

## DOCKETED

<b>Docket Number:</b>	16-AFC-01
<b>Project Title:</b>	Stanton Energy Reliability Center
<b>TN #:</b>	214206-4
<b>Document Title:</b>	Contents
<b>Description:</b>	Application for Certification Vol. 1
<b>Filer:</b>	Sabrina Savala
<b>Organization:</b>	Stanton Energy Reliability Center, LLC
<b>Submitter Role:</b>	Applicant
<b>Submission Date:</b>	10/27/2016 9:17:46 AM
<b>Docketed Date:</b>	10/26/2016

# Contents

Section	Page
<b>Acronyms and Abbreviations</b> .....	<b>xv</b>
<b>Executive Summary</b> .....	<b>ES-1</b>
Project Objectives .....	ES-1
Project Location .....	ES-1
Project Elements .....	ES-1
Project Benefits.....	ES-2
Project Ownership .....	ES-3
Project Schedule .....	ES-3
Environmental Considerations.....	ES-3
Air Quality .....	ES-3
Biological Resources .....	ES-3
Cultural Resources .....	ES-4
Land Use.....	ES-4
Noise .....	ES-4
Visual Resources .....	ES-4
Water Resources.....	ES-5
<b>1 Introduction</b> .....	<b>1-1</b>
1.1 Project Objectives.....	1-1
1.2 Project Location .....	1-2
1.3 Project Elements .....	1-2
1.4 Project Benefits.....	1-11
1.5 Project Operation .....	1-12
1.6 Project Ownership .....	1-12
1.7 Project Schedule .....	1-12
1.8 Persons Who Prepared the AFC.....	1-12
<b>2 Project Description</b> .....	<b>2-1</b>
2.1 Generating Facility Description, Design, and Operation .....	2-1
2.1.1 General Site Arrangement and Layout .....	2-1
2.1.2 Process Description.....	2-1
2.1.3 Integrated Energy Storage .....	2-2
2.1.4 Generating Facility Cycle.....	2-2
2.1.5 Combustion Turbine Generators .....	2-2
2.1.6 Major Electrical Equipment and Systems .....	2-13
2.1.7 Fuel System .....	2-14
2.1.8 Inlet Air Fogging System .....	2-15
2.1.9 Water Supply and Use .....	2-15
2.1.10 Waste Management .....	2-23
2.1.11 Management of Hazardous Materials .....	2-24
2.1.12 Emission Control and Monitoring .....	2-24
2.1.13 Fire Protection .....	2-25
2.1.14 Plant Auxiliaries .....	2-26
2.1.15 Interconnect to Electrical Grid.....	2-28
2.1.16 Project Construction .....	2-28
2.1.17 EGT Facility Operation .....	2-31

2.2	Engineering .....	2-31
2.2.1	Facility Design .....	2-31
2.2.2	Facility Reliability .....	2-32
2.2.3	Thermal Efficiency.....	2-34
2.3	Facility Closure .....	2-35
2.3.1	Temporary Closure .....	2-35
2.3.2	Permanent Closure .....	2-36
<b>3</b>	<b>Electric Transmission.....</b>	<b>3-1</b>
3.1	Introduction .....	3-1
3.2	Transmission Lines Description, Design, and Operation .....	3-1
3.2.1	Underground Transmission Line Characteristics .....	3-1
3.2.2	66-kV Barre Substation Characteristics .....	3-1
3.2.3	SERC Switchyard Characteristics.....	3-1
3.3	Transmission Interconnection Studies.....	3-2
3.3.1	New Equipment Installation .....	3-2
3.3.2	System Impact Studies.....	3-5
3.4	Transmission Line Safety and Nuisances .....	3-6
3.4.1	Electrical Clearances .....	3-6
3.4.2	Electrical Effects.....	3-6
3.4.3	Fire Hazards .....	3-8
3.5	Laws, Ordinances, Regulations, and Standards .....	3-8
3.5.1	Design and Construction.....	3-8
3.5.2	Electric and Magnetic Fields .....	3-9
3.5.3	Hazardous Shock.....	3-9
3.5.4	Communications Interference .....	3-10
3.5.5	Aviation Safety .....	3-10
3.5.6	Fire Hazards .....	3-10
3.5.7	Jurisdiction.....	3-11
<b>4</b>	<b>Natural Gas Supply .....</b>	<b>4-1</b>
4.1	Construction.....	4-1
4.2	Metering Station .....	4-2
4.3	Pipeline Operations .....	4-2
4.4	References .....	4-3
<b>5</b>	<b>Environmental Analysis.....</b>	<b>5-1</b>
5.1	Air Quality .....	5.1-1
5.1.1	Introduction .....	5.1-1
5.1.2	Regulatory Items Affecting New Source Review .....	5.1-3
5.1.3	Project Description .....	5.1-4
5.1.4	Emissions Evaluation.....	5.1-6
5.1.5	Best Available Control Technology Evaluation .....	5.1-15
5.1.6	Air Quality Impact Analysis.....	5.1-16
5.1.7	Meteorological Data Selection .....	5.1-20
5.1.8	Laws, Ordinances, Regulations, and Statutes.....	5.1-30
5.1.9	References .....	5.1-39
5.2	Biological Resources .....	5.2-1
5.2.1	Affected Environment.....	5.2-1
5.2.2	Environmental Analysis.....	5.2-9
5.2.3	Cumulative Effects .....	5.2-14
5.2.4	Avoidance and Minimization Measures .....	5.2-14

5.2.5	Laws, Ordinances, Regulations, and Standards .....	5.2-15
5.2.6	Permits and Permit Schedule.....	5.2-19
5.2.7	Agency Contacts.....	5.2-19
5.2.8	References .....	5.2-19
5.3	Cultural Resources .....	5.3-1
5.3.1	Affected Environment.....	5.3-2
5.3.2	Research Design for the Cultural Resources Inventory .....	5.3-11
5.3.3	Environmental Analysis.....	5.3-21
5.3.4	Cumulative Effects .....	5.3-22
5.3.5	Mitigation Measures.....	5.3-22
5.3.6	Laws, Ordinances, Regulations, and Standards .....	5.3-24
5.3.7	Agencies and Agency Contacts .....	5.3-26
5.3.8	Permits and Permit Schedule.....	5.3-26
5.3.9	References .....	5.3-26
5.4	Geological Hazards and Resources .....	5.4-1
5.4.1	Affected Environment.....	5.4-1
5.4.2	Environmental Analysis.....	5.4-10
5.4.3	Cumulative Effects .....	5.4-10
5.4.4	Mitigation Measures.....	5.4-11
5.4.5	Laws, Ordinances, Regulations, and Standards .....	5.4-11
5.4.6	Agencies and Agency Contacts .....	5.4-12
5.4.7	Permits and Permit Schedule.....	5.4-12
5.4.8	References .....	5.4-12
5.5	Hazardous Materials Handling.....	5.5-1
5.5.1	Affected Environment.....	5.5-1
5.5.2	Environmental Analysis.....	5.5-2
5.5.3	Cumulative Effects .....	5.5-13
5.5.4	Mitigation Measures.....	5.5-14
5.5.5	Laws, Ordinances, Regulations, and Standards .....	5.5-17
5.5.6	Agencies and Agency Contacts .....	5.5-23
5.5.7	Permits and Permit Schedule.....	5.5-24
5.5.8	References .....	5.5-24
5.6	Land Use.....	5.6-1
5.6.1	Affected Environment.....	5.6-1
5.6.2	Environmental Analysis.....	5.6-28
5.6.3	Cumulative Effects .....	5.6-34
5.6.4	Mitigation Measures.....	5.6-35
5.6.5	Laws, Ordinances, Regulations and Standards .....	5.6-35
5.6.6	Agencies and Agency Contacts .....	5.6-38
5.6.7	Permits and Permit Schedule.....	5.6-38
5.6.8	References .....	5.6-38
5.7	Noise .....	5.7-1
5.7.1	Fundamentals of Acoustics .....	5.7-1
5.7.2	Affected Environment.....	5.7-3
5.7.3	Environmental Analysis.....	5.7-11
5.7.4	Cumulative Effects .....	5.7-16
5.7.5	Mitigation Measures.....	5.7-17
5.7.6	Laws, Ordinances, Regulations, and Standards .....	5.7-18
5.7.7	Agencies and Agency Contacts .....	5.7-19
5.7.8	Permits and Permit Schedule.....	5.7-19
5.7.9	References .....	5.7-19

5.8	Paleontological Resources .....	5.8-1
5.8.1	Affected Environment.....	5.8-1
5.8.2	Environmental Analysis.....	5.8-4
5.8.3	Cumulative Effects .....	5.8-6
5.8.4	Mitigation Measures.....	5.8-6
5.8.5	Laws, Ordinances, Regulations, and Standards .....	5.8-7
5.8.6	Agencies and Agency Contacts .....	5.8-9
5.8.7	Permits and Permit Schedule.....	5.8-9
5.8.8	References .....	5.8-9
5.9	Public Health .....	5.9-1
5.9.1	Affected Environment.....	5.9-1
5.9.2	Environmental Analysis.....	5.9-3
5.9.3	Cumulative Effects .....	5.9-11
5.9.4	Mitigation Measures.....	5.9-12
5.9.5	Laws, Ordinances, Regulations, and Standards .....	5.9-13
5.9.6	References .....	5.9-15
5.10	Socioeconomics .....	5.10-1
5.10.1	Affected Environment.....	5.10-1
5.10.2	Environmental Analysis.....	5.10-10
5.10.3	Cumulative Effects .....	5.10-17
5.10.4	Mitigation Measures.....	5.10-17
5.10.5	Laws, Ordinances, Regulations, and Standards .....	5.10-17
5.10.6	Agencies and Agency Contacts .....	5.10-19
5.10.7	Permits and Permit Schedule.....	5.10-20
5.10.8	References .....	5.10-21
5.11	Soils .....	5.11-1
5.11.1	Affected Environment.....	5.11-1
5.11.2	Environmental Analysis.....	5.11-8
5.11.3	Cumulative Effects .....	5.11-12
5.11.4	Mitigation Measures.....	5.11-13
5.11.5	Laws, Ordinances, Regulations, and Standards .....	5.11-14
5.11.6	Agencies and Agency Contacts .....	5.11-16
5.11.7	Permits and Permit Schedule.....	5.11-16
5.11.8	References .....	5.11-17
5.12	Traffic and Transportation .....	5.12-1
5.12.1	Affected Environment.....	5.12-1
5.12.2	Environmental Analysis.....	5.12-13
5.12.3	Cumulative Effects .....	5.12-19
5.12.4	Mitigation Measures.....	5.12-19
5.12.5	Laws, Ordinances, Regulations, and Standards .....	5.12-19
5.12.6	Agencies and Agency Contacts .....	5.12-23
5.12.7	Permits and Permit Schedule.....	5.12-24
5.12.8	References .....	5.12-25
5.13	Visual Resources .....	5.13-1
5.13.1	Introduction .....	5.13-1
5.13.2	Affected Environment.....	5.13-1
5.13.3	Environmental Analysis.....	5.13-5
5.13.4	Cumulative Effects .....	5.13-14
5.13.5	Mitigation Measures.....	5.13-14
5.13.6	Laws, Ordinances, Regulations, and Standards .....	5.13-14

5.13.7	Agencies and Agency Contacts .....	5.13-16
5.13.8	Permits and Permit Schedule.....	5.13-17
5.13.9	References .....	5.13-17
5.14	Waste Management .....	5.14-1
5.14.1	Affected Environment.....	5.14-1
5.14.2	Environmental Analysis.....	5.14-5
5.14.3	Cumulative Effects .....	5.14-9
5.14.4	Mitigation and Waste Management Methods .....	5.14-9
5.14.5	Laws, Ordinances, Regulations, and Standards .....	5.14-11
5.14.6	Agencies and Agency Contacts .....	5.14-14
5.14.7	Permits and Permit Schedule.....	5.14-14
5.14.8	References Cited or Consulted .....	5.14-15
5.15	Water Resources .....	5.15-1
5.15.1	Affected Environment.....	5.15-1
5.15.2	Environmental Analysis.....	5.15-12
5.15.3	Cumulative Effects .....	5.15-13
5.15.4	Mitigation Measures.....	5.15-14
5.15.5	Laws, Ordinances, Regulations, and Standards .....	5.15-14
5.15.6	Agency Contacts, Permits, and Permit Schedule.....	5.15-16
5.15.7	References .....	5.15-17
5.16	Worker Health and Safety.....	5.16-1
5.16.1	Setting .....	5.16-1
5.16.2	Health and Safety Programs .....	5.16-1
5.16.3	Laws, Ordinances, Regulations, and Standards .....	5.16-16
5.16.4	Agencies and Agency Contacts .....	5.16-20
5.16.5	Permits and Permit Schedule.....	5.16-21
5.16.6	References .....	5.16-21
<b>6</b>	<b>Alternatives .....</b>	<b>6-1</b>
6.1	Project Objectives .....	6-1
6.2	The “No Project” Alternative .....	6-2
6.3	Power Plant Site Alternatives .....	6-5
6.3.1	Proposed Project Site.....	6-5
6.3.2	Alternative 1: Warner Site .....	6-6
6.3.3	Alternative 2: Birch Street Site .....	6-6
6.3.4	Alternative 3: Carson Site .....	6-7
6.4	Comparative Evaluation of Alternative Sites .....	6-7
6.4.1	Air Quality .....	6-7
6.4.2	Biological Resources .....	6-7
6.4.3	Cultural Resources .....	6-8
6.4.4	Geological Resources and Hazards .....	6-8
6.4.5	Hazardous Materials Handling.....	6-8
6.4.6	Land Use and Agriculture.....	6-8
6.4.7	Noise .....	6-9
6.4.8	Paleontology .....	6-9
6.4.9	Public Health.....	6-9
6.4.10	Socioeconomics .....	6-9
6.4.11	Soils .....	6-9
6.4.12	Traffic and Transportation .....	6-9
6.4.13	Visual Resources .....	6-9
6.4.14	Water Resources.....	6-10

6.4.15	Waste Management .....	6-10
6.4.16	Summary and Comparison.....	6-10
6.5	Alternative Project Design Features .....	6-10
6.5.1	Alternative Linear Facility Routing.....	6-10
6.5.2	Water Supply Source Alternatives .....	6-11
6.6	Technology Alternatives .....	6-11
6.6.1	Generation Technology Alternatives .....	6-11
6.6.2	Fuel Technology Alternatives.....	6-12
6.6.3	Cooling Alternatives.....	6-12
6.6.4	Inlet Cooling Alternatives.....	6-12

**Appendixes (Vol. 2)**

1A	ALTA Survey
1B	List of Owners of Nearby Properties
1C	Persons Who Prepared this AFC
2A	Engineering Design Criteria
2B	Golden State Water Will-Serve Letter
2C	City of Stanton Can-Serve Letter
2D	Correspondence with Orange County Sanitation District Personnel
3A	Interconnection Request Studies:
3A-1	Phase II Interconnection Study Report
3A-1a	Addendum 1 to the Interconnection Study Report
3A-1b	Appendix H to the Interconnection Study Report
5.1A	Support Data for Emissions Calculations
5.1B	Air Quality Impact Analysis Support Data
5.1C	Dispersion Modeling Protocol
5.1D	Risk Assessment Support Data
5.1E	Estimated Construction Period Emissions and Impacts
5.1F	Evaluation of Best Available Control Technology
5.1G	Regional Emissions Inventory Data
5.1H	Mitigation Strategy Support Data
5.1I	Permitting Forms
5.2A	Special-Status Species
5.2B	Rare Plant Survey Report
5.2C	Biological Resources Resumes
5.3A	Consultation Record:
5.3A1	Historical Societies Consultation
5.3A2	Native American Consultation
5.3B	Cultural Resources Report (Confidential)
5.3C	CHRIS Literature Search (Confidential)
5.3D	Cultural Resources Resumes
5.4A	Preliminary Geotechnical Report
5.5A	Offsite Consequences Analysis
5.6A	Cumulative Projects
5.10A	Environmental Justice Analysis
5.10B	Conversation with OCFA and OCSD
5.11A	Soil Loss Calculations
5.13A	Design Concept
5.13B	Landscape Plan
5.14A	Phase I ESA
5.14B	Phase II ESA

**Tables**

2.1-1	Estimated Daily, Annual, and Peak Water Use and Wastewater Discharge for SERC Operations.....	2-15
2.1-2	LM6000 PC Demineralized Water Purity Requirements.....	2-16
2.1-3	Major Project Milestones.....	2-28
2.1-4	Estimated Average and Peak Construction Traffic.....	2-28
2.2-1	Major Equipment Redundancy.....	2-33
3.5-1	Design and Construction LORS for the Proposed Transmission Line and Switchyard.....	3-9
3.5-2	Electric and Magnetic Field LORS.....	3-9
3.5-3	Hazardous Shock LORS.....	3-9
3.5-4	Communications Interference LORS.....	3-10
3.5-5	Aviation Safety LORS.....	3-10
3.5-6	Fire Hazard LORS.....	3-10
3.5-7	National, State, and Local Agencies with Jurisdiction over Applicable LORS.....	3-11
5.1-1	Facility PTE Summary.....	5.1-3
5.1-2	Combustion Turbine Equipment Specifications.....	5.1-5
5.1-3	Estimated Fuel Use Summary for SERC.....	5.1-5
5.1-4	Significant Emissions Threshold Summary.....	5.1-7
5.1-5	Potentially Emitted Criteria and Toxic Pollutants.....	5.1-8
5.1-6	Combustion Turbine Emissions (startup and steady state operation per turbine).....	5.1-9
5.1-7	Startup and Shutdown Emissions (per event per turbine).....	5.1-9
5.1-8	Two Combustion Turbine Emissions (Full Load, Startup and Shutdown, whichever is Greater) for the Non-Commissioning Year.....	5.1-10
5.1-9	SERC Maximum Potential to Emit.....	5.1-10
5.1-10	Summary of Commissioning Emissions.....	5.1-11
5.1-11	SCAQMD Emission Offsets Required by SERC.....	5.1-12
5.1-12	SCAQMD Emissions Based CEQA Significance Thresholds.....	5.1-14
5.1-13	SCAQMD Air Quality Based CEQA Significance Thresholds.....	5.1-14
5.1-14	BACT Values for Combustion Turbines (Peaking Mode).....	5.1-15
5.1-15	Proposed BACT for the Combustion Turbines.....	5.1-16
5.1-16	State and Federal Ambient Air Quality Standards.....	5.1-21
5.1-17	SCAQMD Attainment Status.....	5.1-23
5.1-18	Measured Ambient Air Quality Concentrations by Year.....	5.1-23
5.1-19	Background Air Quality Data.....	5.1-24
5.1-20	Worst-Case Stack Parameters and Emission Rates.....	5.1-26
5.1-21	Air Quality Impact Results– Significant Impact Levels.....	5.1-27
5.1-22	Air Quality Impact Results– Ambient Air Quality Standards.....	5.1-28
5.1-23	Commissioning Air Quality Impact Results.....	5.1-29
5.1-24	Fumigation Impact Summary.....	5.1-30
5.1-25	Summary of LORS - Air Quality.....	5.1-30
5.1-26	Agencies, Contacts, Jurisdictional Involvement, Required Permits for Air Quality.....	5.1-38
5.2-1	Summary of Unpaved SERC Permanent and Temporary Disturbance Areas (in acres).....	5.2-10
5.2-2	Laws, Ordinances, Regulations, and Standards for Biological Resources.....	5.2-16
5.2-3	Agency Contacts for Biological Resources.....	5.2-19
5.3-1	Cultural Resources Reports within 1 Mile of SERC and 0.5 Mile of Natural Gas Pipeline.....	5.3-15
5.3-2	Previously Recorded Historic Architecture within the SERC Study Area.....	5.3-16
5.3-3	Architectural Properties Newly Documented during the Architectural Survey in September 2016.....	5.3-18
5.3-4	Laws, Ordinances, Regulations, and Standards for Cultural Resources.....	5.3-24



**Tables, continued**

5.3-5 Agency Contacts for Cultural Resources ..... 5.3-26

5.4-1 LORS for Geological Hazards and Resources ..... 5.4-11

5.5-1 Use and Location of Hazardous Materials ..... 5.5-3

5.5-2 Chemical Inventory, Description of Hazardous Materials Stored Onsite, and Reportable  
Quantities ..... 5.5-5

5.5-3 Toxicity, Reactivity, and Flammability of Hazardous Substances Stored Onsite ..... 5.5-7

5.5-4 Toxic Effects and Exposure Levels of Regulated Substance ..... 5.5-9

5.5-5 Laws, Ordinances, Regulations, and Standards for Hazardous Materials Handling ..... 5.5-18

5.5-6 Agency Contacts for Hazardous Materials Handling ..... 5.5-23

5.5-7 Permits and Permit Schedule for Hazardous Materials Handling ..... 5.5-24

5.6-1 Sensitive Nonresidential Land Uses within 1 Mile of the SERC Site ..... 5.6-2

5.6-2 General Plan Land Use Designations in the Study Area ..... 5.6-8

5.6-3 Zoning Districts in the Study Area ..... 5.6-18

5.6-4 Project Conformity with Local Land Use Plans and Policies ..... 5.6-29

5.6-5 LORS for Land Use ..... 5.6-36

5.6-6 Agency Contacts for Land Use ..... 5.6-38

5.7-1 Definitions of Acoustical Terms ..... 5.7-1

5.7-2 Typical Sound Levels Measured in the Environment and Industry ..... 5.7-3

5.7-3 Summary of Noise Survey Locations ..... 5.7-4

5.7-4 Summary of Measurements at LT1 – August 2015 (dBA) ..... 5.7-7

5.7-5 Summary of Measurements at LT1 – August 2016 (dBA) ..... 5.7-8

5.7-6 Summary of Measurements at LT2 – August 2015 (dBA) ..... 5.7-9

5.7-7 Summary of Measurements at LT2 – August 2016 (dBA) ..... 5.7-10

5.7-8 Construction Equipment and Composite Site Noise Levels ..... 5.7-12

5.7-9 Average Construction Noise Levels at Various Distances ..... 5.7-12

5.7-10 Noise Levels from Common Construction Equipment at Various Distances ..... 5.7-12

5.7-11 Construction Vibrations ..... 5.7-13

5.7-12 Summary of Sound Power Levels Used to Model SERC Plant Operations ..... 5.7-15

5.7-13 Laws, Ordinances, Regulations, and Standards for Noise ..... 5.7-18

5.8-1 Paleontological Sensitivity Ratings Employed ..... 5.8-3

5.8-2 LORS Applicable to Paleontological Resources ..... 5.8-7

5.8-3 Agency Contacts for Paleontological Resources ..... 5.8-9

5.9-1 Nearest Sensitive Receptors by Receptor Type ..... 5.9-2

5.9-2 TAC Emissions-2012 AQMP (MATES IV) ..... 5.9-2

5.9-3 Chemical Substances Potentially Emitted to the Air from the SERC ..... 5.9-4

5.9-4 Toxic Pollutant Emissions Estimates (lbs/hr) ..... 5.9-5

5.9-5 Toxic Pollutant Emissions Estimates (lbs/year) ..... 5.9-5

5.9-6 Toxicity Values Used to Characterize Health Risks (Inhalation) ..... 5.9-7

5.9-7 Health Effects Significant Threshold Levels for SCAQMD ..... 5.9-7

5.9-8 SERC HRA Summary ..... 5.9-8

5.9-9 Summary of LORS – Public Health ..... 5.9-13

5.9-10 Summary of Agency Contacts for Public Health ..... 5.9-15

5.10-1 Historical and Projected Populations ..... 5.10-1

5.10-2 Historical and Projected Annual Average Compounded Population Growth Rate ..... 5.10-2

5.10-3 Housing Estimates by City, County, and State, January 1, 2016 ..... 5.10-2

5.10-4 Employment Distribution in Anaheim-Santa Ana-Irvine MD (Orange County),  
2010 to 2015 ..... 5.10-7

5.10-5 Employment Data, Annual Average, 2015 ..... 5.10-7

5.10-6 City of Stanton General Fund Revenues and Expenditures (in \$ thousands) ..... 5.10-8

**Tables, continued**

5.10-7	Historic and Current Enrollment by Grade.....	5.10-8
5.10-8	Construction Workforce Personnel by Month.....	5.10-11
5.10-9	Labor Union Contacts in Los Angeles/Orange County .....	5.10-12
5.10-10	Available Labor by Skill in Anaheim-Santa Ana-Irvine MD, 2012-2022.....	5.10-12
5.10-11	LORS for Socioeconomics.....	5.10-18
5.10-12	Agency Contacts for Socioeconomics .....	5.10-19
5.11-1	NRCS Soil Map Unit Descriptions and Characteristics.....	5.11-2
5.11-2	Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation.....	5.11-9
5.11-3	Soil Loss from Grading and Wind Erosion .....	5.11-11
5.11-4	Mitigation Measures for Fugitive Dust Emissions.....	5.11-14
5.11-5	Laws, Ordinances, Regulations, and Standards for Soils.....	5.11-14
5.11-6	Permits and Agency Contacts for Soils.....	5.11-16
5.12-1	Road Lanes and Capacity.....	5.12-7
5.12-2	LOS Criteria for Local Roadways.....	5.12-7
5.12-3	LOS Criteria for Signalized Intersection Operations.....	5.12-7
5.12-4	Existing Roadway Segment LOS Analysis Summary .....	5.12-8
5.12-5	Existing (2015) Intersection LOS Summary .....	5.12-9
5.12-6	Construction Trip Generation .....	5.12-14
5.12-7	Construction Roadway Segment LOS Analysis Summary.....	5.12-15
5.12-8	Laws, Ordinances, Regulations, and Standards for Traffic and Transportation.....	5.12-20
5.12-9	Agency Contacts for Traffic and Transportation .....	5.12-23
5.12-10	Permits and Permit Schedule for Traffic and Transportation .....	5.12-24
5.13-1	Stanton Energy Reliability Center KOP Views .....	5.13-6
5.13-2	Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features.....	5.13-7
5.13-3	LORS for Visual Resources.....	5.13-14
5.13-5	Conformity with the City of Stanton General Plan.....	5.13-15
5.13-6	Conformity with the City of Stanton Municipal Code .....	5.13-15
5.13-7	Agency Contacts for Visual Resources .....	5.13-16
5.14-1	Potential Wastes Generated during Construction .....	5.14-2
5.14-2	Potential Wastes Generated during Operations.....	5.14-5
5.14-3	Solid Waste Disposal Facilities in the Vicinity of the SERC.....	5.14-7
5.14-4	LORS for Waste Management .....	5.14-12
5.14-5	Agency Contacts for Waste Management .....	5.14-14
5.15-1	Rainfall near the Proposed Project Site (in inches) (1989-2012) .....	5.15-1
5.15-2	CWA Section 303(d) List of Water Quality Impairments in the Santa Ana River .....	5.15-7
5.15-3	Water Quality in Public Supply Wells.....	5.15-7
5.15-4	Expected Water Quality from Golden State Water Company .....	5.15-11
5.15-5	Expected SERC Wastewater Quality.....	5.15-11
5.15-6	LORS for Water Resources .....	5.15-14
5.15-7	Permits and Agency Contacts for Water Resources.....	5.15-16
5.16-1	Construction Hazard Analysis for the SERC.....	5.16-2
5.16-2	Operation Hazard Analysis for the SERC .....	5.16-3
5.16-3	Construction Training Program .....	5.16-14
5.16-4	Operations Training Program.....	5.16-15
5.16-5	Laws, Ordinances, Regulations, and Standards for Worker Health and Safety .....	5.16-16
5.16-6	Agency Contacts for Worker Health and Safety.....	5.16-21
5.16-7	Permits and Permit Schedule for Worker Health and Safety.....	5.16-21
6.4-1	Land Use Designations and Uses.....	6-8

**Figures**

1.0-1 Project Site Prior to Construction ..... 1-3

1.0-2 Architectural Rendering ..... 1-5

1.2-1 Project Vicinity ..... 1-7

1.3-1 Project Location..... 1-9

2.1-1a General Arrangement – Parcel 1 ..... 2-3

2.1-1b General Arrangement – Parcel 2..... 2-5

2.1-2a Elevations – Parcel 1..... 2-7

2.1-2b Elevations – Parcel 2..... 2-9

2.1-3 Heat and Mass Balance Diagram..... 2-11

2.1-4a Water Balance, High Ambient Temperature..... 2-17

2.1-4b Water Balance, Average Ambient Temperature..... 2-19

2.1-4c Water Balance, Low Ambient Temperature ..... 2-21

2.1-5 Construction Worker Parking Area ..... 2-29

3.2-1 Transmission Pole..... 3-3

5.1-1 SERC Site Vicinity..... 5.1-43

5.1-2 SERC Structures Used in BPIP Analysis..... 5.1-45

5.1-3 SERC Coarse Receptor Grids..... 5.1-47

5.1-4 SERC Downwash Receptor Grid ..... 5.1-49

5.1-5 SERC Maximum Impact Locations..... 5.1-51

5.2-1a Protected Areas..... 5.2-21

5.2-1b Significant Regional Wetlands..... 5.2-23

5.2-2 National Wetlands Inventory ..... 5.2-25

5.2-3 Sensitive Natural Communities and Critical Habitat..... 5.2-53

5.2-4 Special-Status Species within the Regional Vicinity..... 5.2-55

5.2-5 Special-Status Species within 1 Mile of the Project Site ..... 5.2-57

5.2-6 Land Cover Within One Mile of the Project Site ..... 5.2-59

5.3-1 Approximate Location of Tribal Lands in Southern California ..... 5.3-5

5.3-2 Cultural Resources Study Area ..... 5.3-13

5.4-1a Surface Geology Within Two Miles of Project Site..... 5.4-3

5.4-1b Surface Geology Within Two Miles of Project Site..... 5.4-5

5.4-2 Regional Fault Map ..... 5.4-7

5.6-1 Existing Land Use..... 5.6-5

5.6-2 General Plan Land Use Designations..... 5.6-15

5.6-3 Zoning in Project Vicinity..... 5.6-25

5.7-1 Sound Monitoring Locations ..... 5.7-5

5.10-1 Minority Percentages within 6 Miles of Project Area ..... 5.10-3

5.10-2 Low Income Population Distribution by Census Tracts within 6 miles ..... 5.10-5

5.11-1 NRCS Soil Map Units Within Project Area ..... 5.11-5

5.12-1 Regional Road Network..... 5.12-3

5.12-2 Local Road Network ..... 5.12-5

5.12-3 Truck Route ..... 5.12-11

5.13-1a Regional Landscape Context ..... 5.13-19

5.13-1b Regional Landscape Context – Oblique Aerial View..... 5.13-21

5.13-2 Project Site and Photograph Viewpoint Locations..... 5.13-23

5.13-3a Key Observation Point Photographs ..... 5.13-25

5.13-3b Key Observation Point Photographs ..... 5.13-27

5.13-4a Additional Representative Photographs ..... 5.13-29

5.13-4b Additional Representative Photographs ..... 5.13-31

**Figures, continued**

5.13-4c	Additional Representative Photographs .....	5.13-33
5.13-4d	Additional Representative Photographs .....	5.13-35
5.13-4e	Additional Representative Photographs .....	5.13-37
5.13-5a	Existing View from Dale Avenue at Monroe Avenue (KOP 1) .....	5.13-39
5.13-5b	Visual Simulation from Dale Avenue at Monroe Avenue (KOP 1) .....	5.13-41
5.13-6a	Existing View from Dale Avenue at Standustrial Street (KOP 2) .....	5.13-43
5.13-6b	Visual Simulation from Dale Avenue at Standustrial Street (KOP 2).....	5.13-45
5.13-7a	Existing View from Pacific Street at Sycamore Avenue (KOP 3).....	5.13-47
5.13-7b	Visual Simulation from Pacific Street at Sycamore Avenue (KOP 3).....	5.13-49
5.13.8a	Existing View from Monroe Avenue (KOP 4).....	5.13-51
5.13.8b	Visual Simulation from Monroe Avenue (KOP 4) .....	5.13-53
5.15-1	Surface Waters .....	5.15-3
5.15-2	Groundwater Basins .....	5.15-5
5.15-3	FEMA Floodplains.....	5.15-9
6.3-1	Alternative Site Locations.....	6-3