

FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT

VOLUME I OF II

Soitec Solar Development Project

**Log No. 3910-120005 (ER); 3800 12-010 (GPA); Tierra Del Sol 3300 12-010 (MUP),
3600 12-005 (REZ), 3921 77-046-01 (AP); Rugged Solar 3300 12-007 (MUP)**

SCH No. 2012-121-018

Lead Agency:

**County of San Diego
Planning and Development Services
5510 Overland Avenue, 3rd Floor
San Diego, CA 92123**

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Project Proponent:

**Patrick Brown
Soitec**

**This Program Environmental Impact Report
was certified by the County Board of
Supervisors on February 4, 2015**



MARK WARDLAW, Director

**County of San Diego, Planning &
Development Services**

January 2015

This EIR is subject to Chapter 6.5 (commencing with Section 21178) of the Public Resources Code, which provides, among other things, that any judicial action challenging the certification of the EIR or the approval of the project described in the EIR is subject to the procedures set forth in Section 21178.2 of the Public Resources Code and must be filed with the court of appeal. A copy of Chapter 6.5 of the Public Resources Code is included in Appendix 1.0-2 to this EIR.

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
<u>VOLUME I</u>	
ACRONYMS AND ABBREVIATIONS.....	ACR-I
GLOSSARY OF TERMS.....	GLOSS-I
<u>PREFACE.....</u>	<u>P.0-1</u>
P.1 Contents of Final Program EIR.....	P.0-1
P.2 Summary of Changes to Draft Program EIR	P.0-7
P.3 Conclusion	P.0-16
<u>ADDITIONAL INFORMATION STATEMENT</u>	<u>AIS.0-1</u>
1.0 Introduction.....	AIS.0-1
1.1 Purpose and Need	AIS.0-12.0
Project Description	AIS.0-2
2.1 Location	AIS.0-2
2.2 Components	AIS.0-3
2.3 Comparison.....	AIS.0-3
2.4 Project Construction, Operation and Decommissioning Activities	AIS.0-4
2.5 Water Usage.....	AIS.0-5
2.6 Water Usage.....	AIS.0-7
3.0 Environmental Issue Areas	AIS.0-8
3.1 Aesthetics.....	AIS.0-8
3.2 Biological Resources	AIS.0-10
3.3 Air Quality	AIS.0-10
3.4 Noise	AIS.0-12
3.5 Greenhouse Gas Emissions.....	AIS.0-14
3.6 Hazards and Hazardous Materials	AIS.0-14
3.7 Transportation and Traffic	AIS.0-16
<u>Attachments:</u>	
<u>AIS1 Aesthetics Analysis – Energy Storage</u>	
<u>AIS2 Supplemental Air Quality and Greenhouse Gas Analysis</u>	
<u>AIS3 Addendum to the Acoustical Assessment Report for Rugged</u>	
<u>AIS4 Addendum to the Fire Protection Plan for Rugged</u>	
<u>SUMMARY</u>	<u>S.0-1</u>
S.1 Project Synopsis.....	S.0-1
S.1.1 Project Description.....	S.0-1

TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
S.1.2 Project Objectives	S.0-5
S.1.3 Project Location	S.0-6
S.1.4 Environmental Setting	S.0-7
S.2 Summary of Significant Effects and Mitigation Measures that Reduce or Avoid the Significant Effects.....	S.0-9
S.3 Areas of Controversy	S.0-7475
S.4 Issues to be Resolved by the Decision-Making Body	S.0-7276
S.5 Project Alternatives.....	S.0-7377
S.5.1 Reduced Proposed Project Alternatives.....	S.0-7377
S.5.2 Alternative Locations.....	S.0-7681
S.5.3 No Project Alternative	S.0-8187
S.5.4 Environmentally Superior Alternative	S.0-8287
1.0 PROJECT DESCRIPTION, LOCATION, AND ENVIRONMENTAL SETTING.....	1.0-1
1.1 Project Objectives	1.0-1
1.2 Project Description.....	1.0-2
1.2.1 Project’s Component Parts.....	1.0-6
1.2.2 Technical, Economic and Environmental Characteristics	1.0-3033
1.3 Project Location	1.0-3337
1.4 Environmental Setting	1.0-3438
1.5 Intended Uses of the EIR	1.0-3640
1.5.1 Project Approvals/Permits	1.0-3741
1.5.2 Related Environmental Review and Consultation Requirements...	1.0-3841
1.6 Project Inconsistencies with Applicable Regional and General Plans.....	1.0-3842
1.7 List of Past, Present, and Reasonably Anticipated Future Projects in the Project Area.....	1.0-3842
1.8 Growth-Inducing Impacts	1.0-3942
2.0 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	2.1-1
2.1 Aesthetics	2.1-1
2.1.1 Existing Conditions.....	2.1-1
2.1.2 Regulatory Setting	2.1-20
2.1.3 Analysis of Project Effects and Determination as to Significance	2.1-26
2.1.4 Cumulative Impact Analysis.....	2.1-6972
2.1.5 Significance of Impacts Prior to Mitigation.....	2.1-7476
2.1.6 Mitigation Measures	2.1-7477

TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
2.1.7 Conclusion	2.1-7679
2.2 Air Quality	2.2-1
2.2.1 Existing Conditions.....	2.2-1
2.2.2 Regulatory Setting	2.2-7
2.2.3 Analysis of Project Effects and Determination as to Significance	2.2-10
2.2.4 Cumulative Impact Analysis.....	2.2-5766
2.2.5 Significance of Impacts Prior to Mitigation.....	2.2-6271
2.2.6 Mitigation Measures	2.2-6675
2.2.7 Conclusion	2.2-6878
2.3 Biological Resources	2.3-1
2.3.1 Existing Conditions.....	2.3-1
2.3.2 Regulatory Setting	2.3-8384
2.3.3 Analysis of Project Effects and Determination as to Significance	2.3-9495
2.3.4 Cumulative Impact Analysis.....	2.3-162181
2.3.5 Significance of Impacts Prior to Mitigation.....	2.3-173193
2.3.6 Mitigation Measures	2.3-173193
2.3.7 Conclusion	2.3-194216

VOLUME II

2.4 Cultural Resources	2.4-1
2.4.1 Existing Conditions.....	2.4-1
2.4.2 Regulatory Setting	2.4-5
2.4.3 Analysis of Project Effects and Determination of Significance	2.4-12
2.4.4 Cumulative Impact Analysis.....	2.4-25
2.4.5 Significance of Impacts Prior to Mitigation.....	2.4-28
2.4.6 Mitigation Measures	2.4-29
2.4.7 Conclusion	2.4-39
2.5 Land Use and Planning	2.5-1
2.5.1 Existing Conditions.....	2.5-2
2.5.2 Regulatory Setting	2.5-9
2.5.3 Analysis of Project Effects and Determination as to Significance	2.5-2526
2.5.4 Cumulative Impact Analysis.....	2.5-4445
2.5.5 Significance of Impacts Prior to Mitigation.....	2.5-4547
2.5.6 Mitigation Measures	2.5-4647
2.5.7 Conclusion	2.5-4647

TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
2.6 Noise	2.6-1
2.6.1 Existing Conditions.....	2.6-1
2.6.2 Regulatory Setting	2.6-7
2.6.3 Analysis of Project Effects and Determination as to Significance	2.6-11
2.6.4 Cumulative Impact Analysis.....	2.6-4647
2.6.5 Significance of Impacts Prior to Mitigation.....	2.6-4950
2.6.6 Mitigation Measures	2.6-5051
2.6.7 Low Frequency Noise.....	2.6-5759
2.6.8 Conclusion	2.6-5860
3.0 EFFECTS NOT FOUND TO BE SIGNIFICANT.....	3.1.1-1
3.1 Effects Found Not Significant as Part of the EIR Process.....	3.1.1-1
3.1.1 Agriculture and Forestry Resources.....	3.1.1-1
3.1.2 Geology, Soils, and Seismicity	3.1.2-1
3.1.3 Greenhouse Gas Emissions.....	3.1.3-1
3.1.4 Hazards And Hazardous Materials	3.1.4-1
3.1.5 Hydrology and Water Quality.....	3.1.5-1
3.1.6 Paleontological Resources	3.1.6-1
3.1.7 Public Services.....	3.1.7-1
3.1.8 Transportation and Traffic	3.1.8-1
3.1.9 Utilities and Service Systems.....	3.1.9-1
3.2 Effects Found Not Significant During Initial Study	3.2.1-1
3.2.1 Parks and Recreation.....	3.2.1-1
3.2.2 Mineral Resources	3.2.2-1
3.2.3 Population and Housing.....	3.2.3-1
4.0 PROJECT ALTERNATIVES	4.0-1
4.1 Rationale for Alternatives Selection	4.0-1
4.2 Alternatives Considered but Rejected.....	4.0-3
4.3 Reduced Project Alternatives.....	4.0-813
4.3.1 Analysis of the Reduced Proposed Project Alternative (Alternative 1).....	4.0-813
4.3.2 Analysis of the No LanEast and LanWest Alternative (Alternative 2).....	4.0-1318
4.3.3 Analysis of the Reduced Proposed Project and Underground Tierra del Sol Gen-tie Alternative (Alternative 3).....	4.0-1823

TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
4.3.4	Analysis of the Reduced Tierra del Sol and Rugged Solar Farms, No LanEast and LanWest, and Underground Tierra del Sol Gen-Tie Alternative (Alternative 4)..... 4.0-2227
4.3.5	Analysis of the Analysis of the Tailored Proposed Project and No LanEast and LanWest Alternative (Alternative 2A)..... 4.0-32
4.4	Alternative Locations..... 4.0-2742
4.4.1	Analysis of Relocate Tierra del Sol to Los Robles Alternative (Alternative 5)..... 4.0-2742
4.4.2	Analysis of Relocate LanEast and LanWest to Los Robles Alternative (Alternative 6)..... 4.0-3349
4.4.3	Analysis of Relocate Tierra del Sol, LanEast, and LanWest to Los Robles Alternative (Alternative 7)..... 4.0-3954
4.4.4	Analysis of Relocate Tierra del Sol, LanEast, and LanWest to Los Robles and Maximize Los Robles Alternative (Alternative 8)..... 4.0-4561
4.5	No Project Alternative 4.0-5268
4.5.1	Analysis of the No Project Alternative (Alternative 9) 4.0-5268
4.6	Summary of Alternatives 4.0-5571
4.7	Environmentally Superior Alternative 4.0-5571
5.0	REFERENCES..... 5.0-1
6.0	LIST OF EIR PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED..... 6.0-1
6.1	EIR Preparers 6.0-1
6.1.1	County of San Diego..... 6.0-1
6.1.2	Dudek..... 6.0-1
6.1.3	Persons and Organizations Contacted..... 6.0-2
7.0	LIST OF MITIGATION MEASURES AND ENVIRONMENTAL DESIGN CONSIDERATIONS..... 7.0-1
7.1	Aesthetics 7.0-1
7.2	Air Quality 7.0-23
7.3	Biological Resources 7.0-56
7.4	Cultural Resources 7.0-2229
7.5	Land Use and Planning 7.0-3239
7.6	Noise 7.0-3240
7.7	Agriculture and Forest Resources 7.0-3846

TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE</u>
7.8 Geology and Soils	7.0-3847
7.9 Greenhouse Gas Emissions.....	7.0-3947
7.10 Hazards and Hazardous Materials	7.0-3948
7.11 Hydrology and Water Quality.....	7.0-4049
7.12 Paleontological Resources	7.0-4049
7.13 Public Services.....	7.0-4049
7.14 Transportation and Traffic	7.0-4150
7.15 Utilities and Service Systems.....	7.0-4352
7.16 Parks and Recreation.....	7.0-4352
7.17 Mineral Resources	7.0-4352
7.18 Population and Housing.....	7.0-4352
<u>8.0 OTHER CEQA CONSIDERATIONS.....</u>	<u>8.0-1</u>
8.1 Significant Environmental Effects of the Proposed Project That Cannot Be Mitigated to Less Than Significant.....	8.0-1
8.2 Significant Irreversible Environmental Changes	8.0-2
8.3 Growth-Inducing Effects	8.0-2
<u>9.0 RESPONSE TO COMMENTS.....</u>	<u>9.0-1</u>
9.1 List of Commenters.....	9.0-1
9.2 Common Responses to Recurring Comments	9.0-2
9.2.1 Alternatives	9.0-2
9.2.2 Visual Resources.....	9.0-5
9.2.3 Biological Resources	9.0-6
9.2.4 Water Resources	9.0-14
9.2.5 Transportation	9.0-30
9.3 Comment Letters Received and Responses to Comments.....	9.0-31

APPENDICES

- 1.0-1 Notice of Preparation
- 1.0-2 Public Resources Code Section 21178-21189.3
- 2.1-1 Visual Resources Report for the Tierra del Sol Solar Farm Project
- 2.1-2 Visual Resources Technical Report for the Rugged Solar LLC Project
- 2.1-3 Boulevard Glare Study
- 2.1-4 Landscape Screen Design for the Soitec Solar Development Program EIR
- 2.2-1 Air Quality Technical Report for the Tierra del Sol Solar Farm Project
- 2.2-2 Air Quality Technical Report for the Rugged Solar Farm Project
- 2.3-1 Biological Resources Report for the Tierra del Sol Solar Farm Project
- 2.3-2 Biological Technical Report for the Rugged Solar Farm Project
- 2.3-3 Quino Checkerspot Butterfly 45-Day Summary Report for the LanEast Solar Farm Project
- 2.3-4 Biological Resources Report for the LanWest Solar Farm Project
- 2.3-5 Cumulative Impacts: Potentially Impacted Special-Status Plant Species
- 2.3-6 Evaluation of Biological Resources for the Soitec Mitigation Site Memorandum
- 2.4-1 Archaeological Survey and Evaluation for the Tierra del Sol Solar Farm Project
- 2.4-2 Archaeological Evaluation for the Rugged Solar Farm Project
- 2.4-3 Cultural Resources Survey Report for the LanEast Solar Farm Project
- 2.4-4 Cultural Resources Survey Report for the LanWest Solar Farm Project
- 2.5-1 General Plan Analysis Report for the Tierra del Sol Farm Project
- 2.5-2 General Plan Analysis Report for the Rugged Solar Farm Project
- 2.6-1 Acoustical Assessment Report for the Tierra del Sol Solar Farm Project
- 2.6-2 Acoustical Assessment Report for the Rugged Solar Farm Project
- 3.1.1-1 LARA Model Results Report
- 3.1.1-2 Agricultural Preserve Disestablishment Report
- 3.1.3-1 Greenhouse Gas Technical Report for the Tierra del Sol Solar Farm Project
- 3.1.3-2 Greenhouse Gas Technical Report for the Rugged Solar Farm Project
- 3.1.3-3 AB 900 Application for the Soitec Solar Energy Project
- 3.1.4-1a Phase I Environmental Site Assessment for the Tierra del Sol Solar Farm Project
- 3.1.4-1b Limited Phase II Environmental Site Assessment for the Tierra del Sol Solar Farm Project
- 3.1.4-1c Phase I Environmental Site Assessment Generator Tie Transmission Line for the Tierra del Sol Solar Farm Project
- 3.1.4-2 Phase I Environmental Site Assessment for the Rugged Solar Farm Project

3.1.4-3 Phase I Environmental Site Assessment for the LanEast Solar Farm Project

3.1.4-4 Phase I Environmental Site Assessment for the LanWest Solar Farm Project

3.1.4-5 Draft Fire Protection Plan for the Tierra del Sol Solar Farm Project

3.1.4-6 Draft Fire Protection Plan for the Rugged Solar Farm Project

3.1.4-7 Construction Fire Prevention Protection Plan Outline

3.1.5-1 Preliminary Hydrology and Drainage Study for the Tierra del Sol Solar Farm Project

3.1.5-2 Preliminary Hydrology and Drainage Study for the Rugged Solar Farm Project

3.1.5-3a Minor Stormwater Management Plan for the Tierra del Sol Solar Farm Project

3.1.5-3b Minor Stormwater Management Plan for the Tierra del Sol Solar Farm Project (Gen-Tie)

3.1.5-4 Minor Stormwater Management Plan for the Rugged Solar Farm Project

3.1.5-5 Groundwater Resources Investigation Report for the Tierra del Sol Solar Farm Project

3.1.5-6 Groundwater Resources Investigation Report for the Rugged Solar Farm Project

3.1.5-7 Groundwater Resources Investigation Report – Pine Valley Mutual Water Company for the Rugged Solar Farm Project

3.1.5-8 Groundwater Resources Investigation Report – Jacumba Community Services District for the Tierra del Sol Solar Farm Project and the Rugged Solar Farm Project.

3.1.7-1 Emergency Service Capabilities Assessment and Cumulative Impact Mitigation

4.0-1 Evaluation of Biological Resources for the Soitec Mitigation Site

9.0-1 Health Issues Related to the Static and Power-Frequency Electric and Magnetic Fields (EMFs) of the Soitec Solar Energy Farms

9.0-2 Critique of “Impacts of Soitec Solar Projects on Boulevard and Surrounding Communities,” by Dr. Victor M. Ponce, dated 15 November 2013

9.0-3 Infrasound and Low-Frequency Noise, Tracker Motor and Fenceline Noise Measurements at Newberry Springs Solar Facility

9.0-4 Review of Bat Data Related to Soitec Boulevard Portfolio

9.0-5 Supplemental Air Quality Analysis – Project Changes

9.0-6 20% Contingency for Operational Water Demand – Revised Analysis

9.0-7 Revisions to Project Design Feature (PDF) PS-1

9.0-8 Cumulative Construction Noise Impacts –Rugged and Tule Wind Memorandum

TABLE OF CONTENTS (CONTINUED)

PAGE

FIGURES

1-1	Regional Location Map.....	1.0-5761
1-2	Specific Location Map.....	1.0-5963
1-3	Project Aerial Map.....	1.0-6165
1-4	Project Environmental Setting – South of I-8.....	1.0-6367
1-5a	Project Environmental Setting – North of I-8.....	1.0-6569
1-5b	Project Environmental Setting – North of I-8.....	1.0-67
1-6	Tierra del Sol Site Plan	1.0-6973
1-7	Tierra del Sol – Gen-Tie Route.....	1.0-7175
1-7a	Tierra del Sol – Gen-Tie Route.....	1.0-7377
1-7b	Tierra del Sol – Gen-Tie Route	1.0-7579
1-7c	Tierra del Sol – Gen-Tie Route.....	1.0-7781
1-7d	Tierra del Sol – Gen-Tie Route.....	1.0-7983
1-8	Rugged Solar – Site Plan	1.0-8185
1-9	Tracker Schematic Drawing	1.0-8387
1-10	Security Fencing Exhibit.....	1.0-8589
1-11	Operations and Maintenance Facility	1.0-8791
1-12	Cumulative Projects Map.....	1.0-8993
2.1-1	Project Viewshed Map.....	2.1-8993
2.1-2	Key View Location Map.....	2.1-9195
2.1-3	Key View 1–Existing and Proposed Conditions.....	2.1-9397
2.1-4	Key View 2–Existing and Proposed Conditions.....	2.1-9599
2.1-5	Key View 3–Existing and Proposed Conditions.....	2.1-97101
2.1-6	Key View 4–Existing and Proposed Conditions.....	2.1-99103
2.1-7	Key View 5–Existing and Proposed Conditions.....	2.1-101105
2.1-8	Key View 6–Existing and Proposed Conditions.....	2.1-103107
2.1-9	Key View 7–Existing and Proposed Conditions.....	2.1-105109
2.1-10	Key View 8–Existing and Proposed Conditions.....	2.1-107111
2.1-11	Key View 9–Existing and Proposed Conditions.....	2.1-109113
2.1-12	Key View 10–Existing and Proposed Conditions.....	2.1-111115
2.1-13	Key View 11–Existing and Proposed Conditions.....	2.1-113117
2.1-14	Key View 12–Existing and Proposed Conditions.....	2.1-115119
2.1-15	Key View 13–Existing and Proposed Conditions.....	2.1-117121
2.1-16	Key View 14–Existing and Proposed Conditions.....	2.1-119123

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE</u>
2.3-1a	Tierra del Sol Solar Farm Vegetation Map..... 2.3-235259
2.3-1b	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-237261
2.3-1c	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-239263
2.3-1d	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-241265
2.3-2	Rugged Solar Vegetation Map..... 2.3-243267
2.3-3	LanWest Solar Vegetation Map..... 2.3-245269
2.3-4	LanEast Solar Vegetation Map 2.3-247271
2.3-5	Hydrologic Setting Map..... 2.3-249273
2.3-6	Regional Context Map 2.3-251275
2.3-7	Tierra del Sol Rare Plant Observations Map 2.3-253277
2.3-8	Tierra del Sol USFWS Critical Habitats Map..... 2.3-255279
2.3-9	Tierra del Sol Special Status Wildlife Observations Map 2.3-257281
2.3-10	Tierra del Sol Wildlife Corridors and Habitat Linkages Map 2.3-259283
2.3-11	Rugged Solar Rare Plant Observations Map 2.3-261285
2.3-12	Rugged Solar USFWS Critical Habitat Map 2.3-263287
2.3-13	Rugged Solar Wildlife Observations Map..... 2.3-265289
2.3-14	Rugged Solar Jurisdictional Delineation and RPO Lands Map..... 2.3-267291
2.3-15	Rugged Solar Wildlife Corridors and Habitat Linkages Map 2.3-269293
2.3-16	LanWest Solar Rare Plant Observations Map 2.3-271295
2.3-17	LanWest Solar Wildlife Observations Map..... 2.3-273297
2.3-18	LanWest Solar Jurisdictional Delineation and RPO Lands Map..... 2.3-275299
2.3-19	LanEast/LanWest Solar Wildlife Corridors and Habitat Linkages Map 2.3-277301
2.3-20	LanEast Solar USFWS Critical Habitat Map..... 2.3-279303
2.3-21	Tierra del Sol Solar Special-Status Plant Observations Impacts Map..... 2.3-281305
2.3-22	Tierra del Sol Solar Special-Status Wildlife Observations Impacts Map..... 2.3-283307
2.3-23	Rugged Solar Farm Special-Status Plant Observations Impacts Map..... 2.3-285309
2.3-24	Rugged Solar Farm Special-Status Wildlife Observations Impacts Map..... 2.3-287311
2.3-25a	Tierra del Sol Solar Vegetation Impacts Map..... 2.3-289313
2.3-25b	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-291315
2.3-25c	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-293317
2.3-25d	Biological Resources - Tierra del Sol Gen-Tie Vegetation Communities..... 2.3-295319
2.3-26	Rugged Solar Vegetation Impacts Map 2.3-297321
2.3-27	Biological Cumulative Analysis Study Area 2.3-299323
2.3-28	Biological Cumulative Study Area Vegetation..... 2.3-301325
2.5-1	Existing Land Uses 2.5-57

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE</u>
2.5-2	General Plan Land Use Designation Map..... 2.5-59
2.5-3	Project Zoning Map 2.5-61
2.5-4	Tierra del Sol Solar Sensitive Land Uses Within 1,000 feet 2.5-63
2.5-5	Rugged Solar Sensitive Land Uses Within 1,000 feet 2.5-65
2.5-6	LanEast Solar Sensitive Land Uses Within 1,000 feet 2.5-67
2.5-7	LanWest Solar Sensitive Land Uses Within 1,000 feet 2.5-69
2.6-1	Tierra del Sol Solar Farm Site - Noise Sensitive Receptors and Noise Measurement Locations 2.6- 69 <u>71</u>
2.6-2a	Gen-Tie Alignment Map..... 2.6- 71 <u>73</u>
2.6-2b	Gen-Tie Alignment Map..... 2.6- 73 <u>75</u>
2.6-3	Rugged Solar Farm Site - Noise Sensitive Receptors and Noise Measurement Locations 2.6- 75 <u>77</u>
2.6-4	LanEast and LanWest Project Sites - Potential Sensitive Receptors..... 2.6- 77 <u>79</u>
3.1.1-1	Tierra del Sol Solar Farm - County Zoning..... 3.1.1-35
3.1.1-2	Tierra del Sol Solar - Williamson Act 3.1.1-37
3.1.1-3	Tierra del Sol Solar - Farmland Mapping and Monitoring Program (FMMP) Lands..... 3.1.1-39
3.1.1-4	Rugged Solar - County Zoning..... 3.1.1-41
3.1.1-5	Rugged Solar - Williamson Act..... 3.1.1-43
3.1.1-6	Rugged Solar - Farmland Mapping and Monitoring Program (FMMP) Lands.... 3.1.1-45
3.1.1-7	Lan East/Lan West - County Zoning 3.1.1-47
3.1.1-8	LanEast/LanWest - Williamson Act 3.1.1-49
3.1.1-9	LanEast/LanWest - Farmland Mapping and Monitoring Program (FMMP) Lands..... 3.1.1-51
3.1.1-10	Cumulative Projects - Farmland Mapping and Monitoring Program (FMMP) Lands..... 3.1.1-53
3.1.1-11	Cumulative Projects - Williamson Act 3.1.1-55
3.1.1-12	Cumulative Projects - County Zoning 3.1.1-57
3.1.2-1	Regional Geologic Map 3.1.2-33
3.1.2-2	Soils Map 3.1.2-35
3.1.4-1	Tierra del Sol Solar Farm Site 3.1.4- 53 <u>57</u>
3.1.4-2	Tierra del Sol Gen-Tie Line 3.1.4- 55 <u>59</u>
3.1.4-3	Rugged Solar Farm Site..... 3.1.4- 57 <u>61</u>
3.1.4-4	LanEast and LanWest Sites 3.1.4- 59 <u>63</u>
3.1.5-1	Regional Hydrology..... 3.1.5- 65 <u>67</u>

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE</u>
3.1.7-1 Public Services in the Project Vicinity	3.1.7-33
3.2.1-1 Park and Recreational Resources	3.2.1-7
4-1 Tierra Del Sol Reduced Project Alternative	4.0- 65 87
4-2 Rugged Solar Reduced Project Alternative	4.0- 67 89
4-3 Los Robles Alternative Project Site.....	4.0- 69 91

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TABLE OF CONTENTS (CONTINUED)

PAGE

TABLES

AIS-1 Summary of Energy Storage System Project Design Features AIS.0-17

AIS-1 Summary of Project Noise Levels at Property Lines Option 1 (PDF-ES-N-1) ... AIS.0-17

AIS-1 Summary of Project Noise Levels at Property Lines Option 2 (PDF-ES-N-2) ... AIS.0-18

S-1 Overview of the Proposed Project S.0-2

S-2 Summary of Significant Effects S.0-9

S-3 Summary of Analysis for Alternatives to the Proposed Project S.0-8389

1-1 Overview of the Proposed Project 1.0-2

1-2 Inverter Stations 1.0-4043

1-3 Construction Employees by Project 1.0-4043

1-4 Construction Equipment Associated with Solar Project Development 1.0-4044

1-5 Full-Time Employees By Project 1.0-4144

1-6 Construction Water Demand By Project 1.0-4145

1-7 Total Estimated Water Use for Operation of Solar Projects 1.0-4246

1-8 Tierra del Sol Construction Schedule 1.0-4346

1-9 Rugged Construction Schedule 1.0-4347

1-10 Summary of Project Design Features 1.0-4448

1-11 Approvals/Permits Expected to be Obtained 1.0-4853

1-12 Cumulative Projects List 1.0-4954

2.1-1 Summary of Viewer Exposure – Tierra del Sol Solar Farm 2.1-8083

2.1-2 Summary of Viewer Exposure – Tierra del Sol Gen-Tie Line 2.1-8083

2.1-3 Summary of Viewer Exposure – Rugged Solar Farm 2.1-8083

2.1-4 Location and Characteristics of Selected Key Views – Tierra del Sol Solar Farm .. 2.1-8184

2.1-5 Location and Characteristics of Selected Key Views – Rugged Solar Farm Project...2.1-8285

2.1-6 Identified Residences within 1 Mile of Solar Equipment – Tierra del Sol 2.1-8286

2.1-7 Maximum Anticipated Glare by Season – Tierra del Sol (Residences) 2.1-8286

2.1-8 Maximum Anticipated Glare by Season – Tierra del Sol (Motorists) 2.1-8387

2.1-9 Identified Residences within 1 Mile of Solar Equipment – Rugged 2.1-8487

2.1-10 Maximum Anticipated Glare by Season – Rugged 2.1-8488

2.1-11 Maximum Anticipated Glare by Season – Rugged (Motorists) 2.1-8488

2.1-12 Identified Residences within One-Mile of Solar Equipment – LanWest/LanEast 2.1-8589

2.1-13 Maximum Anticipated Glare by Season – LanWest/LanEast 2.1-8689

2.1-14 Maximum Anticipated Glare by Season – LanWest/LanEast (Motorists) 2.1-8790

2.2-1 SDAB Attainment Classification 2.2-7282

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE</u>
2.2-2 Ambient Air Quality Data (ppm unless otherwise indicated).....	2.2-7283
2.2-3 Frequency of Air Quality Standard Violations	2.2-7384
2.2-4 Ambient Air Quality Standards	2.2-7384
2.2-5 SDAPCD Air Quality Significance Thresholds.....	2.2-7586
2.2-6 Tierra del Sol Construction Schedule	2.2-7686
2.2-7 Tierra del Sol – Estimated Daily Maximum Construction Emissions (pounds per day).....	2.2-7687
2.2-8 Tierra del Sol – Estimated Daily Maximum Operational Emissions (pounds per day).....	2.2-7787
2.2-9 Rugged Construction Schedule.....	2.2-7788
2.2-10 Rugged – Estimated Daily Maximum Construction Emissions (pounds per day).....	2.2-7888
2.2-11 Rugged – Estimated Daily Maximum Operational Emissions (pounds per day).....	2.2-7889
2.2-12 Proposed Project – Maximum Estimated Daily Construction Emissions.....	2.2-7989
2.2-13 Tierra del Sol – Estimated Daily Maximum Construction Emissions (pounds per day).....	2.2-7990
2.2-14 Rugged – Estimated Daily Maximum Construction Emissions (pounds per day).....	2.2-8091
2.2-15 Proposed Project – Estimated Daily Operations and Maintenance Emissions	2.2-8192
2.2-16 Tierra del Sol – Summary of Maximum Modeled Cancer Risks.....	2.2-8192
2.2-17 Tierra del Sol – Summary of Maximum Chronic Hazard Index	2.2-8292
2.2-18 Rugged – Summary of Maximum Modeled Cancer Risks	2.2-8292
2.2-19 Rugged - Summary of Maximum Chronic Hazard Index.....	2.2-8292
2.2-20 Summary of Average DPM Concentrations Concrete Batch Plant Generators...	2.2-8293
2.2-21 Summary of Maximum Modeled Cancer Risks Concrete Batch Plant Generators..	2.2-8293
2.2-22 Summary of Maximum Chronic Hazard Index Concrete Batch Plant Generators...	2.2-8293
2.3-1 Vegetation Communities and Land Cover Types	2.3-195217
2.3-2 Tierra del Sol Solar Farm Site Data Station Point Summary.....	2.3-197219
2.3-3 Tierra del Sol Gen-Tie Alignment Site Data Station Point Summary	2.3-198219
2.3-4 Proposed Rugged Off-Site Access Roads Vegetation Communities and Land Cover Types	2.3-198220
2.3-5 Rugged Jurisdictional Delineation Summary	2.3-199220
2.3-6 LanWest Jurisdictional Delineation Summary	2.3-199221
2.3-7 Summary of Direct Impacts to County List A and B Species – Tierra del Sol Project	2.3-200221
2.3-8 Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species – Tierra del Sol Solar Farm.....	2.3-200222

TABLE OF CONTENTS (CONTINUED)

PAGE

2.3-9 Summary of Direct Impacts to County List A and B Species – Rugged Solar Farm 2.3-201222
2.3-10 Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species – Rugged Solar Farm 2.3-201223
2.3-11 Summary of Direct Impacts to County List C and D Plant Species – Rugged Solar Farm 2.3-202224
2.3-12 Tierra del Sol Impacts - Vegetation Communities 2.3-203224
2.3-13 Rugged Impacts – Vegetation Communities 2.3-204225
2.3-14 Rugged Impacts – Proposed Northern Off-Site Access Road 2.3-205227
2.3-15 ECMSCP Planning Agreement Conservation Objectives 2.3-206227
2.3-16 Cumulative Projects List within the Biological Cumulative Analysis Study Area. 2.3-206228
2.3-17 Cumulative Impacts – Vegetation Communities 2.3-207229
2.3-18 Summary of Mitigation for Vegetation Communities and Jurisdictional Areas .. 2.3-208230
2.3-19 Summary of Significant Impacts – Tierra del Sol 2.3-211233
2.3-20 Summary of Significant Impacts – Rugged 2.3-216239
2.3-21 Summary of Significant Impacts – LanEast 2.3-223245
2.3-22 Summary of Significant Impacts – LanWest 2.3-229251
2.4-1 Archaeological Site Management Recommendations 2.4-40
2.5-1 General Plan Land Use Designations Applicable to the Proposed Project..... 2.5-4648
2.5-2 Zoning Designations Applicable to the Proposed Project 2.5-4648
2.5-3 County Board of Supervisors Consistency Analysis 2.5-4748
2.5-4 Land Development Ordinances Consistency Analysis 2.5-5253
2.6-1 Typical Sound Levels Measured in the Environment and Industry 2.6-6163
2.6-2 Measured Noise Level 2.6-6163
2.6-3 Information Regarding Properties Along Gen-Tie Route..... 2.6-6264
2.6-4 Noise Measurement Data 2.6-6264
2.6-5 San Diego County Noise Ordinance Sound Level Limits 2.6-6365
2.6-6 Maximum Sound Level (Impulsive) Measured 2.6-6466
2.6-7 San Diego County Land Use Compatibility Guidelines 2.6-6466
2.6-8 Guidelines for Determining the Significance of Groundborne Vibration and Groundborne Noise Impacts 2.6-6567
2.6-9 Operational Noise Levels at Tierra del Sol Property Lines with Proposed Project 2.6-6567
2.6-10 Panel Washing Noise Level at Adjacent Property Lines With Implementation of PDF-N-TDS-1 2.6-6668

TABLE OF CONTENTS (CONTINUED)

	<u>PAGE</u>
2.6-11 Operational Noise at Rugged Solar Farm Property Boundaries with Proposed Project	2.6-6668
2.6-12 Panel Washing Noise Level at Adjacent Property Lines Based on All Design Features.....	2.6-6769
2.6-13 Construction Equipment Noise Emission Levels	2.6-6769
2.6-14 Typical Construction Equipment Vibration Levels	2.6-6870
2.6-15 Noise Levels at Tierra del Sol Solar Farm Property Lines With Mitigation (M-N-TDS-1).....	2.6-6870
2.6-16 Noise Levels at Rugged Solar Farm Property Lines With Mitigation (M-N-R-1).....	2.6-6870
3.1.1-1 Interpretation of LARA Model Results	3.1.1-33
3.1.2-1 Soil Units within the Project Sites	3.1.2-30
3.1.3-1 GHG Sources in California.....	3.1.3-4243
3.1.3-2 GHG Sources in San Diego County.....	3.1.3-4243
3.1.3-3 Project Size Thresholds.....	3.1.3-4243
3.1.3-4 Screening Criteria	3.1.3-4344
3.1.3-5 Tierra del Sol – Estimated Construction GHG Emissions.....	3.1.3-4344
3.1.3-6 Tierra del Sol – Estimated Operational GHG Emissions.....	3.1.3-4445
3.1.3-7 Rugged – Estimated Construction GHG Emissions	3.1.3-4445
3.1.3-8 Rugged – Estimated Operational GHG Emissions	3.1.3-4445
3.1.3-9 Proposed Project (Tierra Del Sol and Rugged Sites) – Estimated Construction GHG Emissions.....	3.1.3-4546
3.1.3-10 Proposed Project (Tierra Del Sol and Rugged Sites) – Estimated Operational GHG Emissions.....	3.1.3-4546
3.1.5-1 Beneficial Uses of Waters Within the Study Area.....	3.1.5-6062
3.1.5-2 Definitions of Beneficial Uses of Surface Waters	3.1.5-6063
3.1.5-3 Selected Water Quality Objectives	3.1.5-6164
3.1.5-4 Pre- and Post-Project Peak Flow Summary (Tierra del Sol Site)	3.1.5-6264
3.1.5-5 Pre- and Post-Project Peak Flow Summary (Rugged Site).....	3.1.5-6264
3.1.7-1 Primary Study Area Fire Resources.....	3.1.7-30
3.1.7-2 Current Call Volumes for Boulevard Area Fire Stations.....	3.1.7-31
3.1.7-3 Area Schools	3.1.7-31
3.1.8-1 Roadways within the Proposed Project Area Vicinity.....	3.1.8-3840
3.1.8-2 San Diego County Criteria to Prepare a Traffic Impact Study	3.1.8-3941

TABLE OF CONTENTS (CONTINUED)

PAGE

3.1.8-3 Measure of Significant Project Impacts to Congestion of Road Segments:
Allowable Increases on Congested Road Segments (Threshold Matrix I) 3.1.8-3941

3.1.8-4 Tierra del Sol Solar Farm Construction Access Route Roadways and Level of
Service Thresholds 3.1.8-4042

3.1.8-5 Rugged Solar Farm Construction Access Route Roadways and Level of
Service Thresholds 3.1.8-4042

3.1.8-6 Measure of Significant Project Impacts to Congestion on Signalized and
Unsignalized Intersections (Threshold Matrix 3) 3.1.8-4143

3.1.9-1 Construction-Related Water Demands by Project 3.1.9-2223

3.2.1-1 Local and Regional Parks 3.2.1-12

4-1 Summary of Direct Impacts to County List A and B Species Alternative 2A -
Tierra del Sol Solar Farm 4.0-73

4-2 Impacts to Suitable Habitat for Group I and/or SSC Wildlife Species –
Alternative 2A - Tierra del Sol Solar Farm 4.0-73

4-3 Vegetation Communities Impacts Alternative 2A - Tierra del Sol Solar Farm 4.0-74

4-4 Summary of Direct Impacts to County List A and B Species Alternative 2A -
Rugged Solar Farm 4.0-75

4-5 Impacts to Suitable Habitat for Listed, Group I and/or SSC Wildlife Species
Alternative 2A - Rugged Solar Farm 4.0-76

4-6 Summary of Direct Impacts to County List C and D Plant Species Alternative
2A - Rugged Solar Farm 4.0-77

4-7 Vegetation Communities Impacts Alternative 2A - Rugged Solar Farm 4.0-77

4-8 Proposed Off-Site Access Roads1 Impacts Alternative 2A - Rugged Solar Farm 4.0-78

4-19 Summary of Analysis for Alternatives to the Proposed Project 4.0-58

4-210 Analysis for Alternatives to the Proposed Project 4.0-59

9-1 List of Commenters 9.0-31

9-2 Revised Construction Water Demand 9.0-41

9-3a Tierra del Sol Solar Farm Construction Water Supply by Source 9.0-46

9-3b Rugged Solar Farm Construction Water Supply by Source 9.0-47

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
°C	degrees Celsius
°F	Degrees Fahrenheit
AB	Assembly Bill
AC	alternating current
ACEC	Areas of Critical Environmental Concern
ACOE	U.S. Army Corps of Engineers
ADT	average daily traffic
AED	automated external defibrillator
AF	acre feet
ALUCP	Airport Land Use Compatibility Plan
AMR	American Medical Response
amsl	above mean sea level
AOU	American Ornithologists' Union
APCD	Air Pollution Control District
APE	Areas of Potential Effect
APN	Assessor's Parcel Number
ASCE	American Society of Civil Engineers
AST	aboveground storage tank
AWM	Agriculture, Weights and Measures
BCC	Birds of Conservation Concern
bgs	below ground surface
BLM	Bureau of Land Management
BMPs	best management practices
BOS	Board of Supervisors
BRR	Biological Resources Report
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention
Cal EMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CalFire	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupation Health and Safety Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBP	U.S. Customs and Border Protection
CCR	California Code of Regulations

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFD	Community Facilities District
CFPP	Construction Fire Prevention Plan
CGS	California Geological Survey
CHHSLs	California Human Health Screening Levels
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CMU	concrete masonry unit
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNF	Cleveland National Forest
CNPS	California Native Plant Society
CO ₂ E	carbon dioxide equivalent
CPA	community planning area
CPUC	California Public Utilities Commission
CPV	concentratorphotovoltaic
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSA	County Service Area
CSS	coastal sage scrub
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DC	direct current
DEH	Department of Environmental Health
DEH-HIRT	Department of Environmental Health-Hazardous Incident Response Team
DG	decomposed granite
DHS	Department of Health Services
DOC	Department of Conservation
DPDS	Department of Planning and Development Services
DPLU	Department of Planning and Land Use
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DPW	Department of Public Works
DTSC	Department of Toxic Substances Control
DU	dwelling unit
DWR	Department of Water Resources
ECMSCP	East County Multiple Species Conservation Plan
EIR	Environmental Impact Report
EIS	environmental impact statement

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
EFZ	earthquake fault zone
EMF	electric and magnetic field
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FP	Fully Protected
FPP	Fire Protection Plan
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information systems
GMP	Groundwater Monitoring Plan
GPA	General Plan Amendment
gpd	gallons per day
gpm	gallons per minute
GPS	Global Positioning System
GWP	Global Warming Potential
HAP	hazardous air pollution
HFC	hydrofluorocarbon
HLP	Habitat Loss Permit
HMBP	hazardous materials business plan
HMD	Hazardous Materials Division
HMP	Habitat Management Plan
HVAC	heating, ventilation and air conditioning
Hz	hertz
I-8	Interstate 8
IAWP	Interim Ag Water Program
IFC	International Fire Code
JCSD	Jacumba Community Services District
kV	kilovolt
kW	kilowatt
kWh	kilowatt hour
LARA	Local Agricultural Resource Assessment
lb (lbs)	pound (pounds)
LCC	Land Capability Classification
LCFS	Low Carbon Fuel Standard
LEA	Local Enforcement Agency
L_{eq}	equivalent level
LID	Low Impact Development
LIDAR	light detecting and ranging

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
L _{max}	maximum sound level
L _{min}	minimum sound level
LOS	Level of Service
LOSWC	Live Oak Springs Water Company
L _v	velocity level
MCLs	maximum contaminant levels
MET	Meteorological
MLD	Most Likely Descendent
MMT	million metric tons
MMTCO ₂ E	million metric tons carbon dioxide equivalent
MPA	Major Pre-application
mpg	miles per gallon
MPO	metropolitan planning organization
MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MTCO ₂ E	metric tons carbon dioxide equivalent
MTS	Metropolitan Transit Service
MUP	Master Use Permit
MVA	megavolt amperes
MW	megawatt
MWD	Metropolitan Water District
NAAQS	National Ambient Air Quality Standards
NABA	North American Butterfly Association
NAHC	Native American Heritage Commission
NBMMRP	Nesting Bird Mitigation -Management, Monitoring and Reporting Program
NDAA	Natural Disaster Assistance Act
NESC	National Electrical Safety Code
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NML	Nesting Monitoring Log
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSLU	noise-sensitive land use
O&M	operation and maintenance
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OWTS	On-Site wastewater Treatment System
PCA	Pest Control Advisor

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
PDF	project design feature
<u>PDMWD</u>	<u>Padre Dam Municipal Water District</u>
PFC	perfluorocarbon
PGA	peak ground acceleration
POD	Plan of Development
PPA	Power Purchasing Agreement
PPV	peak particle velocity
PRC	Public Resources Code
PRGs	Preliminary Remediation Goals
PSHA	probabilistic seismic hazard assessment
PVC	polyvinylchloride
<u>PVMWC</u>	<u>Pine Valley Mutual Water Company</u>
RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
REL	reference exposure level
RFS	Renewable Fuel Standard
RMS	root mean square
ROW	right-of-way
RPO	Resource Protection Ordinance
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAM	Site Assessment and Mitigation
SAMP	Special Area Management Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCADA	supervisory control and data acquisition
SCIC	South Coastal Information Center
SD&AE	San Diego & Arizona Eastern Railroad
SD&SE	San Diego & Southeastern Railway
SDAB	San Diego Air Basin
SDAC	San Diego Archeological Center
SDAPCD	San Diego Air Pollution Control District
SDCFA	San Diego County Fire Authority
SDG&E	San Diego Gas and Electric
SDNHM	San Diego Natural History Museum
SDRFPD	San Diego Rural Fire Protection District
SDSU	San Diego State University
SI	Storie index
SIP	State Implementation Plan
SoDAR	sonic detecting and ranging
SPCC	Spill Prevention and Control Countermeasures
SRA	State Responsibility Area

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
SSC	Species of Special Concern
SWMP	Stormwater Management Plan
SWP	State Water Project
SWPL	Southwest Powerlink
SWPPP	Stormwater Pollution Prevention Program
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDS	Total Dissolved Solids
TIF	Transportation Impact Fee
TIS	Traffic Impact Study
TM	Tentative Map
TMDL	Total Maximum Daily Load
TOC	top of casing
TPM	Tentative Parcel Map
UCCE	University of California Cooperative Extension
UDC	Unified Disaster Council
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
V	volt
VdB	vibration decibel
VOC	volatile organic compound
VMT	vehicle miles traveled
WDRs	waste discharge requirements
WL	Watch List

GLOSSARY OF TERMS

Batch Plant – Temporary facility to be located on the Rugged Solar Farm and used for the construction of the Tierra del Sol and Rugged solar farms. The 10-acre facility complex would consist of a mixing plant, areas for sand and gravel stockpiles, an access road, and truck load out and truck turnaround areas. The facility would be used for preparing and mixing the concrete used for the foundations for the trackers, inverter stations, transformers at the substations, the O&M buildings, and other project facilities.

Building Block – Groups of trackers within the solar farm which supply power to a single inverter station.

Bus – A strip or bar of copper, brass, or aluminum that conducts electricity within a switchboard, distribution board, substation, battery bank or other electric apparatus.

Duct Bank – An assembly of PVC cable conduits or ducts, which are usually encased in concrete in a trench and allow replacement of damaged cables or the addition of more power circuits without the re-excavation of a trench.

Inverter Station – Converts DC power from the solar module to AC power. Each inverter station houses a solid-state inverter, which changes the direct current (DC) power to alternating current (AC). The inverter stations would be constructed in an open configuration with a shade structure or placed within an enclosure. All inverter pads would accommodate up to three inverters and one transformer.

Module – Made up of a lens plate (Fresnel lens) and a base plate on which high-performance solar cells are mounted. The Fresnel lens focuses sunlight concentrated by a factor of 500 on the solar cells beneath.

SCADA System – The SCADA (supervisory control and data acquisition) system provides critical operating information (e.g., power production, equipment status and alarms, and meteorological information) to the power purchaser, project owners and investors, grid operator, and project operations teams, as well as facilitates production forecasting and other reporting requirements for project stakeholders. The SCADA system would use on-site sensors, which would maintain tracker orientation toward the sun during the day.

Solar Farm – A large scale concentrated photovoltaic system designed for the supply of merchant power into the electricity grid.

Substation – A part of an electrical generation, transmission, and distribution system that transforms voltage from high to low, or the reverse. Substations include transmission substations,

which connect two or more transmission lines; distribution substations, which transfer power from the transmission system to the distribution system of an area; collector substations, which steps up the voltage from a distributed generation project to a transmission voltage for the grid, as well as metering of the power flow.

Tierra del Sol Transmission Line (gen-tie) – An approximately 6-mile dual circuit 138kV transmission line that would deliver power from the private substation on the Tierra del Sol solar farm to 138kV bus at SDG&E’s Rebuilt Boulevard Substation.

Tracker – A concentrated photovoltaic (CPV) system that includes a module mounted on the tracking system, tracking unit and tracker control unit.