B.3.7 Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Significance criteria established by CEQA Guidelines, Appendix G.

B.3.7.1 Setting

Globally, temperatures, precipitation, sea levels, ocean currents, wind patterns, and storm activity are all affected by the presence of greenhouse gases (GHGs). The global climate depends on the presence of GHGs to naturally provide the "greenhouse effect." The greenhouse effect is driven mainly by water vapor, aerosols, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and other GHGs that trap heat radiated from the Earth's surface. The global surface temperature would be about 34°C (61°F) colder than it is now if it were not for the natural heat trapping effect of natural climate change pollutants (CAT, 2006).

Human activity significantly contributes to emissions of six primary GHGs: CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). In response to Executive Order S-3-05 (June 2005), which declared California's particular vulnerability to climate change, the California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB32), was signed into effect on September 27, 2006. In passing the bill, the California Legislature found that:

> *Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems [California Health & Safety Code, Sec. 38500, Division 25.5, Part 1].*

California was responsible for approximately 475 million metric tonnes of CO_2 equivalent (475 MMT CO2E) in 2008, (CARB, 2010) or just over one percent of the approximately 49,000 MMT CO2E emitted globally (IPCC, 2007).

Applicable Regulations

Federal

Mandatory Reporting of Greenhouse Gases Rule (40 CFR Part 98). This rule requires mandatory reporting of GHG emissions for industrial facilities that emit more than 25,000 MT CO2E emissions per year.

Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (40 CFR Part 52). The final rule issued on May 13, 2010, sets thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and title V

Operating Permit programs are required for new and existing industrial facilities. The U.S. Environmental Protection Agency (USEPA) will phase the permitting requirements for GHGs in two initial steps. During Phase 1, only sources currently subject to the PSD permitting program and to the title V would be subjected to permitting requirements for their GHG emission under PSD and to title V requirements for GHG. During Phase 2, the threshold of 100,000 CO2E tons per year (tpy) would be used to determine the applicability of PSD and title V permitting requirements for the first time new source. The USEPA is committed to undertake another rulemaking, Phase 3, and if established, the threshold would be lowered to 50,000 CO2E tpy (USEPA, 2010).

State

California Air Resources Board AB32 Scoping Plan – Cap-and-Trade. The California Air Resources Board (ARB) has promulgated regulations for the California Global Warming Solutions Act of 2006 (AB 32 Núñez, Statutes of 2006, Chapter 488, Health and Safety Code sections 38500 et seq.) and has recently approved GHG emissions cap and trade regulations that have been designed to achieve the state's GHG emission reduction goals. The structure of the cap and trade regulations were adopted by ARB on December 16, 2010 and specific enabling regulations must be adopted by ARB by October 2011 to allow these requirements to become effective January 2012. The approved GHG cap and trade regulations still have several remaining action items and will have several amendments until they will have final state approval by the end of 2011.

Mandatory Reporting Regulation. The mandatory annual reporting requirements, adopted in December 2007, are effective for the largest facilities in the state, which include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 MT CO2E from on-site stationary source combustions such as large furnaces.

California Renewable Energy Programs. In 2002, California established its RPS, with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating that goal, and in November 2008, the Governor signed Executive Order S 14 08 requiring that California utilities reach the 33 percent renewable electricity goal by 2020. The AB32 Scoping Plan (CARB, 2008) includes the 33 percent RPS requirement, and the CARB is due to establish rules in 2010 for the Renewable Electricity Standard (RES) as required by Executive Order S-21-09 of September 2009.

Local

Eastern Kern Air Pollution Control District/Mojave Desert Air Quality Management District.

The Kern County CEQA Implementation Document and Kern County Environmental Checklist, as amended by the California Natural Resources Agency and adopted by the Office of Administrative Law on February 16, 2010, state that a project would have significant impacts on greenhouse gas emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Kern County General Plan includes policies, goals, and implementation measures applicable to air quality, some of which would also indirectly impact GHG emissions. However, neither the Eastern Kern

Air Pollution Control District (EKAPCD) nor the Mojave Desert Air Quality Management District (MDAQMD) have regulations that are directly applicable to GHG emissions and neither agency has approved a quantified threshold of significance for GHG emissions.

B.3.7.2 Environmental Impacts and Mitigation Measures

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT. The Proposed Project would generate GHG emissions through construction activities and maintenance activities. The period of construction would be short-term, and construction-phase GHG emissions would occur directly from the off-road heavy-duty equipment and the on-road motor vehicles needed to mobilize crew, equipment, and materials, to prepare the sites, and to construct substation. Construction GHG emissions would be approximately 422.82 CO2E MT.

The Proposed Project would not add any new facility, but would upgrade and expand the existing Downs Substation, route an existing transmission line into and out of the substation, and add fiber optic telecommunication cable to existing 115 kV poles (with six replacement poles). Therefore, the Proposed Project would not require additional operations/maintenance efforts considering the nature of a Proposed Project. Upon completion of construction, Downs Substation would be unattended and would be controlled remotely. No stationary sources would be associated with the Proposed Project; the only incremental operational and maintenance GHG emissions source would be vehicle usage during periodic inspection, maintenance, and repair activities. Operational/maintenance vehicle trips are estimated to be less than ten per month. Considering that the Proposed Project would require a minimal level of operations/maintenance, the incremental greenhouse emissions from operations/maintenance are also anticipated to be negligible; therefore, no operational emissions estimates have been performed. There would, however, be possible leakage of SF_6 from the circuit breakers, which would also create GHG emissions. Total annual CO2E emissions due to SF_6 leakage are estimated to be 20.4 CO2E MT/year.

As of January 2011, neither EKAPCD nor MDAQMD currently has any significance threshold to regulate GHG emissions. At the level of local air district, the SCAQMD Governing Board adopted the proposal for draft interim GHG significance threshold for projects where the SCAQMD is lead agency. SCAQMD's interim GHG significance threshold is set as 10,000 MT CO2E/year for industrial project with a project's construction emissions amortized over 30 years or the project life and added to operational emissions (SCAQMD 2008). If amortized over 30 years, construction emissions of the Proposed Project would be 14.1 CO2E MT/year. Amortized construction emissions are added to operational emissions to result in slightly higher than 34.5 CO2E MT/year of total annualized direct operational emissions. The expected greenhouse gas emissions of the Proposed Project would be well below than the SCAQMD's interim significance threshold of 10,000 CO2E MT/year. Therefore, the Proposed Project would have a less than significant impact.

b Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

LESS THAN SIGNIFICANT. The GHG emissions are expected to be minimal both during construction and operation of the Proposed Project. In addition, the Applicant (SCE) has developed SF_6 Gas Management Guidelines that they follow which requires proper documentation and control of SF_6 gas inventories for the identification and control of leaking SF_6. The guidelines would be used to mitigate SF_6 leaks to reduce GHG emissions during operation to the extent feasible. Estimated GHG emissions of the Proposed Project would be well below the threshold of federal and State mandatory reporting

regulation. The level of the Project's GHG emissions would be too low to be subject to the federal 40 CFR Part 52 and the State cap-and-trade regulations.

The Energy Commission's *2007 Integrated Energy Policy Report* (IEPR) also addresses climate change within the electricity, natural gas, and transportation sectors (CEC, 2007). For the electricity sector, it recommends such approaches as pursuing all cost-effective energy efficiency measures and meeting the Governor's stated goal of a 33 percent renewable portfolio standard. In compliance with this recommended energy efficiency measure, the Proposed Project, which includes upgrading and expanding substation/transmission elements, would help increase the capacity, reliability, and efficiency of the transmission system that should also help meet the 33 percent renewable portfolio standard. Therefore, the Proposed Project would not conflict with any applicable plan, policy or regulation, and would have a less than significant impact.