



Table of Contents

Executive Summary	ES-1
Project Overview	ES-1
Purpose of an EIR	ES-2
Eliminated from Further Review in Notice of Preparation	ES-2
Summary of Significant Impacts and Mitigation Measures that Reduce or Avoid the Significant Impacts	ES-7
Areas of Controversy and Issues to be Resolved	ES-7
Project Alternatives	ES-37
Environmentally Superior Alternative	ES-41
1 Introduction	1-1
1.1 Overview of the Proposed Project	1-1
1.1.1 Agency Roles and Responsibilities	1-1
1.2 Relationship to Statutes, Regulations, and Other Plans	1-4
1.2.1 County of Imperial General Plan and Land Use Ordinance	1-4
1.2.2 Renewables Portfolio Standard Program	1-4
1.2.3 California Global Warming Solutions Act of 2006, Assembly Bill 32 (Statutes 2006; Chapter 488; Health and Safety Code Sections 38500 et seq.)	1-4
1.2.4 Title 17 California Code of Regulations, Subchapter 10, Article 2, Sections 95100 et seq.	1-5
1.2.5 Federal Clean Air Act	1-5
1.2.6 Imperial County Air Pollution Control District	1-5
1.2.7 Federal Clean Water Act (33 United States Code Section 1251-1387)	1-5
1.2.8 Federal Clean Water Act and California Porter-Cologne Water Quality Control Act	1-6
1.2.9 Federal Endangered Species Act	1-6
1.2.10 National Historic Preservation Act	1-6
1.2.11 California Endangered Species Act	1-6
1.2.12 California Lake and Streambed Program (Fish and Game Code Section 1602)	1-6
1.3 Purpose of an EIR	1-6
1.4 EIR Process	1-7
1.4.1 Availability of Reports	1-7
1.4.2 Public Participation Opportunities/Comments and Coordination	1-7
1.4.3 Environmental Topics Addressed	1-8
1.4.4 Areas of Controversy and Issues to be Resolved	1-13
1.4.5 Document Organization	1-13
2 Project Description	2-1
2.1 Project Location	2-1
2.1.1 Solar Energy Facility and Gen-Tie Line	2-1
2.1.2 Fiberoptic Cable	2-1
2.1.3 Renewable Energy Overlay Zone	2-5
2.2 Project Objectives	2-5
2.3 Project Characteristics	2-5
2.3.1 Photovoltaic Panels/Solar Arrays	2-9
2.3.2 Substation	2-10
2.3.3 Fiberoptic Cable	2-11
2.3.4 Gen-Tie Line	2-11
2.3.5 Auxiliary Facilities	2-11

2.4	Project Construction	2-12
2.4.1	Construction Sequence	2-12
2.4.2	Workforce	2-13
2.4.3	Materials	2-13
2.4.4	Site Preparation	2-14
2.4.5	Start-up	2-15
2.4.6	Construction Water Requirements	2-15
2.4.7	Dust Suppression	2-15
2.4.8	Clean-up and Demobilization	2-15
2.5	Operations and Maintenance	2-16
2.6	Facility Decommissioning	2-16
2.7	Required Project Approvals	2-16
2.7.1	Imperial County	2-16
2.7.2	Discretionary Actions and Approvals by Other Agencies	2-18
2.7.3	Potential Actions/Approvals by Other Agencies	2-18
3	Environmental Analysis, Impacts, and Mitigation	3.1-1
3.1	Introduction to Environmental Analysis	3.1-1
3.1.1	Organization of Issue Areas	3.1-1
3.1.2	Format of the Impact Analysis	3.1-1
3.2	Aesthetics and Visual Resources	3.2-1
3.2.1	Existing Conditions	3.2-1
3.2.2	Regulatory Setting	3.2-11
3.2.3	Impacts and Mitigation Measures	3.2-13
3.2.4	Decommissioning/Restoration and Residual Impacts	3.2-25
3.3	Air Quality	3.3-1
3.3.1	Existing Conditions	3.3-1
3.3.2	Regulatory Setting	3.3-5
3.3.3	Impacts and Mitigation Measures	3.3-11
3.3.4	Decommissioning/Restoration and Residual Impacts	3.3-21
3.4	Biological Resources	3.4-1
3.4.1	Existing Conditions	3.4-1
3.4.2	Regulatory Setting	3.4-19
3.4.3	Impacts and Mitigation Measures	3.4-23
3.4.4	Decommissioning/Restoration and Residual Impacts	3.4-42
3.5	Cultural Resources	3.5-1
3.5.1	Existing Conditions	3.5-1
3.5.2	Regulatory Setting	3.5-7
3.5.3	Impacts and Mitigation Measures	3.5-12
3.5.4	Decommissioning/Restoration and Residual Impacts	3.5-17
3.6	Geology and Soils	3.6-1
3.6.1	Existing Conditions	3.6-1
3.6.2	Regulatory Setting	3.6-4
3.6.3	Impacts and Mitigation Measures	3.6-7
3.6.4	Decommissioning/Restoration and Residual Impacts	3.6-13
3.7	Greenhouse Gas Emissions	3.7-1
3.7.1	Existing Conditions	3.7-1
3.7.2	Regulatory Setting	3.7-4
3.7.3	Impacts and Mitigation Measures	3.7-11
3.7.4	Decommissioning/Restoration and Residual Impacts	3.7-15
3.8	Hydrology/Water Quality	3.8-1
3.8.1	Existing Conditions	3.8-1



3.8.2	Regulatory Setting	3.8-3
3.8.3	Impacts and Mitigation Measures	3.8-10
3.8.4	Decommissioning/Restoration and Residual Impacts.....	3.8-18
3.9	Land Use Planning	3.9-1
3.9.1	Existing Conditions	3.9-1
3.9.2	Regulatory Setting.....	3.9-4
3.9.3	Impacts and Mitigation Measures	3.9-13
3.9.4	Decommissioning/Restoration and Residual Impacts.....	3.9-16
3.10	Transportation/Traffic	3.10-1
3.10.1	Existing Conditions.....	3.10-1
3.10.2	Regulatory Setting.....	3.10-5
3.10.3	Impacts and Mitigation Measures	3.10-6
3.10.4	Decommissioning/Restoration and Residual Impacts.....	3.10-11
3.11	Utilities/Service Systems	3.11-1
3.11.1	Environmental Setting	3.11-1
3.11.2	Regulatory Setting.....	3.11-2
3.11.3	Impacts and Mitigation Measures	3.11-4
3.11.4	Decommissioning/Restoration and Residual Impacts.....	3.11-7
4	Analysis of Long-Term Effects	4-1
4.1	Growth-Inducing Impacts	4-1
4.2	Significant Irreversible Environmental Changes	4-3
4.3	Unavoidable Adverse Impacts	4-3
5	Cumulative Impacts.....	5-1
5.1	Geographic Scope and Timeframe of the Cumulative Effects Analysis	5-2
5.2	Projects Contributing to Potential Cumulative Impacts.....	5-2
5.3	Cumulative Impact Analysis	5-2
5.3.1	Aesthetics and Visual Resources.....	5-7
5.3.2	Air Quality.....	5-7
5.3.3	Biological Resources.....	5-9
5.3.4	Cultural Resources.....	5-11
5.3.5	Geology and Soils	5-12
5.3.6	Greenhouse Gas Emissions	5-12
5.3.7	Hydrology and Water Quality	5-13
5.3.8	Land Use Planning	5-13
5.3.9	Transportation/Traffic	5-14
5.3.10	Utilities/Service Systems.....	5-14
6	Effects Found Not Significant.....	6-1
6.1	Agriculture and Forestry Resources.....	6-1
6.1.1	Agriculture Resources	6-1
6.1.2	Forestry Resources	6-1
6.2	Energy	6-1
6.3	Hazards and Hazardous Materials.....	6-2
6.4	Mineral Resources	6-3
6.5	Noise	6-3
6.6	Population and Housing	6-3
6.7	Public Services.....	6-4
6.8	Recreation	6-4
6.9	Utilities and Service Systems.....	6-5

6.10	Wildfire.....	6-6
7	Alternatives.....	7-1
7.1	Introduction.....	7-1
7.2	Criteria for Alternatives Analysis.....	7-1
7.3	Alternatives Considered but Rejected.....	7-2
7.3.1	Alternative Site.....	7-2
7.3.2	Original Site Plan Submittal.....	7-5
7.4	Alternative 1: No Project/No Development Alternative.....	7-9
7.4.1	Environmental Impact of Alternative 1: No Project/No Development Alternative.....	7-9
7.5	Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands.....	7-12
7.5.1	Environmental Impact of Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands.....	7-14
7.6	Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands.....	7-16
7.6.1	Environmental Impact of Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands.....	7-19
7.7	Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative.....	7-22
7.7.1	Environmental Impact of Alternative 4: Distributed Commercial and Industrial Rooftop Solar Only Alternative.....	7-22
7.8	Environmentally Superior Alternative.....	7-25
8	References.....	8-1
9	EIR Preparers and Persons and Organizations Contacted.....	9-1
9.1	EIR Preparers.....	9-1
9.2	Persons and Organizations Contacted.....	9-2



Tables

Table ES-1. Summary of Project Impacts and Proposed Mitigation Measures	ES-9
Table ES-2. Comparison of Alternative Impacts to Proposed Project	ES-43
Table 2-1. Example Construction Equipment	2-14
Table 3.2-1. Consistency with Applicable General Plan Conservation and Open Space Policies	3.2-12
Table 3.3-1. Health Effects of Criteria Air Pollutants	3.3-2
Table 3.3-2. Attainment Status of Imperial County	3.3-3
Table 3.3-3. Criteria Air Pollutants – Ambient Data Summary.....	3.3-4
Table 3.3-4. Ambient Air Quality Standards.....	3.3-7
Table 3.3-5. Project Consistency with Applicable Plan Policies	3.3-11
Table 3.3-6. Imperial County Air Pollution Control District Significance Thresholds for Operation	3.3-12
Table 3.3-7. Imperial County Air Pollution Control District Significance Thresholds for Construction Activities	3.3-13
Table 3.3-8. Estimated Construction Emissions by Phase	3.3-16
Table 3.3-9. Estimated Operational Emissions Summary	3.3-16
Table 3.4-1. Vegetation Communities or Land Cover Types within the Biological Study Area	3.4-4
Table 3.4-2. Known and Potential Occurrences of Special-Status Plant Species within the Biological Study Area	3.4-8
Table 3.4-3. Known and Potential Occurrences of Special-Status Wildlife Species within the Biological Study Area	3.4-11
Table 3.4-4. Project Consistency with General Plan Goals and Policies	3.4-22
Table 3.4-5. Vegetation Communities and Other Land Cover Types Impacted by the Project.....	3.4-24
Table 3.4-6. Jurisdictional Features Occurring within the Biological Study Area and Impacts.....	3.4-38
Table 3.5-1. Previously Recorded Cultural Resources Located Within a 1-Mile Radius of the Project Area.....	3.5-5
Table 3.5-2. Cultural Resources Located within 640-acre Survey Area	3.5-6
Table 3.5-3. Project Consistency with Applicable General Plan Goals and Objectives	3.5-12
Table 3.6-1. Nearby Faults.....	3.6-2
Table 3.6-2. Project Consistency with Applicable General Plan Policies	3.6-6
Table 3.7-1. California Greenhouse Gas Emissions Inventory 2000 to 2017.....	3.7-3
Table 3.7-2. Greenhouse Gas Emissions Summary	3.7-14
Table 3.8-1. Beneficial Uses of Receiving Waters.....	3.8-5
Table 3.8-2. Project Consistency with Applicable General Plan Policies	3.8-6
Table 3.8-3. Site Design Best Management Practices	3.8-12
Table 3.8-4. Source Control Best Management Practices.....	3.8-12
Table 3.9-1. Project Consistency with Applicable Plan Policies	3.9-5
Table 3.9-2. Project Consistency with “Adjacent to the Existing Renewable Energy Overlay Zone” Criteria	3.9-15
Table 3.10-1. Level of Service Thresholds for Unsignalized Intersections	3.10-7
Table 3.10-2. Project Trip Generation.....	3.10-8
Table 3.11-1. County of Imperial General Plan Consistency Analysis – Water Service	3.11-3
Table 3.11-2. Construction Water Demand	3.11-5
Table 3.11-3. Operational and Decommissioning Water Demand	3.11-5
Table 3.11-4. Amortized Water Demand	3.11-6
Table 5-1. Projects Considered in the Cumulative Impact Analysis	5-5
Table 7-1. Comparison of Alternative Impacts to Proposed Project.....	7-27

Figures

Figure 2-1. Regional Location	2-2
Figure 2-2. Project Site	2-3
Figure 2-3. Fiberoptic Cable and Gen-Tie Alignment	2-4
Figure 2-4. Preliminary Site Plan	2-7
Figure 2-5. Representative Example of Typical Single-Axis Tracking Solar Panels	2-10
Figure 2-6. Representative Example of Typical Substation Design	2-11
Figure 3.2-1. Key Observation Points	3.2-3
Figure 3.2-2. Existing View at Key Observation Point 1	3.2-5
Figure 3.2-3. Existing View at Key Observation Point 2	3.2-9
Figure 3.2-4. Flight Path Analysis	3.2-15
Figure 3.2-5. Project View Simulation at Key Observation Point 1	3.2-21
Figure 3.2-6. Project View Simulation at Key Observation Point 2	3.2-22
Figure 3.4-1. Vegetation Communities and Land Cover Types in the Biological Study Area	3.4-5
Figure 3.4-2. Potentially Jurisdictional Waters	3.4-17
Figure 3.9-1. General Plan Land Use Designations	3.9-2
Figure 3.9-2. Zoning Designations	3.9-3
Figure 3.10-1. Proposed Haul Routes	3.10-3
Figure 5-1. Cumulative Projects	5-3
Figure 7-1. Alternative Site	7-4
Figure 7-2. Original Site Plan	7-7
Figure 7-3. Alternative 2: Development within Renewable Energy Overlay Zone – Agricultural Lands	7-13
Figure 7-4. Alternative 3: Development within Renewable Energy Overlay Zone – Desert Lands	7-18



Appendices

Appendix A	Initial Study and Notice of Preparation and Comment Letters
Appendix B	Visual Resources Technical Report
Appendix C	Glare Hazard Analysis Rpeort
Appendix D	Air Quality Technical Study
Appendix E	Biological Resources Technical Report
Appendix F	Flat-Tailed Horned Lizard Survey
Appendix G	Preliminary Jurisdictional Waters/Wetlands Delineation Report
Appendix H	Cultural Resources Survey
Appendix I	CEQA Level Geotechnical Study
Appendix J	Water Quality Management Plan
Appendix K	Hydrological Evaluation
Appendix L	Water Supply Assessment

Acronyms

°F	degrees Fahrenheit
AB	Assembly Bill
ABPP	avian and bat protection plan
AC	alternating current
AF	acre-feet
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
amsl	above mean sea level
AP	Alquist-Priolo
APLIC	Avian Powerline Interaction Committee
APN	assessor parcel number
AQAP	air quality attainment plan
AQMP	air quality management plan
AQUA	aquaculture
AST	aboveground storage tank
BAU	business as usual
BBCS	Bird and Bat Conservation Strategy
BLM	Bureau of Land Management
BMP	best management practice
BP	Before present
BSA	biological survey area
BRTR	Biological Resources Technical Report
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
Cal EPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCH	Consortium of California Herbaria
CCR	California Code of Regulations
CDFA	California Department of Food Agriculture
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CHRIS	California Historical Resources Information System
CMP	congestion management program
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
County	Imperial County
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel



DC	direct current
DDT	Dichlorodiphenyltrichloroethane
DOC	Department of Conservation
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	farmland mapping and monitoring program
FRSH	freshwater replenishment
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	Geographic Information System
GPS	Global Positioning System
GWP	global warming potential
H	High
HCP	habitat conservation plan
HFC	hydrofluorocarbon
HSC	Health and Safety Code
HU	hydrological unit
Hz	hertz
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire Department
ICPDS	Imperial County Planning and Development Services Department
IEEE	Institute of Electrical and Electronics Engineers
IGR	Intergovernmental Review
IID	Imperial Irrigation District
IND	industrial service supply
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
IVAG	Imperial Valley Association of Governments
IVC	Imperial Valley College
IVT	Imperial Valley Transit
IWSP	Interim Water Supply Policy
KOP	key observation point
kV	kilovolt
kW	kilowatt
L	low
LCFS	low carbon fuel standard
L _{dn}	day-night average sound level
LE	land evaluation
L _{eq}	equivalent sound level
LESA	land evaluation site assessment
L _{max}	maximum noise level
LOS	level of service
M	moderate
MBTA	Migratory Bird Treaty Act
MEER	Mechanical and Electrical Equipment Room
MH	moderately high

MHMP	Multi-Hazard Mitigation Plan
ML	moderately low
MLD	most likely descendant
MMT	million metric tons
MMTCO _{2e}	million metric tons of CO ₂ equivalent
MPO	metropolitan planning organization
MS4	Municipal Separate Storm Sewer System
MSL	mean sea level
MT	metric tons
MW	megawatt
MWh	megawatt hours
N/A	not applicable
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGO	nongovernmental organizations
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
No.	Number
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NOI	Notice of Intent
NOP	notice of preparation
NPDES	National Pollution Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O&M	operations and maintenance
O ₃	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyls
PCS	Power Conversion Station
PFC	perfluorocarbon
pH	potential of hydrogen
Phase I ESA	Phase I Environmental Site Assessment
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
POI	Point of Interconnection
POW	hydropower generation
PPA	power purchase agreement
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
PV	photovoltaic
RARE	Preservation of Rare, Threatened, or Endangered Species
RCP	Regional Comprehensive Plan



RE	renewable energy
REC	Renewable-Energy Credits
REC I	water contact recreation
REC II	non-contact water recreation
RECUP	Renewable Energy Conditional Use Permit
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SA	site assessment
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SLF	sacred lands file
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SSAB	Salton Sea Air Basin
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
tCO ₂ e	tonnes of carbon dioxide equivalents
TMDL	total maximum daily load
TSS	total suspended solids
U.S.	United States
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USMC	United States Marine Corps
UST	underground storage tank
V/C	volume to capacity
VOC	volatile organic compound
WARM	warm freshwater habitat
WILD	wildlife habitat
WSA	Water Supply Assessment
µg/m ³	microgram per cubic meter

This page is intentionally blank.