Chapter 2
MASTER RESPONSES

This chapter contains the master responses prepared in response to comments submitted on the Draft Environmental Impact Report (DEIR) and recirculated DEIR for the Estrella Substation and Paso Robles Area Reinforcement Project (Proposed Project). As described in Chapter 1, *Introduction,* of this Final Environmental Impact Report (FEIR), the DEIR and recirculated DEIR comment letters raised a number of similar comments and concerns, and the California Public Utilities Commission (CPUC) has determined that preparing master responses is the most appropriate and efficient means of responding. Each master response first summarizes the comments raised in letters and then provides a comprehensive response.

2.1 Master Response 1: Proximity of Earthquake Faults

2.1.1 Comments

Some commenters assert that the CPUC should reject Alternative SE-PLR-2: Templeton-Paso South River Road Route, as it would involve construction of a high-voltage overhead transmission line across and near the Rinconada Fault. The commenters argue that this would exacerbate impacts of existing potential for seismic events, which would be especially hazardous in an area that is designated as a High Fire Hazard Severity Zone (HFHSZ). The commenters assert that the poles and lines associated with the 70 kilovolt (kV) power line route would not be able to withstand a large earthquake. The commenters also assert an earthquake could cause damage (e.g., the lines may snap and the poles may topple), and while the design may be seismic-resistant, it would not be seismic-proof.

2.1.2 Response

Concerns Related to Alternative SE-PLR-2

As described on page 4.7-42 in Volume 1 of the FEIR, in Section 4.7, "Geology, Soils, Seismicity, and Paleontological Resources," and depicted in Figure 4.7-2, Alternative SE-PLR-2 would occur in close proximity to the Rinconada Fault for much of its length and would cross the fault line in several places. Figure 4.7-2 has been updated to show additional branches of this earthquake fault system. The changes to Figure 4.7-2 described above would not result in changes to environmental impact analyses or conclusions presented in the DEIR and, therefore, do not constitute significant new information that would trigger recirculation under CEQA Guidelines Section 15088.5. Rather, the changes serve to clarify and amplify the content of the DEIR.

As described on Page 4.7-9, although definitive geologic evidence of Holocene surface rupture has not been found on the Rinconada Fault, it is regarded as an earthquake source for the California Geological Survey Probabilistic Seismic Hazards Assessment. This is based on the

fault's postulated slip rate of 1±1 mm per year, with a calculated maximum magnitude of 7.3 (Rosenberg et al. 2009). Based on the quaternary age of the Rinconada Fault, it is considered potentially active.

As detailed in FEIR, Volume 1, Section 4.7.2, while the Rinconada Fault is thought to be capable of producing a 7.3 magnitude earthquake, the Alquist-Priolo Earthquake Zoning Act does not prohibit construction of utility infrastructure, such as substations or powerlines, and the Proposed Project does not involve the development of structures intended for human occupancy. (See Public Resources Code Section 2621 et seq.) For these reasons, Alternative SE-PLR-2 is permitted under state law.

CEQA Guidelines Section 15126.6(a) requires that alternatives described in an EIR must only:

- accomplish most of the basic project objectives,
- reduce or eliminate one or more of the significant impacts of the proposed project (although the alternative could have greater impacts overall), and
- be potentially feasible.

In determining whether alternatives are potentially feasible, Lead Agencies are guided by the definition of feasibility found in CEQA Guidelines Section 15364: "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." As described in Section 3.5.3 of the Alternatives Screening Report (ASR), none of these factors were found to be prohibitive for Alternative SE-PLR-2. As noted above, placement of transmission lines in close proximity to, or across, the Rinconada Fault Line is permissible under state law; thus, this would not render the alternative infeasible. Overall, Alternative SE-PLR-2 would accomplish each of the three criteria required of alternatives, as specified in the CEQA Guidelines, when combined with other alternatives (see FEIR, Volume 2, Appendix B, *Alternatives Screening Report*).

The CPUC will consider the analyses presented in this FEIR, the public comments and input during the CEQA process, and the whole of the administrative record to evaluate the Proposed Project and its alternatives' environmental impacts and to further modify, approve, or deny the application for the Proposed Project, and/or alternatives.

Concerns Related to Exacerbation of Seismic Conditions

While the new 70 kV power line under Alternative SE-PLR-2 could be subjected to strong seismic ground shaking from a rupture along the Rinconada Fault, construction of these new facilities would not cause an earthquake to occur or exacerbate the existing seismic-related hazards. As noted in Section 4.7, "Geology, Soils, Seismicity, and Paleontological Resources," in Volume 1 of the FEIR, the Rinconada fault is potentially active and thus could cause ground shaking under existing conditions. However, there is no recorded evidence that a construction project of this scale would cause or exacerbate seismic conditions. (Foulger, et al, 2018.) Consequently, there is no substantial evidence indicating that construction and/or operation of Alternative SE-PLR-2 would directly or indirectly exacerbate existing seismic-related hazards or cause strong seismic ground-shaking in the area.

As discussed in Section 4.7, the Proposed Project would be designed in accordance with existing laws and regulations related to geological and seismic stability, including CPUC General Order (G.O.) 174, which outlines minimum construction material requirements, calculations for foundations, and utility safety measures designed to withstand damage from ground rupture and seismic shaking. The proposed 70 kV power line structures also would be engineered to meet loads generated by forces such as seismic activity, as required by CPUC G.O. 95. Finally, implementation of APM GEO-1 (Soft or Loose Soils) would employ other appropriate measures to avoid, accommodate, replace, or improve soft or loose soils if they are encountered during construction, which would help to increase stability of structures in the event of strong seismic ground shaking. The Proposed Project would not include uses that would substantially change the existing soil composition in the area nor would the Project increase the groundwater table or otherwise increase soil saturation. Neither the construction nor operation of the Proposed Project or Alternative SE-PLR-2 would reasonably increase the likelihood of an earthquake or increase the force or magnitude of a fault rupture.

Concerns Related to High Fire Hazard Severity Zone Coupled with the Rinconada Fault Line

As described in Section 4.9, "Hazards and Hazardous Materials," in Volume 1 of the FEIR, the majority of the Alternative SE-PLR-2 route (south of Charolais Road) would be located in a HFHSZ. Much of the alignment traverses areas of grasslands and oak woodland, which could be highly susceptible to wildfire. However, there is no evidence indicating that construction and/or operation of Alternative SE-PLR-2 would directly or indirectly exacerbate seismic-related hazards or strong seismic ground-shaking such that accidental ignition and development of an uncontrolled wildfire may occur. As noted above, there is no recorded evidence that a construction project of this scale would cause or exacerbate seismic conditions. (Foulger, et al, 2018). In addition, as detailed above, the Proposed Project would be designed in accordance with existing laws and regulations related to geological and seismic stability.

Nevertheless, due to the elevated risk from being partially located in the HFHSZ, additional planning and care with respect to fire safety is warranted for Alternative SE-PLR-2. As described in Section 4.9, compliance with the Public Resources Code and California Fire Code requirements would limit the potential for any accidental ignitions to develop into uncontrolled wildfires. The FEIR includes Mitigation Measure HAZ-1 (Prepare and Implement a Fire Prevention and Management Plan), requiring preparation and implementation of a fire prevention and management plan. This plan would address potential ignition risks during operation of alternative components located in the HFHSZ. Mitigation Measure HAZ-1 requires coordination with state and local fire agencies (refer to page 4.9-32 of the FEIR, Volume 1). Once constructed, Alternative SE-PLR-2 would also be maintained to achieve the vegetation clearances under G.O. 95. Compliance with applicable laws, and implementation of Mitigation Measure HAZ-1 would reduce the potential wildfire hazards from Alternative SE-PLR-2 to a level that is less than significant.

Concerns Related to Resiliency of the Infrastructure to Withstand Seismic Activity

The resiliency of infrastructure, such as the poles and power lines described in the EIR, to withstand individual seismic activities is not only determined by the magnitude of the earthquake, but by a variety of factors, including the distance of the site to the seismic source, soil conditions, and depth to groundwater. As discussed in Section 4.7, "Geology, Soils, Seismicity, and Paleontological Resources," of Volume 1 of the FEIR, Title 24 of the California Code of Regulations (CCR) (also known as the California Building Standards Code [CBC]) specifies standards for construction within and near geologic and seismic hazards. These codes are administered and updated by the California Building Standards Commission. The CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California. Additionally, the 2018 International Building Code (IBC) is used by most states, including California, to set basic standards for acceptable design of structures and facilities. The IBC provides information on criteria for seismic design, construction, and load-bearing capacity associated with various buildings and other structures and features. Additionally, the IBC identifies design and construction requirements for addressing and mitigating potential geologic hazards.

Proposed Project construction and/or construction of any alternatives that may be selected for implementation would meet the requirements of the most recent version of the CBC and IBC, as applicable. Additionally, as described above, the Proposed Project would be designed in accordance with existing laws and regulations related to geological and seismic stability, including CPUC G.O. 174, which outlines minimum construction material requirements, calculations for foundations, and utility safety measures designed to withstand damage from ground rupture and seismic shaking. The proposed 70 kV power line structures also would be engineered to meet loads generated by forces such as seismic activity, as required by CPUC G.O. 95. Finally, implementation of APM GEO-1 would employ other appropriate measures to avoid, accommodate, replace, or improve soft or loose soils if they are encountered during construction, which would help to increase stability of structures in the event of strong seismic ground shaking. Thus, no substantial evidence indicates that construction and/or operation of Alternative SE-PLR-2 would directly or indirectly exacerbate existing seismic-related hazards or strong seismic ground-shaking in the area.

2.2 Master Response 2: Electric Magnetic Fields

2.2.1 Comments

Some commenters allege that the DEIR fails to discuss electric magnetic fields (EMF) and/or provide an analysis of EMF impacts on human health (e.g., sensitive receptors, including both adults and children) or biological resources (e.g., oak trees and other adjacent flora) resulting from the Proposed Project and alternatives. Commenters argue that whether or not CEQA defines or adopts standards for defining potential risk from EMF is irrelevant to the CPUC's responsibility to analyze impacts to human health resulting from EMF. According to the commenters, case studies illustrate the consequences of continued exposure to EMF, and the medical community has not agreed that any type of exposure from EMF is not hazardous to one's health. Commenters reference the California Department of Health Services (DHS) review

(DHS 2002), completed on behalf of the CPUC, which looked at existing studies related to EMF from power lines and potential health risks.

Commenters further assert that significant public health impacts can be mitigated by undergrounding the transmission line. Commenters cite and summarize articles and reports that discuss undergrounding of power lines. The commenters allege that the DEIR fails to comply with the CPUC design guidelines.

2.2.2 Response

Environmental Impact Analysis for EMF

Health concerns regarding EMF are discussed in Section 2.9 of Chapter 2, *Project Description*, of Volume 1 of the FEIR. This section includes an overview of EMF-related topics, scientific background, and applicable regulatory setting, including CPUC policies, standards, and regulations. Information provided in the EIR is presented for the benefit of the public and decisionmakers for informational purposes only and is not considered within the environmental analysis of the Proposed Project or alternatives.

Table 2-13 in the FEIR, Volume 1, provides a summary of the different types of EMF, including source examples of man-made EMF (i.e., EMF that results from technological applications, such as communications technologies, personal electronic devices, and electric generation and transmission). From this table it can be seen that the EMF from the power line under the Proposed Project or alternatives would be "non-ionizing." Non-ionizing EMF is characterized as low to mid-frequency radiation which is generally perceived as harmless due to its lack of potency. (National Institute of Environmental Health Sciences 2020.) In the U.S., electric transmission lines typically operate at 60 Hertz (Hz), which is considered an extremely low frequency (ELF). By comparison, mobile phones operate at between 1.9 and 2.2 gigahertz (i.e., between 1.9 and 2.2 billion Hz), while X-rays operate at upwards of 30 X 10^{19} Hz (National Cancer Institute 2020).

As stated on page 2-121 of Volume 1 of the FEIR, "The CPUC does not consider [EMF] to be an environmental issue in the context of CEQA because there is no agreement among scientists that EMF creates a potential health risk, and because CEQA does not define or adopt standards for defining any potential risk from EMF." As discussed in Section 2.9.2, "Scientific Background and Regulations Applicable to EMF," a substantial amount of research investigating EMF has been conducted over the past several decades; however, much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. While the results of the DHS report referenced by commenters indicate DHS scientists believe that EMF can cause some degree of increased risk for certain health problems, the report does not quantify the degree of risk or make any specific recommendations to the CPUC. In addition to the uncertainty regarding the level of health risk posed by EMF, individual studies and scientific panels have not been able to determine or reach consensus regarding what level of magnetic field exposure might constitute a health risk. In some early epidemiological studies, increased health risks were discussed for daily time-weighted average field levels greater than 2 milligauss (mG). However, the International Agency for Research on Cancer (IARC) scientific working group indicated that studies with average magnetic field levels of 3 to 4 mG played a pivotal role in their classification of EMF as a possible carcinogen. (FEIR,

Volume 1, Section 2.9.)

The 2007 World Health Organization (WHO) [Environmental Health Criteria 238] report concluded that evidence for a link between ELF (50 to 60 Hz) magnetic fields and health risks is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia (WHO 2007). However, it noted that "virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status…the evidence is not strong enough to be considered causal but sufficiently strong to remain a concern." The WHO report added that "[f]or other diseases, there is inadequate or no evidence or health effects at low exposure levels." (FEIR, Volume 1, Section 2.9.)

For these reasons, the CPUC does not consider EMF to be an environmental issue in the context of CEQA, and no further response is required.

CPUC Design Guidelines and Undergrounding of Power Lines

The CPUC acknowledges the commenters' concerns related to EMF and recommendations for decisionmakers to consider undergrounding alternatives. As stated on page 2-126 of Volume 1 of the FEIR, in Decision No. 93-11-013, the CPUC established rules and procedures for addressing the potential health effects of EMFs of utility electrical facilities. The CPUC recommended the following with respect to EMF:

- No-cost and low-cost steps to reduce EMF levels;
- Workshops to develop EMF design guidelines;
- Uniform residential and workplace EMF measurement programs;
- Stakeholder and public involvement; and
- Funding for educational and research programs.

As discussed on page 2-127 of Volume 1 of the FEIR, CPUC revisited the EMF issue in 2006 (Decision No. 06-01-042) and affirmed its "low-cost/no-cost" policy for mitigation of EMF exposure for new utility transmission and substation projects. The CPUC's EMF Design Guidelines for Electrical Facilities (July 21, 2006) (Design Guidelines) document is available at www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/infrastructure/emfs/ca_emf_design_guidelines.pdf. With respect to the no-cost and low-cost steps to reduce EMF levels, the following reduction methods may be considered for new and upgraded electrical facilities:

A. Increasing the distance from electrical facilities by:
    a. Increasing structure height or trench depth.
    b. Locating power lines closer to the centerline of the corridor.

B. Reducing conductor (phase) spacing.

C. Phasing circuits to reduce magnetic fields.

The Proposed Project Applicants are required to implement no-cost or low-cost measures to reduce EMF in accordance with CPUC Decision Nos. 93-11-013 and 06-01-042. Undergrounding power lines is one way to increase the distance from electrical facilities; however, due to the substantially higher cost of undergrounding, this typically would not be considered a low-cost measure. The CPUC's Design Guidelines do not require that new 70 kV power lines be undergrounded to reduce EMF and, as discussed above, EMF is not a CEQA impact. Per CPUC's Design Guidelines, reducing magnetic field strength by increasing the distance from the source can be accomplished either by increasing the height or depth of the conductor from ground level.

As described in Exhibit E (Preliminary Field Management Plan) to the Proposed Project Application (17-01-023) for the 70 kV power line, the Applicants have proposed optimal phase configurations and raising the height of power line structures in residential land use areas by 10 feet taller than necessary for meeting clearance requirements to reduce EMF exposure. For the substation, the Applicants would implement the following measures to reduce EMF levels:

1. Keep high current devices, transformers, capacitors, and reactors away from the substation property lines.

2. For underground duct banks, the minimum distance should be 12 feet from the adjacent property lines or as close to 12 feet as practical.

3. Locate new substations close to existing power lines to the extent practical.

4. Increase the substation property boundary to the extent practical.

These constitute the Applicants' proposed no-cost and low-cost EMF reduction measures for the Proposed Project, as required pursuant to CPUC Decision Nos. 93-11-013 and 06-01-042.

Because scientific studies regarding EMFs cannot reach consensus regarding what level of magnetic field exposure might constitute a health risk, EMF exposure is not considered an environmental issue in the context of CEQA and thus, is not considered within the EIR's environmental impact analysis of the Proposed Project or alternatives. Thus, CEQA mitigation related to EMF, beyond the measures that are already required pursuant to CPUC decisions, is not appropriate, since EMF exposure would not constitute an environmental impact under CEQA.

2.3 Master Response 3: Aesthetics Analysis

2.3.1 Comments

Multiple comments expressed concern regarding the visual impact that the replacement poles would have on the City of Paso Robles, as described in the DEIR. Comments focused on the following themes.

- Several comments allege that the DEIR does not provide adequate information on either the existing or proposed pole heights along the Proposed Project's reconductoring segment to understand the potential visual change that the new poles would have on residents in the Proposed Project vicinity. Commenters also request that the new poles be of similar size and height as the existing wood poles currently present along the reconductoring segment.
- Several comments assert that the new replacement poles for the reconductoring segment would be out of scale with the existing residential neighborhoods and the greater Paso Robles community.
- Several comments express generalized concerns regarding the aesthetic impacts of transmission lines, in particular in relation to Alternative SE-PLR-2. For example, commenters express concerns regarding visual disruptions to property owners, adverse effects on the natural scenery along South River Road, which commenters argue is one of the last pastoral routes entering Paso Robles.

2.3.2 Response

Visual Change Associated with Increased Pole Heights along the Reconductoring Segment

As described in Chapter 2, *Project Description* (see Volume 1 of the FEIR), the reconductoring segment parallel to River Road would use a combination of tubular steel poles (TSPs) and light-duty steel poles (LDSPs) for support and the heights of these poles would typically range between 80 and 90 feet. As shown in Table 2-5, the approximate heights of the LDSPs would range from 76 to 101 feet and on average would be 85 feet above ground; the approximate heights of the TSPs would be 71 to 108 feet and on average would be 88 feet above ground.

Since publication of the DEIR, the Applicants have confirmed that the existing height of poles within the reconductoring segment range from approximately 50 to 80 feet tall. It is important to note that the final heights of the poles will be determined once engineering studies or plans are complete. According to the Preliminary Field Management Plan developed for the Proposed Project, replacement poles in residential areas would be 10 feet taller than necessary to meet clearance requirements to help reduce EMF. Additionally, in some instances, poles may need to be taller to support a longer span of the replaced 70 kV power line, common neutral lines, fiber lines, and existing communication lines. The pole height ranges provided in the Project Description account for the additional height necessary to implement the proposed EMF reduction measures. For these reasons, replacement poles that are a similar height as the existing wood poles would not adequately achieve the Proposed Project objectives. The

maximum change in height of existing poles would be up to 58 feet where a 108-foot-tall pole replaces a 50-foot-tall pole.

In response to comments requesting additional description regarding the potential visual change of the new poles along the reconductoring segment, the following sentence has been added to the first full paragraph on page 4.1-4 of Section 4.1, "Aesthetics," Volume 1 of the FEIR, to describe the height of the existing poles:

> The Proposed Project's approximately 3-mile 70 kV reconductoring segment along River Road follows an established utility corridor. The landscape in this area is characterized by steep hills, native and ornamental vegetation, existing distribution lines, and residential neighborhoods. Close-up views of the reconductoring segment would be available from River Road, the crossing at SR 46, Riverglen Drive and the surrounding neighborhood, and many nearby residences… Within the reconductoring segment, the existing pole heights range between 50 and 80 feet tall.

In addition, the following text under Impact AES-3 on page 4.1-42 of Volume 1 of the FEIR has been revised to better describe the visual change associated with the taller poles:

> The Proposed Project's new 70 kV power line segment would have similar adverse effects on the existing visual conditions, although the degree of impact would vary by location. Effects would be most pronounced in areas of the proposed 70 kV alignment that do not have existing transmission or distribution lines and in areas subject to immediate views from residents and recreationists. Dissimilarly, the reconductoring segment would replace existing poles and reconductor the existing power line~~;~~. Along the reconductored segment, the new replacement poles would range between 71 and 108 feet tall though most poles typically range between 80 and 90 feet in height. The maximum height of a replacement pole would be 108 feet. The maximum change in pole height would be 58 feet where a 108-foot-tall pole replaces an existing 50-foot-tall pole. The visual change would be more pronounced in select areas where poles would reach up to 108 feet tall and would be more noticeable to nearby residents. Public views of the replacement poles would primarily be visible to motorists traveling near the alignment as well as recreationists using the River Walk Trail. Motorists' views would be of short duration. Recreationists may notice the taller poles along portions of the trail, however, the visual change would be incremental because the poles would be installed along the existing alignment. Most views from the Salinas River Parkway Trail are focused on the natural setting in foreground and it is reasonable to assume that local recreationists in the area are accustomed to viewing power lines and poles along the reconductoring segment. For these reasons and because these linear man-made structures already exist along the reconductoring segment the replacement poles ~~thus it~~ would not substantially degrade the existing visual character or quality of public views ~~substantially change the existing visual character or quality in this area~~.

The changes to the EIR described above would not result in changes to environmental impact analyses or conclusions presented in the DEIR and, therefore, do not constitute significant new information that would trigger recirculation under CEQA Guidelines Section 15088.5. Rather, the changes serve to clarify and amplify the content of the DEIR.

Scale of Replacement Poles Relative to Surrounding Residential Development

For the purposes of CEQA, Section 4.1, "Aesthetics," used criteria from Appendix G of the CEQA Guidelines to determine whether the Proposed Project would result in a significant impact on aesthetics (see criteria listed on pages 4.1-37 and 4.1-38 of Volume 1 of the FEIR). Specifically, criterion c. states that a significant impact on aesthetics would occur if, in non-urbanized areas, the Proposed Project would substantially degrade the existing visual character or quality of public views of the site and its surroundings. In urbanized areas, CEQA requires Lead Agencies to consider whether a project would conflict with applicable zoning and other regulations governing scenic quality. Thus, while many commenters raise concerns about the effects that the taller poles would have on private residential views, CEQA is primarily concerned with a project's effects on public views and not private residential views. (See *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App. 4th 477, 492 ["Under CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons."]; *Banker's Hill, Hillcrest, Park West Community Preservation Group v. City of San Diego* (2006) 139 Cal.App.4th 249, 279, ["[O]bstruction of a few private views in a Project's immediate vicinity is not generally regarded as a significant environmental impact.") The impact analysis in Impact AES-3 evaluates the Proposed Project's degradation of public views on the Proposed Project area and whether the Proposed Project would conflict with zoning or other regulations governing scenic quality.

Nevertheless, the DEIR analysis considers aesthetic impacts from private properties. For example, Table 4.1-1, "Key Observation Point Visual Characteristics Summary," provides analysis related to visual quality, concern, exposure, and sensitivity of key observation points from the perspective of a private property. The EIR notes that while views of the Proposed Project from these private properties are dominated by rural surroundings, the number of viewers from these private key observational points would be low. In addition, the EIR describes views of the Estrella Substation from the perspective of the two closest residences which would have fairly unobstructed and long duration views of the facility in comparison to the short duration of views of motorists traveling on Union Road (FEIR, Volume 1, pages 4.1-41 to 4.1-42). The EIR also describes the visual effect from the new 70 kV power line, which the analysis determines would have more pronounced effects "in areas of the proposed 70 kV alignment that do not have existing transmission or distribution lines and in areas subject to immediate views from residents and recreationists" (FEIR, Volume 1, page 4.1-42).

As described in the response above, the impact evaluation under Impact AES-3 has been revised to better describe the visual change associated with the taller replacement poles along the reconductoring segment. These revisions do not result in changes to environmental impact analyses or conclusions presented in the DEIR and, therefore, do not constitute significant new information that would trigger recirculation under CEQA Guidelines Section 15088.5. Rather, the revisions serve to clarify and amplify the content of the DEIR.

A number of comments also alleged that the Proposed Project would negatively affect the area's community character. Community character is not an environmental resource or physical characteristic defined in CEQA. "CEQA does not require an analysis of subjective psychological feelings or social impacts." (P*reserve Poway v. City of Poway* (2016) 245 Cal. App.4th 560, 579.)

Additionally, per CEQA Guidelines Section 15131, subdivision (a), social and economic effects are not considered environmental impacts pursuant to CEQA.

The EIR concluded that the reconductoring segment would be consistent with zoning and that public views would mostly be accessible to motorists with fleeting views. For these reasons and because power lines and poles are common elements viewed in the urban context, the EIR has concluded that the replacement poles in the reconductoring segment would not substantially degrade the visual character or visual quality of public views.

Aesthetic Impacts of Alternative SE-PLR-2

The analysis of aesthetic impacts from Alternative SE-PLR-2 is provided in Section 4.1, "Aesthetics," within Volume 1 of this FEIR. Key observation points (KOPs) 18 through 23 (refer to Figures 4.1-15 through 4.1-17) show existing views along portions of the Alternative SE-PLR-2 route, while KOP 22 provides the view most representative of conditions along South River Road near Santa Ysabel Ranch, where many of the commenters reside. The visual conditions and character associated with these KOPs are described and analyzed in Table 4.1-1. As described therein, for KOP 22, the EIR characterizes the visual quality as moderate-to-high and the viewer concern as high. The analysis states: "From this view, foreground views include mature trees, fencing, and rolling hills. Due to the lack of development and dominance of trees and vegetation, this particular KOP has a high visual appeal." (FEIR, Volume 1, Table 4.1-1, page 4.1-33). As such, the EIR acknowledges the existing aesthetic value and appeal of the area along South River Road through which the Alternative SE-PLR-2 70 kV line would be routed.

The impact analysis discussion for Alternative SE-PLR-2 is provided on pages 4.1-52 to 4.1-54 in Volume 1 of the FEIR. The analysis under significance criterion c[1] finds that the "new power line under Alternative SE-PLR-2 would change the visual character and quality of views of the landscape and would be noticeable to motorists and residences in the surrounding area." Overall, even with implementation of Mitigation Measure AES-1, which would require use of transmission structures with a dulled finish or paint colors that are compatible with the surrounding area in order to minimize contrast, the impacts were found to be significant. With respect to significance criterion a, which considers adverse effects on a scenic vista, the EIR analysis took a conservative approach by considering the rolling hills along South River Road as "oak-covered hillsides," which are identified as scenic vistas in the City of Paso Robles General Plan. As such, the conclusion under significance criterion a for Alternative SE-PLR-2 is significant and unavoidable.

The EIR takes these factors into account in comparing Alternative SE-PLR-2 (which was considered as part of Alternative Combination #4) to other alternatives considered in the EIR

[1] Criterion c from the CEQA Guidelines Appendix G checklist reads: "In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?"

and the Proposed Project. As described in Chapter 5, *Alternatives Analysis Summary and Comparison of Alternatives,* page 5-12, in Volume 1 of the FEIR, "In spite of Alternative SE-PLR-2's shorter length and the co-location of the substation with existing transmission facilities, certain characteristics of this alternative may increase environmental impacts relative to the Proposed Project's 70 kV power line… South River Road is a very scenic area in the area of the Alternative SE-PLR-2 alignment (particularly south of Charolais Road), typified by rolling hills and oak trees, such that the 70 kV power line would significantly affect aesthetics." For the aesthetic impacts and other reasons, Alternative Combination #4 (including Alternative SE-PLR-2) is ranked last (sixth) out of the Proposed Project and other alternative combinations considered in the EIR (refer to FEIR, Volume 1, Table 5-2, page 5-15).

Therefore, the commenters' concerns regarding the aesthetic impacts from implementation of Alternative SE-PLR-2 have been taken into account and properly evaluated in the EIR. With respect to the potential visual disruption to property owners, the commenters are advised CEQA is primarily concerned with a project's effects on public views and not private residential views. See the more detailed discussion of this topic in the preceding discussion under "Scale of Replacement Poles Relative to Surrounding Residential Development."

The "pastoral" quality of the South River Road area noted by several commenters is generally captured by the aesthetics analysis for Alternative SE-PLR-2 described above. For example, the EIR notes the mature trees, fencing, and rolling hills, lack of development and dominance of trees and vegetation, which provide this area with a high visual appeal. To the extent that "pastoral" typically connotes agriculture, Figure 4.2-1 in Section 4.2, "Agriculture and Forestry Resources," in Volume 1 of the FEIR, shows that land along the Alternative SE-PLR-2 alignment is designated as Grazing Land, according to the Farmland Mapping and Monitoring Program (FMMP).

2.4 Master Response 4: Increased Fire Risk

2.4.1 Comments

Multiple comments expressed concern regarding the risks of fire from transmission lines. In particular, the comments regarding fire risk were primarily made in relation to Alternative SE-PLR-2: Templeton-Paso South River Road Route. Comments focused on the following themes:

- Commenters allege that transmission lines can cause wildfires, sometimes catastrophic wildfires.
- Commenters state the Proposed Project Applicants cannot be trusted to maintain defensible space and transmission lines in accordance with fire prevention requirements and mitigation measures.
- Commenters argue the CPUC should reject Alternative SE-PLR-2 because the operation of a high-voltage overhead transmission line in an area that is designated a HFHSZ may ignite wildfires. They also assert a wildfire could be sparked during construction of Alternative SL-PLR-2.

- Commenters note the Santa Ysabel Ranch area includes oak trees and dry grass, providing dense fuel for a fire, and steep hills containing blue oak forest, and experiences high winds, all of which commenters argue contribute to increased fire risk.
- Commenters allege Santa Ysabel Ranch residents and homeowners association (HOA) undertake extensive and expensive measures to mitigate the fire danger within Santa Ysabel Ranch. Commenters allege they comply with California Department of Forestry and Fire Protection (CAL FIRE) mandates for wild grass mowing, tree trimming and other recommendations. They argue installing transmission lines would add a measure of danger beyond their control, which they could not mitigate.

2.4.2 Response

General Concern Regarding Fire Risk from Transmission Lines

As described in Volume 1 of this FEIR, the addition of an electrified substation and new overhead 70 kV power lines to the Paso Robles area would increase wildfire hazards to some degree above baseline conditions. The CPUC acknowledges that with any electrified equipment, including power lines, there is the potential for accidental ignition of nearby vegetation, particularly during high fire hazard conditions (FEIR, Volume 1, page 4.9-28).

The EIR describes a number of measures and requirements that would reduce potential risks of fire resulting from the operation of new power lines. In accordance with G.O. 95, the Proposed Project Applicants would be required to maintain acceptable clearances between the new and reconductored 70 kV power lines and any nearby trees or other vegetation to minimize the risk of the energized lines igniting wildfires. In addition, the Pacific Gas & Electric Company (PG&E) and Horizon West Transmission (HWT) Wildfire Mitigation Plans, prepared pursuant to California Public Utilities Code Section 8386, would be implemented. Additionally, for alternative components in areas designated as a Very High/High Fire Hazard Severity Zone (VHFHSZ or HFHSZ), Mitigation Measure HAZ-1 would require preparation of a project-specific fire prevention and management plan. This would include preparedness training and drills for HWT, PG&E, and contractor personnel; daily tracking of site-specific risk conditions and red flag warnings; coordination with CAL FIRE/San Luis Obispo County Fire Department officials; design and implementation of defensible space around the substation subject to CAL FIRE review; development and implementation of protocols for de-energizing the substation and/or transmission line components in the event of a wildfire; and other measures that would further reduce potential wildfire impacts. Further requirements of the fire prevention and management plan are described in Section 4.9, “Hazards and Hazardous Materials,” in Volume 1 of the FEIR. Although the fire prevention and management plan would not be required for the Proposed Project (since no components are located in a HFHSZ/VHFHSZ), it would be required for Alternative SE-PLR-2, as well as other alternatives.

Also, a CAL FIRE Air Attack Base is located adjacent to the Paso Robles Municipal Airport (see Figure 4.9-2 in Volume 1 of this FEIR), which would help to ensure a quick response time should a wildfire occur. Given these mitigating factors, the EIR determines that the risk of wildfire due to operation of power transmission lines would be less than significant for the Proposed Project and alternatives, including Alternative SE-PLR-2 (refer to FEIR, Volume 1, pages 4.9-28 and 4.9-38).

Concern Regarding Maintenance of Transmission Lines

The Proposed Project Applicants would be legally required to maintain vegetation clearances around the power transmission lines under the Proposed Project and the alternatives. Specifically, California Public Utilities Code Sections 8385 to 8389 require utilities to construct, maintain, and operate electrical lines "in a manner that will minimize the risk of catastrophic wildfire." Under this law, utilities must annually prepare a Wildfire Mitigation Plan, which includes, but is not limited to (Public Utilities Code Section 8386):

- Plans for vegetation management;
- Plans for inspection of electrical infrastructure;
- Plans for particular risks associated with topographic and climatological risk factors; and
- Plans to prepare for and restore service after a wildfire.

Utility Wildfire Mitigation Plans are discussed in Volume 1 of the FEIR on page 4.20-5. The CPUC assesses penalties on utility corporations that do not comply with such Wildfire Mitigation Plans (Public Utilities Code Section 8386.1).

As described in the EIR, the Proposed Project Applicants had both submitted Wildfire Mitigation Plans for 2020 at the time the DEIR was being prepared, which had been approved with conditions by the CPUC (CPUC 2020a). Since that time, both Applicants have submitted 2021 Wildfire Mitigation Plan Update documents (CPUC 2022a). The Wildfire Mitigation Plans provide a strategic framework for systematic reduction of wildfire risk and enhanced system reliability, as well as demonstrate the Applicant's commitment to control wildfire risk using industry best practices and best-available tools, including asset management, vegetation management, situational awareness, weather forecasting, and system hardening. (FEIR, Volume 1, p. 4.20-5.)

Additionally, as noted above in the preceding discussion, Mitigation Measure HAZ-1 from the EIR would require preparation of a fire prevention and management plan for alternatives within a HFHSZ/VHFHSZ, including Alternative SE-PLR-2. The fire prevention and management plan would be required to include design and operation considerations to minimize fire hazard, including vegetation management activities and schedules for ensuring CPUC G.O. 95 clearance requirements are met for transmission line components. (FEIR, Volume 1, page 4.9-32).

Fire Risks During Construction and Operation of Transmission Lines in a High Fire Hazard Severity Zone (HFHSZ)

In response to concerns related to the inherent fire risks in the South River Road area (e.g., due to presence of combustible vegetative fuel materials, steep terrain, frequent high winds, etc.), the CPUC confirms that Alternative SE-PLR-2 would traverse lands designated as a HFHSZ, as identified by CAL FIRE. As noted in the FEIR, "several of the alternatives would be located within or on the border of a HFHSZ. Specifically, Alternatives SS-1 and SE-1A would be entirely located in the HFHSZ while the Alternative SE-PLR-2 alignment would be almost entirely located in the HFHSZ except the northern portion which is within the Paso Robles city limits. Portions of the Alternative PLR- 1A and PLR-1C alignments would border the HFHSZ, while a small portion of Alternative PLR-1C would pass through the HFHSZ. The majority of the length of Alternative PLR-

1C Minor Route Variation 1 would border the HFHSZ along Estrella Road. Example FTM Sites 1-5 and 7 considered for the analysis would be located within the LRA not mapped as VHFHSZ; however, FTM Sites 6 and 8 would be within the SRA HFHSZ. Alternative PLR-3 (both options) would both be located in the LRA non-VHFHSZ. None of the alternatives would be located in a CPUC designated Tier 2 or 3 fire threat area (CPUC 2018)." (FEIR, Volume 1, Section 4.20, "Wildfire," p. 4.20-7.)

However, as stated in Section 4.20, "Wildfire," in Volume 1 of the FEIR, construction of the 70 kV power line for the Proposed Project and all alternatives including Alternative SE-PLR-2 would comply with Public Resources Code requirements for wildland fire safety in brush- or grass-covered areas, as well as California Fire Code requirements, which would minimize potential to ignite a wildfire during construction. The California Public Resources Code includes fire safety regulations restricting the use of certain equipment that could produce sparks or flames, and specifies requirements for the safe use of gasoline-powered tools in fire hazard areas. The California Fire Code contains requirements for fire safety during construction and demolition activities, such as development of a pre-fire plan in coordination with the fire chief; maintaining vehicle access for firefighting at construction sites, and requirements related to safe operation of internal combustion engine construction equipment. As discussed in Volume 1 of the FEIR, because Alternative SE-PLR-2 is located within the HFHSZ, if selected, Mitigation Measure HAZ-1 would be implemented, requiring preparation and implementation of a fire prevention and management plan. The fire prevention and management plan would include site-specific considerations for wildland fire safety during construction and operation, including management of vegetation to ensure compliance with the CPUC's G.O. 95 clearance requirements for overhead electric line construction. Compliance with existing laws and regulations and implementation of Mitigation Measure HAZ-1 would reduce the potential for exacerbating fire risks for neighborhoods located along the alternative route.

The CPUC also notes that there are existing transmission lines in the South River Road/Santa Ysabel Ranch vicinity, which present an existing hazard with respect to fire risk (albeit one that is substantially reduced through compliance with applicable California laws – see discussion above regarding maintenance of transmission lines). For example, the existing 70 kV line connecting Templeton Substation and Paso Robles Substation follows Vaquero Drive, the Salinas River corridor, and Santa Ysabel Avenue. Additionally, there are 230 kV and 500 kV transmission lines that cross South River Road near Lothar Lane. Finally, there are numerous overhead distribution lines (lower voltage) in the greater vicinity, although these lines are undergrounded within SYR itself. Thus, the addition of a 70 kV power line along South River Road under Alternative SE-PLR-2 would be an incremental change to baseline conditions in terms of any additional fire risk from the presence of electrified lines.

Additionally, it should be noted that the South River Road/Santa Ysabel Ranch area is designated as a HFHSZ by CAL FIRE, rather than a VHFHSZ, as are some certain other alternatives. In addition, the South River Road/Santa Ysabel Ranch area is not designated as a CPUC Tier 2 or Tier 3 fire threat area. Refer to Section 4.20, "Wildfire," in Volume 1 of the FEIR, for discussion of the different types of fire hazard/threat classifications. Thus, although CPUC takes fire risk from electrified equipment very seriously, the Alternative SE-PLR-2 alignment is not among the highest fire risk areas of the state. Further, substantial safeguards have been put in place by CPUC to reduce fire risk from transmission lines. In the context of this EIR, Mitigation Measure

HAZ-1 is a reasonable set of requirements to reduce fire risk that may be posed by applicable alternatives, including Alternative SE-PLR-2, with components located in the HFHSZ.

2.5 Master Response 5: Consideration of Battery Storage Alternatives

2.5.1 Comments

Some commenters assert that the DEIR lacks substantial evidence to show that Alternatives BS-2 (Battery Storage to Address the Distribution Objective) and BS-3 (Third Party, Behind-the-Meter [BTM] Solar and Battery Storage to Address the Distribution Objective) are potentially feasible and would be environmentally preferable to the reasonably foreseeable distribution components. Commenters point out that the DEIR only provides illustrative potential sites for front-of-the-meter (FTM) facilities under Alternative BS-2 and that the DEIR acknowledges that the specific locations and characteristics of BTM resources procured under Alternative BS-3 are unknown. The DEIR does not provide significance conclusions for any of the significance criteria in the environmental analysis for Alternatives BS-2 and BS-3.

Thus, commenters allege, the DEIR is flawed in including Alternatives BS-2 and BS-3 as part of Alternative Combination #2, which the DEIR identified as the environmentally superior alternative. Commenters argue that "the DEIR cannot compare actual impact findings regarding the reasonably foreseeable distribution components to speculative assessments of the impacts of Alternatives BS-2 and BS-3 and conclude that these alternatives are environmentally preferable" (Comment Letter J – Pacific Gas & Electric Company; Comment J-16).

Other commenters argue that Alternatives BS-2 and BS-3 would increase the Proposed Project's already significant impacts and purport to provide evidence in support of this argument. Commenters point to fire risk associated with battery energy storage systems (BESSs), greenhouse gas (GHG) emissions from the energy required to charge BESSs during operation, and potential explosion risks and other hazards during transportation and handling of BESSs.

2.5.2 Response

The CPUC performed a reasonable, good faith effort in evaluating potential battery storage and other Distributed Energy Resources (DERs) solutions to the Transmission and Distribution Objectives of the Proposed Project. CEQA requires an EIR to describe and analyze "a reasonable range of potentially feasible alternatives" to the Proposed Project which "could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." (CEQA Guidelines, Section 15126.6, subds. (a), (c).) Thus, CEQA specifically requires EIRs to consider not only feasible alternatives, but also "potentially feasible" alternatives. Further, there are no fixed rules governing the types of activities that an EIR should analyze as project alternatives, and alternatives often vary depending on the type of project being analyzed. (See *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 556.) As documented in the ASR (see Appendix B, *Alternatives Screening Report*, in Volume 2 of the FEIR), CPUC conducted a robust screening analysis of potential alternatives, including the three battery storage alternatives (BS-1, BS-2, and BS-3). It was determined that Alternative BS-1 (Battery Storage to Address the Transmission Objective) could not feasibly be

implemented because the issues with recharging the large BESSs for extended outages during peak demand conditions would prevent Alternative BS-1 from fully meeting the Proposed Project's Transmission Objective. As discussed in the FEIR, Volume 1, page 3-140, Alternative BS-1 would not provide the power support needed for a long duration outage because the BESS would need to be in an adequate state of charge to address an outage. During high loading conditions, such as the summertime, BESSs would not be available to recharge during a P1 or P6 contingency outage. As such, Alternative BS-1 was screened out from full analysis in the EIR because it would not fully meet the Proposed Project's Transmission Objective.

The other two alternatives – BS-2 and BS-3 – were determined to be potentially feasible and to meet the other screening criteria and were, thus, carried forward for further analysis in the EIR.

The ASR identified eight potentially feasible sites for FTM BESSs (see Figure 3-16 and Table 3-17 in Chapter 3 of Volume 1 of this FEIR for a list of the sites). A more detailed view of each site is provided in Figure 3-17 through Figure 3-24. The FEIR analyzes these sites for illustrative purposes. Specifically, Table 3-18 of Volume 1 of the FEIR analyzes the potential placement of BESSs on the eight sites to illustrate characteristics that typify BESSs. This table provides example BESS configurations that could fit on the identified sites for informational purposes only because it is not currently possible to identify with certainty the specific BESS sites that PG&E could select in the future. These example sites and BESS sizing were initially chosen because they would meet both the Proposed Project's transmission and distribution objectives. As discussed in the FEIR, the distribution need for the Proposed Project became less urgent during the course of the CEQA analysis, and placement/siting of BESSs would likely be dependent on future load growth that cannot be predicted at this time.[2] The discussion of Alternative BS-2 in Chapter 3, *Alternatives Description,* specifically reads:

> Need for the reasonably foreseeable distribution components may not occur for up to 15 years as discussed in Chapter 2, *Project Description*. It is not possible to identify with certainty FTM BESS sites that could be selected by PG&E in the future. In addition, energy storage and other distributed energy resources (DER) technologies (e.g., demand response and energy efficiency) are expected to advance within this timeframe. These technological changes are likely to alter siting requirements. Because site-specific analyses are speculative at this time, this FEIR uses the illustrative sites to demonstrate the feasibility of this alternative, and the relatively small footprint these facilities would occupy throughout the project area. (FEIR, Volume 1, page 3-114.)

Further, particularly in light of the COVID-19 pandemic that occurred at the time of writing the DEIR and continues during preparation of the FEIR, future distribution load demand was, and

[2] Figure 2-5 in Volume 1 of the FEIR shows the evolution of PG&E's LoadSEER forecast for the Paso Robles Distribution Planning Area (DPA) and how the forecast was downgraded substantially in 2020. In PG&E's 2018 and 2019 filings, the distribution capacity requirements identified ranged from 3.4 MW to 5.9 MW (CPUC 2020b). In their 2020 filing, however, PG&E indicated that the distribution capacity need no longer exists within the 10-year planning horizon (PG&E 2020a). PG&E clarified that it remains reasonably foreseeable that the distribution components could be needed at the proposed Estrella Substation within fifteen years (PG&E 2020b).

continues to be, highly uncertain, and the specific sizing of FTM BESSs depend on the future unknown load conditions.

As indicated above, the rapidly evolving state of energy storage and other DER (e.g., demand response and energy efficiency) technologies is expected to continue to advance between the FEIR analysis and the time when the facilities may be needed to address the distribution objective. The technologies could affect the sizing and siting of the BESSs. As such, potentially feasible example FTM sites shown in the FEIR demonstrate the feasibility of the alternative and the relatively small footprint these facilities would occupy throughout the project area. The example FTM sites show that vacant parcels are available in the Paso Robles area which have sufficient space for FTM facilities and which the Applicants should reasonably be able to acquire and control. With respect to Alternative BS-3, although CPUC does not know whether customers would opt into the BTM resources program and install BTM resources on their properties, it anticipates that it will find willing customers within the 5-15 years before such energy demand exceeds capacity necessitating these BTM facilities.

Despite these uncertainties, the analysis in the FEIR would be applicable to any site eventually chosen. The FEIR discusses the type of BESS technology that would likely be used (lithium ion/flow battery), the BESSs' size in megawatts, energy amount in megawatts-hour, footprint in acres that the BESS would occupy, and the likely system interconnection to which the BESSs would connect. While the BESS configurations identified in Table 3-18 (see Volume 1 of this FEIR) apply to the eight specific sites identified in the ASR, it is reasonable to assume the example BESS storage system size, storage amount, and footprint data will be correspondingly reflective of any site eventually chosen for BESS placement. Additionally, the FEIR conservatively assumes that the entire undeveloped portions of identified FTM sites would be impacted in developing BESSs, reflecting the FEIR's conservative analysis. (FEIR, Volume 1, p. 3-125; see also Table 3-18, which reflects the maximum BESS sizing for the example FTM sites. BESS sizing for the distribution need alone would be substantially smaller.)

Similarly, BTM resources adoption under Alternative BS-3 would depend on individual customers choosing to opt into the program and installing BTM resources on their property, which is indeterminable at this time. Thus, as explained in the FEIR (see Volume 1, page 3-134), the specific locations of activities under Alternative BS-3 are unknown. However, the FEIR notes BESSs are small in size and would likely be installed on or within existing commercial, industrial, and residential buildings. (See FEIR, Volume 1, p. 4.1-55.) Additionally, like Alternative BS-2, adoption of BTM resources under Alternative BS-3 may not be needed for 5 to 15 years to reduce distribution system loading and technologies are expected to advance in that timeframe, likely resulting in less environmental impacts associated with future BTM resources.

Although specific information about the BESSs and DERs was not available, enough is known about these systems and technologies to allow meaningful evaluation, analysis, and comparison with the Proposed Project and compare impacts in the context of the environmentally superior alternative discussion. (CEQA Guidelines, Section 15126.6(d).) As stated in the FEIR, Volume 1, although certain elements of Alternatives BS-2 and BS-3 are speculative at this time, it is reasonable to assume that deployment/procurement of DERs to meet the distribution needs in the Paso Robles Distribution Planning Area (DPA) in lieu of traditional distribution infrastructure would reduce environmental impacts. (FEIR, Volume 1, p. 5-12.) To illustrate such reduction in environmental impacts, the FEIR discusses standard BESS components and site features for both

BESSs technology types, lithium-ion and flow battery (FEIR, Volume 1, pages 3-127 and 3-128), noting that lithium-ion BESSs may be enclosed in a building, serving to limit aesthetic impacts. Additionally, although the specific locations and characteristics of the FTM BESSs under Alternative BS-2 are not known, it is known that such facilities would not include tall structures that would substantially adversely affect existing views (see Figure 3-25, which shows how FTM BESSs could potentially be enclosed within buildings). Since FTM BESSs would be integrated into the existing distribution grid and could reduce peak loading, the reasonably foreseeable distribution components (including 1.7 miles of new overhead distribution lines) could be avoided with implementation of Alternatives BS-2 and BS-3. Thus, it is known that implementation of BESSs and DERs could avoid the aesthetic impacts of new overhead distribution lines, as well as the potential impacts to special-status birds (e.g., electrocution, collision hazards) that come with overhead lines. "A public agency can make reasonable assumptions based on substantial evidence about future conditions without guaranteeing that those assumptions will remain true." (*Environmental Council of Sacramento v. City of Sacramento* (2006) 142 Cal.App.4th 1018, 1036.)

Similarly, since the BESSs and other DERs would avoid the reasonably foreseeable distribution components, it is known that the fire hazard associated with these facilities (fire risk from new overhead distribution lines) would be avoided. Thus, it is reasonable for the FEIR to discuss the tradeoffs with respect to fire risk for alternative combinations that include Alternatives BS-2 and BS-3. In the discussion of Alternative Combination #2 in Table 5-1, the FEIR states that this combination would result in: "Potentially increased fire risk associated with FTM BESS installations (particularly lithium-ion BESSs); however, the fire risk associated with overhead distribution lines is avoided." (FEIR, Volume 1, p. 5-4.)

In short, the FEIR reasonably includes Alternatives BS-2 and BS-3 in the alternative combinations discussed in Chapter 5 of Volume 1 of the FEIR, and specifically in Alternative Combination #2, which the FEIR identified as the environmentally superior alternative. The high level of analysis presented in the FEIR for Alternatives BS-2 and BS-3 does not preclude them from being included in an alternative combination that may be selected for implementation. At the time of the decision, if the Commission wishes, it can select an alternative combination that includes Alternatives BS-2 and/or BS-3 subject to future planning, design, and review.

The FEIR provides a discussion of the potential impacts of FTM and BTM BESSs and other DERs under the battery storage alternatives for each of the significance criteria for each resource topic under Appendix G of the CEQA Guidelines (see Sections 4.1 through 4.20 of Volume 1 of this FEIR). However, due to the lack of specific information (e.g., known sites, specific FTM BESS designs, locations of BTM resources adoption), as described above, and based on the uncertainty regarding future load growth, the FEIR does not provide project-level significance conclusions for these two alternatives. This approach is consistent with CEQA Guidelines section 15145, which states that: "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." This approach is also consistent with case law determining CEQA analysis is not required, and instead may be postponed to "a later planning stage [for] the evaluation of those project details that are not reasonably foreseeable when the agency first approves the project." (*Save Tara v. City of West Hollywood* (2008) 45 Cal.4th 116, 139.)

Comments alleging the significant, increased environmental impacts of the battery storage and DER alternatives are noted; however, as described above and acknowledged by commenters, specific potential impacts depend on the specific designs and characteristics of BESSs and DERs. Many of the potential fire hazards discussed by the commenters are already disclosed in the FEIR (see Volume 1, pages 4.9-39 to 4.9-41). For discussion of the GHG emissions associated with BESSs, please refer to Master Response 17.

As described above, inclusion of Alternatives BS-2 and BS-3 in the environmentally superior alternative (Alternative Combination #2) is permissible under CEQA, and the CPUC has proceeded in good faith in its evaluation of these alternatives. At the time of the decision, if the Commission wishes, it can select an alternative combination that includes Alternatives BS-2 and/or BS-3 subject to future planning, design, and review.

2.6 Master Response 6: Emergency Access and Evacuation

2.6.1 Comments

Multiple comments expressed concern regarding impacts to emergency access and evacuation routes in the event of a wildfire. In particular, the concerns were predominantly focused on impacts related to Alternative SE-PLR-2: Templeton-Paso South River Road Route. Comments focused on the following themes:

- Commenters argue the CPUC should reject Alternative SE-PLR-2 because of the potential for adverse impacts related to emergency vehicle access and evacuation routes in the event of wildfire or another emergency (e.g., a falling pole or line).

- Specifically, commenters suggest that in the event of upset, entrance and exit flow into or out of the Santa Ysabel Ranch community would be directly impacted by construction and operation of a power line along South River Road.

- Commenters state that elderly and disabled people in the Santa Ysabel Ranch community would be particularly at risk during an emergency (e.g., wildfire or earthquake) that might be additionally complicated with failing or falling towers and power lines.

- Commenters allege transmission lines could be adversely affected by a wildfire leading to a loss of insulation and arcing, posing a hazard to individuals trying to evacuate.

2.6.2 Response

As described in the EIR (see FEIR, Volume 1, page 4.17-29), HWT and PG&E would be required to obtain encroachment permits from the County of San Luis Obispo and City of Paso Robles for impacts to County and City jurisdictional rights-of-way from Alternative SE-PLR-2. As discussed on page 4.17-2 of the EIR, the Caltrans District 5 Encroachment Permits Office in San Luis Obispo issues encroachment permits for activities and encroachments within, under, or over the state highway right of way in the San Luis Obispo area. Authority for Caltrans to control encroachments within the state highway right of way is contained in the Streets and Highways

Code Section 660 et seq. Construction in rights of way subject to Caltrans Encroachment Permit requirements typically requires a Traffic Control Plan in compliance with Caltrans' California Manual on Uniform Traffic Control Devices (MUTCD). As part of these requirements, there are provisions for coordination with local emergency services, training for flagman for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers (Caltrans 2014).

Encroachment permits and implementation of Mitigation Measure TR-1 would require HWT and/or PG&E to each implement a traffic control plan during construction of the Proposed Project, reasonably foreseeable distribution components, and/or alternatives (including Alternative SE-PLR-2). This would include use of signage, flaggers, and other devices to safely route traffic around construction work areas and to provide detours for any road closures. The traffic control plan will minimize vehicle travel delays and potential roadway hazards on public roadways during construction activities. The traffic control plan may be used to satisfy requirements imposed in encroachment permits from Caltrans, County of San Luis Obispo, and/or City of Paso Robles. The EIR on page 4.17-18 (refer to Volume 1 of this FEIR) describes Mitigation Measure TR-1 and the requirements for the traffic control plan, which includes the requirement that HWT and PG&E implement protocols to notify police, fire, and other emergency services departments serving the area of planned lane or road closures on public roadways at least 48 hours in advance. All warning signs, lights, devices, and procedures prescribed in the traffic control plans would conform to the latest MUTCD. With implementation of Mitigation Measure TR-1 and the requirements in encroachment permits, the EIR determined that construction of Alternative SE-PLR-2 would not result in substantial delays or pose a hazard to motorists.

The potential for Alternative SE-PLR-2 to adversely affect emergency response and evacuation is discussed on pages 4.9-37 to 4.9-38 in Section 4.9, "Hazards and Hazardous Materials," in Volume 1 of the FEIR. The EIR acknowledges that construction activities for Alternative SE-PLR-2 could cause temporary disturbances to South River Road, which may be used as an evacuation route by residents in the area. Additionally, lane and/or road closures that may be required for construction of Alternative SE-PLR-2 at crossing structure locations, could obstruct emergency vehicle access or hinder evacuation by residents in the area. However, with implementation of Mitigation Measure TR-1, including implementation of traffic control measures and notification of emergency services departments, the EIR finds that these impacts would be less than significant (FEIR, Volume 1, page 4.9-38).

The County of San Luis Obispo does not identify specific evacuation routes in its General Plan or other documents; however, the EIR acknowledges that South River Road may be used as an evacuation route by residents in the vicinity. Other roads along or near the Alternative SE-PLR-2 alignment could also be used as an evacuation route, depending on the location, extent, and nature of a given emergency or disaster. Although construction of Alternative SE-PLR-2 would not be expected to directly affect Warms Springs Lane, Lake Ysabel Road, Fire Rock Loop, Hanging Tree Lane, or other roads within SYR mentioned in comments, the CPUC acknowledges that these roads could be used by residents for evacuation in the event of an emergency. The CPUC also acknowledges the limited number of entrances/exits from Santa Ysabel Ranch, as noted in comments. Nevertheless, adherence to encroachment permits and implementation of

Mitigation Measure TR-1 would ensure reasonable passage of vehicles around construction work areas and limit adverse effects on evacuation procedures. Mitigation Measure TR-1 requires HWT and PG&E to implement a traffic control plan to minimize vehicle travel delays and potential roadway hazards on public roadways during construction activities. Additionally, the impacts to the entrance/exit points for Santa Ysabel Ranch along South River Road would be relatively short-lived, since construction activities for individual 70 kV poles near these locations would progress more quickly than the overall construction schedule and could be easily cleared from roadways in the event of an emergency. As described in the EIR, "Following completion of construction activities, the Proposed Project would be operated remotely and no staff would typically be on-site during Proposed Project operation. No permanent Proposed Project structures or equipment would interfere with vehicle movement on public roadways. Site maintenance and inspections would be sporadic and would occur only a few times per year. Overall, implementation of Mitigation Measure TR-1 would minimize potential impacts during construction, and no impacts to emergency vehicle access or evacuation procedures would occur during operation." (FEIR, Volume 1, page 4.9-26.)

With respect to concerns regarding falling poles and lines associated with Alternative SE-PLR-2, such potential impacts are speculative. Nonetheless, as discussed in Master Response 1, construction of utility infrastructure under the Proposed Project or alternatives would comply with the CBC and IBC. (See FEIR, Volume 1, pp. 4.7-2-3.) As such, it would be resistant to geologic and seismic hazards. The steel 70 kV poles (LDSPs and/or TSPs) comprising the Alternative SE-PLR-2 70 kV power line also would provide reasonable resistance to vehicle impact (Shi 2019). The use of steel poles rather than wood poles helps ensure that the poles would not be damaged in a fire, causing them to fall (CAL FIRE, State Fire Marshal, and CPUC 2020). For these reasons, there is no reason to believe that the new 70 kV poles or lines would fall down, thereby affecting evacuation routes or causing a wildfire, during the life of Alternative SE-PLR-2. Additionally, as noted in Master Response 5, there are existing transmission and distribution lines in the vicinity of South River Road and Santa Ysabel Ranch; thus, there is an existing risk of power lines/poles falling due to vehicle impact or other reasons. Thus, Alternative SE-PLR-2 would not substantially increase the risk of wildfire over baseline conditions.

Please also refer to Master Response 4 for discussion of increased fire risk from overhead transmission lines and the measures that would be implemented by HWT and PG&E to reduce these risks.

2.7 Master Response 7: Property Values, Economic Effects, and Insurance

2.7.1 Comments

Some commenters expressed concerns regarding the potential for overhead transmission lines to decrease property values in the surrounding area. Commenters also expressed concerns about economic effects on local businesses due to the presence of overhead transmission lines. Additionally, commenters expressed concerns regarding their ability to retain/obtain property

insurance due to increased fire danger associated with having transmission lines in proximity to their properties.

2.7.2 Response

CEQA requires an analysis of physical impacts to the environment; it does not require analysis of social and economic impacts. Under CEQA, "an economic or social change by itself shall not be considered a significant effect on the environment." (CEQA Guidelines, Sections 15131, 15382.) CEQA requires an analysis only of impacts where there is "substantial evidence" that the project would have a significant effect on the environment. Under CEQA, substantial evidence does not include "evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment." (Public Resources Code, Section 21080(e)(2).) Property value loss, including changes to property values or homeowner's insurance policy costs/availability, in and of themselves are not physical impacts required to be included in a CEQA analysis and is not encompassed in a resource topic that is included in Appendix G of the CEQA Guidelines. There is no evidence, and commenters do not provide any evidence, that potentially significant changes to the physical environment would result from economic effects of the Proposed Project or alternatives. For this reason, the comments raise issues that are considered outside the scope of analysis required by CEQA.

2.8 Master Response 8: Project Need and Consideration of Alternatives

2.8.1 Comments

Some commenters questioned the need for the Proposed Project and/or specific alternatives. In particular, a number of commenters asserted that the Alternative SE-PLR-2 alignment did not make sense given that the Proposed Project is intended to address anticipated growth in areas in the northeast portion of Paso Robles. Commenters noted that the "energy need" in the area is small enough that it could be accomplished with battery or thermal storage, and that Templeton (in relation to Alternative Combination #4, which includes both Alternative SE-PLR-2 and Alternative SE-1A) does not have capacity for substantial residential or commercial growth.

Some commenters expressed that Alternative SE-PLR-2 would violate California's "non-wires" policy. Commenters argued that the project should be forward-thinking and an example of what can be done to solve energy needs in California, questioning why the CPUC would consider using "19th-century technology" when the "21st-century technology" of energy storage would solve the problem. Additionally, commenters questioned why all the power lines could not be placed underground.

2.8.2 Response

An EIR is required to describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Specifically, alternatives described in an EIR must:

- feasibly accomplish most of the basic project objectives,
- reduce or eliminate one or more of the significant impacts of the proposed project (although the alternative could have greater impacts overall), and
- be potentially feasible (CEQA Guidelines Section 15126.6[a]).

In determining whether alternatives are potentially feasible, Lead Agencies are guided by the general definition of feasibility found in CEQA Guidelines Section 15364: "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Alternative SE-PLR-2 was determined to have met each of these feasibility criteria, as discussed in the ASR (see Appendix B in Volume 2 of the FEIR), and is considered potentially feasible. The environmental impacts of the Proposed Project and alternatives considered in the EIR are discussed and compared in Chapter 5, *Alternatives Analysis Summary and Comparison of Alternatives*, in Volume 1 of the FEIR.

With respect to the Proposed Project need, commenters are correct to point out that the projected growth areas identified by PG&E and the City of Paso Robles are located primarily in the northeast areas of the city. The locations of expected load growth are part of the rationale for the Proposed Project Applicants identifying the Estrella Substation site as the preferred location for a new substation (see Appendix G[3] to the PEA). PG&E has indicated that new load growth in Paso Robles could be more easily served via traditional distribution line infrastructure from the Estrella Substation site compared to an expanded Templeton Substation. Distribution feeders emanating from the Templeton Substation would need to be substantially longer to reach the anticipated growth areas, as compared to new feeders from the Estrella Substation[4].

However, the "energy need" referred to by commenters pertains to distribution service capacity. *Distribution* needs differ from *transmission system* needs as the two modes of electricity carriage are fundamentally different. The core difference between transmission and distribution power lines is that transmission power lines are used for long-distance, high-voltage electricity transportation, whereas distribution power lines are used for shorter distances and lower voltage electricity transportation (YSG Solar 2021). Transmission power lines carry bulk electricity from the generating power station to a number of substations, and typically operate at voltages between 60 kV and 500 kV. By contrast, distribution power lines carry electricity from the substations to the consumers, and operate at lower voltages (YSG Solar 2021; PG&E

[3] Available: https://ia.cpuc.ca.gov/environment/info/horizonh2o/estrella/docs/App%20G%20-%20Update%205.pdf

[4] Refer to the Applicants' description of the "New Templeton Substation and Paso Robles-Templeton South River Route Alternative", available here: https://ia.cpuc.ca.gov/environment/info/horizonh2o/estrella/docs/Templeton%20Sub%20and%20South%20River%20Route%20Alt%20PD.pdf

2022). The distribution/load growth aspects are only one part of the Proposed Project's objectives. As described in Chapter 2, *Project Description,* in Volume 1 of the FEIR, CPUC identified two CEQA objectives for the Proposed Project, as follows:

> **Transmission Objective:** Mitigate thermal overload and low voltage concerns in the Los Padres 70 kV system during Category B contingency scenarios, as identified by the CAISO in its 2013-2014 Transmission Plan.
>
> **Distribution Objective:** Accommodate expected future increased electric distribution demand in the Paso Robles DPA, particularly in the anticipated growth areas in northeast Paso Robles.

The underlying issues behind these objectives are described in detail in Section 2.1 in Chapter 2, *Project Description,* in Volume 1 of the FEIR. To summarize the key points, the Proposed Project was identified in the CAISO's 2013-2014 Transmission Plan as a project needed to mitigate thermal overloads and voltage concerns in the Los Padres 70 kV transmission system (CAISO 2014). CAISO modeling determined that thermal overloads and very low voltage conditions could occur in this system following either one of two Category B (i.e., P1 or N-1)[5] contingences: loss of the Templeton 230 kV/70 kV #1 Transformer Bank or loss of the Paso Robles-Templeton 70 kV power line. Essentially, if either the #1 Transformer Bank at the Templeton Substation or the 70 kV power line connecting the Paso Robles and Templeton Substations were to fail for any reason (e.g., vehicular impact to existing infrastructure, vegetation and/or storm damage,

[5] The CAISO uses the National Electric Reliability Commission (NERC) reliability standards to analyze the need for transmission system upgrades. The NERC standards provide criteria for system performance requirements that must be met under a varied but specific set of operating conditions, and prior to 2012, included the following categories:

- Category A – System Performance Under Normal Conditions;
- Category B – System Performance Following Loss of a Single Bulk Electric System (BES) Element;
- Category C – System Performance Following Loss of Two or More BES Elements; and
- Category D – System Performance Following Extreme BES Events.

The latest adopted NERC TPL-001-4 transmission reliability standard applies new terminology; P0 through P7 define different scenarios based on the initial system condition and nature of the event (e.g., loss of generator, transmission circuit, bus section fault, etc.). The Category B contingencies identified for the Proposed Project would equate to a P1 (single contingency), while the Category C3 contingency would equate to a P6 (multiple contingency; two overlapping singles) (NERC No Date). The NERC standards allow for load to be dropped for a P6 contingency, but not for a P1 contingency.

NERC also refers to single contingencies (i.e., loss of a single BES element) as N-1 events. A multiple contingency where both BES elements fail at the same time (e.g., two circuits on the same pole line fail when a pole is hit by a vehicle) is known as a N-2 event. A multiple contingency involving the consecutive loss of two single BES elements that are not physically or electrically connected is known as a N-1-1 event. The Category B/P1 contingencies identified for the Proposed Project would be N-1 events, whereas the Category C3/P6 contingency would be a N-1-1 event.

wildlife damage to existing electrical connections, and/or mechanical failure), this could result in dangerous overloading and low voltage conditions in the regional transmission system. This is both due to high load (i.e., electrical service demand) in the Paso Robles area relative to substation capacity, as well as lack of redundancy in the system. (FEIR, Volume 1, page 2-2.)

Because PG&E has an Under-Voltage Load Shedding (UVLS) scheme that serves to protect the transmission system infrastructure in the event of such overload scenarios, rather than allow the power line to deteriorate or completely fail, load would be systematically shed to bring voltages to acceptable levels. Practically, without the Proposed Project, this could result in 60 to 70 megawatts (MW) of load in the Paso Robles area being dropped during one of the Category B/P1 contingencies described above (CAISO 2014).

Separately, with respect to the distribution system, the Proposed Project also would address existing undesirable conditions and projected load growth in the distribution system in the Paso Robles area. First, as described in detail in Appendix G of the Applicants' PEA, the Paso Robles system is characterized by very long distribution feeders[6], particularly those extending from Templeton Substation. Long feeders are undesirable for several reasons, including that they are more susceptible to potential outages caused by vehicle pole strikes, downed vegetation from storms, or other incidents (NEET West and PG&E 2020), and that outages that occur on long feeders may affect larger numbers of people than similar events that occur on feeders of moderate length. Locating the Estrella Substation at its proposed location (along Union Road) would allow for the long feeders to be split in half and for some of the load currently being served by the Templeton Substation to be served by the new Estrella Substation. (FEIR, Volume 1, page 2-6.)

Additionally, and more importantly with respect to the Proposed Project's Distribution Objective, the projected growth within the Paso Robles DPA is anticipated to exceed the capacity of the system in the future. The City of Paso Robles expects strong industrial growth to occur north of State Route (SR-) 46 in the Paso Robles city limits (in particular within the Golden Hill Industrial Park and directly south of Paso Robles Airport along Dry Creek Road) within the next 10 years, and a resurgence of residential growth south of SR-46 (NEET West and PG&E 2020). Overall, City planners are estimating a nearly 50 percent increase in the population of Paso Robles by 2045 (NEET West and PG&E 2020; City of Paso Robles 2014; U.S. Census Bureau 2014). (FEIR, Volume 1, page 2-13.) Increases in electrical demand (i.e., load) will place increased demands on the distribution and transmission systems. The discussion in Chapter 2, *Project Description,* in Volume 1 of the FEIR, and Figure 2-5, show that PG&E's forecasts of load growth in the Paso Robles DPA have varied from year to year, but generally indicate that load is approaching the available distribution service capacity and could exceed this capacity in 5 to 15 years.

[6] Distribution *circuits* (i.e., electrical lines or conductors) are commonly referred to as *feeders*. They operate at voltages under 50 kV.

In a practical sense, without the addition of a new or expanded substation or other facilities to serve increased load when it materializes, this situation could result in thermal overloads, low voltage, and electrical service outages, as the infrastructure is unable to meet demands. The intent of the Proposed Project is to provide enhanced operational flexibility, improved area system reliability, and add capacity to the system with the addition of the new Estrella Substation. The new Estrella Substation would be able to absorb load currently served by other substations within the DPA and alleviate existing undesirable conditions, as well as serve the anticipated new load in the northeast portions of Paso Robles and elsewhere (i.e., through construction of new distribution feeders from the substation [reasonably foreseeable distribution components]).

As such, along with the Distribution Objective, the Transmission Objective is a critical aspect of the Proposed Project that was considered in the alternatives analysis in the EIR. As described in the ASR, Alternative SE-PLR-2, when combined with Alternative SE-1A, could meet the Transmission Objective, since it would address the transmission-level Category B contingency scenarios identified by CAISO. Inclusion of Alternatives BS-2 and BS-3 in an alternative combination (#4) with Alternatives SE-PLR-2 and SE-1A would allow for both CEQA Proposed Project objectives to be met. The 70 kV power line that is considered under Alternative SE-PLR-2 would be to meet the Transmission Objective and would not on its own address the distribution capacity issues described above with respect to the Distribution Objective. Thus, a power line south of Paso Robles is being considered only insofar as it would address the Transmission Objective (and could be paired with other alternatives [e.g., battery storage] to meet both Proposed Project objectives). Similarly, locating a new substation adjacent to the existing substation at Templeton (Alternative SE-1A) is primarily considered insofar as it would address the Transmission Objective. Given that Alternative SE-PLR-2, when paired with Alternative SE-1A, could meet the Transmission Objective, and other alternatives could be incorporated to meet the Distribution Objective, CPUC believes it is proper to include Alternative SE-PLR-2 in the range of potentially feasible alternatives carried forward for detailed analysis in the EIR. The commenters are reminded that the EIR is an informational document that presents a reasonable range of alternatives, as defined by CEQA, for consideration by the Commission.

The CPUC generally agrees with the contention that the “energy need” (distribution capacity need) in the Paso Robles DPA is small enough that it could be met with battery storage; however, this is only with respect to the distribution capacity needs related to the Proposed Project’s Distribution Objective. The transmission system needs/vulnerabilities could not be met with battery storage alone, as documented in the ASR. The CPUC considered Alternative BS-1 (“Battery Storage to Address the Transmission Objective”), which would include installation of FTM BESSs sized to address the Transmission Objective. As described in Chapter 3, *Alternatives Description,* page 3-140, in Volume 1 of the FEIR, however, while FTM BESSs could solve the voltage and loading issues during a P1 and/or P6 contingency identified by CAISO for a limited period of time, they could not provide the power support needed for a long duration outage. PG&E has indicated that a transmission-level outage on its system could last multiple days (outages lasting up to 178 days have occurred). CAISO has also commented that a BESS that discharges to address one outage would need to be in an adequate state of charge to potentially address a subsequent outage. The CPUC confirmed that during high loading conditions (e.g., summer), there may not be a charging window for BESSs to recharge during a P1 or P6 outage. In other words, cumulative loading on the Paso Robles Substation may not drop below the 20 MW that can be supplied by the northern San Miguel-Paso 70 kV Transmission Line (the only

remaining power source to the substation during such a contingency), leaving no available capacity to allow for BESS recharging. Thus, it was determined that Alternative BS-1 could not meet the Transmission Objective of the Proposed Project and was screened out from full analysis in the EIR.

With respect to "non-wires alternatives," CPUC considered such alternatives in detail and included Alternatives BS-2 and BS-3, which would avoid the need for new traditional, overhead distribution lines (i.e., the reasonably foreseeable distribution components). These alternatives would include battery storage, and potentially other DERs, which are "non-wire" solutions to electrical grid challenges. However, such alternatives are not capable of meeting the Proposed Project's Transmission Objective, which is why a 70 kV power line and substation are necessary. CPUC is not aware of a California "non-wire" policy, referenced by commenters. To the extent that commenters are referring generally to CPUC's Distribution Infrastructure Deferral Framework (DIDF) pursuant to the Distribution Resources Plan proceeding (R.14-08-013) or its successor proceeding, which seeks to promote "non-wire" solutions, these policies and frameworks were considered in developing alternatives to the Proposed Project. As described in Chapter 3, *Alternatives Description,* Sections 3.3.7 and 3.3.8, both Alternatives BS-2 and BS-3 would involve battery storage and/or other DERs to address distribution grid needs Indeed, these alternatives could be procured through the DIDF, although the precise method for implementation is unknown at this time. As described in the EIR (FEIR, Volume 1, page 3-133):

> Ultimately, the precise method for implementing Alternative BS-2, if selected, will be determined by the Commission. Multiple approaches are possible, including, but not limited to, directly ordering development of the alternative, ordering filing via the DIDF as needs arise, or ordering a proceeding-specific programmatic decision-making approach via advice letter filings.

Thus, the EIR did consider "non-wire" alternatives that are in keeping with the CPUC's DIDF. The commenters could also be referring to other decisions and policies, which seek to increase battery storage procurement and/or avoid or delay transmission and distribution system upgrades.[7] For example, CPUC Decision 13-10-040 established an Energy Storage Procurement Framework and design program, which includes energy storage procurement targets for each of the investor-owned utilities. Public Utilities Code Section 2837(g) states that each electrical corporation's renewable energy procurement plan should address the acquisition and use of energy storage systems to avoid or delay investments in transmission and distribution system upgrades. Similarly, Assembly Bill 2868 passed in 2016 to spur further DER implementation by requiring the CPUC to direct PG&E, SCE, and SDG&E to develop programs to accelerate deployment of an additional 500 MW of distributed energy storage systems. CPUC Decision D.17-04-039 ordered each of the three utility companies to add up to 166.66 MW of distributed

[7] Other more recent policies, statutes, and proposals include, but are not limited to, Order Instituting Rulemaking R21-06-017 (available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M390/K664/390664433.PDF), Public Utilities Code 769, and the CPUC's DER Action Plan 2.0 (available at: https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M467/K470/467470758.PDF)

energy storage systems to their energy storage procurement and investment plans. (Final ASR, pages 2-6 to 2-7; FEIR, Volume 2, Appendix B.)

The CPUC considered these policies and directives during the alternatives development and screening process for the Proposed Project. This included a detailed analysis of Alternative BS-1, which was an effort to avoid the need for conventional transmission lines; however, the alternative was ultimately determined to be infeasible. The commenters' allegations that Alternative SE-PLR-2 is in violation of "non-wire" policy is based on a misunderstanding regarding the Proposed Project need and objectives. Alternative SE-PLR-2 would include a 70 kV power line that would be required to meet the Transmission Objective of the Proposed Project. Additionally, while the DIDF and other policies seek to encourage DER solutions and defer investments in conventional infrastructure, such as overhead power lines, a project that utilizes such traditional infrastructure would not be in "violation" of the policies, particularly when energy storage and DER solutions have been fully explored as possible alternatives. In the case of the Proposed Project, an energy storage alternative (BS-1) has been explored and determined to be infeasible, yet DER alternatives (BS-2 and BS-3) are still retained to meet other aspects of the Proposed Project need. Therefore, there is clearly no violation of any policy.

While undergrounding of a portion of the Proposed Project's 70 kV power line was considered (Alternative PLR-3), undergrounding of the 70 kV power line under Alternative SE-PLR-2 was not considered. In part, this was due to the focus of the alternatives development and screening process, whose goal it was, consistent with CEQA requirements, to avoid or reduce one or more of the *Proposed Project's* significant environmental effects. The goal was not to avoid or reduce the environmental effects of Alternative SE-PLR-2 relative to itself. As explained in the ASR, Alternative SE-PLR-2 was found to avoid or reduce one or more of the Proposed Project's significant effects (particularly given its pairing with Alternative SE-1A), based on its conception as an overhead 70 kV power line, and it was therefore carried forward for analysis. In a similar vein, undergrounding was not considered for the reconductoring segment of the Proposed Project 70 kV power line. Any impacts or undesirable aspects (e.g., aesthetics concerns) of the existing 70 kV San Miguel-Paso Robles Transmission Line (a portion of which would be reconductored as part of the Proposed Project) are part of existing conditions. Under CEQA, an alternatives analysis need not, and should not, consider the avoidance or reduction of significant, existing impacts on the environment, since these are part of the baseline conditions. Therefore, it would improper to consider undergrounding or relocating poles for the reconductoring segment to address such existing concerns.

Additionally, it should be noted that undergrounding creates impacts of its own and is substantially more expensive than overhead lines. For example, as described in the EIR, trenching along the length of an undergrounding alignment can loosen soils and would involve use of hazardous materials (e.g., fuel and oil in construction equipment), which would create potential for off-site movement of pollutants to waterbodies or discharges into soil and groundwater. (FEIR, Volume 1, p. 4.10-33.) Likewise, undergrounding a power line would require additional excavation compared to overhead line construction and (if installed within the roadway) would use some pieces of equipment (e.g., asphalt saw) that generate elevated noise compared to the construction equipment necessary for overhead power line construction. (FEIR, Volume 1, p. 4.13-30.) Undergrounding also generally involves greater amounts of ground disturbance during construction, as compared to overhead line construction, which could potentially impact biological and cultural resources. As shown in Table 5-3 in Chapter 5,

Alternatives Analysis Summary and Comparison of Alternatives, page 5-17, in Volume 1 of the FEIR, the estimated per mile cost of undergrounding the 70 kV power line is $17,705,000, compared to $3,008,000 for new overhead construction.

The CPUC is under no obligation to consider every possible alternative to a project. As stated in Section 15126.6 of the CEQA Guidelines, "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. *An EIR need not consider every conceivable alternative to a project.* [Emphasis added]. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation." As described above and in the EIR, the CPUC has evaluated a reasonable range of alternatives for the Proposed Project.

Finally, with respect to commenter's suggestions regarding Templeton lacking capacity for substantial new commercial or residential growth, implementation of Alternative Combination #4 (which includes Alternatives SE-1A, SE-PLR-2, BS-2, and BS-3) would not cause or induce growth. As discussed earlier in this comment response, the expanded substation (Alternative SE-1A) at Templeton and 70 kV power line (Alternative SE-PLR-2) are considered only insofar as they would meet the Transmission Objective of the Proposed Project, while Alternatives BS-2 and BS-3 would meet the Distribution Objective. Traditional distribution infrastructure (e.g., overhead lines) could theoretically be built out from the expanded Templeton Substation to provide service to the anticipated growth areas that are primarily located in the northeast portions of Paso Robles; however, that is not envisioned at this time and is not proposed under Alternative Combination #4.

Further, the discussion of population growth and growth inducement in the EIR with respect to the Proposed Project would equally apply to Alternative Combination #4. As described in Section 4.14, "Population and Housing," page 4.14-4, in Volume 1 of the FEIR:

> The Proposed Project would not include any new homes or businesses; therefore, it would not directly induce substantial population growth. The Proposed Project, on its own, would not extend electrical distribution service to new areas such that it would indirectly induce population growth. However, the Proposed Project, with buildout of the reasonably foreseeable distribution components, would expand electric distribution service capacity to accommodate future anticipated growth in the Paso Robles Distribution Planning Area (DPA). Following completion of the Proposed Project, PG&E would be able to provide electricity more effectively to new applications (e.g., new homes and businesses). Without the Proposed Project, it is conceivable that PG&E would not be able to accommodate the level of growth that is anticipated in the DPA. As described in Chapter 2, *Project Description* and in the Proponent's Environmental Assessment (PEA) Appendix G, City of Paso Robles planners expect strong industrial growth to occur north of SR 46 (in particular within the Golden Hill Industrial Park and directly south of Paso Robles Airport along Dry Creek Road) within the next 10 years, and a resurgence of residential growth south of SR 46 (NEET West and PG&E 2020). Overall, city planners estimate a nearly 50 percent increase in the population of Paso Robles by 2045 (NEET West and PG&E 2020; City of Paso Robles 2014; U.S. Census Bureau 2014).

> While the Proposed Project, with buildout of the reasonably foreseeable distribution components, would serve the new growth anticipated by the city, it would not cause or result in this growth. The Proposed Project would accommodate the already anticipated growth…

Although Alternative Combination #4 would expand the existing Templeton Substation, rather than locate a substation at the proposed Estrella Substation site, this alternative combination would similarly not include homes or businesses and would not directly or indirectly cause growth in the Templeton area. Rather, the alternative combination would help to serve new growth anticipated by the City of Paso Robles, as well as address identified transmission system deficiencies.

2.9 Master Response 9: Golden Eagles

2.9.1 Comments

Some commenters expressed concern over Alternative SE-PLR-2: Templeton-Paso South River Road Route and its positioning near known golden eagle nests. Commenters stated concerns over golden eagle and other avian species collisions with and electrocutions from the proposed power line along this route.

2.9.2 Response

One of the Project Applicants (PG&E) is currently working with the United States Fish and Wildlife Service (USFWS) to apply for a permit under the Bald and Golden Eagle Protection Act and Endangered Species Act to address work activities in areas within golden eagle territories. Fatality monitoring and remedial actions will be addressed in the USFWS take permit. The EIR provides the known golden eagle nest locations in Figure 4.4-5. As described in Chapter 2, *Project Description*, in Volume 1 of the FEIR, conductors will be installed in accordance with raptor safety requirements and would be specular (i.e., shiny) and more visible to birds upon initial installation. Specular conductors will allow raptors time to adjust to the new facilities and help to reduce electrocutions and collisions.

The text of Mitigation Measure BIO-3 has also been clarified in the FEIR to state that PG&E will implement the company's own Avian Protection Plan (included in Appendix D in Volume 2 of this FEIR), which incorporates relevant raptor-safe construction guidelines found in the Avian Power Line Interaction Committee's (APLIC's) and USFWS' 2005 Avian Protection Plan Guidelines. As part of the Avian Protection Plan, under Mitigation Measure BIO-3, PG&E shall work with USFWS to determine the need for installation of bird diverters in areas near known golden and bald eagle nests. Mitigation Measure BIO-3 also describes the measures that will be implemented to protect golden eagles, bald eagles, and other avian species during construction or replacement work for the Proposed Project and/or applicable alternatives (including Alternative SE-PLR-2). This would include avoiding work during the nesting season to the extent feasible, and otherwise conducting a nesting bird survey in the area of proposed work and implementing no-disturbance nesting buffers, as appropriate, for any identified active nests. (FEIR, Volume 1, p. 4.4-54.) As noted above, Mitigation Measure BIO-3 would be applied for Alternative SE-PLR-2 as well as the Proposed Project.

In addition to application of an Avian Protection Plan and implementation of Mitigation Measure BIO-3, APMs GEN-1, BIO-1, and BIO-2 and Mitigation Measure BIO-1 would avoid or reduce the potential for impacts to golden eagles. As stated in Section 4.4 "Biological Resources," in Volume 1 of the FEIR, APM GEN-1 requires that the Applicants prepare and implement a worker environmental awareness training (WEAP) so that construction personnel are trained on the identification of special-status species and sensitive resources and in the avoidance and minimization measures that will be implemented to protect them. APM BIO-1 and Mitigation Measure BIO-1 would require pre-construction surveys, which would identify if golden eagles may be present on or near work sites. If work is scheduled during the nesting season (commencing January 15 for golden eagle and February 1 for all other birds through August 31), APM BIO-2 and Mitigation Measure BIO-1 would require that nest detection surveys be implemented corresponding with the species-specific buffers set forth in PG&E's *Nesting Birds: Specific Buffers for PG&E Activities* (Appendix E to the PEA). Appropriate buffers would be implemented around golden eagle nests until the young have fledged. Implementation of these APMs and mitigation measures would reduce impacts to golden eagles to a less than significant level.

2.10 Master Response 10: Heritage Oaks

2.10.1 Comments

Some commenters are concerned about the potential loss of heritage oak trees that may occur due to Alternative SE-PLR-2: Templeton-Paso South River Road Route. Commenters are concerned about the amount of heritage trees that will be removed and that these trees are irreplaceable.

2.10.2 Response

Section 4.4, "Biological Resources," in Volume 1 of the FEIR, discusses the impacts of Alternative SE-PLR-2 (see pages 4.4-69 to 4.4-71) and provides discussion on the applicable mitigation measure (Mitigation Measure BIO-4) that will be implemented to avoid or minimize impacts to blue oak woodland habitat. Mitigation Measure BIO-4 would require development and implementation of a Habitat Restoration Plan to mitigate any temporary and permanent impact on blue oak woodland habitat. For any temporary impact, all disturbed soils and new fill in this habitat shall be revegetated with site-appropriate native species compatible with the facility. The Habitat Restoration Plan would require that any permanent impacts to blue oak woodland habitat be mitigated at a ratio of 1.1:1 (replacement to impact). Oak trees that are removed (including heritage oaks) shall be mitigated based on the tree diameter at breast height (dbh) (approximately 4.5 feet above grade). The blue oak woodland restoration plan would be consistent with and include conditions within the City of Paso Robles's Oak Tree Ordinance and will follow the guidelines in the ordinance to determine the replacement ratios for each tree. Replacement oaks shall, at a minimum, be equivalent to 25 percent of the diameter of the

removed trees[8]. As stated under Mitigation Measure BIO-4, blue oak woodland restoration or compensation may be completed at the work area, in the vicinity, or at a conservation bank with a service area that covers the Proposed Project or selected alternative (e.g., Alternative SE-PLR-2). Revegetated or restored areas shall be maintained and monitored to ensure a minimum of 65 percent survival of woody plantings after 5 years (or 75 percent survival after 3 years), or at a conservation bank with a service area that covers the Proposed Project or selected alternative.

Operation and maintenance of the Proposed Project's 70 kV power line or Alternative SE-PLR-2 could affect blue oak woodland and potentially other sensitive natural communities in the vicinity. Specifically, impacts to these sensitive natural communities could result from tree trimming and/or vegetation removal activities required under G.O. 95. As applicable, an approximate 10-foot radius would be maintained around new power poles, dependent on location and equipment installed. As such, mature vegetation that grows within 10 horizontal feet of any conductor within the easement would be trimmed, if that vegetation has a mature height of 15 feet or greater. Additional impacts from operation and maintenance within sensitive natural communities could result from overland access, work and staging in blue oak woodland, and drift of herbicides. Thus, implementation of APM HAZ-1 would prevent the introduction of hazardous materials into natural communities and would reduce these impacts to a less than significant level.

2.11 Master Response 11: Construction Emissions

2.11.1 Comments

Various comments were provided on the construction emissions estimates and measures to reduce construction emissions in the EIR. The Proposed Project Applicants provided comments suggesting revisions to the construction emissions, including changes to the Proposed Project construction schedule and timing. This included an overall lengthening of the construction schedule, which may result in less overlap of emissions, thus potentially decreasing the maximum daily and/or quarterly reactive organic gas (ROG) and nitrogen oxides ($NO_{x)}$) values. The Applicants also suggested revised activity time for helicopters that could potentially decrease the emissions associated with helicopters.

With respect to the California Emission Estimator Model (CalEEMOD) modeling, some commenters noted the engine load factor can vary depending on the intensity of the activity and varies overtime and may ramp up and down as a piece of equipment performs a task.

[8] Chapter 10.01, *Oak Tree Preservation*, of the El Paso de Robles Code of Ordinances provides an example to explain what the replacement oaks equivalence to 25 percent of DBH means: *The replacement requirement for removal of two trees of fifteen-inch DBH (thirty total diameter inches), would be seven and one-half inches (thirty inches removed multiplied by twenty-five hundredths replacement factor). This requirement could be satisfied by planting five, one and one-half inch caliper trees, or three-, two- and one-half-inch caliper trees, or any other combination totaling seven and one-half inches.*

Some commenters suggested that construction equipment should implement best available control technology (BACT) and additional control mechanisms. Some commenters suggested that construction equipment could install diesel particulate filters, Verified Diesel Emission Control Strategy (VDECS), Selective Catalytic Reduction (SCR), lean NO_x catalysts and exhaust gas recirculation and other pollution control devices to the construction equipment to decrease emissions.

2.11.2 Response

Construction emissions were calculated for criteria pollutants and GHGs using the CalEEMod version 2016.3.2 for most construction emissions. CalEEMod is the program recommended by San Luis Obispo County Air Pollution Control District (SLOCAPCD) and most air districts in California for estimating construction and operational emissions under CEQA and has been approved for use by the United States Environmental Protection Agency (USEPA). All methodologies are well-documented and supported by substantial evidence, as described in the CalEEMod User's Guide and accompanying appendices. The basis of construction equipment and vehicle emission factors is the California Air Resources Board's (CARB) approved models for including EMFAC (EMission FACtors) and In Use Off-road Engine Emission Models. While CalEEMod is designed to estimate emissions from most common types of sources, it does not include helicopters. Since the Proposed Project may use helicopters during construction, these emissions were estimated using methods recommended by the Federal Aviation Administration (FAA), consistent with the FAA's Aviation Environmental Design Tool (AEDT version 3c).

Information on the Proposed Project schedule and construction equipment was provided by the Applicants in their Proponent's Environmental Assessment (PEA) and supplemental responses to data requests. The initial construction schedule contained several overlapping project phases that were incorporated into CalEEMod. Available project-specific information was used in CalEEMod; however, there were several pieces of information, described below, that were not available. In these cases, the CPUC relied on the recommended CalEEMod default values, as these are reasonable assumptions if there is no site-specific information readily available. In order to estimate emissions from off-road construction equipment, the equipment type, hours of use per day, engine horsepower, load factor and engine age or engine tier are used. The equipment type and hours of equipment use and, in some instances, horsepower was provided. The remaining equipment horsepower, load factors and average engine age used the defaults included in CalEEMod. The CalEEMod defaults used are the same defaults used by CARB in its emission inventories and rulemaking activities, which are based on extensive surveys and other information-gathering activities.

The load factor is the average operational level of an engine in a given application as a fraction or percentage of the engine manufacturer's maximum rated horsepower. Since emissions are directly proportional to engine horsepower, load factors are used in the emissions inventory calculations to adjust the maximum rated horsepower to normal operating levels. Load factors are difficult to characterize since they are highly dependent on equipment use and operation. In 2010 and 2011, CARB re-evaluated the default load factors it used and revised many load factors downward, given information from multiple sources including their own testing data, data from USEPA and data provided by manufacturers. Since it is unknown what the specific variability in load factors will be due to the variety of tasks and conditions surrounding the construction

equipment, it is reasonable to use the well-documented and commonly applied load factors recommended by CARB.

CalEEMod has the ability to use default engine age for construction equipment or under a mitigated scenario option to specify specific engine Tiers that correspond to maximum emission levels for various pollutants established by the USEPA. The emissions reported in Table 4.3-5a[9] in Section 4.3, "Air Quality," in Volume 1 of the FEIR, are based on the default engine ages from CARB's models for the calendar year during which the construction phase is occurring. The emissions based on the default engine age combined with helicopter emissions indicated that the Proposed Project's construction emissions exceeded SLOCAPCD significance thresholds. In order to determine if it would be feasible to decrease construction emissions below the significance thresholds, a mitigation scenario option assuming all Tier 4 final engines (those engines with the lowest emissions available) was created. The estimated emissions under this mitigation scenario option are shown in Appendix C of the EIR (see Volume 2 of this FEIR) and in Table 4.3-5b within Section 4.3, "Air Quality," in Volume 1 of the FEIR. The mitigation scenario shows that ROG and NO_x emissions from construction equipment and vehicles outside of the helicopter would decrease substantially to 51.7 pounds per day, 0.845 tons per quarter, and 2.5 tons for the entirety of project construction. There would also be a substantial reduction in diesel particulate matter (DPM) emissions to 0.011 tons per quarter. When helicopter emissions are added, the ROG and NO_x emissions are still above the SLOCAPCD significance thresholds. Since there are no realistic options to further reduce ROG and NO_x emissions, if all engines are already Tier 4 final, it was concluded that the impact, even with all feasible mitigation applied, would be significant and unavoidable.

At this time, given uncertainty with respect to final construction schedules and equipment that may undergo additional changes, as well as inadequate detail to fully verify all the assumptions, there will be no changes to the EIR construction emissions estimates, nor any change in the significance determination. With consideration of the Proposed Project Applicants' provided estimates and the estimates shown in the EIR, a reasonable range of emissions has been presented and a reasonable upper bound was used to estimate emissions and establish the significance determination. Revisions to Mitigation Measure AQ-1 made as part of the Recirculated DEIR will allow for the Applicants to potentially reduce or eliminate offset mitigation if they are able to demonstrate by tracking actual emissions from construction that the emissions are below the Quarterly Tier 2 ROG and NO_x threshold, provided in Table 4.3-3 on page 2-R.4.3-15 of the Recirculated DEIR. For discussion of Mitigation Measure AQ-1, refer to Master Response 13. Refer to the revised Section 4.3, "Air Quality," within the Recirculated DEIR for the revisions to Mitigation Measure AQ-1 made since publication of the original DEIR. (These revisions have been accepted for the FEIR).

At this time, most common construction equipment is available in Tier 4 final engine requirements, however, there are some rare and less common equipment that are not readily

[9] Note that Table 4.3-5 was revised as part of the Recirculated DEIR to add a Table 4.3-5b showing mitigated emissions (the original Table 4.3-5 then became Table 4.3-5a showing unmitigated construction emissions).

available as Tier 4 engines. Thus, BACT is usually determined based on technical, commercial availability and cost feasibility criteria. Mitigation Measure AQ-1 requires documentation of construction equipment using BACT based on these criteria. At this time, implementation of BACT would not decrease construction emissions below the significance thresholds.

Use of strategies to reduce emissions (e.g., diesel particulate filters, VDECS, SCR, lean NOx catalysts and exhaust gas recirculation and other pollution control devices) suggested by commenters is feasible for lower engine Tiers, but many of these strategies have been employed already to achieve Tier 4 final emissions standards and additional pollution control devices are not readily available that would further decrease emissions from this equipment. To the extent that equipment of lower engine tiers to be used on the project can implement these technologies, they will be considered and their feasibility will be documented under Mitigation Measure AQ-1.

2.12 Master Response 12: Fugitive Emissions[10]

2.12.1 Comments

Several comments state that the analysis of fugitive dust emissions resulting from the Proposed Project is inadequate.

2.12.2 Response

Fugitive particulate matter (PM) emissions (e.g., fugitive dust) would be emitted by a variety of sources during construction and operation of the Proposed Project. Fugitive dust emissions refer to those air pollutants that enter the atmosphere without first passing through a stack or duct designed to direct or control their flow. During construction of the Proposed Project, fugitive dust would occur from the construction equipment acting on exposed soils. This includes moving concrete, asphalt, and earthen material, demolition of such material or other facilities and structures and resuspension of accumulated dust on roads and surfaces. During operation of the Proposed Project, fugitive dust would be generated by resuspension of accumulated dust on roads and surfaces, and from use of helicopters for maintenance and inspection operations.

The SLOCAPCD's CEQA significance thresholds indicate that implementation of standard and expanded fugitive dust control measures during construction is adequate to reduce construction emissions of fugitive PM_{10} (particulate matter with a diameter less than 10 microns) and $PM_{2.5}$ (particulate matter with a diameter less than 2.5 microns) to a level that is less than significant. The EIR requires implementation of Mitigation Measure AQ-1, which is a comprehensive Construction Activity Management Plan (CAMP). As described in further detail in Master Response 13, this CAMP is required to be submitted to the SLOCAPCD for review and comment and approved by the CPUC. As detailed in Mitigation Measure AQ-1 (revised as part of the

[10] This master response addresses fugitive dust in general. For information regarding fugitive dusts in relation to Valley Fever, refer to Master Response 14.

Recirculated DEIR), the CAMP must include all the SLOCAPCD standard and expanded Fugitive Dust Mitigation Measures unless any are documented and approved as infeasible since the Proposed Project is greater than 4 acres and located near sensitive receptors. In addition, Mitigation Measure AQ-1 was revised in the Recirculated DEIR to incorporate several measures suggested in public comments. This includes clarification and enhancement of the mitigation measures minimum performance standards. For fugitive dust emissions the performance standard for fugitive dust requires the dust to be controlled to not exceed 20 percent opacity for greater than 3 minutes in any 60-minute period while construction activity is occurring and disturbed areas are not covered, vegetated or chemically stabilized. Additionally, fugitive dust specific mitigation measures that will be outlined in the CAMP to ensure that the minimum performance standard is met, requires evaluation of all SLOCAPCD standard and expanded fugitive dust mitigation measures as well as the Dust Control Management Plan must include the additional measures listed in part 3 of Mitigation Measure AQ-1 which include measures to minimize fugitive dust from the construction activities on paved roads with track out prevention and requiring haul trucks to be tarped and have a minimum freeboard height of 12 inches. It also includes requirements for control of disturbed surface areas and storage piles with a specific performance standard which defines adequately wetted and crusted surfaces and storage piles as an option or use of other means of reducing fugitive dust from these areas including covering the areas and/or installation of wind barrier, suspending grading operations when wind speeds are high with a specific definition of high winds.

For construction equipment emissions the performance standard is meeting or exceeding all applicable CARB mobile source and off-road fleet regulations and use of a Tier 4 final off-road engine unless there is documentation for a specific piece of equipment where it is infeasible to be a Tier 4 engine due to unavailability of specialized equipment with a Tier 4 engine. It also requires emission tracking to ensure that emissions are below the SLOCAPCD significance thresholds by reducing emissions, modifying the project schedule and/or providing emission offsets.

Many specific mitigation measures suggested by the commenters were detailed variations on the types of measures that will be encompassed in the CAMP. Since detailed specifics of the construction project, equipment and contractor are not known at this time, the Mitigation Measure AQ-1 does not get into the specific details such as how frequent watering needs to be conducted, but rather requires the CAMP to evaluate a range of options that it may choose to use to meet the minimum performance standards outlined in Mitigation Measure AQ-1. Some mitigation measures when evaluated under the CAMP may not be necessary as they would not increase the mitigation effectiveness above alternative measures selected and/or may be infeasible to implement due to lack of commercial availability, technical feasibility or cost effectiveness.

For operational emissions, PM emissions were qualitatively evaluated, as the only sources of emissions would be from occasional maintenance and inspection vehicles traveling on paved and unpaved roads, as well as fugitive dust from any use of helicopters for inspections and maintenance. Since helicopters would take off from an airport, the fugitive dust emissions are already accounted for in the airport's emissions and would utilize the airport's fugitive dust control plans. Given the infrequent nature of the vehicle and helicopter trips, it was concluded that they would not result in significant fugitive dust emissions.

Emissions of fugitive dust are, by their nature, difficult to accurately quantify. The analysis in the EIR used conservative values to estimate the fugitive dust emissions (as described as follows for the general sources of fugitive dust) and the effect of mitigation measures. The primary methodology used in the EIR's analysis was based on methods outlined in CalEEMod, as recommended by SLOCAPCD. Wind-blown dust was not estimated by CalEEMod, consistent with approaches taken in other comprehensive models. Wind-blown dust is difficult to quantify and methods that are available to estimate these emissions requires detailed information regarding the size and shape of the storage piles, soil type, moisture content, wind speed and other parameters that is not readily available at the time of the environmental analysis. Thus, while there is likely additional fugitive dust PM emissions from wind, it would be speculative to be reasonably modeled. Thus, it is not feasible to accurately quantify these emissions at this time. Based on the information currently available, fugitive dust mitigation measures that are based on proven, best-management practices recommended by SLOCAPCD (which have been incorporated into Mitigation Measure AQ-1), are expected to substantially reduce wind-blown dust from stockpiles, as explained in the EIR Section 4.3 and are adequate to reduce or minimize these wind-blown emissions.

Similarly, it is difficult to accurately determine the effectiveness of mitigation measures for fugitive dust. Thus, the effectiveness of some mitigation measures for fugitive dust was either not quantified or used conservative estimates. For instance, the Bay Area Air Quality Management District's (BAAQMD's) Permit Handbook allows for mitigation by watering, providing a maximum effectiveness of 70 percent reduction in emissions. On the other hand, the South Coast Air Quality Management District allows for 90 percent control efficiency for watering storage piles by hand. This is consistent with the Western Regional Air Partnership's (WRAP) Fugitive Dust Handbook (Western Governors' Association 2006), that watering the storage pile by hand has a 90 percent control efficiency, as was confirmed by a field study conducted by Fitz and Bumiller in the Journal of Air & Waste Management Association, Volume 50, April 2000. Thus, mitigation of fugitive dust by watering is effective, but there is disagreement in the specific reduction values.

The WRAP Fugitive Dust Handbook notes the control efficiency of several other potential options to control wind erosion, including planting trees and shrubs as a windbreak with a 25 percent control efficiency, erecting artificial wind barriers having 4 to 88 percent control efficiency, use of chemical dust suppressants with 84 percent control efficiency, and use of three-sided enclosures with 50 percent porosity with a 75 percent control efficiency. It is unclear what the overall control efficiency would be if multiple measures were employed as these have not been studied. For instance, it is unknown how effective adding a wind or vegetation barrier in addition to the watering would be as the strategies are not necessarily linearly additive.

The Proposed Project would be required to implement feasible fugitive dust mitigation as determined in the CAMP. Additionally, all loaded trucks would maintain a minimum of 1 foot of freeboard and cover beds when transporting soils, gravels, and similar materials going above the required compliance with California Vehicle Code Section 23114. Other fugitive dust mitigation measures include measures to prevent trackout from trucks and, with the revised Project Description, the access road to the Estrella Substation will be paved.

2.13 Master Response 13: Air Quality Mitigation Measures

2.13.1 Comments

A number of comments were raised regarding the air quality mitigation measures in the EIR, including the following:

- Some commenters were confused as to the difference between APMs and Mitigation Measure AQ-1.
- Some commenters were confused as to incorporation of the standard mitigation measures for construction equipment and fugitive dust suggested by SLOCAPCD.
- Some commenters requested additional fugitive dust mitigation measures.
- Some of the commenters requested increased frequency such as for watering activities.
- Some of the commenters suggested rapid revegetation of areas even if they will be later disturbed by the Proposed Project again.
- Some commenters suggested stopping work during high wind events.
- Some commenters suggested conducting real-time monitoring for things such as wind speed, dust, and Valley Fever spores.

2.13.2 Response

The EIR determined that construction emissions for the Proposed Project are significant and unavoidable, which requires implementation of all feasible mitigation measures. Based on comments received on the original DEIR, Mitigation Measure AQ-1 was revised as part of the Recirculated DEIR to further clarify the requirement to prepare a Construction Activity Management Plan (CAMP), which describes in detail mitigation measures considered and measures deemed infeasible. Refer to the Recirculated DEIR[11] (see the revised Section 4.3, "Air Quality") for the revisions to Mitigation Measure AQ-1. As described in Chapter 4, *Revisions to the DEIR,* in Volume 3 of this FEIR, the revisions from the Recirculated DEIR have been accepted in the FEIR and thus are not shown in underline/strikeout in the FEIR. With respect to Mitigation Measure AQ-1, the CAMP is being used instead of detailed prescriptive measures since details regarding specific final project design and components, construction schedules, methods of construction, specific construction equipment, and potential alternatives have not been finalized at this time, as evidenced by the Proposed Project Applicants suggesting additional revisions to construction schedules and emission estimates. The revisions to Mitigation Measure AQ-1 made as part of the Recirculated DEIR also clarified minimum performance standards that

[11] Available here: https://ia.cpuc.ca.gov/environment/info/horizonh2o/estrella/RDEIR.html

are to be achieved and describes types of mitigation that can feasibly achieve the performance standards, which satisfies the requirements of CEQA Guidelines 15126.4(a)(1)(B).

Mitigation Measure AQ-1 has been modified in the Recirculated DEIR to provide clarification and enhancement of the mitigation measures minimum performance standards. For fugitive dust emissions the performance standard for fugitive dust requires the dust to be controlled to not exceed 20 percent opacity for greater than 3 minutes in any 60-minute period while construction activity is occurring and disturbed areas are not covered, vegetated or chemically stabilized. Additionally, fugitive dust specific mitigation measures that will be outlined in the CAMP to ensure that the minimum performance standard is met, requires evaluation of all SLOCAPCD standard and expanded fugitive dust mitigation measures as well as the Dust Control Management Plan must include the additional measures listed in part 3 of Mitigation Measure AQ-1 which include measures to minimize fugitive dust from the construction activities on paved roads with track out prevention and requiring haul trucks to be tarped and have a minimum freeboard height of 12 inches. It also includes requirements for control of disturbed surface areas and storage piles with a specific performance standard which defines adequately wetted and crusted surfaces and storage piles as an option or use of other means of reducing fugitive dust from these areas including covering the areas and/or installation of wind barrier, suspending grading operations when wind speeds are high with a specific definition of high winds.

For construction equipment emissions the performance standard is meeting or exceeding all applicable CARB mobile source and off-road fleet regulations and use of a Tier 4 final off-road engine unless there is documentation for a specific piece of equipment where it is infeasible to be a Tier 4 engine due to unavailability of specialized equipment with a Tier 4 engine. It also requires emission tracking to ensure that emissions are below the SLOCAPCD significance thresholds by reducing emissions, modifying the project schedule and/or providing emission offsets.

Many specific mitigation measures suggested by the commenters were detailed variations on the types of measures that will be encompassed in the CAMP. Since detailed specifics of the construction project, equipment and contractor are not known at this time, the Mitigation Measure AQ-1 does not get into the specific details such as how frequent watering needs to be conducted, but rather requires the CAMP to evaluate a range of options that it may choose to use to meet the minimum performance standards outlined in Mitigation Measure AQ-1. Some mitigation measures when evaluated under the CAMP may not be necessary as they would not increase the mitigation effectiveness above alternative measures selected and/or may be infeasible to implement due to lack of commercial availability, technical feasibility or cost effectiveness.

Mitigation Measure AQ-1 incorporates the APMs or establishes more stringent requirements and therefore replaces all APMs related to air quality. Mitigation Measure AQ-1 is enforceable by the CPUC and incorporated into the Mitigation Monitoring and Reporting Plan (MMRP). Mitigation Measure AQ-1, by requiring preparation and implementation of a CAMP, will include all of the suggested standard mitigation measures and BACT for construction equipment by SLOCAPCD. The mitigation measure will require implementation of all feasible measures and clear documentation of any infeasible measures. For instance, having staging areas more than 1,000 feet from sensitive receptors may not be feasible in some areas due to lack of suitable

locations near difficult terrain. Similarly, it may not be feasible to limit diesel equipment idling within 1,000 feet of sensitive receptors due to proximity of the project in some locations to sensitive receptors which cannot be avoided. In these cases, idling will be limited to the extent feasible and consistent with state law regarding diesel idling limits. This CAMP will be reviewed by SLOCAPCD for input with final approval and determination of acceptance by the CPUC as the Lead Agency for the Proposed Project.

As discussed in Master Response 11 and Section 4.3 of the Recirculated DEIR, implementation of all Tier 4 final construction equipment, even if feasible, when combined with helicopter emissions, may not reduce emissions below the significance thresholds. BACT for construction equipment, as defined by SLOCAPCD, includes expanding the use of Tier 3 and Tier 4 off-road engines and use of 2010 on-road engines. It also includes repowering equipment with the cleanest engines and installing California Verified Diesel Emission Control Strategies. Many of these requirements are already incorporated by demonstrating compliance with California mobile source fleet regulations or incorporated into the design to meet Tier 4 final standards. Thus, BACT is included as part of Mitigation Measure AQ-1 by establishing performance standards to be no less than the California mobile source fleet regulation requirements and to consider use of Tier 4 final and newer model year on-road engines to the extent feasible, as defined by technical, commercial availability and cost feasibility criteria.

For more detailed discussion on fugitive dust emissions, refer to Master Response 12. Many of the additional fugitive dust mitigation measures suggested by commenters reflect alternative phrasing for the same types of measures already listed by SLOCAPCD in their standard and expanded fugitive dust mitigation measures. The requests from commenters for increased frequency of water activities will be considered in the CAMP, taking into consideration the potential decrease in fugitive dust emissions compared against the use of additional water that may be required, especially during drought conditions. Similar to additional watering frequency, the suggestion for rapid revegetation of areas (even if they may be subsequently disturbed again by the Proposed Project construction activities) may not be the best solution during drought conditions, which could preclude rapid revegetation. The suggestion from commenters of stopping work during high wind events will be considered in the CAMP, but may not be feasible in all situations due to other project constraints, including safety. As specified in Mitigation Measure AQ-1, all measures suggested by the public will be discussed in the CAMP documenting their incorporation or detailing why they are infeasible.

Comments suggest real-time monitoring during construction (e.g., for wind speed, dust, and Valley Fever spores); however, this would be unreasonably difficult given the linear nature of the Proposed Project in that the construction sites along the 70 kV power line will be constantly moving and changing location. Additionally, methods and instrumentation to reliably detect Valley Fever spores in real time is not commercially available, technically feasible or cost effective. Real-time monitoring is not something routinely suggested or implemented for construction projects and there are no unique aspects of this project that would deem it necessary over other types of projects that do not have these requirements. Unless specifically requested by SLOCAPCD, real-time monitoring will not be required.

2.14 Master Response 14: Valley Fever

2.14.1 Comments

Several commenters raised concerns regarding the impact of Valley Fever due to the ground disturbances caused by construction activities. Some commenters have claimed that fugitive dust mitigation measures may not be protective enough to prevent Valley Fever.

2.14.2 Response

As noted above in Master Response 13, Section 4.3, "Air Quality," was revised and these revisions were circulated for public review as part of the Recirculated DEIR. The revisions to Section 4.3 included updating the text to reflect changes to state laws, regulations, and policies to include reference to the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) regulation regarding Valley Fever. Additionally, the discussion of potential impacts from the Proposed Project was updated to reflect concerns regarding exposure of sensitive receptors to Valley Fever. Mitigation Measure AQ-2, requiring preparation of a Valley Fever Management Plan (VFMP), was added and the significance determination for Impact AQ-3 was changed to significant and unavoidable. Refer to the revised Section 4.3 in the Recirculated DEIR[12] for the revisions with respect to Valley Fever. These revisions have been accepted in this FEIR and thus are not shown in underline/strikeout.

The EIR discusses Valley Fever generally in Section 4.3.3 within Section 4.3, "Air Quality," pages 4.3-10 through 4.3-11, in Volume 1 of the FEIR. As discussed in the EIR, the *Coccidioides immitis* fungi results in a fungal infection often referred to as Valley Fever. The fungal infection is caused by inhalation of spores of the fungus and tends to vary with the season and commonly affects hot dry areas with alkaline soil. When conditions are favorable, the fungus forms spores that lie dormant in the soil until they are disturbed by wind, vehicles, excavation or other ground-disturbing activities and become airborne. Agriculture workers, construction workers and other people who are outdoors and exposed to wind, dust and disturbed topsoil are at elevated risk of contracting Valley Fever.

As discussed in the EIR, San Luis Obispo County has some of the highest rates of Valley Fever in the state with a rate of 9.8 to 155.8 cases per year per 100,000 people from 2011 through 2018. Construction workers are most susceptible since they are most likely to be working near and potentially exposed to the spores during ground disturbing activities or working near ground disturbing activities. For this reason, the Cal/OSHA has specific regulations applicable to Valley Fever. The construction contractors are required to comply with Cal/OSHA recommendations and regulations.

Since spores often become airborne or are contained in fugitive dust, mitigation measures aimed at controlling fugitive dust will decrease the number of spores that can become airborne.

[12] Available here: https://ia.cpuc.ca.gov/environment/info/horizonh2o/estrella/RDEIR.html

As described in Master Responses 12 and 13, the Proposed Project Applicants will be required to implement all feasible fugitive dust mitigation measures and clearly document any that are infeasible from all measures contained in SLOCAPCD standard and extended fugitive dust mitigation measures as well as meet the performance standard outlined in this mitigation measure. While fugitive dust mitigation measures, as discussed further in Master Response 12, have varying degrees of effectiveness both in overall reduction of fugitive dust as well as varying levels of control for different sized dust particles where smaller fine particles may be controlled to a lower control efficiency compared to larger coarse particles which is expected given the nature of fugitive dust dispersal mechanisms. However, both coarse and fine particles will be reduced and the list of mitigation measures that must be considered under Mitigation Measure AQ-1 represent what is regarded as the best practices to reduce fugitive dust for both coarse and fine particles as recognized by multiple air districts within California. Furthermore, Mitigation Measure AQ-2 requires preparation of a VFMP which includes review by the California Department of Public Health (CDPH) and the San Luis Obispo County Department of Public Health to ensure that their recommended best practices to minimize Valley Fever are implemented. Mitigation Measure AQ-2 requires implementation of the currently suggested measures from the CDPH which includes adoption of site plans and work practices that reduce workers' exposure to minimize primary and secondary exposure to the community through direct dispersal of spores or secondary dispersal from contaminated workers or equipment to the community. Many of these measures to consider implementing are the same as the fugitive dust mitigation measures to be implemented under Mitigation Measure AQ-1 including minimization of the area of soil disturbed, using water, soil stabilizers and/or re-vegetation to reduce air borne dust, stabilize piles by tarping or other methods and suspension of work during heavy winds. Other measures include air-conditioned enclosed cabs for vehicles that generate heavy dust. Measures to reduce transporting spores offsite include cleaning tools, equipment and vehicles before transporting offsite and providing coveralls and changing rooms for workers. Mitigation Measure AQ-2 also requires worker training about Valley Fever, identifying a health care provider for occupational illnesses that is knowledgeable about the diagnosis and treatment of Valley Fever, and encouraging workers to report Valley Fever symptoms promptly to supervisors. This represents the best recommended measures by the CDPH and requires consultation with CDPH to ensure that at the time of project construction, the best recommended practices to reduce Valley Fever impacts to the community are considered and incorporated into the VFMP.

2.15 Master Response 15: Health Risk Assessment

2.15.1 Comments

Multiple comments raised concerns regarding health risk assessments (HRAs) and translation of air quality impacts to specific adverse human health impacts for the nearby sensitive receptors. Two HRAs were submitted by commenters with respect to the Proposed Project during the DEIR and Recirculated DEIR review periods. The first HRA was submitted by Adams Broadwell Joseph and Cardozo (Adams Broadwell) during the DEIR commenting period. Clarifications to the model used for this HRA were then included in comments submitted by Adams Broadwell during the Recirculated DEIR review period. The second HRA was submitted by the Applicants (HWT and PG&E) during the Recirculated DEIR commenting period.

2.15.2 Response

The EIR's conclusion regarding the impact of exposing sensitive receptors to substantial pollutant concentrations was revised as part of the Recirculated DEIR. The Recirculated DEIR concluded that impacts to sensitive receptors from the Proposed Project are significant and unavoidable. Mitigation Measure AQ-1 was also revised as part of the Recirculated DEIR and requires construction equipment to utilize diesel particulate filters and/or Tier 4 final engines to the extent feasible, which would reduce the Proposed Project's DPM emissions potentially down by an order of magnitude. The additional language included in the discussion of Impact AQ-3 as part of the Recirculated DEIR describes the reasons why CPUC chose not to conduct a quantitative HRA for the Proposed Project. Refer to the Recirculated DEIR[13] for this revised text starting on page 2-R.4.3-24, which has been accepted in this FEIR.

The results of the HRAs submitted during the DEIR and Recirculated DEIR review periods indicate that the health impacts from the Proposed Project's emissions may range from below the significance thresholds to above the significance thresholds. While there are some flaws with the HRAs prepared by both Adams Broadwell and the Applicants, given the uncertainty regarding the actual construction emissions, equipment, duration, and other aspects of the Proposed Project, they likely represent a conservative upper and lower bound of the anticipated health impacts of the Proposed Project. Thus, the EIR's conservative conclusion of significant and unavoidable impacts to sensitive receptors is reasonable and valid.

Adams Broadwell Health Risk Assessment

With respect to the HRA submitted as part of Adams Broadwell's comments on the original DEIR, information provided by Adams Broadwell and their consultants was not adequate to conduct a thorough review to determine if this model accurately represents the Proposed Project. The modeling and HRA report provided as Exhibit 20 to Phyllis Fox's report did not include key modeling details and assumptions and no appendix, or supporting model input and output files, were provided. Furthermore, the two most critical omissions with regard to reliable determination of concentrations and health impacts are model source parameters and exposure factors. The only information on how sources were modeled is found on page 9 of Exhibit 20 which simply states: "Emissions associated with the reconductoring route and along the 70 kV line were modeled as two separate line sources. Emissions associated with construction of the Estrella Substation were modeled as a single area source." Typically, a line and area source require the release height, width of the source and initial vertical dimension to fully characterize how the sources are modeled. Absent the source parameters, the model was not reproducible with the given information (USEPA 2021). Source representation is important and most construction modeling suggests dividing area or volume sources into smaller increments to ensure that model artifacts associated with large areas over estimating dispersion along the wind direction, as described, for example, in the South Coast Air Quality Management District's (SCAQMD's) Final Localized Significance Threshold Methodology (July 2008). It is unclear if this

[13] Available here: https://ia.cpuc.ca.gov/environment/info/horizonh2o/estrella/RDEIR.html

practice was implemented by the commenter's model. The information regarding exposure parameters, use of age specific factors and toxicity factors is also absent from the report and is information recommended by the California Office of Environmental Health Hazard Assessment (OEHHA) (2015) to be included in HRAs.

With its comment letter on the Recirculated DEIR, Adams Broadwell provided the detailed modeling files which allowed for review of certain parameters not previously disclosed. For example, the width of the line sources of 30 meters (about 98 feet) and the release height of 5 meters (about 16 feet). The reconductoring segment and new 70 kV power line segments were modeled as line sources, which requires the assumption of flat terrain versus using detailed elevation inputs of the actual terrain in the model. Based on the review of the now provided files, the emission rate in terms of grams per second per square meter was confirmed. It appears that the HRA used a constant rate of emissions for a full 2-year period rather than the 18 to 21 months indicated in the Project Description and did not take into account any specific changes in the construction schedule at the three different source locations Adams Broadwell chose to model. The nature of power line construction is such that emissions do not occur throughout the entire line for the full duration of construction, but rather occur at individual pole locations for a few days at a time, with likely multiple phases occurring separated by days, weeks, or months as work progresses. Instead, the construction schedule modeled by the Adams Broadwell assumed a constant emission rate of all potential construction occurring throughout the alignment concurrently, substantially overestimating the likely impact. The specific impacts at sensitive receptors could not be adequately determined by the CPUC from the Adams Broadwell provided study, as the contour lines were developed from only a coarse uniform grid of 250 meter spacing instead of a more fine grid of 25 to 50 meters close to the modeled sources and discrete individual sensitive receptors.

The commenter's HRA does not include any discussion in regards to the use of helicopters and their associated emissions of toxic air contaminants (TACs). Helicopters combust jet fuel or aviation gasoline. The combustion of these fossil fuels, like any fossil fuel combustion, will produce a variety of TACs that would be evaluated for each individual TAC rather than a mixture of TACs, which has been done specifically for DPM with toxicity factors for the mixture as a whole. When a helicopter is flying between sites at a higher altitude, the combustion emissions will be dispersed and diluted in the atmosphere such that it is unlikely that substantial concentrations of these TACs would reach individual sensitive receptors. When a helicopter is in operation at a landing zone or hovering above an area, there is potential for these combustion TACs from the helicopters to disperse to nearby sensitive receptors. It is difficult to determine the health impacts from these helicopter emissions given the localized wind turbulence caused by the helicopter's spinning blades. Estimation of such impacts would require more sophisticated models requiring additional unavailable data inputs. Therefore, an HRA for helicopter emissions would be highly speculative at this time. The helicopter has the potential to complete the pole installation work in less time and potentially with less emissions than would be required if ground-based diesel equipment was used to conduct the installation. A few temporary landing zones would be utilized and health impacts for sensitive receptors may be higher at these sites than other locations. The helicopter impacts for the takeoff location at the Paso Robles Airport would have been incorporated under previous authorization and operations conducted as part of this facility.

The commenter suggests use of non-OEHHA toxicity factors, in particular for DPM, which has no acute toxicity factor adopted by OEHHA for use in California nor by the USEPA. Typically, if an acute assessment of health effects is warranted from fossil fuel combustion exhaust, speciation profiles of individual TACs (e.g., benzene, toluene, ethylbenzene, xylene, etc.) are used along with these individual TAC toxicity factors in absence of a defined mixture, such as DPM being defined for acute health effects similar to the approach described in BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards (May 2011). Given this lack of information, the results of the commenter's HRA cannot be adequately evaluated and cannot be relied upon for accurate conclusions. Thus, it is difficult to determine a quantitative value for acute health impacts at any of the sources based upon the Adams Broadwell supplied HRA and related materials. Assuming the acute health impacts alleged in the Adams Broadwell supplied HRA were relied upon by the CPUC, mitigation measures to reduce acute health impacts would be similar to those described to reduce cancer risks as far as using the least emitting construction equipment as possible, as required by Mitigation Measure AQ-1.

Applicants Health Risk Assessment

As noted above, during the review period for the Recirculated DEIR, the Applicants submitted their own HRA, which contained the information that is needed for the study to be reproducible, as well as their supporting modeling files. As the basis for their emission estimates, the HRA used the Applicant's own revised construction estimates. See Master Response 11 for discussion of the CPUC's concerns with these emission estimates, such as unjustified activity assumptions and equipment usage changes. The difference in emission rates used in this model compared to Adams Broadwell's model could account for the large discrepancies in the results obtained by these two models. The two models also differ in source and receptor representations.

The emissions modeled by the applicants included a scaling of off-site on-road mobile sources limiting them to only within 1,000 feet of the substation, reconductoring segment and new 70 kV power line segment. The emissions were allocated to the specific work hours of the day matching the construction schedule rather than the assumed steady release over 2 years used in the Adams Broadwell model. This approach better accounts for day and night time variations in wind that can alter the concentrations based on the time of day, but does not lend as well to a statistical variation of conditions since the emissions modeled were limited to specific days and months, which may underestimate the range of possible meteorological conditions that may occur during actual construction. The Applicants' analysis modeled three sources: substation, reconductoring, and the 70 kV line. No helicopter emissions were modeled in this HRA. All sources were modeled as area sources rather than line sources for the reconductoring and new 70kV power line segments. This allowed the model to use terrain variation as opposed to line sources, which requires an assumption of flat terrain. These sources were represented in more detail using more nodes of definition compared to the Adams Broadwell model. The lines used a narrower width of 10 meters compared to the other model which used 30 meters. This model used a finer grid of receptors near the sources compared to the coarse grid used by the other model which allows for more resolution of contours. This HRA provided details of the exposure parameters used which are standard defaults recommended by the California Air Pollution Control Officers Association (CAPCOA) and numerous air districts.

The results of the Applicants' HRA determined that excess cancer risks would be below the threshold of significance at 5.12 in a million. This HRA also included analysis of acute health

impacts and nitrogen dioxide (NO_2) modeling. The acute health impact analysis used a non-OEHHA toxicity factor for DPM similar to the factor used by the other HRA. See comments above in the discussion of the Adams Broadwell provided HRA regarding the use of these acute toxicity factors, results, and the inability of the CPUC to adopt the conclusions in the EIR.

Nitrogen Dioxide Modeling

NO_2 was modeled in both Adams Broadwell's and the Applicants' HRAs. Modeling of NO_2 is complex since there is conversion over time of various nitrogen oxides into NO_2. The AMS/EPA Regulatory Model (AERMOD) contains three options to consider for modeling NO_2:

1) Tier 1 assumes full conversion of NO to NO_2.

2) Tier 2, known as the Ambient Ratio Method (ARM), uses an empirically derived NO_2/NO_x ratio of 0.75 or source specific derived ratios.

3) Tier 3 uses the Ozone Limiting Method (OLM) or Plume Volume Molar Ratio Method (PVMRM) which requires using in-stack NO_2/NO_x ratios and background ozone concentrations along with the modeled concentrations to determine the amount of NO_2.

The basis of the 1-hour NO_2 Ambient Air Quality Standard (AAQS) is complex and cumulative. While there may be localized areas that are close to or exceed the AAQS, the AAQS is addressed in terms of the air basin as a whole, representing variation in meteorology over time. The actual AAQS is based on a statistical average of the 98th percentile of daily maximum 1-hour averages over a 3-year period. In general, no single project is sufficient in size by itself to affect the attainment status of an air basin (BAAQMD 2017).

The modeling of maximum 1-hour NO_2 concentrations represent a conservative estimate of localized conditions by the very design of air dispersion models to be over-predictive and represents a speculative, worst case and extreme weather condition that may never occur. USEPA has prepared memos indicating that modeling of NO_2 may not be appropriate for intermittent sources which we would expect construction equipment to operate intermittently over the course of a work day. These memos indicate that due to the statistical nature of NO_2 modeling it can be difficult to model intermittent emissions and that models may over-estimate concentrations (USEPA 2011). NO_2 modeling is more appropriate for continuous stationary sources in AERMOD and more appropriately done on a regional scale for other sources using models such as US EPA's Community Multiscale Air Quality Modeling System (CMAQ) or Ramboll Environment and Health's Comprehensive Air Quality Model with Extensions (CAMx). Due to uncertainty in modelling NO_2 from intermittent sources, the CPUC declines to adopt the results or conclusions of the NO_2 models.

Friant Ranch Decision and Disclosure of Health Impacts

The decision in *Sierra Club v. County of Fresno*, 6 Cal.5th 502 (2018), regarding the Friant Ranch project, requires projects with significant air quality impacts to either relate those impacts to likely health consequences or explain why it is not feasible to provide such analysis. The purpose is to inform the public and decisionmakers so that they can make informed decisions regarding

the costs and benefits of the project. As discussed on pages 4.3-19 to 4.3-20 of the EIR (see Volume 1 of this FEIR):

> [S]ignificant criteria air pollutant emissions could lead to increased concentrations of pollutants in the atmosphere and could result in health effects due to the increased emissions. The ambient concentration of criteria pollutants is a result of complex atmospheric chemistry; models to determine the concentrations and related health effects of emissions of pollutant precursors and direct emissions which are not readily available at the project level. Such modeling would require detailed information not only about the project, but also about the other pollutants being emitted in the region; this information is not widely available and, where it is available, its use would be speculative.
>
> NO_X and ROG are precursors to ozone, and NO_X, ROG, and SO_X are precursors to secondarily formed $PM_{2.5}$. Chemical and physical processes transform some of these precursors to the criteria pollutant concentrations in the atmosphere. Multiple variables determine whether emissions of air pollutants from the project move and disperse in the atmosphere in a manner in which concentrations of criteria pollutants would become elevated and result in health impacts. A specific mass of precursor emissions does not equate to an equivalent concentration of the resultant ozone or secondary particulate matter in that area. The resulting health effects of ambient air concentrations are further based on a complex relationship of multiple variables and factors. The calculated health effects are dependent upon the concentrations of pollutants to which the receptors are exposed, the number and type of exposure pathways for a receptor, and the intake parameters for a receptor, which vary based upon age and sensitivity (e.g., presence of pre-existing conditions). Health effects would be more likely for individuals with greater susceptibility to exposure, and the location of receptors relative to the project impacts would affect whether receptors are exposed to project-related pollutants.
>
> The following is a summary of the health effects from ozone, $PM_{2.5}$, and PM_{10}. Meteorology and terrain play major roles in ozone formation, and conditions for maximum ozone generation occur on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Central California can result in health effects. When inhaled, $PM_{2.5}$ and PM_{10} can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks and cause or aggravate bronchitis and other lung diseases. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Health effects of $PM_{2.5}$ include mortality (all causes), hospital admissions (respiratory, asthma, cardiovascular), emergency room visits (asthma), and acute myocardial infarction (non-fatal). For ozone, the endpoints are mortality, emergency room visits (respiratory), and hospital admissions (respiratory).
>
> For this project, mass emissions from construction could exceed significance thresholds even if assuming the use of all Tier 4 final construction equipment as shown in the mitigated emissions. Though the Project's emissions are significant for these criteria air

pollutants, it is anticipated that the health effects from the Project would generally be low compared to background incidences of such health effects due to the relatively low level of emissions from this project compared to the total emissions in the South Central Coast Air Basin.

As stated in the EIR, emissions of ROG and NO_x emissions exceed significance thresholds and result in a significant and unavoidable impact. CEQA significance thresholds are set at levels such that projects with emissions below the thresholds would not be expected to result in nonattainment of ambient air quality standards or to create significant contributions to existing nonattainment conditions. Since the federal and state ambient air quality standards are designed to protect against health impacts, including impacts to the most vulnerable segments of the population, exposures to direct emissions from the Proposed Project could result in significant health impacts within the population intended to be protected by compliance with the ambient standards. Emissions of ROG and NO_x from the Proposed Project can result in production of ozone and $PM_{2.5}$ (so-called secondary $PM_{2.5}$) over the course of a few hours via chemical reactions in the atmosphere between ROG, NO_x, and ammonia in the presence of sunlight. The SLOCAPCD significance thresholds for ROG and NO_x emissions are based on SLOCAPCD's offset requirements for ozone precursors. These offset requirements are based on the non-attainment status of the federal and state ozone standard and, therefore, these significance thresholds are appropriate to prevent further deterioration of ambient air quality and proportionality to prevention of a regionally cumulative significant impact. As explained above, attainment of the ambient standards can be considered protective of public health, including the health of sensitive subgroups, thus providing a strong link between a mass emission threshold and avoidance of health effects.

As disclosed in the EIR, ROG and NO_x emissions from the Proposed Project are calculated to exceed the SLOCAPCD ROG and NO_X emissions threshold, thus significant impacts from ozone or secondary $PM_{2.5}$ production cannot be ruled out based solely on the level of ROG and NO_x emissions from the Proposed Project. However, Mitigation Measure AQ-1 requires implementation of all feasible mitigation measures and may include emission offsets to bring quarterly ROG and NO_x emissions below the Tier 2 thresholds. Revised construction schedules provided by the Applicants suggest it may be feasible to reduce emissions below the significance thresholds, but this is uncertain. The above considerations notwithstanding, the possibility of some localized ozone and secondary $PM_{2.5}$ formation and resulting health impacts from Proposed Project NOx emissions cannot be entirely ruled out.

Computer models (e.g., CMAQ, CAMX, and BenMap) used to generate such health impact estimates are based on rough approximations of the complex atmospheric processes involved in ozone and secondary $PM_{2.5}$ formation, transport, and dispersion. These models require a substantial amount of additional data that is not readily available for use at the individual CEQA project level. Furthermore, factors relating health impacts to concentration increases are also uncertain, particularly when applied to very small concentration increments. As a result, results derived from application of these models are subject to large uncertainties, thus limiting their value in communicating any likely health impacts.

Due to this uncertainty, inclusion of quantitative calculations in the EIR of local and regional health impacts due to any incremental ozone and secondary PM2.5 formation from Project ROG, NO_x, and SO_x emissions was determined not to be warranted. Therefore, the incremental

ozone and secondarily formed PM2.5 emissions are reasonably likely to remain above the level of significance and, therefore, overall impact conclusion in the EIR has not been changed.

2.16 Master Response 16: Greenhouse Gas Emissions

2.16.1 Comments

Commenters noted that there was not specific quantification of mobile sources and helicopters for operational GHG emissions. Commenters noted that sources of the electricity used and transmission loss through the transmission lines was not quantified. Commenters also noted that GHG emissions from BESSs were not considered. Finally, commenters noted that GHG emissions could be produced from disturbance of soils, especially once moisture is applied.

2.16.2 Response

The EIR provides estimates of construction and operational GHG emissions for the Proposed Project, as shown in Table 4.8-1 in Section 4.8, "Greenhouse Gas Emissions," page 4.8-7, in Volume 1 of the FEIR. The CPUC used CalEEMod to estimate construction emissions and used fuel usage estimates to estimate helicopter emissions. For more information on construction emission calculations, refer to Master Response 11. As detailed in Section 4.3 of the EIR, construction emissions from the Proposed Project were estimated to be 2,724 metric tons of carbon dioxide equivalents (CO_2e). SLOCAPCD recommends amortizing construction emissions over the life of a project, which was assumed to be 30 years for the Proposed Project. Thus, this was added to the operational emissions estimates. Operational emissions are from sulfur hexafluoride (SF_6) emissions from gas insulated switches (GIS) and are estimated to be 96 metric tons CO_2e per year. SF_6 emissions were based on a 1 percent leak rate of the total poundage of SF_6 that will be contained in the GIS, as provided by the Applicants. The details of this calculation were omitted from Appendix C in the original DEIR and have been added for clarification in the FEIR. Combining the amortized construction emissions with the operational emissions results in a total of 187 metric tons CO_2e per year. Since the Proposed Project is being proposed by electric power entities that are subject to California's Greenhouse Gas Mandatory Reporting Regulation (MRR) and Cap-and Trade Regulation, the appropriate threshold of significance is 10,000 metric tons of CO_2e per year. This is the threshold for reporting of GHG emissions under the MRR, if not a specifically-covered entity. Under the Cap-and-Trade Regulation, entities must provide allowances for all GHG emissions reported either through free allowances allocated to the entity or through purchase of available offsets by auction. The Cap-and-Trade Regulation is a key strategy for California to achieve the goals outlined in Senate Bill (SB) 32. Thus, by complying with the Cap-and-Trade Regulation and regulations regarding GIS, the Proposed Project's emission sources are on track to achieve their share of SB 32 goals.

With respect to the critique by commenters that specific quantification of mobile source emissions and helicopter emissions was not provided as a component of operational GHG emissions, these emissions are infrequent in nature (occurring monthly or annually) and would not add a substantial amount to the operational emissions. Additionally, these activities are subject to various state-wide regulations aimed at reducing GHG emissions from mobile sources. Similarly, transmission and distribution losses, as well as equipment energy use to operate the substation and transmission lines, are a small percentage of HWT's and PG&E's total electricity-

based operational GHG emissions. The Proposed Project represents a small change to the total amount of substations and transmission lines operated by HWT and PG&E. These operational indirect emissions are not quantified as they are not released locally, but rather represent an overall loss of efficiency and are considered in the average carbon intensity of delivered electricity. Typically, under MRR and the Cap-and-Trade Regulation, these emissions are calculated on the entity level and include the emissions from generation and transmission losses. GHG emissions from electricity generation/transmission are based on the net electricity delivered after transmission and distribution losses are accounted for. Thus, these types of emissions will be covered and allowances provided for under the Cap-and-Trade Program.

Refer to Master Response 17 for discussion of the EIR's analysis of GHG emissions from BESSs. With respect to the comments that GHG emissions could be produced from disturbance of soils, under steady state conditions, GHG emissions are typically only quantified if there is a permanent change in vegetation land use and not just a temporary disturbance. This is consistent with methods used in CalEEMod and the Intergovernmental Panel on Climate Change (IPCC) protocol for vegetation for quantification of GHG emissions associated with land use changes. Quantification of short-term fluxes in GHG emissions would involve highly specific information not readily available and it would be speculative if estimated, given the limited information available at this time regarding the land composition, construction means, and construction methods for the Proposed Project and alternatives.

2.17 Master Response 17: Battery Energy Storage System Emissions

2.17.1 Comments

Several comments claim that the GHG and criteria air pollutant impacts from BESSs are not accounted for in the EIR. Commenters also assert that the EIR does not provide information required to estimate charging emissions and storage efficiency of the BESSs. Some comments also reference calculations of BESS emissions.

2.17.2 Response

The BESSs were evaluated under two alternative scenarios in the EIR: Alternative BS-2: Battery Storage to Address Distribution Need and Alternative BS-3: Third party, BTM Solar and Battery Storage. Under CEQA, alternatives do not need to be described or analyzed at the same level of detail as the proposed project (CEQA Guidelines Section 15126.6(d)). The EIR evaluated the two alternatives, which identified potential reductions to construction emissions and operational emissions during peak electricity use compared to the Proposed Project. While these were discussed qualitatively, after thorough investigation, it was ultimately concluded that since specific BESS installations have not yet been designed or technologies selected, a project-level determination of impacts would be speculative. Therefore, consistent with CEQA Guidelines Section 15145, no significance conclusions were provided for Alternatives BS-2 or BS-3. As stated and consistent with CEQA Guidelines for alternatives and speculative information, the BESS alternatives do not provide sufficient detail to estimate further impacts, particularly for air quality and climate change impacts. Thus, there is no deficiency in the EIR for not providing this information.

If the GHG and criteria pollutant emissions associated with the use of BESSs, even if too speculative to estimate fully, were to be considered, it would not result in substantial increases in local criteria pollutant and GHG emissions based on emission calculation methodologies and existing state laws and regulations. For criteria pollutant estimates, emissions directly emitted from a project are considered, such as those from stationary sources, heaters, boilers, generators, vehicles, and off-road equipment. A project's direct emissions are estimated because criteria pollutants have a local effect and, in some cases, a regional effect. It is not typical in criteria pollutant emission inventories to consider indirect sources of criteria pollutants, such as the emissions associated with electricity generation, that occurs offsite because the location, and therefore the specific effects of those indirect criteria pollutant emissions would be speculative. A BESS does not directly emit criteria pollutants and, therefore, no criteria pollutants from operation would be anticipated. There would be criteria pollutants associated with vehicle and off-road equipment used in construction and maintenance. The BESSs may or may not change indirect criteria pollutants depending on the source of electricity generation in use during BESS charging periods and the source of electricity that would be used if the BESSs were not discharging electricity during peak electricity use periods. BESSs act as a pass-through storage for electricity that is generated and do not directly consume (outside of battery storage efficiencies) or generate electricity, but rather store the electricity for later discharge. While there may be an increase in indirect emissions while charging for a given hour, emissions would decrease during another hour during discharge, resulting in minor indirect fluctuations in indirect criteria pollutant emissions.

The goal of BESSs, which may or may not be accurate in practice, is to charge the BESSs during periods of excess electricity generation due to renewable energy sources that do not emit a substantial amount of criteria pollutants, such as solar and wind. Then, during periods of high electricity demand which is more than can be supplied with the current baseload, the BESSs would discharge their stored electricity, preventing the need for short term load generating sources, such as peaker plants or generators, which emit criteria pollutants at their source location. If used in this manner, BESSs would result in less indirect criteria pollutant emissions due to the avoidance of higher emitters used during high electricity demand periods.

In contrast to criteria pollutant emissions, GHG emissions estimates tend to include both direct and indirect GHG emissions because GHG emissions have global impacts, as is explained in Section 4.8 of the EIR. The indirect emissions in this instance are related to the GHG emissions associated with electricity generation, transmission and distribution. Since there are losses in electricity from generation to the BTM user, accounting for electricity use and the GHG intensity of electricity is generally discussed on the net delivered basis after accounting for losses rather than the gross electricity generated. This is consistent with methods used for the MRR and Cap-and-Trade Regulation. For Alternative BS-2, which is in front of the final electrical meter to the end user, any losses due to the BESSs' operation would be accounted for in the net electricity delivered and current GHG emission accounting methods would capture this loss to provide a net GHG intensity per kilowatt of electricity delivered. For Alternative BS-3, since the BESSs are behind the end user meter the losses from using the BESSs may not necessarily be taken into account if the electricity use is not subject to the electricity provider requirements of the MRR and Cap-and-Trade Regulation. The goal of BESSs, which may or may not be accurate in practice, is to charge the BESSs during periods of excess electricity generation due to renewable energy sources that do not emit a substantial amount of GHGs, such as solar and wind. During periods of high electricity demand, which is more than can be supplied with the current baseload, the

BESSs would discharge their stored electricity, thereby preventing or limiting the need for high GHG-emitting generating sources when renewable energy is less available. If used in this manner, BESSs would result in less indirect GHG emissions due to the avoidance of higher GHG intensity generator use during high electricity demand periods.

The assumptions used in calculations of BESS emissions referenced by some commenters are not documented. Given the lack of specific information available on specific BESSs configurations and use, these calculations are not based on any specific facts or information contained or required to be contained in the EIR for these alternatives.

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