impacts, while adverse, would continue to be mitigated similar to the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to PSU-1 would actually be greater with this alternative component only since approximately 44 residences would be located within 1,000 feet of the alternative transmission line alignment, and each customer would experience an interruption in service while his/her connection is transferred from the existing to the new distribution facility. However, this increase in impacts, while adverse, would continue to be mitigated similar to the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to PSU-1 would actually be greater with this alternative component since undergrounding the gen-tie could result in greater potential for conflicts with existing overhead utilities. However, this increase in impacts, while adverse, would continue to be mitigated similar to the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to PSU-1 would actually be greater with this alternative component since undergrounding the gen-tie could result in greater potential for conflicts with existing overhead utilities. However, this increase in impacts, while adverse, would continue to be mitigated similar to the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5 Reduction in Turbines

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Impacts related to PSU-3 (use of water during construction) would be substantially reduced with the reduction of 62 wind turbines, as well as PSU-5 (decommissioning waste deposited at a landfill). However, this decrease in impacts would not alter any impact conclusions, and the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While Impact PSU-1 is identified as not being adverse and, under CEQA, less than significant (Class III), the existing ECO Substation and Tule Wind components would continue to be adverse but mitigated. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact PSU-1 through PSU-5 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While Impact PSU-1 is identified as not being adverse and, under CEQA, less than significant (Class III), the existing ECO Substation and Tule Wind components would continue to be adverse but mitigated. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives.

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. This alternative would reduce some of the impacts, such as the amount of water for construction and the amount of construction waste generated (PSU-3 and PSU-5), but overall cumulative impacts would remain due to the other project components. Cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.14 Fire and Fuels Management

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to fire and fuels management includes the Boulevard and La Posta Firesheds, as defined in Section D.15. The Proposed PROJECT occurs entirely within these two firesheds. Defined as regional landscapes that are delineated based on a number of fire-related features including fire history, fire regime, vegetation, topography, and potential wildfire behavior, firesheds serve as an appropriate geographic extent for evaluating cumulative impacts.

Existing Cumulative Conditions

Increase in Available Ignition Sources. Over 67% of the wildfires in San Diego County over the past 50 years (1960 to 2009) are human-ignited wildfires (CAL FIRE 2010). Human-caused ignitions are typically associated with transportation corridors, infrastructure, or originate at the wildland–urban interface (WUI), the ~~–a~~rea where houses and wildland vegetation coincide" (National Fire Plan). Development that occurs within or adjacent to wildland fuels, including commercial, residential, transportation, and infrastructure projects, increases potential ignition sources and the possibility of large, damaging wildfires. Such wildfires have negative effects on biological resources, air quality, and water quality (see Section D.15.1.1 for a detailed description of these effects).

Reduction in Firefighting Effectiveness. Both ground and aerial-based firefighting operations are significantly limited adjacent to transmission lines and other aboveground system components (turbines, collector lines). Avoidance of transmission lines and aboveground components within a 500-foot safety buffer greatly reduces the risk of electrical structure contact for firefighters but creates an indefensible corridor along the transmission line alignment where firefighting is tactically difficult or too dangerous. Avoidance of this corridor may negatively effect initial attack operations and sustained attack efforts and can exacerbate fire conditions by allowing uncontrolled spread through an area that is critical for containment. Furthermore, from a regional perspective, the proximity of transmission line projects or those with aboveground system components can create larger or contiguous avoidance corridors which negatively impact firefighting efforts across a wider geographical extent.

Introduction of Non-Native Plants and Their Contribution to Ignition Potential and Fire Spread Rate. Non-native plants may be spread by a variety of means, including animal, human and vehicle dispersal. Non-native plant establishment is most prevalent where competition is scarce and soil has been disturbed. Soil disturbance associated with development projects and the associated introduction of people and vehicles contributes to the spread of non-native plants. Whenever native vegetation is removed and soils are disturbed, the potential for non-native plant

establishment increases. Removal of native plants may allow aggressively establishing non-native plants to successfully germinate and become established, and once established, it is common for non-native plants to spread. Non-native plants, especially grass species, are more prone to ignite and carry wildfire due to earlier seasonal drying times, which is conducive to more rapid fire spread. Non-native vegetation typically burns more frequently than native vegetation, often resulting in the exclusion of native plants and the proliferation of the non-native plant species. Invasive annual grasses may also influence fire spread by changing the horizontal spacing characteristics of a native fuel bed. Naturally occurring separations in shrub-dominated vegetation types can become ~~"c~~onnected" via a fine, grassy fuel continuum between patchy, perennial shrubs, allowing wildfires to expand further into otherwise sparsely vegetated wildlands (Brooks 2008).

Alterations to Natural Fire Regime. Human activities have altered natural fire regimes, primarily through increased ignition sources, lowered fire frequencies, and fire suppression activities, although the introduction of non-native plant species and manipulation of vegetation for defensible space have also played a role. Alternative viewpoints are presented for the impact of fire suppression on natural fire regimes. Minnich (1983) argues that larger fires in Southern California are the result of fuel accumulation resulting from fire suppression activities, while Moritz (2004) argues that both young and old vegetation would burn during extreme weather conditions and that fire suppression policies do not promote the existence of large-scale conflagrations.

Increased ignition sources have the capability to alter historical fire regimes, a measure of the general pattern of fire frequency and severity typical to a particular area or type of landscape. For example, an average fire return interval for chaparral is approximately 50 to 70 years, while that for sage scrub communities is approximately 20 years (Westman 1982). Fire is a natural process in San Diego County and has played an important role shaping the distribution of various vegetation communities across the landscape. Furthermore, fire-adapted vegetation communities, namely chaparral and sage scrub, have developed reproduction techniques, such as basal sprouting, specific to repeated occurrence of wildfires. Alterations to natural or historic fire regimes, however, can have damaging effects on these vegetation communities and their ability to recover and reestablish following fire.

Repeated burning at short intervals resulting from human-influenced ignitions has resulted in type-conversion of chaparral and sage scrub shrublands to non-native grasslands in many portions of San Diego County. The implications of this effect lie in the propensity of herbaceous vegetation to ignite and carry fire. Short fire intervals can severely limit shrubland recovery as repeated fires destroy seedlings that establish after the first fire and increase the quantity of non-native grasses (Giessow and Zedler 1996). Consequently, heavy seed-production and sprouting

in chaparral and sage scrub habitats may impede their successful re-establishment if fire return intervals are too short. The resulting non-native grasslands dry out earlier in the season and are more easily ignited than native shrublands; therefore they increase the potential for fire occurrence and resulting higher spread rates while they decrease fire intensity (heat output) as compared with wildfires burning in shrubland communities. Higher fire frequencies (shorter intervals) expose communities and critical infrastructure to more fires, albeit less intense fires, over time, thus potentially increasing wildfire risk. However, that risk is more easily mitigated due to the lower intensity characteristics of grass fires.

Effect on Natural Resources. Increased wildfire frequency, intensity, and duration may have negative effects on natural resources including biological resources, air quality, and water quality. Although wildfires are a natural component to the San Diego County landscape, human-influenced alterations to natural wildfire regimes can exacerbate the negative effects of wildfire on sensitive biological resources, including conversion of native vegetation types, reduction in habitat value, loss of sensitive plant and animal species, wildlife displacement and mortality, and fragmentation of migration and movement corridors. Additionally, increased wildfires increase smoke and particulate matter exposure within the air basin, increase erosion and sedimentation potential, and alter surface water chemistry, temperature, and habitat suitability.

Cumulative Impact Analysis

Cumulative impacts associated with fire and fuels management would occur if Proposed PROJECT impacts exceed the significance criteria presented in Section D.15.3 when combined with other past, present and reasonably foreseeable future projects. In addition to the four impacts included in Section D.15.3.3, two additional impacts are included in this section as they would occur only as cumulative impacts associated with fire and fuels management. The two additional impacts, which are not addressed in Section D.15, include:

- **Impact FF-5:** The presence of the Project-related facilities would alter historic fire regimes
- **Impact FF-6:** Project-caused wildfires would adversely affect natural resources.

Impact FF-1: Construction and/or operation and maintenance and decommissioning activities would significantly increase the probability of a wildfire.

All Reasonably Foreseeable Cumulative Projects (Class I)

As illustrated in Section D.15.3.3, impacts associated with construction, operation, and maintenance of the Proposed PROJECT would be less than significant with implementation of required mitigation measures identified for the ECO Substation, Tule Wind, and ESJ Gen-Tie Projects. The Proposed PROJECT would present a number of potential ignition sources across an area that has been identified as having high fire hazard and where fires have occurred before and

would represent an adverse impact. Therefore, the Proposed PROJECT will implement Mitigation Measures FF-1, FF-2, FF-3, and FF-4. Implementation of Mitigation Measures FF-1 and FF-2 would provide a proactive plan for educating construction and ongoing maintenance personnel about the fire hazard risk associated with wind energy projects. These measures would also provide training for practices to reduce the likelihood of fire ignition and to quickly extinguish ignitions that may occur. Furthermore, they provide for coordination with CAL FIRE and the local fire authority and restrict construction activities during the days when fire spread would be most likely (Red Flag Warning periods). Additionally, Mitigation Measures FF-3 and FF-4 would provide for better prepared and equipped responding fire fighting forces and provide additional fire prevention, protection and suppression capabilities to reduce the increased probability of a wildfire during project construction or maintenance. This mitigation would ensure related fire safety impacts associated with the Proposed PROJECT increasing the risk of wildfire would be less than significant under CEQA (Class II) and would represent an adverse, but mitigated impact.

Increased human presence within the Boulevard and La Posta Firesheds associated with other reasonably foreseeable cumulative projects would contribute to increased probability of human-caused wildfire ignitions and would be cumulatively considerable. Reasonably foreseeable projects would include intermittent human presence (portions of wind energy and transmission line projects, cell towers, radio antennas, and other public facility/utility projects) and permanent human presence (residential developments, commercial developments, mining operations, landfills). Regardless of project type, it is expected that human presence within the Boulevard and La Posta Firesheds would increase, even if concentrations of human activity is geographically or temporarily constrained. As such, Proposed PROJECT impacts, when considered in combination with other reasonably foreseeable cumulative projects would create a significant and unmitigable cumulative impact (Class I) under CEQA. Cumulative impacts would remain adverse.

Impact FF-2: Presence of project facilities including overhead transmission lines would increase the probability of a wildfire.

All Reasonably Foreseeable Cumulative Projects (Class I)

As discussed in Section D.15.3.3, the development of the Proposed PROJECT would result in the long-term presence of facilities and features that have the potential and history of producing ignitions through a variety of equipment failures or outside sources acting on the facilities. While Mitigation Measures FF-1 through FF-5 would reduce the potential for wildfire ignitions or fire spread by requiring intensive pre-planning, fire safety procedures, customized operation and maintenance restrictions and requirements, and customized fire detection warning and suppression systems (as technology made these systems available in a tested and accepted

format), among other fire safety features; the Proposed PROJECT's likelihood of increasing the occurrences of wildfires is considered significant and unmitigable (Class I) under CEQA. Therefore, despite mitigation, impacts would remain adverse.

The presence of reasonably foreseeable cumulative projects within the Boulevard and La Posta Firesheds increases the probability of a wildfire and would be cumulatively considerable. Increases in wildfire probability can be attributed to the aboveground components of wind energy projects. Other project types within the geographic extent of this analysis, including cell towers, radio antennas, residential developments, commercial developments, mining operations, and landfills, increase the probability of wildfire, primarily by increasing human-caused wildfire ignitions. Presence of the Sunrise Powerlink Transmission Line project within the Boulevard and La Posta Firesheds also increases wildfire probability through human- and facility-related ignition sources. Based on expected increases in ignition sources within the Boulevard and La Posta Firesheds, a significant cumulative impact may exist and the Proposed PROJECT would contribute to that impact and be cumulatively considerable. Therefore, the Proposed PROJECT's impacts under CEQA, when combined with the proposed cumulative wind energy projects, are considered significant and unmitigable cumulative impacts (Class I). Cumulative impacts would remain adverse despite mitigation.

Impact FF-3: Presence of the overhead transmission line/facilities would reduce the effectiveness of firefighting.

All Reasonably Foreseeable Cumulative Projects (Class I)

The analysis determined under Section D.15.3.3, that the Proposed PROJECT's various electrical generation, transmission, and distribution components would result in the presence of horizontal and vertical structures across a relatively large area of east San Diego County and these horizontal and vertical features can affect the ability of responding firefighters, from effectively and efficiently performing their duties. The transmission lines and other aboveground system components associated with the Proposed PROJECT and the Campo, Manzanita, and Jordan wind energy project components may result in significant conflicts with wildfire containment. Although Mitigation Measures would provide for fire protection planning, coordination and training for local fire personnel, and funding for local firesafe councils, the constraints associated with transmission lines and aboveground system components would reduce the effectiveness of both ground-based and aerial firefighting capabilities over the life of the project. Based on the specialized training and equipment necessary to effectively fight fires related to electrical transmission lines, conductors, transformers, wind turbines, substations, and related components, and the obstacles that these facilities present across a naturally vegetated wildland landscape and as airborne complications, it was determined the Proposed PROJECT's direct impacts are considered significant and unmitigable (Class I), despite the incorporation of

Mitigation Measures FF-2, FF-3, FF-5, and FF-6. Impacts would remain adverse despite the incorporation of mitigation.

Future development of the southeastern San Diego County region would place numerous urban (large-scale residential developments, hotels and parking structures) and industrial (Sunrise Powerlink, future wind farms, cell towers) structures and features within the Boulevard and La Posta Firesheds. Overhead facilities associated with industrial projects, including turbines, collector lines, and transmission lines, would create a network of avoidance corridors within this region of San Diego County. When combined with the impacts of the Proposed PROJECT (identified as significant and unmitigable in Section D.15 Fire and Fuels Management) these projects would further reduce the effectiveness of firefighting efforts in the area. Therefore, the Proposed PROJECT's impacts under CEQA would be cumulatively considerable and the cumulative impact of the Proposed PROJECT coupled with the reasonably foreseeable cumulative projects in the area would create a cumulatively significant and unmitigable impact (Class I). Cumulative impacts would remain adverse.

Impact FF-4: Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread.

All Reasonably Foreseeable Cumulative Projects (Class I)

As discussed in Section D.15.3.3, the Proposed PROJECT would include substantial ground disturbance through the removal of existing vegetation for purposes of constructing the proposed facilities, resulting in the establishment of non-native species that can spread and result in higher likelihood of ignition and fire spread. The project includes two customized plans for each of the three project components that comprise the Proposed PROJECT that include a focus on controlling the establishment and spread of vegetation in the disturbed areas. The areas would be revegetated with native plants to prohibit invasive species from establishing and spreading. Combined, these procedures would reduce the significant impact for increasing the non-native plants in the Proposed PROJECT area, which would not result in an adverse impact, and under CEQA impacts related to the increased probability for wildfires would be less than significant (Class II).

Future development within the Boulevard and La Posta Firesheds in southeastern San Diego County region would include numerous urban (large-scale residential developments, hotels and parking structures) and industrial (Sunrise Powerlink, potential future wind farms, cell towers) projects. It is expected that non-native species introduction related to these projects would result from ground disturbance activities (construction) and increased human presence on the landscape. Non-native or invasive plant species spread into this area is expected via permanent (e.g., residential) and intermittent (e.g., facility maintenance/monitoring activity) human

presence. It is expected that the introduction of non-native and/or invasive plant species associated with these cumulative projects, when combined with the impacts of the Proposed PROJECT, would serve to exacerbate fire behavior in the region and create an adverse impact. Therefore, under CEQA the Proposed PROJECT's impacts would be cumulatively considerable and would represent a significant and unmitigable cumulative impact (Class I).

Impact FF-5: The presence of the Project-related facilities would alter historic fire regimes.

All Reasonably Foreseeable Cumulative Projects (Class I)

Increases in human-caused wildfire ignition sources throughout San Diego County have altered natural fire regimes. Such ignition sources are primarily associated with residential development in the WUI, transportation networks, and infrastructure components, and have been exacerbated by the regions seasonally dry climate and the presence of Santa Ana winds. Historical fire regimes, a measure of the general pattern of fire frequency and severity typical to a particular area or type of landscape, result in fire return intervals for chaparral of approximately 50 to 70 years, and sage scrub communities of approximately 20 years. Alterations to natural fire regimes, including increases in wildfire frequency, intensity, and duration, can have negative effects on habitats and individual plant and wildlife species. Additionally, human populations can be negatively affected through increased exposure to wildland fire threats. Changes in fire regimes take place over a long time period and over a large geographical area. The Proposed PROJECT would incrementally contribute to an ongoing fire regime change in this portion of San Diego County by increasing potential ignition sources. The incremental effects of the Proposed PROJECT, including the Campo, Manzanita, and Jordan wind energy projects, would represent an adverse cumulative impact. This impact under CEQA would represent a significant and unmitigable cumulative impact (Class I).

Future development within the Boulevard and La Posta Firesheds in southeastern San Diego County region would include numerous urban (large-scale residential developments, hotels and parking structures) and industrial (Sunrise Powerlink, future wind farms, cell towers) projects as identified in Table F-2. It is expected that non-native species introduction related to these projects would result from ground disturbance activities (construction) and increased human presence on the landscape. Non-native or invasive plant species spread into this area is expected via permanent (e.g., residential) and intermittent (e.g., facility maintenance/monitoring activity) human presence. It is expected that the introduction of non-native and/or invasive plant species associated with these cumulative projects, when combined with the impacts of the Proposed PROJECT, would serve to exacerbate fire behavior in the region. Therefore, the impacts resulting from the Proposed PROJECT coupled with the reasonably foreseeable cumulative projects would represent an adverse cumulative impact. This impact under CEQA would be a significant and unmitigable cumulative impact (Class I).

Impact FF-6: Project-caused wildfires would adversely affect natural resources.

All Reasonably Foreseeable Cumulative Projects (Class I)

An increase in the frequency, intensity, and duration of wildfires in San Diego County can have negative effects on natural resources including biological resources, air quality, and water quality. Although the native vegetation types present in the Proposed PROJECT area are adapted to wildfire, alterations to natural fire regimes caused by foreseeable cumulative projects can have damaging effects. Grassland communities, usually non-native grasses, would readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities would typically re-sprout or germinate from seed, and, absent fire or other disturbances, would eventually return to pre-fire conditions. However, because shrub-dominated vegetation types in southeastern San Diego County have the potential for conversion to grassland following fire, wildfire effectively has the ability to type-convert chaparral and sage scrub habitats. Additionally, special-status plant species present within these shrub-dominated plant communities can be negatively affected with altered fire regimes.

Wildfires also have the ability to injure or kill wild animals. For example, birds and larger mammals can flee wildfire and small mammals and reptiles can seek refuge in subterranean burrows. However, habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. For example, fires can result in short-term increases in vegetation productivity, availability and nutrient content of forage and browse, and these increases can lead to increases in herbivore populations. However, the short-term increases in vegetation typically cannot support larger animal populations. Fires also have the ability to alter vegetation structures which function as shelter, resulting in negative impacts to animal habitat and possibly special-status animal species.

These potentially significant impacts to biological resources would be more severe with increases in wildfire frequency, intensity, and duration. Increased ignition sources associated with the Proposed PROJECT, as well as the Campo, Manzanita, and Jordan wind energy projects, would result in an incremental increase in fire frequency resulting in potentially significant cumulative impacts to biological resources. The incremental effects of the Proposed PROJECT would represent an adverse cumulative impact and, under CEQA, would represent a significant and unmitigable cumulative impact (Class I).

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons and other constituent materials are all present in wildlife smoke. However, particulate matter is of primary concern when considering the relatively short-term (hours to weeks) public exposure associated with wildfires. The potential for adverse air quality conditions resulting from higher levels of

particulate matter increases with increased wildfire duration and frequency. In addition, longer burning periods increase the number of days of poor air quality in the air basin and negatively affect air quality and visibility. Large quantities of pollutants can also be released by wildland fires over a relatively short period of time and air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited. Regional wind patterns also affect the impact of wildfire smoke on air quality. For example, fires burning under minimal wind conditions in remote portions of southeastern San Diego County may not have a significant effect on air quality within larger urban centers to the west. Conversely, wildfires burning under Santa Ana wind conditions would blow smoke westward towards these larger urban centers closer to the coast resulting in a more significant impact.

In addition to the impacts associated with the release of particulate matter, wildfires also release significant quantities of carbon dioxide. Resulting from a release of atmospheric carbon stored in biomass (vegetation), carbon dioxide is a significant contributor to the greenhouse gas (GHG) effect. Wildfires in shrubland vegetation types typically consume the entire aboveground portions of the plant, resulting in a potentially large short-term carbon dioxide release. Conversely, the sequestration (uptake) of atmospheric carbon occurs over a much longer time period in these vegetation types (decades). As a result, increases in wildfire frequency associated with the Proposed PROJECT would result in a net increase in short-term carbon emissions over the life of the projects. It is expected that the construction, operation, and maintenance activities associated with foreseeable cumulative projects in the southeastern portion of San Diego County would increase fire frequency through increased ignition sources. The incremental effects of the Proposed PROJECT would represent an adverse cumulative impact and, under CEQA, would be a significant and unmitigable cumulative impact (Class I).

Fire can impact water quality by increasing erosion and sedimentation potential in areas where vegetation has been consumed by fire, resulting in increased water temperatures. Water chemistry can also be altered through the introduction of pollutants and chemical constituents, including ash and fire retardant chemicals used during fire-fighting activities. These potentially significant impacts to water quality would be more severe with increases in wildfire frequency, intensity, and duration. Proposed and planned wind energy projects would each incrementally increase the frequency of fires resulting in potentially significant impacts to water quality.

Due to varying system components, distribution and transmission lines of varying voltages are susceptible to different wildfire-causing events, including transformer or capacitor failure, vegetation and powerline conflicts, arcing, and maintenance activities. Additionally, although transmission and distribution system structures are designed to retain their structural integrity in high wind environments, high winds can (in rare cases) blow over high voltage transmission structures. Distribution line ignitions caused by high winds were responsible for four of the

largest fires recorded in California between 1923 and 2007, two of which occurred within SDG&E territory. The Proposed PROJECT would, therefore, incrementally contribute to an increased risk of wildfire ignition. Even a small increase in ignitions resulting from the Proposed PROJECT could result in a catastrophic wildfire event, especially if the ignition occurred during a Santa Ana wind event. The Mitigation Measures associated with fire and fuels management presented in Section D.15.3.3 would reduce project-related ignitions, although the impacts to biological resources, air quality, and water quality would be cumulatively considerable and when evaluated in the context of other foreseeable cumulative projects would represent an adverse cumulative impact. Under CEQA, this cumulative impact would remain significant and unmitigable (Class I).

Future development within the Boulevard and La Posta Firesheds in southeastern San Diego County include numerous public facility/utility, commercial, and residential projects. Construction of these projects in wildland or WUI areas has the potential of increasing wildfire probability in the area, primarily through increases in human presence and facility-related ignition sources. All reasonably foreseeable cumulative projects would increase the potential for human-caused wildfire throughout the life of the projects. As such, the Proposed PROJECT's incremental contribution to increased probability of wildfire ignitions is considered an adverse cumulative impact. Under CEQA, this cumulative impact would remain significant and unmitigable (Class I).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects.

While undergrounding parts of the transmission line would reduce impacts related to Impact FF-2 and FF-3, these impacts would remain adverse. Furthermore, impacts related to Impact FF-4 would increase ground disturbance and result in a higher probability of non-native plant species. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Under this alternative there would be some benefits related to fire by removing the existing wood poles and replacing them with steel poles, along with the reduction in the likelihood of non-native plant establishment for parts of the transmission line. However, these benefits would not be sufficient to substantially alter the impact determinations. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While undergrounding parts of the transmission line would reduce impacts related to Impact FF-2 and FF-3, these impacts would remain adverse. Furthermore, impacts related to Impact FF-4 would increase ground disturbance and result in a higher probability of non-native plant species. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Locating the collector substation and O&M Facility on Rough Acres Ranch would reduce the length of the 138 kV transmission line. However, turbines or overhead collector lines would remain, thereby providing improved potential access to some remote areas; as well as disadvantages related to the presence of turbines and overhead transmission lines that would impact firefighting operations and increase risk to firefighters and the potential for delaying initial attack capabilities. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impacts FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Locating the collector substation O&M Facility on Rough Acres Ranch, would reduce the length of the 138 kV transmission line. However, turbines and overhead collector lines would remain, thereby providing improved potential access to some remote areas; as well as disadvantages related to the presence of turbines and overhead transmission lines that would impact firefighting operations and increase risk to firefighters and the potential for delaying initial attack capabilities. While undergrounding parts of the transmission line would reduce impacts related to Impacts FF-2 and FF-3, these impacts would remain adverse. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Locating the collector substation and O&M Facility on Rough Acres Ranch would reduce the

length of the 138 kV line. However, turbines and the overhead collector lines would remain, thereby providing improved potential access to some remote areas; as well as disadvantages related to the presence of turbines and overhead transmission lines that would impact firefighting operations and increase risk to firefighters and the potential for delaying initial attack capabilities. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Locating the collector substation and O&M Facility on Rough Acres Ranch would reduce the length of the 138 kV line. However, turbines would remain, thereby providing improved potential access to some remote areas; as well as disadvantages related to the presence of turbines and overhead transmission lines that would impact firefighting operations and increase risk to firefighters and the potential for delaying initial attack capabilities. As discussed previously, Impacts FF-2 and FF-3 were found to be individually adverse and under CEQA represented a significant and unmitigable impact (Class I), and all impacts (FF-1 through FF-6) represented an adverse cumulative impact that was significant and unmitigable (Class I) under CEQA when considered with the reasonably foreseeable cumulative projects. The changes from this alternative would not alter any of these cumulative impact determinations.

Tule Wind Alternative 5, Reduction in Turbines

Despite the reduction of 62 turbines, cumulative impacts related to Impact FF-1 through FF-6 would be similar to those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. Wind turbines would continue to be built providing access to remote areas, as well as inherent risks with the construction and operation of turbines and overhead transmission lines. The changes from this alternative would not alter any of these cumulative impact determinations.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact FF-1 through FF-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While the undergrounding of transmission lines included in this alternative eliminates overhead transmission lines as a source of potential wildfire ignitions, as well as interference with transmission lines during firefighting activities, the other project components under the Proposed PROJECT would remain similar. Therefore, overall the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts when the entire Proposed PROJECT is considered with the reasonably foreseeable cumulative projects.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact FF-1 through FF-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact FF-1 through FF-6 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While the undergrounding of transmission lines included in this alternative eliminates overhead transmission lines as a source of potential wildfire ignitions, as well as interference with transmission lines during firefighting activities, the other project components under the Proposed PROJECT would remain similar. Therefore, overall the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts when the entire Proposed PROJECT is considered with the reasonably foreseeable cumulative projects.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built and the existing conditions on the project site would remain. This alternative would remove a significant source of ignitions and obstruction to firefighting effectiveness and operations; therefore, its removal from the project would significantly reduce the likelihood of wildfires. Additionally, removal of the wind turbines from the landscape would result in substantially reduced obstructions for firefighting response and would avoid a large area of disturbance that could lead to establishment of non-native, fire-prone plant species. While this reduction would certainly lessen the overall impacts related to fire and fuels for all impacts, since the other components would remain, the cumulative impacts, when considered with the reasonably foreseeable cumulative impacts, are anticipated to remain similar as evaluated in the Proposed PROJECT. The ECO Substation component of the Proposed PROJECT would likely support similar cumulative impact conclusions when considered with the reasonably foreseeable cumulative impacts. Therefore, cumulative impacts would remain similar under this alternative.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.15 Social and Economic Conditions

Geographic Extent

The geographic extent and scope of the cumulative impact discussion as it relates to social and economic conditions is fairly inclusive and would include most of the cumulative project area as identified within Table F-2 and Figure F-1 and the resulting cumulative projects therein. The reason for the large cumulative area is the unique nature of such social and economic conditions and factors of the Proposed PROJECT and how they may relate to the overall cumulative area. Most public services and utilities are provided by local jurisdictions as well as providing the bulk of the local work force for these projects, which justifies the geographic extent limited to eastern San Diego and Imperial counties and the impacted cities within that region. In particular, the Mountain Empire census county division (CCD) area (or the Mountain Empire subregion) contains the Proposed PROJECT and the area most impacted by any project-specific and cumulative socioeconomic impacts. Thus, the Mountain Empire subregion data has been used as the primary geographic area for compiling demographic and socioeconomic data. Regardless, as part of the cumulative analysis, the project must still work in concert with other projects to create a cumulative impact; if no such relationship exists then the Proposed PROJECT would not be deemed to create a cumulatively considerable impact.

Existing Cumulative Conditions

Section D.16.1 covers in detail the existing socioeconomic conditions within the impacted area. The Proposed PROJECT and the bulk of the cumulative project area is located near the unincorporated communities of Jacumba and Boulevard in the rural Mountain Empire subregion of southeastern San Diego County.

The Mountain Empire subregion is characterized by its rural character, vast open spaces, natural resources, and scenic vistas. The area is defined by large-lot single-family residential development outside the community areas, limited commercial development, and undeveloped lands. The area holds roughly 6,354 residents and is sparsely populated compared with the closest urban areas in the area, El Cajon and El Centro. These cities are located approximately 50 miles from the impacted area. While rental vacancy rates for the Mountain Empire subregion are unknown, the rental vacancy rate for urban areas of El Cajon and El Centro would likely be selected by temporary construction workers for housing during construction due to increased rental options. Residential development in the Mountain Empire subregion is typified by single-family homes on large lots. In addition to housing units, there are three motels in the general area, accessible from I-8.

The Mountain Empire subregion consists of a total employed population of 2,177. Within this population, the education and health industry accounts for 18.5% of the employment base,

followed by construction at 13%. Other important employment industries within the Mountain Empire subregion include public administration, arts/entertainment/recreation, and manufacturing. Many residents in the Boulevard community telecommute for work; work for local educational facilities, law enforcement and border security agencies, at local tribal gaming, entertainment, and other enterprises; and/or operate small home-based cottage, art related, bed and breakfast lodgings, or livestock and produce businesses.

Between 1990 and 2007, per capita income growth in San Diego County has outpaced the average per capita income growth experienced across the State of California. However, the urban areas closest to the project area have been hit hard by the recession. The 2009 unemployment data for the cities of El Cajon and El Centro show that the unemployment rates in those cities exceed County of San Diego and State of California rates. It does not appear that unemployment rates have stabilized in the vicinity of the project area and in the State of California as a whole. Compared with the recession of 1990–1992, excluding the City of El Centro, the recent recession appears to have had a more severe effect because unemployment rates have peaked at higher levels.

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.16.3.3 and/or create a cumulatively considerable impact to social and economic conditions due to the increase in impacts caused by the Proposed PROJECT.

Impact SOC-1: The project would displace substantial numbers of people or existing housing.

All Reasonably Foreseeable Cumulative Projects (Class III)

As described under Section D.16.3.3, the Proposed PROJECT would result in the displacement of one residence; however, this impact would be less than significant given the availability of housing in the Mountain Empire subregion. Although construction of the Proposed PROJECT would temporarily impact traffic along local roadways, no homes would need to be removed or relocated other than the one residence located on the Boulevard Substation rebuild site which is considered to not represent an adverse impact and, under CEQA, would be a less-than-significant impact (Class III). Furthermore, construction activities associated with the Proposed PROJECT would require the provision of temporary housing for construction workers. This housing would be available from existing hotels or motels, short-term rental of homes and apartments, or potentially trailers in trailer parks. Since both temporary and permanent housing demand would be accommodated by the current housing available and would not require construction of new units, no adverse impacts would result and, under CEQA, a significant impact would not occur (No Impact).

The development of the reasonably foreseeable cumulative projects are not anticipated to create a significant impact on housing or the displacement of large numbers of people within the cumulative project area. The overall cumulative project area is rural in nature and does not consist of high density population cores where housing would be dense enough to cause such an impact due to the construction of these projects. Similar to the Proposed PROJECT, the bulk of the workforce would come from the local area and any temporary employees would find suitable short-term leasing options in the area, or within the larger urban areas of El Centro or El Cajon. Moreover, many of the projects listed from Table F-2 include the increase of residential units and housing development options. The Proposed PROJECT would not have the potential to combine with other impacts from the reasonably foreseeable cumulative projects to result in a cumulatively considerable impact. No adverse cumulative impacts are anticipated and, under CEQA, impacts are less than significant (Class III).

Impact SOC-2: Project construction and/or presence would cause a change in revenue for businesses, tribes, or governments and would cause a substantial change in local employment

All Reasonably Foreseeable Cumulative Projects

As indicated in Section D.16.3.3, the Proposed PROJECT would employ approximately 214 construction workers over a 2-year period, and the ESJ Gen-Tie Project would employ approximately 20 to 25 workers over a 6-month period. Employment of construction personnel would be beneficial to local businesses and the regional economy through increased expenditure of wages for goods and services. The Proposed PROJECT would also result in the employment of up to 12 permanent employees. Additionally, the Proposed PROJECT would result in local construction expenditures of approximately $39.6 million, which would substantially benefit the local economy. Specific figures related to the Campo, Manzanita, and Jordan wind energy projects are not known at this time. Less than significant impacts to agricultural operations and other business operations resulting from the construction and presence of the Proposed PROJECT would be offset by the economic benefits resulting from project construction and operation; therefore, the project would be beneficial.

The larger commercial developments in particular such as the Sunrise Powerlink Transmission Line Project, Golden Acorn Casino, La Posta Casino, the Boulevard and Campo Border Patrol Stations, La Posta Mountain Warfare Training Facility, Ketchum Ranch, and Star Ranch developments coupled with the Proposed PROJECT, including the Campo, Manzanita, and Jordan wind energy projects would increase local revenue and jobs to the impacted area. This increase in revenue and jobs would not offset a significant loss elsewhere in the area or region. Therefore, the Proposed PROJECT would not interact with the reasonably foreseeable cumulative projects to cause a significant negative change in revenue for businesses, tribes, or

governments or a substantial loss in local employment, but would actually increase local revenues and employment in the area. No adverse cumulative impacts would result.

Impact SOC-3: Project construction and operation would cause a decrease in property values.

All Reasonably Foreseeable Cumulative Projects

The analysis in Section D.16.3.3 concluded that insufficient evidence exists to illustrate that wind projects, similar to both the Proposed PROJECT and the Campo, Manzanita, and Jordan wind energy projects, would have any substantial negative impacts on housing and property values due to either visual impacts associated with transmission lines, substations, or the wind turbines. A report by Iberdrola Renewables, Inc. completed a literature review to address specific impacts of wind projects on property values and concluded that insufficient data or evidence existed to suggest that property values near wind developments are affected by wind facilities, and if these impacts do exist, they are either too small and/or too infrequent to result in any widespread and consistent statistically observable impact (Iberdrola Renewables, Inc. 2010).

The Proposed PROJECT, including the associated wind project components, and the Sunrise Powerlink Transmission Line Project would not be adverse to housing values. Furthermore, the bulk of the reasonably foreseeable cumulative projects consist of cell tower and small residential developments, none of which would significantly decrease home values within the cumulative project area. The larger residential developments such as the Ketchum and Star Ranch projects, while increasing the housing stock, also tend to have either a benign or positive benefit on the overall housing values within the area influenced by such developments. The larger scale commercial developments, particularly the Golden Acorn Casino, and La Posta Casino would have the greater potential to impact home values in the cumulative impact area. Regardless, the impacts associated with the Proposed PROJECT would not create impacts that negatively affect housing prices. The Proposed PROJECT is distinct from these other commercial developments and would not interact with such projects to create an adverse cumulative impact.

Impact SOC-4: Property tax revenues and/or fees from project presence would substantially benefit public agencies.

All Reasonably Foreseeable Cumulative Projects

Similar to the discussion above under Impact SOC-1, the Proposed PROJECT, including the Camp, Manzanita, and Jordan wind energy projects, would stimulate local businesses and the fiscal impacts created because the projects would add to the County tax base throughout the life of the projects. For example, the Proposed PROJECT would contribute to personal income of landowners by providing additional income received from royalty payments through set lease agreements between the individual landowners and developers. These community benefits from

increased income would be widespread throughout the County and surrounding region. Property tax revenues in the Mountain Empire subregion are expected to increase as a result of the projects and dispersion of this property tax revenue would result in a beneficial impact to the local economy because of tax revenue spending. Therefore, the Proposed PROJECT would not result in an adverse change in public resource revenue, nor would it preclude or limit the operations of any public agency or result in a loss of revenue to any public agencies. Potential changes to public agency revenues would be positive and are considered beneficial. No adverse cumulative impacts would occur.

The same or similar reasoning would also apply to all reasonably foreseeable cumulative projects. The development would increase property tax revenue, provide jobs, and increase spending in the local cumulative area, all of which would have a net cumulative benefit on public agency revenues and would not represent an adverse change in public resource revenue. No adverse cumulative impacts would occur.

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact related to property values by removing the visual impacts related to transmission lines. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative

projects. While the alternative would relocate the transmission line route out of an active agricultural area, therefore reducing any impacts to revenues from agricultural operations, this change would not alter the overall cumulative impact determinations for the Proposed PROJECT. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact related to property values by removing the visual impacts related to transmission lines. The alternative would also relocate the transmission line route out of an active agricultural area, therefore reducing any impacts to revenues from agricultural operations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact SOC-1 through SOC-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact related to property values by removing the visual impacts related to transmission lines. However, this change will not alter any cumulative impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact SOC-1 through SOC-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact related to property values by removing the visual impacts related to transmission lines. However, this change will not alter any cumulative impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would lessen the impacts due to reduced construction requirements for these 62 wind turbines, this change would not be sufficient to alter the overall impact determinations. The alternative would likely reduce the number of construction workers needed and a reduction in increased expenditure of wages for goods and services; however, this change would not be sufficient to alter the cumulative impact determinations. Additionally, project-related revenues for BLM, California State Lands Commission (CSLC), and the County of San Diego would be reduced due to the removal of 27 turbines located on BLM land, 7 turbines located on CSLC land, and 11 turbines located on County of San Diego land. Impacts to the revenues of these entities, as well as impacts to other business operations resulting from the construction and presence of this alternative, would be offset by the economic benefits resulting from project construction, operation, and decommissioning. Therefore, the project would be beneficial under NEPA, and the cumulative impacts would remain similar to those discussed under the Proposed PROJECT

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact related to property values by removing the visual impacts related to transmission lines in this area. Furthermore, impacts to revenue from agricultural operations and other business operations would not occur, aside from minor disruptions to recreational activities during construction activities. However, this change will not alter any cumulative impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact SOC-1 through SOC-4 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. For Impact SOC-3, this alternative would actually further decrease the already less-than-adverse impact by removing the visual impacts related to transmission lines in this area. This change will not alter any cumulative impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist. Therefore, while localized expenditures of $39.6 million would be foregone, and local jurisdictions would not receive tax revenues, and no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Nonetheless, the other components would continue to provide employment and revenue opportunities. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines, and would continue to bring in revenue and jobs to the impacted area, along with physical impacts under this alternative. The tribe would be particularly impacted since this alternative would remove a funding source to the tribe as it relates to the Tule Wind component. Regardless, the cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Nonetheless, the other components would continue to provide employment and revenue opportunities. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

F.3.16 Environmental Justice

Geographic Extent

Similar to the project-specific discussion under Section D.17.3.3, the cumulative study area for the environmental justice encompasses the Mountain Empire CCD as the appropriate geographic extent of analysis. This area contains the Proposed PROJECT as well as neighboring communities which may be impacted by both the Proposed PROJECT as well as the closest

neighboring cumulative projects that may have the potential to interact with the Proposed PROJECT in order to create a cumulatively considerable significant impact.

Existing Cumulative Conditions

As discussed within Section D.17.3.1, of the four block groups contained within the Mountain Empire CCD, two make up the Proposed PROJECT. Areas of high-minority populations and their locations are identified as those block groups having a total minority population percentage within the highest one-third (33% in terms of minority percentage) of all block groups in the Mountain Empire CCD. These groups are classified as high-minority block groups. Those block groups having a total minority population percentage within the lowest one-third (33%) of the block groups in the Mountain Empire CCD are classified as low-minority block groups. Those block groups having a total minority population percentage that is greater than the upper bound of minority population percentage for the low-minority block groups but less than the lower bound for the high-minority block groups are classified as medium-minority block groups.

Areas of high poverty and their locations are identified as those census block groups having a poverty rate that is in the highest one-third (33%) of the block groups in the Mountain Empire CCD. These block groups are classified as high-poverty block groups. Those block groups having a poverty rate in the lowest one-third (33%) of the block groups in the CCD are classified as low-poverty block groups. Those block groups having a poverty rate that is greater than the upper bound for the low-poverty block groups but less than the lower bound of the high-poverty block groups are classified as medium-poverty block groups. Thus, all of the block groups in the CCD are divided into the highest one-third, middle one-third, and the lowest one-third in terms of poverty rates.

Within the Mountain Empire CCD, one block was found to have a high poverty level and medium minority classification; one block was found to have a medium poverty level and low minority classification; and two blocks were found to have a low poverty level with a high minority classification for one block and the other with a medium minority classification (see Table D.17-2).

Cumulative Impact Analysis

A cumulative impact would result if Proposed PROJECT impacts, when combined with other past, present, and future projects would exceed the significance criteria presented in Section D.17.3.3 and/or create a cumulatively considerable impact to environmental justice due to the increase in impacts caused by the Proposed PROJECT.

Impact EJ-1: Construction and operation would result in disproportionately high or adverse effects on minority or low-income populations.

All Reasonably Foreseeable Cumulative Projects (No Impact)

As indicated in Section D.17.3.3, the Proposed PROJECT would have no impacts with respect to creating disproportionately high or adverse effects on minority or low-income populations. The Proposed PROJECT would have no impacts with respect to creating disproportionately high or adverse effects on minority or low-income populations. As the number of high-poverty block groups within the study area is equal to the number of low-poverty block groups, and because high-poverty and low-poverty block groups would be affected equally, there would be no disproportionate impacts to high-minority or high-poverty populations. Therefore, the Proposed PROJECT would not have the potential to combine with other impacts from all reasonably foreseeable cumulative projects to result in a cumulatively considerable impact under CEQA (No Impact). No adverse cumulative impacts would occur.

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ECO Partial Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

ESJ Gen-Tie Underground Alternative Alignment

Cumulative impacts related to Impact EJ-1 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new adverse cumulative impacts. No Impact would continue to occur.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built, and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area, along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.3.17 Climate Change

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to climate change primarily involves the southeastern corner of the San Diego Air Basin (San Diego County) similar to the analysis under air quality. However, as GHG emissions and climate change are a global issue, any approved project regardless of its location has the potential to contribute to a cumulatively global accumulation of GHG emissions (as opposed to the relatively temporary nature of pollutants related to air quality). In theory, the geographic extent of the cumulative contributions to GHGs and climate change is worldwide. However, lead agencies are only able

to regulate GHG emissions within their respective jurisdictions; therefore, the geographic extent is primarily contingent upon the area over which lead agencies have authority. As such, the geographic extent for the purposes of the Proposed PROJECT is the southeastern corner of the San Diego Air Basin.

Existing Cumulative Conditions

The primary contributors to GHG emissions in California relating to existing cumulative climate change conditions include transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. According to the 2004 GHG inventory data compiled by CARB for the California 1990 GHG emissions inventory, California emitted emissions of 484 million metric tons of carbon dioxide equivalent ($MMTCO_2E$), including emissions resulting from out-of-state electrical generation (CARB 2007).

Refer to Section D.18, Climate Change, for more information on existing conditions related to climate change.

Cumulative Impact Analysis

Impact GHG-1: Project construction would cause a net increase of greenhouse gas emissions.

All Reasonably Foreseeable Cumulative Projects (Class I)

As discussed under Section D.18.3.3, the construction-related GHG emissions will be less than the NEPA indicator of 25,000 metric tons of carbon dioxide equivalent per year ($MTCO_2E/yr$) for the Proposed PROJECT, as well as the proposed Campo, Manzanita, and Jordan wind projects. Although sufficient project-level information has yet to be developed for the Campo, Manzanita, and Jordan wind energy project components to the Proposed PROJECT, it is estimated that these three wind projects would generate similar construction-related emissions as the Tule Wind Project component because they would utilize similar construction equipment, workers, and number of haul routes during development. The Jordan wind energy project is proposed to be developed in 2013, while the Campo and Manzanita wind energy projects are expected to be constructed in a similar time frame as the Proposed PROJECT (2011 – 2012). Identified impacts would not be adverse. Note the amortized annual construction-related emissions are added to the operational emissions for comparison with the CEQA significance under Impact GHG-2.

Other projects located within the cumulative study area would include large-scale residential subdivisions, unmanned wireless telecommunications facilities, commercial developments, minor residential lot splits, expansion of a tribal casino/hotel, and construction or expansion of several federal facilities, several of which would result in significant construction-related GHG

emissions. Construction-related GHG emissions would be associated with the use of construction equipment and worker vehicle trips. Because GHG emissions generated during construction would contribute to a global accumulation of emissions, and are not a temporary addition to the local airshed, the extent to which these projects and the Proposed PROJECT would result in significant cumulative impacts does not depend on their proximity or time schedules. As such, generation of these emissions would result in an unavoidable significant cumulative impact to climate change. Although the Proposed PROJECT's construction impacts would eventually be offset resulting in a net beneficial impact and its construction emissions within the cumulative study area would not exceed the significance threshold, it would be cumulatively considerable when considered with the reasonably foreseeable cumulative projects and would represent a significant and unmitigable cumulative impact under CEQA (Class I). Therefore, cumulative impacts regarding construction-related GHG emissions would be adverse for the reasonably foreseeable cumulative projects coupled with the Proposed PROJECT.

Impact GHG-2: Project operation would cause a net increase of greenhouse gas emissions.

All Reasonably Foreseeable Cumulative Projects (Class I).

As discussed under Section D.18.3.3, GHG emissions during operations and maintenance of the Proposed PROJECT were estimated to be approximately 3,819 $MTCO_2E$/yr. Although sufficient project-level information has yet to be developed for the Campo, Manzanita, and Jordan wind energy project components to the Proposed PROJECT, it is assumed that these three wind projects would generate similar GHG emissions during operations and maintenance as the Tule Wind project due to a small amount of vehicle emissions from employees trips to the facilities. The operational emissions are less than the NEPA indicator of 25,000 $MTCO_2E$/yr. Identified operational impacts would not be adverse. In addition, when combined with the amortized annual construction emissions, the Proposed PROJECT's GHG emissions would be 4,824 $MTCO_2E$/yr. The combined GHG emissions will be well below the CEQA significance threshold of 10,000 $MTCO_2E$/yr. Under CEQA, impacts would be considered less than significant (Class III).

As previously discussed, other projects located within the cumulative study area would include large-scale residential subdivisions, unmanned wireless telecommunications facilities, commercial developments minor residential lot splits, expansion of a tribal casino/hotel, and construction or expansion of several federal facilities, several of which would result in significant operational GHG emissions. The primary sources of GHG emissions associated with residential developments would include mobile sources such as vehicular traffic generated by resident and visitor trips, as well as area sources including natural gas appliances and hearth combustion, electrical generation, and water. Because GHG emissions generated during operational phases would contribute to a global accumulation of emissions, and are not a

temporary addition to the local airshed, the extent to which these projects and the Proposed PROJECT would result in significant cumulative impacts does not depend on their proximity. As such, generation of these emissions would result in an unavoidable significant impact to climate change and would represent a significant and unmitigable cumulative impact under CEQA (Class I). Therefore, cumulative impacts regarding GHG emissions for operations of the Proposed PROJECT would be adverse when considered with the reasonably foreseeable cumulative projects.

Impact GHG-3: Project activities would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

All Reasonably Foreseeable Cumulative Projects (Class III)

California's current Renewable Portfolio Standard is intended to increase the share of renewable energy to 20% by the end of 2010. Based on Governor Schwarzenegger's call for a statewide 33% Renewable Portfolio Standard, the Climate Change Scoping Plan anticipates that California would have 33% of its electricity provided by renewable resources by 2020. Additionally, AB 32 calls for a reduction in statewide GHG emissions to 1990 levels by 2020. Over their lifespans, the proposed Tule, Campo, Manzanita, and Jordan wind energy projects, as well as the Proposed PROJECT as a whole, would assist in the attainment of the state's goals by utilizing a renewable source of energy in place of typical fossil-fuel-fired power plants. The Proposed PROJECT and associated wind energy projects would therefore be consistent with state initiatives aimed at reducing GHG emissions, and impacts would not be adverse and would be less than significant under CEQA (Class III).

As several of the other projects within the cumulative study area include large-scale residential subdivisions and commercial developments, it is expected that when analyzed cumulatively, these projects would result in a cumulatively considerable increase in both construction and operational GHG emissions. Because GHG emissions generated during construction and operational phases would contribute to a global accumulation of emissions, and are not a temporary addition to the local airshed, the extent to which these projects and the Proposed PROJECT would result in significant cumulative impacts does not depend on their proximity and time schedules. As such, generation of these emissions would result in an unavoidable significant impact to climate change and could potentially conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. However, the extent to which the foreseeable projects would conflict with GHG reduction plans would depend on the extent to which the County of San Diego develops such a plan or strategies to achieve the motor

vehicle emission targets under Senate Bill 375.[1] Because the Proposed PROJECT would result in a net beneficial impact to climate change considering its intended nature as a renewable energy source, the Proposed PROJECT's contribution to a potentially significant impact would not be cumulatively considerable. Therefore, no adverse cumulative impacts would result and, under CEQA, impacts would represent a less-than-significant cumulative impact (Class III).

Alternatives and Reasonably Foreseeable Cumulative Impacts

ECO Substation Project Alternatives. The listed ECO Substation Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed Tule Wind and ESJ Gen-Tie components of the Proposed PROJECT.

ECO Substation Alternative Site

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. This is particularly applicable to Impact GHG-1, where the alternatives may change the overall GHG emission levels, none of which would alter the cumulative impact findings of an adverse cumulative impact when the Proposed PROJECT is considered with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Partial Underground 138 kV Transmission Route Alternative

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

[1] Under Senate Bill 375, CARB will assign regional GHG reduction targets for the automobile and light truck sector for 2020 and 2035 by September 30, 2010. The targets are required to consider the emission reductions associated with vehicle emission standards (i.e., AB 1493 emission standards), the composition of fuels (i.e., Low Carbon Fuel Standard), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations, such as SANDAG, will be responsible for preparing a Sustainable Communities Strategy within the Regional Transportation Plan. The goal of the Sustainable Communities Strategy is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets.

ECO Highway 80 138 kV Transmission Route Alternative

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ECO Highway 80 Underground 138 kV Transmission Route Alternative

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Project Alternatives. The listed Tule Wind Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and ESJ Gen-Tie components of the Proposed PROJECT.

Tule Wind Alternative 1, Gen-Tie Route 2 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 2, Gen-Tie Route 2 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 3, Gen-Tie Route 3 with Collector Substation/O&M Facility on Rough Acres Ranch

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. Under the alternative, emissions of GHG would potentially increase during construction due to an increase in exhaust emissions of GHGs along the proposed alternative route as a result of heavy construction equipment. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 4, Gen-Tie Route 3 Underground with Collector Substation/O&M Facility on Rough Acres Ranch

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

Tule Wind Alternative 5, Reduction in Turbines

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. While this alternative would lessen the impacts due to reduced construction requirements for these 62 wind turbines, this change would not be sufficient to alter the overall impact determinations. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Project Alternatives. The listed ESJ Gen-Tie Project alternatives would not affect the cumulative impact conclusions or considerations resulting from the implementation of the proposed ECO Substation and Tule Wind components of the Proposed PROJECT.

ESJ 230 kV Gen-Tie Underground Alternative

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects.

GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Overhead Alternative Alignment

Cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

ESJ Gen-Tie Underground Alternative Alignment

While GHG emissions would potentially increase during undergrounding, cumulative impacts related to Impact GHG-1 through GHG-3 would be the same as those assessed for the Proposed PROJECT when combined with the reasonably foreseeable cumulative projects. GHGs for the alternatives are not likely to change when compared with the cumulative impact analysis for any of the alternatives. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project/No Action Alternatives

No Project Alternative 1 – No ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind Projects

Under the No Project Alternative 1, the ECO Substation, Tule Wind, ESJ Gen-Tie, Campo, Manzanita, or Jordan Wind projects would not be built and the existing conditions would remain at these sites. Impacts resulting from the Proposed PROJECT would not occur. Therefore, no cumulative impacts would exist.

No Project Alternative 2 – No ECO Substation Project

Under the No Project Alternative 2, the ECO Substation Project would not be built and the Tule Wind Project and ESJ Gen-Tie Project would be constructed. Under the No Project Alternative 2, SDG&E would likely upgrade an existing substation or construct an entirely new substation in order to interconnect planned renewable energy generation in southeastern San Diego County. None of the cumulative impacts evaluated under the Proposed PROJECT would likely change overall since the ESJ Gen-Tie and Tule Wind components would continue to be constructed, and SDG&E would need to replace the lost capacity needed for the substation elsewhere in the area,

along with needed interconnection upgrades and transmission options. Therefore, cumulative impacts are anticipated to remain similar as evaluated in the Proposed PROJECT.

No Project Alternative 3 – No Tule Wind Project

Under the No Project Alternative 3, the Tule Wind Project would not be built, and the existing conditions on the project site would remain. However, both the ECO Substation and ESJ Gen-Tie components would continue to be built, which includes the 138 kV and 500 kV or 230 kV transmission lines. While this alternative would reduce GHG emissions during construction, it would also lose some of the GHG offsets attributed to such projects. The cumulative impacts would remain similar to those discussed under the Proposed PROJECT and would not represent any substantial new or reduced adverse cumulative impacts.

No Project Alternative 4 – No ESJ Gen-Tie Project

Under the No Project Alternative 4, the ESJ Gen-Tie Project would not be built and the Tule Wind Project and ECO Substation Project would continue to be constructed.

Similar to the analysis above under the No Project Alternative 2, a substitute gen-tie would need to be constructed elsewhere. Regardless, the other project components alone would cause similar adverse cumulative impacts as the Proposed PROJECT. Therefore, it is not anticipated that this alternative would substantially reduce any of the evaluated cumulative impacts, and cumulative impacts are anticipated to remain similar as evaluated under the Proposed PROJECT.

F.4 References

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