6. Other CEQA and NEPA Considerations

Additional topics associated with implementation of the Eldorado–Ivanpah Transmission Project (EITP or the proposed project) and its alternatives that must be considered under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) are discussed in this chapter. The following additional considerations are discussed: environmental impacts that cannot be mitigated to less than significant levels; irreversible and irretrievable commitment of resources; growth-inducing effects; and a summary of cumulative impacts. The Ivanpah Solar Electric Generating System (ISEGS) project is also discussed. While the EITP would not be a source of additional power, the Bureau of Land Management (BLM) and the California Public Utilities Commission (CPUC) have determined that because the EITP is intended to facilitate the transmission of power from ISEGS, power generation from ISEGS should be considered in this EIR/EIS (Figure 1-1).

6.1 Significant Unavoidable Adverse Impacts

The proposed project and its alternatives would result in significant unavoidable adverse impacts on biological resources and ~~potentially significant impacts~~ air quality~~, hydrology and water quality, and public services and utilities.~~ The proposed project would also result in major, adverse, and unavoidable impacts on aesthetics and visual resources for one of the eight Key Observation Points (KOPs) analysis; however, with mitigation this impact would be less than significant under CEQA.

Under NEPA, the proposed project would result in major, adverse and unavoidable impacts on aesthetics and visual resources for ~~one of the eight key observation points (KOPs) analyzed; with mitigation,~~ KOP 1, which shows views of the transmission corridor within the South McCullough Wilderness Area. With mitigation, however, the overall project impacts on aesthetics and visual resources would be less than significant under CEQA. Mitigation includes painting the Ivanpah Substation to blend with its surroundings, rock staining for areas that have been graded or disturbed near the Ivanpah Substation, and color treating the microwave dish both within the Ivanpah Substation and near the town of Nipton, California.

As discussed in Section 3.4, "Biological Resources," the proposed project would impact several special-status wildlife species and their habitat. ~~Mitigation~~As currently designed, construction, operations, and maintenance activities associated with the proposed project would have impacts on native vegetation, desert washes, local wildlife, and special-status plants and wildlife. Under NEPA, adverse, moderate impacts on vegetation communities, special status plant and wildlife species, and desert drainages would occur with implementation of the proposed project, including the proposed APMs. These impacts would be significant under CEQA. Incorporation of recommended mitigation measures would reduce impacts on these resources through avoidance and minimization. Specifically, MM BIO-1 through 18 would reduce impacts to minor, localized, and less than significant for all of the species and habitats discussed, except for desert tortoise. Impacts on desert tortoise and its habitat would be significant even after mitigation (IMPACT BIO-2).

As described in the analysis of IMPACT AIR-2, the estimates of average daily emissions of $PM_{2.5}$, PM_{10} and NO_X from project construction activities exceed The Mojave Desert Air Quality Management District (MDAQMD) daily significant thresholds. Implementation of MM AIR-1 (low-emission equipment) and MM AIR-2 (enhanced fugitive dust control measures) would reduce potential impacts but are not expected to reduce emissions from construction activities to below the MDAQMD daily significant thresholds. Long-term impacts would not occur because construction would be temporary at any one location. Therefore, temporary ambient air quality impacts caused by construction activities would violate or contribute substantially to an air quality violation. This would be considered a significant unavoidable impact during construction.

In addition, construction of the proposed project or its alternatives would occur in an area designated non-attainment for ozone and PM_{10} (IMPACT AIR-3). The estimates of average daily emissions of PM_{10} and ozone precursors, NO_X and VOCs, from project construction activities exceed MDAQMD daily significant thresholds. ~~The construction~~Construction is expected to adversely impact the proposed project region for a short term. Mitigation measures to be implemented, including the use of low-emission equipment and enhanced fugitive dust control measures, are not expected to reduce PM_{10} and NO_X emissions from construction activities to below the MDAQMD daily significant thresholds. Therefore, temporary emission increases of NO_x, VOCs, and PM_{10} during construction would contribute to a cumulatively considerable net increase of a criteria pollutant in a non-attainment area. This would be considered a significant unavoidable impact during construction.

~~The proposed project and its alternatives could also result in a significant impact on water resources by impacting aquifer recharge processes and exceeding existing levels of groundwater withdrawal (IMPACT HYDRO-2). This potentially significant impact relates to IMPACT PUSVC-2, which indicates that construction of the proposed project would temporarily increase water use. Depending on the quantity and sources of water to be used, the proposed project could decrease local groundwater supply and recharge. Because the sources of the water to be used during construction is currently unknown, the impact on groundwater supplies could be significant (Section 3.8, "Hydrology and Water Quality" and Section 3.11, "Public Services and Utilities")~~

6.1.1 Ivanpah Solar Electric Generating System Project

~~The ISEGS project would result in significant unavoidable adverse impacts on existing scenic visual resources as seen from several key observation points in the Ivanpah Valley and Clark Mountains (CEC and BLM 2009, CEC 2010). ISEGS project impacts, when combine with the impacts of present and reasonably foreseeable projects, would also result in significant and unavoidable cumulative impacts with respect to visual resources, land use, and traffic and transportation (CEC 2010). These ISEGS project impacts are further reviewed in Section 3.2, "Visual Resources" and Chapter 5, "Cumulative Scenario and Impacts," of the EITP EIR/EIS.~~

The ISEGS project would result in significant and unavoidable adverse impacts on biological resources, land use, and visual resources. Impacts on biological resources would be significant and unavoidable even with the implementation of avoidance and minimization measures. These impacts include loss and disturbance of sensitive plant and wildlife species and the permanent conversion of approximately 3,564 acres of sensitive plant and wildlife habitat. Significant and unavoidable impacts on desert tortoise include the permanent loss of 3,564 acres of habitat and the translocation of up to 25 desert tortoises (BLM 2010 and CEC 2010).

The ISEGS project would contribute to significant and unavoidable adverse cumulative impacts to land use. The Mitigated Ivanpah 3 Alternative would result in the permanent conversion of 3,564 acres of undeveloped land. This represents a significant contribution to the anticipated 22,000 acres of undeveloped land in the Ivanpah Valley that would be developed should all the reasonably foreseeable future projects be constructed. This land is currently in use primarily as wildlife and vegetation habitat and for recreational uses. There is no feasible mitigation to lessen this cumulative impact on land use (BLM 2010 and CEC 2010).

The ISEGS project would result in significant and unavoidable adverse impacts on visual resources from the following vantage points: the Primm Valley Golf Course, middleground distance viewpoints on I-15, viewpoints in the Mojave National Preserve on the eastern face of Clark Mountain, and viewpoints in the Stateline Wilderness Area, including the Umberci Mine. Implementation of the ISEGS project would contribute to the industrialization of the Ivnapah Valley area, and there is no feasible mitigation to lessen this impact (BLM 2010 and CEC 2010). Additionally, the ISEGS heliostats would create substantial glare; with Conditions of Certification TRANS-3 and TRANS-4, glare would not result in a hazard. However, glare could interfere with views of the Clark Mountains from the Valley floor (CEC 2010).

6.1.2 Combined Impact of EITP and ISEGS

When considered together, the EITP and the ISEGS project would result in significant and unavoidable aggregate impacts on air quality, biological resources, land use, and visual resources. Long-term impacts on air quality would not result from the combined EITP and ISEGS project; however, because the EITP would result in significant and unavoidable adverse impacts on air quality due to temporary emission increases of NO_x, VOCs, and PM_{10}, which would contribute to a cumulatively considerable net increase of a criteria pollutant in a non-attainment area, and temporary impacts on ambient air quality, the whole of the action/cumulative action would result in significant and unavoidable impacts under these criteria.

The combined EITP and ISEGS project would also result in significant and unavoidable impacts on biological resources. The inclusion of ISEGS with EITP would result in an increase in the extent of the adverse impacts during construction to several sensitive plant species due to the high concentration of six of these species within the ISEGS construction footprint and the approximately additional 3,539 acres of desert habitat that would be impacted. Therefore, together ISEGS and EITP would result in significant impacts to small-flowered androstephium, Mojave milkweed, desert pincushion, nine-awed pappus grass, Parish's club cholla, and Rusby's desert-mallow.

Additionally, EITP and ISEGS together would result in significant and unavoidable impacts to desert tortoise and the permanent loss of desert tortoise critical habitat. The construction of the EITP was determined to result in significant impacts to desert tortoise due to the portions of the project that would result in permanent and temporary impacts to designated critical habitat. As each project individually was determined to result in significant impacts to desert tortoise even with implementation of recommended mitigation measures, the combination of the ISEGS and EITP would result in significant, unavoidable impacts to desert tortoise and desert tortoise habitat. There is not feasible mitigation to reduce these impacts to a less than significant level.

As described above, the ISEGS project would contribute to significant and unavoidable impacts on land use due to the permanent conversion of habitat and land used for recreational purposes. Although the transmission component of the EITP constitutes an upgrade of an existing transmission line, the Ivanpah Substation is a newly proposed component and would require the permanent conversion of undeveloped land. Together, the EITP and ISEGS would contribute to significant and unavoidable cumulative impacts on land use.

The EITP substation component and the ISEGS project would be collocated. The ISEGS project would result in significant and unavoidable impacts on the following viewer groups: the Primm Valley Golf Course, middleground distance viewpoints on I-15, viewpoints in the Mojave National Preserve on the eastern face of Clark Mountain, and viewpoints in the Stateline Wilderness Area, including the Umberci Mine. Additionally, the ISEGS project could result in glare impacts for viewers on the Ivanpah Valley floor, because glare may interfere with views of the Clark Mountains. The Ivanpah Substation would be surrounded by the ISEGS project and therefore may be visible to these viewer groups although, given the relative scale, would likely not be distinguishable from these locations. Considered together, the impact of the EITP and the ISGES project on these viewers, including potential glare impacts, would be significant and unavoidable, and there is no feasible mitigation to reduce this impact to less than significant levels.

6.2 Significant Irreversible and Irretrievable Commitment of Resources

This section discusses significant irreversible changes to and irretrievable commitments of resources as a result of energy and materials consumption, accidental release of hazardous materials, land disturbance (and associated habitat loss for sensitive biological resources), damage to or the loss of cultural or paleontological resources, land use, and visual impacts. During the proposed project's operational phase, the transmission of electrical power generated from nonrenewable resources would continue. Operation of the proposed project, however, would facilitate the distribution of solar energy from the ISEGS project and accommodate the area's potential for renewable power

generation in order to achieve the State of California Renewables Portfolio Standard goals. For this reason, the irreversible and irretrievable resource commitments discussed in this section are considered to be acceptable.

6.2.1 Energy and Materials Consumption

Implementation of the proposed project would result in the consumption of energy and materials. Fossil fuels would be required for construction of the proposed project as well as operation and maintenance. A total of 35,000 gallons of gasoline, 665,000 of diesel, and 8,300 of aviation fuel are estimated to be required for construction of the proposed project. The amount of fossil fuels to be stored for the emergency back-up generator for microwave telecommunications is estimated at 499 gallons of liquefied petroleum gas (LPG).

The proposed Ivanpah Substation would be routinely visited on a monthly basis, and the Eldorado–Ivanpah Transmission Line would be monitored routinely in its entirety by helicopter or truck on an annual basis. Additional visits for maintenance purposes would be expected in response to inclement weather or other issues as needed—generally five or more times annually for the transmission line and 20 or more times annually for the substation. The Nipton, California, microwave site would also be visited for operations and maintenance purposes several times annually.

Additionally, construction would require the manufacture of new materials, some of which would not be recyclable after the estimated 80-year lifespan for the proposed project. The raw materials and energy required for the production of these materials would also result in an irretrievable commitment of natural resources. Operation and maintenance of the proposed project or its alternatives would not cause a substantial increase in the consumption or use of non-renewable resources.

6.2.2 Hazards and Hazardous Materials

Construction activities could result in the accidental release of hazardous materials in localized areas of the transmission line, Ivanpah Substation, or telecommunication lines. Such accidents could pose a hazard to humans or result in long-term impacts on the environment. With mitigation, however, potential impacts would be reduced to less than significant levels. No long-term adverse impacts would occur as result of construction, operation, or maintenance of the proposed project or its alternatives.

6.2.3 Land Disturbance

Clearing and grading activities for proposed project infrastructure (e.g., the new substation; improvements to existing access and spur roads; new access and spur roads; staging areas; powerline tension and pull areas; stringing and splicing areas; and tower and pole installation) would cause direct losses of vegetation communities and would be potential sources of direct mortality to wildlife. Wildlife would also be indirectly impacted through the loss or modification of vegetation.

Approximately ~~51~~ 54 acres of land would permanently be disturbed with implementation of the proposed project. Consequently, ~~51~~ 54 acres of plant and wildlife habitat would be eliminated. Approximately ~~424~~ 426 acres would temporarily be disturbed during construction of the proposed project; therefore, total land disturbance would be approximately ~~465~~ 480 acres (~~464.9~~ 479.6; Table 6-1). The extent that temporary land disturbances would impact biological resources would vary by vegetation or wildlife community and the location of disturbance. The loss of habitat from permanently disturbed land would be long-term, enduring throughout the 80-year lifespan estimated for the proposed project.

The amount of land that would be disturbed with the implementation of each alternative is provided in Table 6-1. The effect of land disturbance with the implementation of each alternative would be similar to that of the proposed project. Potential impacts from land disturbance are further analyzed in Section 3.4, “Biological Resources.”

Table 6-1 Estimated Land Disturbance by Alternative

Component	Acres Disturbed During Construction [1, 2]	Acres Permanently Disturbed [1]
Proposed Project (Proposed Action)	~~464.9~~ 479.6	~~51.2~~ 53.7
Transmission Route Alternative A	~~536.3~~ 545.7	~~59~~ 57.3
Transmission Route Alternative B	~~605.5~~ 616.9	61.2
Transmission Route Alternative C	~~551.8~~ 563.2	57.7
Transmission Route Alternative D	~~526.9~~ 538.3	52.4
Transmission Route Alternative E	~~525.1~~ 536.5	52.2
Golf Course Telecommunication Alternative	~~475.5~~ 489.0	~~51.3~~ 53.8
Mountain Pass Telecommunication Alternative	~~475.7~~ 489.2	~~51.3~~ 53.8

Notes:

[1] Land disturbance estimations are based on the applicant's preliminary design information and are subject to change during final engineering.

[2] Construction land disturbances include both temporary and permanent land disturbance estimations.

Transmission Alternative Route A would shorten the overall length of the proposed project by one mile but require additional right-of-way (ROW). There would be an increase in total permanent impacts by 0.2 acres and an increase in temporary impacts by 17 acres in previously undisturbed desert habitat. The increase in acreage of both permanent and temporary impacts would be due to construction activities required for the completion of this alternative. Transmission Alternative Routes B and C and would result in a longer transmission line and require additional ROW, which would increase the acreage of permanent and temporary impacts. Transmission Alternative Route D and Subalternative E would result in a slightly longer transmission line, which would increase the acreage of habitat that is temporarily impacted. The acreage permanently impacted would be slightly greater than under the proposed project.

The Golf Course and Mountain Pass Telecommunication Alternatives would result in the installation of additional communication line (20 and 25 miles, respectively). There would be a substantial increase in the acreage of habitat that would be impacted as a result of these alternatives. The No Project Alternative would not result in impacts to biological resources. Under this alternative, construction, demolition, or ground disturbance would not occur because neither the proposed project nor the alternatives would be implemented.

6.2.4 Cultural Resources

Construction of the proposed project would result in a significant impact on cultural resource sites 36-10315 and 36-7694/26CK4957 (Section 3.5, "Cultural Resources"). Without mitigation, impacts would be adverse and permanent. Implementation of mitigation measures, however, would reduce all potentially significant impacts associated with the proposed project to less than significant levels.

Site 36-10315/26CK8280, the Boulder Dam–San Bernardino 132-kV Transmission Line, would be impacted by the EITP because towers from this line would be removed and replaced with new towers to accommodate the existing and new transmission capacity. While this impact could not be avoided, mitigation would be incorporated that would require a full record be made of the resource before impacts are made. ~~Site 36-7694/26CK4957, the Los Angeles Department of Water and Power Boulder Transmission Line, was determined eligible for the National Register of Historic Places in 1994. The applicant intends to span over the line using H-Frame towers, which would allow the EITP line to cross the historic line without impacting it.~~ Implementation of APM CR-2 would minimize impacts to less than significant levels.

Transmission Route Alternatives A and B would cross no known cultural resources, and no newly discovered cultural resources were found during the field survey of this alternative. Transmission Route Alternative C would result in

significant adverse permanent impacts to ~~sites~~ site 36-10315 ~~and 36-7694/26CK4957~~ by altering the setting and disturbing elements of the site that contribute to its historic significance. Without mitigation, impacts would be adverse and permanent. With mitigation, potential impacts would be reduced to less than significant levels.

Transmission Route Alternatives D and E would not result in impacts on cultural resources. The alternative routes contain no previously recorded cultural resources, and no newly discovered cultural resources were found during the field surveys. The Golf Course and Mountain Pass Telecommunication Alternatives would also not result in impacts to known cultural resources. The No Project Alternative would not result in impacts to cultural resources.

If subsurface cultural resources or human remains are discovered with the implementation of the proposed project and any of the alternatives, an impact could occur. Implementation of the mitigation described in Section 3.5, "Cultural Resources," would reduce potential impacts to less than significant levels.

6.2.5 Geology, Soils, Minerals, and Paleontology

The proposed project would result in minor long-term impacts to geology and soil resources because of transmission line, Ivanpah Substation, and telecommunication line construction. Activities associated with the construction of access road and structures along the transmission and telecommunication line routes would disturb the existing ground surface and natural drainages, causing minor erosion-related impacts. Operations and maintenance activities would result in continued erosion.

Expansive soils in the proposed project area could result in low to moderate levels of structural failure of the transmission and telecommunication line poles and towers and the Ivanpah Substation. There is also the potential for impacts as a result of changing geologic conditions including seismic events (fault rupture and ground shaking), subsidence, or liquefaction. Numerous non-metallic and metallic mineral deposits occur along or near the transmission line route. Non-metallic deposits within the general project area include pumice, feldspar, limestone, and sand and gravel, with sand and gravel potential being the highest along the routes.

Several paleontological resources would be located within 1 mile of the proposed project and one paleontological resource location would be within 300 feet. The nearest location identified in record searches indicated the presence of indeterminate large mammal bone fragments. All potentially significant geology, soil, mineral, and paleontological impacts would be mitigated to less than significant levels. All potentially significant short and long-term geology, soil, mineral, and paleontological impacts associated with the proposed project would be mitigated to less than significant levels (Section 3.6, "Geology, Soils, Minerals, and Paleontology").

Implementation of Transmission Route Alternatives A and B would result in negligible impacts associated with seismic ground shaking, and seismic-related ground failure including liquefaction. Minor impacts would be associated with erosion and unstable geologic units (subsidence). Negligible impacts would be associated with expansive soil and non-metallic mineral resources. Construction of Transmission Route Alternatives A and B may also impact buried paleontological resources as a result of ground-disturbing activities. The two routes could impact areas where underlying formations have been identified as high paleontological sensitivity.

Implementation of Transmission Route Alternative C could result in several impacts. A segment of the Stateline Fault System crosses Transmission Route Alternative C along the California–Nevada border. This impact would be negligible and localized but long term. Minor impacts would be associated with erosion and result from unstable geologic units (subsidence). Negligible impact would be associated with expansive soil and non-metallic mineral resources. Areas where underlying formations have been identified as high paleontological sensitivity could also be impacted.

Impacts and mitigation associated with Transmission Route Alternatives D and E would be similar to those associated with Transmission Route Alternative C. Only Transmission Route Alternatives C and D, however, would

cross a segment of the Stateline Fault System. Impacts associated with the Golf Course and Mountain Pass Telecommunication Alternatives would also be similar to those associated with the proposed project and Transmission Route Alternatives A, C, and D. The No Project Alternative would have no impact on existing geologic, soil, mineral, or paleontological resources. All potentially significant short and long-term geology, soil, mineral, and paleontological impacts associated with the alternatives would be mitigated to less than significant levels (Section 3.6, "Geology, Soils, Minerals, and Paleontology").

6.2.6 Land Use

Long-term negligible adverse impacts on the Clark Mountain grazing allotment would occur as a result of proposed project construction. No additional long-term adverse impacts on existing, approved land use plans, livestock grazing management, livestock, or Special Management Areas would occur as a result of implementation of the proposed project or Transmission Route Alternatives A through E, the Golf Course or Mountain Pass Telecommunication Alternatives, or the No Project Alternative (Section 3.9, "Land Use").

~~While an EIS for the Southern Nevada Supplemental Airport is currently in progress and is expected to be completed by 2012, the applicant would consult with the Federal Aviation Administration prior to final project design to determine if a Hazard/No Hazard Determination is necessary as discussed in Section 3.7, "Hazards, Health, and Safety." Once this determination is made, land use impacts on the Ivanpah Airport Environs Overlay would be reduced.~~

The Southern Nevada Supplemental Airport project has been placed on hold indefinitely; however, the applicant has filed Form 7460s with the Federal Aviation Administration (FAA) and will implement all FAA requirements when the SNSA is constructed as discussed in Section 3.7, "Hazards, Health, and Safety." Implementing all FAA requirements will reduce all impacts associated with the SNSA to less than significant.

The portion of the proposed project that crosses the BCCE would be constructed mostly within the boundary of BLM-managed utility corridors; however, less than one mile would cross outside of the corridor at MP 2 along an existing 70-foot ROW, which would require approval from Clark County and Boulder City. With the approval of these jurisdictions, impacts on land use within the BCCE would be reduced.

6.2.7 Visual Impacts

The proposed project would result in permanent, minor, adverse impacts on visual resources because of the use of taller transmission line structures and construction of the Ivanpah Substation and microwave tower. The undergrounded portion of the telecommunications line would result in temporary moderate impacts on visual resources. All visual impacts would be consistent with applicable BLM visual resource designations for the proposed project area, however, and would not significantly impact visual resources (Section 3.9, "Visual Resources").

Implementation of Transmission Route Alternatives A through E would result in stronger overall visual contrast in comparison to the proposed project. Increased visual contrast would occur in areas where the alternative routes would veer from the existing transmission line route. Visual impacts would still be consistent with applicable BLM visual resource designations, however, and would not significantly impact visual resources.

The Golf Course and Mountain Pass Telecommunication Alternatives would result in moderate temporary impacts on visual resources because of an additional segment of trenching along Nipton Road but would not result in long-term impacts. A segment of the Mountain Pass Telecommunication Alternative would traverse an area designated by the BLM with stricter objectives for visual resources than the proposed project or other alternative routes, but would still not result in significant impacts. This segment of telecommunication line would be strung on existing 33-kV distribution structures. It would not result in a visual impact because the new telecommunication line would not be noticeable with respect to the existing distribution lines. Under the No Project Alternative, there would be no impact on visual resources.

~~6.2.8 Hydrological and Water Quality~~

~~Construction of the proposed project and its alternatives would result in localized erosion and sedimentation impacts ranging from minor to moderate. Additionally, the proposed project and its alternatives would use water for dust suppression during construction, and water would be used at the substation for sanitary purposes and fire control during emergencies during proposed project operation. The applicant has stated that no wells would be drilled for water supply; however, until the water source is identified by the applicant, potential minor to moderate localized impacts on groundwater are assumed (see MM W-2, Water Use Plan).~~

6.2.8 Ivanpah Solar Electric Generating System Project

Implementation of the ISEGS project would result in the consumption of a substantial amount of energy from fuel (i.e., gasoline, diesel, and jet fuel) for construction activities. Additionally, construction would require the manufacture of new materials, some of which would not be recyclable when the ISEGS project is decommissioned. The raw materials and energy required for the production of these materials would also result in an irretrievable commitment of natural resources. Operation of the ISEGS project would not cause a substantial increase in the consumption or use of non-renewable resources. Therefore, the combined impact of EITP and ISEGS would result in an irretrievable commitment of natural resources during construction, which would be adverse; however, considering that the combined impact of the two projects would reduce overall dependence upon fossil fuels, the impact would be less than significant.

The use of a limited amount of hazardous materials (e.g., fuel, lubricants, and cleaning solvents) would be required. Hazardous materials would be stored, handled, and used in accordance with best management practices and applicable federal, state, and local regulations. Assuming appropriate implementation of plans and practices, impacts associated with the degradation of the environment because of the accidental release of hazardous materials would be less than significant. Therefore, the combined impact of EITP and ISEGS would also be less than significant.

Implementation of the ISEGS project would require the loss of approximately ~~4,073~~ 3,597 acres of vegetation and wildlife ~~and~~ habitat. The loss of this habitat would be long-term, enduring throughout the proposed 50-year lifespan of the ISEGS project facility. Following decommissioning, restoration would be conducted which would involve removal of structures, restoration of topography, and revegetation, all of which would work towards restoration of the original habitat. However, it is likely that restoration of native vegetation would be slow and the success uncertain. The loss of desert tortoise habitat would be permanent since restoration of vegetation for which they depend for foraging and other factors affecting the quality of the restored habitat would be uncertain. Because the EITP would also require the loss of 442 acres of vegetation and wildlife habitat, the combined acreage loss would be approximately 4039 acres.

The majority of access required for construction, operation, and maintenance of the ISEGS project would use existing ROW and access roads. Opportunities for public access would not be significantly affected nor would previously inaccessible areas be made accessible. Therefore, the combined impact of the EITP and ISEGS would be less than significant.

Visual impacts would be significant and long-term enduring throughout the proposed 50-year lifespan of the facility. The ISEGS project site would be near a national preserve, two designated wilderness areas, and an area used for *land sailing*—moving on land in a wind-powered wheeled vehicle with a sail on flat open spaces such as Ivanpah Dry Lake. Concerns were expressed during the public comment period regarding potential impacts on visual resources as well as the level of glare from the solar towers; and concern over cumulative visual effects of renewable projects on the Southern California Mojave Desert as a whole. After the end of the ISEGS project's useful life, it would be decommissioned and the area restored and revegetated, but visual recovery is would likely take a very long period of time. While the EITP's contribution to the ISEGS impact would be less than significant, because ISEGS would have a

significant and long-term visual impact throughout the life of the project and possibly beyond decommissioning, the combined impact of the EITP and ISEGS would also be considered significant.

6.3 Growth-Inducing Effects

The proposed project would induce growth if it results in additional development, such as increases in population, employment and/or housing above and beyond what is already assumed will occur in local and regional land use plans or in projections made by regional planning authorities, irrespective of the proposed project. Under CEQA (Section 15126.2(d)), the proposed project would be growth-inducing if it:

- Directly or indirectly fosters economic or population growth or the construction of additional housing;
- Taxes community facilities to the extent that the construction of new facilities would be necessary;
- Removes obstacles to population growth; or
- Encourages or facilitates other activities that cause significant environmental effects.

Typical growth inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area or the removal of major barriers to development. This section evaluates the proposed project's potential to create such growth inducements. It should also be noted that growth inducement can be positive or negative depending on resulting effects and the development objectives of the planning authorities in the proposed project area. Negative impacts associated with growth inducement would occur only where growth associated with the proposed project would result in significant/adverse environmental impacts.

6.3.1 Workforce for the Proposed Project / Proposed Action

6.3.1.1 Construction

Section 3.13, "Socioeconomics, Population and Housing, and Environmental Justice" provides a detailed description of the availability of existing labor within the proposed project area. Construction employment for the proposed project would include both skilled and semi-skilled positions. The construction workforce available in San Bernardino County, California is 35,973 and Clark County, Nevada 92,364. As discussed in Chapter 2.0, "Description of the Proposed Project and Alternatives," construction of the proposed project would occur over an estimated 18-month period and require a total construction workforce of approximately 190 workers.

Because the total expected construction workforce is 190 workers (approximately 0.015 percent of the total workers available), it is not expected that any additional workers would be required to relocate into the proposed project area during construction. The presence of 190 workers in the proposed project area would have a localized beneficial effect as a result of the temporary localized spending on goods and services, but this effect would be short-term and would not be expected to result in a permanent increase in housing or need for community facilities that could not be met by existing services and facilities.

The analysis presented in Section 3.11, "Public Services and Utilities," confirms that construction of the proposed project would not create significant additional demands for emergency response services, schools, drinking water, or solid waste and wastewater facilities that could not be met by existing providers and facilities. Therefore, workforce required for construction of the proposed project would not have any direct or indirect growth inducing effect.

6.3.1.2 Operation

Operation and maintenance of the proposed project would be conducted by the existing work force currently assigned to the operation and maintenance of the existing Eldorado–Ivanpah Transmission Line (Section,

"Socioeconomics, Population and Housing, and Environmental Justice") and would not create new jobs locally or regionally. Operation of the proposed project would not cause growth in population, employment, or housing because no additional workers would be required beyond those currently employed.

The analysis presented in Section 3.11, "Public Services and Utilities," confirms that operation and maintenance of the proposed project would not create long-term demands for emergency response services, schools, drinking water, or solid waste and wastewater facilities that could not be met by existing services and facilities. Therefore, workforce required for operation and maintenance of the proposed project would not have any direct or indirect growth inducing effect.

6.3.1.3 Alternatives

Potential growth-inducing impacts from implementation of each alternative would be similar to that for the proposed project. The alternatives would require a similar number of workers as the proposed project. Under the No Project Alternative, there would be no growth-inducing impacts on the proposed project area. Therefore, workforce required for implementation of the alternatives would not have any direct or indirect growth inducing effect.

6.3.2 Provisions for Additional Electric Power

As described previously, growth inducement can occur directly, as a result of increases in employment, housing, and demands for public facilities and services. Growth inducement can also occur indirectly as the result of the removal of existing constraints to growth or the creation of factors that encourage or otherwise facilitate development that would not otherwise have occurred. The provision of electrical power can be a trigger for growth, either by alleviating a constraint where limitations on power availability are curtailing development and growth that would otherwise occur or by providing easier and/or cheaper access to power.

The purpose of and need for the EITP is to connect renewable generation sources in the Ivanpah Valley region to the existing electrical transmission grid and to enable the applicant to comply with California's Renewables Portfolio Standards (Chapter 1, "Purpose and Need"). The Renewables Portfolio Standards and Energy Action Plan require utilities, including the applicant, to increase the sale of electricity produced by renewable energy sources including solar facilities to meet a goal of 20 percent renewable energy generation by 2010. The Ivanpah Valley area has been identified as an area with high potential for solar resource development. The proposed project would allow the applicant to increase the percentage of renewable resources in its energy portfolio and assist them in reaching the goals set in the Renewable Portfolio Standards.

In addition, the Energy Policy Act of 2005 requires the Department of the Interior (the BLM's parent agency) to approve at least 10,000 megawatts (MW) of renewable energy on public lands by 2015. Currently, proposed renewable energy projects amounting to 1,900 MW of electricity are on file with the BLM for the Ivanpah Valley area. The EITP would allow for the transmission and distribution of energy from proposed renewable energy generation facilities.

Irrespective of the proposed project, population in both San Bernardino and Clark counties has increased substantially in the last decade and is expected to continue to increase (Section 3.13, "Socioeconomics, Population and Housing, and Environmental Justice"). It is anticipated that growth would occur regardless of the availability of additional renewable energy and electrical transmission capacity. Further, it is not anticipated that the proposed project would have any effect on population growth because associated energy demands would be met by other means.

Additionally, as described in Section 2.3.5, "No Project/No Action Alternative," if the EITP is not constructed, it is assumed that the proposed renewable power generation projects that the EITP would be intended to serve would still proceed. These renewable power projects would need alternate means to connect to electrical transmission systems.

SCE or other electrical transmission companies that currently serve the Ivanpah Valley region would be likely candidates for providing electrical transmission projects if the EITP was not constructed.

Therefore, because the proposed project would not result in increases in employment, housing, or the demands for public facilities and services nor result in the removal of existing constraints to growth or the creation of factors that encourage or otherwise facilitate development that would not otherwise have occurred, its implementation would not have any direct or indirect growth inducing effect due to the provision for additional electric power.

6.3.2.1 Alternatives

Potential growth-inducing impacts from implementation of each alternative would be similar to that for the proposed project. The alternatives comprise route variations of the proposed project transmission and telecommunication lines and would not result in differences in the amount of power that would be transmitted or the location of substations where power would be transmitted. Under the No Project Alternative, there would be no growth-inducing impacts on the proposed project area. Therefore, provisions for additional electric power resulting from implementation of the alternatives would not have any direct or indirect growth inducing effect.

6.3.3 Ivanpah Solar Electric Generating System Project

The ISEGS project would employ up to 959 construction personnel (peak workforce) and 90 full time equivalent positions during operations ~~personnel~~. Construction workers would commute as much as 2 hours each direction from their communities rather than relocate, and operations workers would commute as much as 1 hour.

Socioeconomics data for the 1- and 2-hour commute ranges in counties were reviewed. The counties included San Bernardino and Clark and others that were within the commute range. It was determined that there are approximately 231,000 construction workers within the commute-range study area. The number of workers required for the ISEGS project would be negligible with respect to the total number of workers available. Additionally, all workers would reside within the study area, and no impacts on existing population levels would occur. Because the EITP would also have no impact on existing population levels, the combined impact of ISEGS and EITP would also have no impact.

The primary need for the ISEGS project relates to federal and state requirements for the generation of renewable energy. According to the California Energy Commission (CEC), peak electricity demand within California is projected to increase at a rate of 1.35 percent per year (CPUC, CEC, and CPA 2008), and therefore, additional generating capacity from new sources will be required. The ISEGS project is not intended to supply power related to growth for any particular development and would not result in direct growth-inducing impacts. However, the ISEGS project could facilitate growth indirectly through the additional increased capacity of electric power that it would make available (CEC and BLM 2009). This finding differs from the discussion of the EITP above, which concludes that there would no direct or indirect growth inducing impact from the implementation of the EITP. Nevertheless, because ISEGS may facilitate growth indirectly, the combined impact of the EITP and ISEGS could also indirectly effect growth.

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