

6.0 PROJECT ALTERNATIVES

6.1 RATIONALE FOR ALTERNATIVE SELECTION

Pursuant to Section 15126.6(a) of the State CEQA Guidelines, this section discusses five alternatives to the proposed project that could feasibly accomplish a majority of the proposed project objectives. This section also describes alternatives that were considered, but rejected from further study. The environmental assessment provided in this section will enable the County to exercise greater discretion in its decisions regarding whether to approve the project as proposed, to approve a project with changes such as those described in the following alternatives, or to reject the proposed project or any alternatives at this time.

Section 15126(f) states that “the range of alternatives in an EIR is governed by the “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” The State CEQA Guidelines provide several factors that should be considered in regard to the feasibility of an alternative; those factors include: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries (projects with a reasonably significant impact should consider the regional context); and, (7) whether the project applicant can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

The rationale for and characteristics of each of the alternatives addressed are described below, followed by a comparison of the environmental effects associated with the proposed project versus each alternative. Note that the comparison of environmental effects focuses on the same environmental topic areas addressed in Sections 4.1 through 4.18 in this PEIR. Following the comparative analysis of each alternative versus the proposed project, the environmentally superior alternative is identified. The project alternatives selected for evaluation include:

1. No Project Alternative
2. Solar PV Only Alternative (no solar thermal)
3. Distributed Generation Only Alternative (less than 20 MW)
4. Reduced SEDA Alternative (Elimination of the Laws, Rose Valley, Pearsonville and Chicago Valley SEDAs)
5. Solar Energy Development on Previously Disturbed Lands Only Alternative

6.2 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER STUDY

State CEQA Guideline 15126.6(c) requires that an EIR identify alternatives that were considered and rejected as infeasible, and briefly explain the reasons for their rejection. Alternatives considered but rejected from further study include: (1) 2011 Renewable Energy Development Areas (REDAs) Alternative and (2) 2013 REDAs (more intensive version of 2011 REDAs).

6.2.1 2011 Renewable Energy Development Areas Alternative

The 2011 REDAs included 15 REDAs that would have allowed development of solar and wind energy projects. The 15 REDAs included the following areas: Fish Lake Valley, Deep Springs, Laws, Owens Valley, Owens Lake and Keeler, Centennial Flat, Rose Valley, Pearsonville, Panamint Valley, Trona, Death Valley Junction, Chicago Valley, Charleston View, Tecopa, and Sandy Valley. The 2011 REDAs would have restricted the potential for renewable energy to about 15 percent of the County. The areas were identified with criteria that were based on site specific studies, environmental review, and permitting requirements pursuant to the Renewable Energy Ordinance and other applicable State, federal and local laws. Because the 2011 REGPA was challenged by environmental groups due to lack of CEQA compliance, it was rescinded and the 2011 REDAs were not carried forward.

6.2.2 2013 Renewable Energy Development Areas Alternative

In 2013, the County reviewed the 2011 REDAs and proposed revised areas (SEDAs) for consideration in this REGPA PEIR. The primary difference between the 2013 and 2011 REDAs was a reduction in area available for renewable development in the Owens Valley and Chicago Valley and an increase in area available for renewable development in Rose Valley and Trona. The County presented the potential 2013 REDAs to the public for consideration and held several meetings to discuss the REDAs. The public expressed concerns regarding both the extent of the REDAs and the inclusion of wind energy in the REGPA due to the significant visual impacts of this technology. The DOD also expressed concern about the potential impact to military readiness and training operations resulting from implementation of wind projects. As a result of this input, the County revised the 2013 REDAs to reduce both the total footprint of the REDAs and to eliminate the consideration of wind energy. As part of this process, the County eliminated consideration of the following REDAs: Fish Lake Valley, Deep Springs, Centennial Flats/Darwin, Panamint Valley, Death Valley Junction, and Tecopa from the proposed project carried forward for consideration. Additional planning will be undertaken for the Owens Valley separately. Because of the potential significant environmental impacts and public concern regarding the Owens Valley, this alternative was eliminated from consideration in the PEIR.

6.3 ALTERNATIVES CONSIDERED FOR EVALUATION

The following alternatives are presented to foster informed decision making and public participation. The primary differences between the alternatives are the size, location, and type of solar development.

The impacts of solar development for each of the alternatives are largely similar to those of the proposed project because the types of construction equipment and construction and operation activities are similar. Therefore the types of air emissions, noise levels, and impacts to sensitive receptors and services would be similar to the proposed project. If fewer or smaller projects are built resulting in less ground disturbance, as might be the case with the Distributed Generation Only Alternative, these impacts would be incrementally reduced, but not necessarily eliminated. Because of the similarity (other than the scale of the impacts) among the alternatives, the following resources are not addressed in detail:

- Agricultural Resources
- Air Quality
- Geology and Soils
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Circulation
- Utilities

6.3.1 No Project Alternative

The No Project Alternative is required under Section 15126.6(e) of the State CEQA Guidelines and represents a possible scenario that could occur if the proposed REGPA was not approved. According to Section 15126.6 (e)(3)(A) of the State CEQA Guidelines, when the project is the revision of an existing land use plan or regulatory plan, policy or ongoing operation, the “no project” alternative would be the continuation of the existing plan, policy or operation into the future. Therefore, under the No Project Alternative, the County would process proposed renewable energy project applications countywide without the benefit of the policy framework provided by the REGPA. Significant portions of the County could be impacted by the development of solar and/or wind energy projects (all of which would be subject to CEQA review). The County would be limited in its ability to discourage project applicants from submitting renewable energy development proposals due to lacking regulatory guidance on the location, siting and size of such projects. Additionally, the County would not set a MW cap on the amount of renewable energy development.

The No Project Alternative would not fulfill the majority of the project objectives as described in Section 4.2 because it would not regulate the size, capacity and impacts of solar energy development projects and could result in development of large swaths of undisturbed lands outside of the identified SEDAs.

The primary differences between the No Project Alternative and the proposed projects are discussed below.

6.3.1.1 Aesthetics

Aesthetics impacts associated with the No Project Alternative would be similar to the proposed project in that the types of activities associated with the development of renewable energy that could be permitted under the No Project Alternative would be similar to the proposed project. However, under the No Project Alternative, renewable projects could be built anywhere in the County that is not currently legally or technically restricted. This includes areas not available to renewable energy under the proposed project such as throughout the Owens Valley or in the Panamint Valley. These locations have been identified by the public and by the analysis as visually sensitive so renewable energy development would potentially result in more wide-ranging impacts to visual resources when compared with the proposed project.

Under the No Project Alternative, there would be no restriction on the type of renewable energy projects that are constructed. Wind energy facilities could conceivably be constructed anywhere in the County that is not currently legally restricted. Wind energy projects would likely be focused along portions of the US 395 and in the Death Valley Junction where the potential to harness wind energy is fair to excellent. Because wind turbines are generally several hundred feet tall, they are highly visible from far distances similar to solar power tower facilities. Due to the height of wind farms, they are required to use night lighting as a warning system for pilots thereby increasing their visual impacts, in general, and resulting in impacts to night skies.

If projects are permitted under the No Project Alternative, there could be greater impacts to visual resources when compared to the proposed project because under the No Project Alternative, solar energy development could occur in more areas throughout the County and would allow for the development of more wind energy.

6.3.1.2 Biological Resources

If solar energy projects are permitted under the No Project Alternative, the impacts to biological resources associated with the No Project Alternative have the potential to be greater than those described for the proposed project. The proposed project has selected the SEDAs as areas containing less sensitive biological resources when compared with other potentially developable areas of the County and may develop restrictions and criteria for development in the OVSA, which is a biologically rich area of the County, based on further analysis. The REGPA contains policies and implementation measures to encourage development within the SEDAs on lands that have been previously developed or disturbed, and along existing transmission lines (Section 3.3.3), thereby potentially minimizing impacts to biological resources.

Under the No Project Alternative, if approved, renewable projects could be built anywhere in the County that is not currently legally restricted. Wind energy projects would likely be focused along the east slope of the Sierra Nevada, near Pearsonville along US 395, and along the peaks of the Panamint Range, the Amargosa Range, and the Funeral Mountains (Aspen 2014). Wind energy developments require larger areas of development per MW produced when compared with solar developments – wind developments require 22 acres per MW to 247 acres per MW (Denholm et al. 2009) compared with approximately 6 acres per MW required for solar developments (see Table 3-2 in Section 3.3.6.1). Additionally, this alternative would not constrain renewable energy development by acreage as is the case under the REGPA. At the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to biological resources. However, based on the lack of regulations dictating the maximum utility scale renewable energy developments in the County, restrictions to the potential locations of those developments, and the possibility of greater land requirements for wind energy developments under the No Project Alternative, if such developments are approved, the No Project Alternative would likely result in greater impacts to biological resources when compared with the proposed REGPA.

6.3.1.3 Cultural Resources

The impacts to cultural resources associated with the No Project Alternative would have a potentially significant effect on cultural resources when viewed programmatically. Additional

avoidance and mitigation strategies will be applied in the second-tier, project-level analyses under both the proposed and No Project Alternatives, however, cultural resources would likely still be adversely affected as part of renewable energy projects. The No Project Alternative would not constrain solar development by acreage and could impact a higher number of cultural resources, including cultural landscapes, during development of previously undisturbed lands. At the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to these resources. Mitigation Measures CUL-1a through CUL-1g and CUL-3a for the proposed REGPA would not be applied under this alternative and, therefore, impacts to cultural resources would not be reduced and this impact would remain significant and unavoidable. Therefore, if renewable energy projects are approved under the No Project Alternative, depending on the number and location of projects approved, the No Project Alternative could have a greater impact to cultural resources than the proposed project at the programmatic level.

6.3.1.4 Greenhouse Gas Emissions

The No Project Alternative could result in similar impacts due to GHG emissions as under the proposed project depending on the number and size of the projects approved. The proposed project would cap the total allowable energy generation capacity in the SEDAs at 900 MW of electricity. The No Project Alternative would not have a MW cap so, depending on market conditions, more projects than anticipated under the proposed REGPA could be approved and built. The types of construction and operation impacts would be similar because the construction and operational activities would be similar, however, overall construction and operational emissions under the No Project Alternatives could be greater as a result of more acres of development. On the other hand, an increase in MW produced under the No Project Alternative would result in an increase in GHG emission offsets when compared with the proposed project. Depending on the MW of electricity produced, the No Project Alternative could result in a greater beneficial impact on GHG (lesser impact) than the proposed project at the programmatic level.

6.3.1.5 Hazards and Hazardous Materials

The No Project Alternative would result in similar impacts due to the use of hazardous materials as under the proposed project depending on the number and size of the projects approved. This is because the types of hazardous materials (fuels, hydraulic and dielectric fluids, oil and grease, cleaning solutions/solvents, and storage batteries) used in the proposed project would be similar to the types of hazardous materials used for renewable development under the No Project Alternative. Standard measures would be required to reduce the potential spill of any hazardous materials and the developers would be required to incorporate spill prevention plans into their construction and operation.

Because the No Project Alternative would allow the development of wind energy, some additional hazards and hazardous materials would be considered. The FAA regulations establish standards for determining obstructions in navigable airspace, including height limitations on structures taller than 200 feet or within 20,000 feet (approximately 3.8 miles) of an airport. (14 CFR, Part 77). The FAA requires that it be notified of these types of structures through the

filing of FAA Form 7460 1 (Notice of Proposed Construction or Alteration). Many wind turbines are taller than 200 feet and would trigger filing of FAA Form 7460 1.

Filing a Form 7460 1 allows the FAA to conduct an aeronautical study to ascertain whether the proposed structure would present a hazard to air navigation or could negatively impact the operational procedures of a nearby airport. The FAA then makes its recommendations, determining whether: (1) the proposed structure constitutes a hazard to air navigation; (2) the proposed structure would not constitute a hazard if the structure is marked and/or lit; or (3) the proposed structure is not a hazard even in the absence of marking or lighting. Because the No Project Alternative would allow construction of wind energy, it would potentially pose a navigational hazard.

In addition, wind turbines can catch fire from excessive braking system friction, lightning strikes, electrical malfunctions, and flammable components. Fires at the top of the turbines are difficult to extinguish as fire truck ladders are too short to reach them. This can cause fires to spread to adjacent areas increasing the risk of wildfire. Because wind energy is not included in the proposed project, the No Project Alternative would include it, which would present an increased type of wildfire hazard, although, wind energy facility operators implement standard practices to reduce this risk accordingly. Overall impacts would remain similar to the proposed project.

6.3.1.6 Hydrology and Water Quality

The No Project Alternative would result in impacts associated with hydrology and water quality that would be similar to those described for the proposed project depending on the number and size of the projects approved. This includes impacts to drainage patterns and flow directions, runoff rates, flooding, existing or planned storm drainage system capacity, groundwater supplies and recharge, and impacts to water quality.

The No Project Alternative would not have a MW cap so, depending on market conditions, more projects than anticipated under the proposed project could be approved and built. If more projects were constructed under the No Project Alternative compared with the proposed project, this would result in a greater degree of impacts to hydrology and water quality.

6.3.1.7 Socioeconomics

Similar to the proposed project, socioeconomic impacts may occur if the influx of workers, both short and long term, exceeds the expected growth of the County and adversely impacts the amount of available temporary housing, and public service levels. Because the No Project Alternative would not cap the total allowable utility scale solar energy development in the County, the overall potential for temporary worker in-migration could be greater than that of the proposed project. Depending upon the conditions of approval placed upon large solar energy projects, the No Project Alternative might not allow for planning of large solar energy projects to provide for sufficient transient housing and sharing of specialized workers. Additionally, local recreational resource providers would have less ability to plan for any transient housing shortages resulting from construction worker in-migration. Types of beneficial long-term fiscal and job growth effects would be similar to the proposed project. Therefore, depending on the number and size of the projects approved, the No Project Alternative might have a greater

potential for adverse socioeconomic effects and similar beneficial effects when compared to the proposed project.

6.3.2 Solar Photovoltaic Only Alternative

The Solar PV Only Alternative would provide for solar PV projects to be implemented within the eight proposed SEDAs; no solar thermal projects, solar trough, and/or solar power tower, would be allowed within the County. Distributed generation would still be supported within the County. Selection of this alternative would remove the more controversial types of solar energy projects from consideration; solar thermal applications would be denied by the County outright. Because this alternative would continue to allow solar PV development in the proposed SEDAs, it would meet the project objectives outlined in Section 4.2 of the PEIR. However, solar thermal projects could be processed by other agencies.

This alternative would likely result in slightly less impacts to aesthetics, biological resources, and cultural resources, although it would not reduce the impacts to below a level of significance. It is difficult to determine if socioeconomic impacts to the County would be lessened through exclusion of solar thermal projects. Solar thermal projects may require specialized workers during construction and operations due to the complexity of the technology. Therefore, potentially beneficial economic impacts of this alternative may be slightly reduced. However, the overall socioeconomic impacts would likely be similar to the proposed project.

The primary differences between the Solar PV Only Alternative and the proposed projects are discussed below.

6.3.2.1 Aesthetics

Aesthetic impacts associated with the Solar PV Only Alternative would be similar to those described for the proposed project in Section 4.1; however, the operational aesthetic impacts would be limited to those described for PV facilities. This would limit the height structures of the solar panels themselves to 30 feet as compared with solar thermal technologies that can include structures up to 750 feet tall. As noted for the proposed project, PV arrays are comprised of low-profile elements, and do not result in dominant vertical massing effects. However, because of the potential size of the PV facilities, up to several thousand acres, they create a large-scale dominant visual feature that covers large areas of relatively flat land. While the Solar PV Only Alternative would reduce the aesthetic impacts compared with the proposed project, future PV projects would still introduce visual features that substantially contrast with, and degrade the existing visual character or quality of the site and its surroundings, resulting in significant and unmitigated visual impacts.

6.3.2.2 Biological Resources

The Solar PV Only Alternative would result in slightly reduced impacts to biological resources from those described for the proposed project. Most impacts to biological resources would be similar to those identified in Section 4.4 of this PEIR; however, solar thermal power tower facilities that could be constructed under the proposed project result in significant impacts that would not occur or would be reduced if solar development was limited to solar PV only. The scale of the impacts generally increases with the size of the solar thermal power tower facility.

Solar thermal power tower facilities result in significant and unavoidable impacts to birds from solar flux and luminosity between the tower and the heliostats. Solar PV technology does not produce solar flux or luminosity; therefore, these impacts would be eliminated under the Solar PV Only Alternative. Further, solar thermal power tower facilities contain tall structures – the towers may reach hundreds of feet in height. These tall structures increase the chances for bird collisions and provide opportunities for perching and nesting; thereby increasing opportunities for impacts related to solar flux, luminosity, and collisions. Solar PV technologies contain relatively low profile facilities which would be expected to result in reduced impacts from collisions with tall structures, although there is still the risk of collisions and increased predation associated with polarized light pollution. Blowdown and evaporation ponds are part of solar thermal facilities that are not required for solar PV facilities. These ponds may also impact birds by attracting them to the area and increasing the chances of impacts from solar flux, luminosity, and collision. The Solar PV Only Alternative would result in reduced impacts to birds from collisions and solar flux when compared with the risk associated with solar thermal power tower facilities of similar size and location.

As described above in the discussion regarding “Hydrology and Water Quality,” solar thermal technologies require more water use when compared with solar PV facilities. The reduced impacts to groundwater supplies and recharge of the Solar PV Only Alternative compared with the proposed project would reduce impacts to groundwater dependent habitats, although likely not below a level of significance without mitigation.

6.3.2.3 Cultural Resources

The impacts to cultural resources associated with the Solar PV Only Alternative would have a potentially significant effect on cultural resources when viewed programmatically. If solar development was limited to solar PV only, impacts to cultural resources from deep ground-disturbance activities might be reduced and visual impacts to the integrity of setting and feeling of cultural resources would also likely be reduced. However, some cultural resources, including cultural landscapes, would be adversely affected as part of solar PV projects and any reduction in impacts would not be sufficient to be considered less than significant as even without taller structures, large-scale solar PV facilities can be viewed at far distances given the topography of the County. At the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to these resources. Because of this uncertainty, at the programmatic level of analysis the impact is considered significant and unavoidable. Mitigation Measures CUL-1a through CUL-1g and CUL-3a would be applied under the Solar PV Only Alternative and therefore would reduce affects to cultural resources. This alternative would likely have a lesser impact to cultural resources than the proposed project at the programmatic level because of the reduced size and scale of the projects, but not to less than significant levels.

6.3.2.4 Greenhouse Gas Emissions

The Solar PV Only Alternative would result in similar impacts due to GHG emissions as the proposed project. The types of construction and operation emissions would be similar because the construction and operational activities would be similar. The exact offset of the proposed project and Solar PV Only Alternative are not known; however, solar thermal projects generally

involve additional combustion of natural gas and are expected to result in additional GHG emissions impacts during operations compared with solar PV. Solar thermal technologies frequently generate more megawatt hours per MW of capacity compared with solar PV projects because they are able to produce energy for longer periods during a day. Overall, the offset of the proposed projects and Solar PV Only Alternative would be expected to be similar.

6.3.2.5 Hazards and Hazardous Materials

The Solar PV Only Alternative would result in slightly reduced impacts due to hazardous materials compared with the proposed project. This is because while the types of hazardous materials (fuels, hydraulic and dielectric fluids, oil and grease, cleaning solutions/solvents, and storage batteries) used in the construction would be similar, solar PV projects do not include heat transfer fluids, thermal energy storage (TES) salts, and steam amendment chemicals that are components of some solar thermal technologies. Much of this waste will have recycling options, but subsequent flushing (with water or appropriate organic solvents) and cleaning of the systems will generate wastes that require disposal. The heat transfer fluids most commonly used are Therminol and Dowtherm. Therminol is an ethylated benzene compound with relatively low volatility at ambient temperatures. It has a low oral and inhalation toxicity (Solutia Inc. 2006) but is irritating to the skin. Dowtherm is primarily ethylene glycol, a common antifreeze. It also has a low volatility at ambient temperatures, low inhalation toxicity, and moderate oral toxicity; brief skin contact is nonirritating (Dow Chemical Inc. 2004). Because the proposed project could require use of additional hazardous materials not required for solar PV technologies, the impacts to hazards and hazardous materials would be slightly reduced for the Solar PV Only Alternative. However, with implementation of BMPs and standard mitigation requirements, the impacts of both would be less than significant with mitigation.

The Solar PV Only Alternative would also result in placement of fewer structures such as towers within airport hazard zones so would reduce potential impacts to airport-related hazards. Glare from solar energy facilities (i.e., the sun's reflection off mirrors or PV panels) could interfere with pilot vision as was reported in 2013 by two flight crews in the vicinity of the Ivanpah Solar Electric General System.

6.3.2.6 Hydrology and Water Quality

The Solar PV Only Alternative would result in impacts associated with hydrology and water quality that would be similar in nature to those described for the proposed project. This includes impacts to drainage patterns and flow directions, runoff rates, flooding, existing or planned storm drainage system capacity, groundwater supplies and recharge, and impacts to water quality.

The Solar PV Only Alternative would require only minimal water during operations. Solar thermal technologies require additional water during operations even with implementation of dry cooling technology. As such, the Solar PV Only Alternative would result in reduced impacts to groundwater supplies and recharge compared with the proposed project, although likely not below a level of significance without mitigation.

6.3.2.7 Socioeconomics

This alternative would only allow for solar PV projects to be implemented within the eight proposed SEDAs; no solar thermal projects would be allowed within the County. Overall, this alternative would result in similar socioeconomic effects to the proposed project. In general, utility scale solar PV and solar thermal projects would require similar numbers of needed temporary workers. However, solar thermal projects typically require additional specialized workers during construction and operation due to complexity and variations of this technology. Also, depending on the method used for maintaining solar reflector mirrors, solar thermal projects may also require slightly more operational workers. Beneficial long-term fiscal and job growth affects would be similar to the proposed project. Therefore, while similar, the overall potential for temporary worker in-migration may be slightly reduced under this alternative when compared to the proposed project, because the potential for solar thermal projects to be developed within the County would be eliminated.

6.3.3 Distributed Generation Only Alternative

The Distributed Generation Only Alternative would result in continued County support for distributed generation for solar energy projects ranging from 1 to 20 MW. No SEDAs are proposed under this alternative. Under this alternative, applications for projects over 20 MW would be denied outright by the County, effectively prohibiting the construction and operation of solar energy projects greater than 20 MW within the County's jurisdiction. Because solar thermal projects are generally constructed at utility scale, this alternative would likely limit future development of solar thermal technologies in the near term.

Implementation of the Distributed Generation Only Alternative would not meet all of the project objectives outlined in Section 4.2 of the PEIR as this alternative would be less supportive of the State's goal of reduced reliance on petroleum-based energy sources in favor of renewable energy sources. Utility scale projects could still be processed by other land management agencies. The MW and acreage development caps identified for the proposed project would be followed for the Distributed Generation Only alternative. This alternative would result in fewer impacts to all environmental topic areas analyzed in the PEIR, and likely to below a level of significance. The socioeconomic effects of the Distributed Generation Only Alternative would likely be neutral: the County would neither benefit from nor be negatively affected financially by implementation of this alternative. When compared to utility scale projects, solar facilities less than 20 MW would require a smaller construction workforce so there would be a reduction in local economic benefits from this alternative compared with the proposed project.

The primary differences between the Distributed Generation Only Alternative and the proposed projects are discussed below.

6.3.3.1 Aesthetics

Aesthetic impacts associated with the Distributed Generation Only Alternative would be similar to those described for the proposed project in Section 4.1, although at a smaller scale. Distributed generation projects would be up to 20 MW in size so would likely be less than 150 acres. The operational aesthetic impacts would be limited primarily to those described for

PV facilities. This would limit the height structures of the solar panels themselves to 30 feet as compared with solar thermal technologies that can include structures up to 750 feet tall. Because the Distributed Generation Only Alternative would not be limited to SEDAs, the projects could be constructed throughout the entire County. This includes areas not available to renewable energy under the Proposed Project such as throughout the Owens Valley or in the Panamint Valley. These locations have been identified by the public and by the analysis as visually sensitive so would result in greater impacts to visual resources when compared with the proposed project. A greater number of projects could also result in more intertie facilities across the landscape.

As noted for the proposed project, PV arrays are comprised of low-profile elements, and do not result in dominant vertical massing effects. However, because a distributed generation project could be as large as 150 acres, they could still create a large-scale dominant visual feature that covers large areas of relatively flat land. This visual impact would be greatly reduced when compared with the proposed project but would still introduce visual features that substantially contrast with, and degrade the existing visual character or quality of the site and its surroundings. In many instances, the distributed generation projects could be sited to reduce visual impacts to less than significant. However, depending on the size and location of the distributed generation project and the nearby sensitive viewers, a 20-MW distributed generation project could result in significant visual impacts.

6.3.3.2 Biological Resources

The Distributed Generation Only Alternative would not include solar thermal technologies; therefore, significant and unavoidable impacts to birds from solar flux and luminosity associated with solar thermal power towers that could be developed under the proposed project would be eliminated. Significant and unavoidable impacts to birds from collisions with solar thermal power towers would be reduced, and potentially significant impacts to groundwater dependent habitats and their species would be reduced as described above under the Solar PV Only Alternative. Like solar thermal facilities, solar PV facilities may result in impacts to birds resulting from collisions with solar panels. However, the size and continuity of the panels may contribute to the likeliness for collisions from birds. It is likely that utility scale facilities will see greater numbers of birds colliding with solar panels when compared with smaller scale facilities, as would be constructed under the Distributed Generation Only Alternative, and the significant and unavoidable impact to birds from utility scale facilities would be reduced, although they may not be able to be reduced to a level of less than significant.

Additional impacts would be similar to those described under the proposed project; however, reducing the construction and operation of solar energy projects to less than 20 MW would likely reduce the area used to construct such projects resulting in reduced physical impacts to special status species and their habitats within the project footprint. Further, distributed generation facilities may be constructed within urban environments or existing structures, which could reduce the amount of undisturbed or undeveloped habitat being converted to solar facility development. It is unknown whether the Distributed Generation Only Alternative would achieve 900 MW of projects; therefore, overall impacts to the physical environment may be reduced by the smaller developments and developments on existing structures and disturbed environments as described above.

6.3.3.3 Cultural Resources

The impacts to cultural resources associated with the Distributed Generation Only Alternative would have a potentially significant effect on cultural resources when viewed programmatically. Reducing the construction and operation of solar energy projects to less than 20 MW would likely reduce the area used to construct such projects and thus reduce physical impacts on cultural resources. It is also likely that the smaller footprint of these projects would cause fewer visual impacts to the integrities of setting and feeling of cultural resources. However, because the projects would not be limited to SEDAs, the distributed nature of this alternative may result in a greater number of projects being constructed in wider geographic areas, impacting more cultural resources, including cultural landscapes, physically and visually.

Distributed generation built within urban environments or on elements of the built environment may have a greater impact on the integrity of design, setting, materials, workmanship, or feeling of historical resources, particularly buildings over 50 years old. With appropriate project specific mitigation measures, the impacts to historic period buildings could be reduced to a less than significant level. However, at the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to these resources. Because of this uncertainty, at the programmatic level of analysis the impact is considered significant and unavoidable. Mitigation Measures CUL-1a through CUL-1g and CUL-3a would be applied under the Distributed Generation Only Alternative and therefore would reduce effects to cultural resources. With implementation of mitigation measures, the Distributed Generation Only Alternative would likely have a lesser impact to cultural resources than the proposed project at the programmatic level because of the reduced size and scale of the projects, but potentially not to a less than significant level.

6.3.3.4 Greenhouse Gas Emissions

The Distributed Generation Only Alternative would result in similar impacts due to GHG emissions as the proposed project but at a reduced scale. The types of construction and operation emissions would be similar because the construction and operational activities would be similar. The exact offset of the proposed project and the Distributed Generation Only Alternative are not known. However, the proposed project would permit up to 900 MW of solar projects. While it is possible for up to 900 MW of distributed generation to be built in the County, it is less likely than under the proposed project due to the economies of scale that result from utility scale projects and because a large number of distributed sites that would need to be identified and permitted. Therefore, the Distributed Generation would likely result in less GHG offsets when compared with the proposed project.

6.3.3.5 Hazards and Hazardous Materials

The Distributed Generation Only Alternative would result in slightly reduced impacts due to hazardous materials compared with the proposed project. This is because while the types of hazardous materials (fuels, hydraulic and dielectric fluids, oil and grease, cleaning solutions/solvents, and storage batteries) used in the construction would be similar, the Distributed Generation Only Alternative would likely limit the technology built to primarily solar PV projects. As such, the impacts would be similar to those addressed for the Solar PV

Only Alternative. Also, it is unknown whether the Distributed Generation Only Alternative would achieve 900 MW of projects so the amount of hazardous materials used under this alternative would be reduced.

6.3.3.6 Hydrology and Water Quality

The Distributed Generation Only Alternative would result in impacts associated with hydrology and water quality that would be similar in nature to those described for the proposed project. This includes impacts to drainage patterns and flow directions, runoff rates, flooding, existing or planned storm drainage system capacity, groundwater supplies and recharge, and impacts to water quality.

Because the Distributed Generation Only Alternative would likely be comprised primarily of solar PV projects, it would require only minimal water during operations. Solar thermal technologies require additional water during operations even with implementation of dry cooling technology. As such, the Distributed Generation Only Alternative would result in reduced impacts to groundwater supplies and recharge compared with the proposed project. It is unknown whether the Distributed Generation Only Alternative would achieve 900 MW of projects so the impacts to hydrology and water quality would likely be reduced, although potentially not below a level of significance without mitigation.

6.3.3.7 Socioeconomics

By only allowing development of distributed generation projects ranging from 1 to 20 MW throughout the County, the potential for socioeconomic effects from temporary worker in-migration, social disruption affects, and any increased demands to public services would be significantly reduced with this alternative. When compared to utility scale projects, solar facilities less than 20 MW would require a smaller construction workforce, many of which could come from within the County and the greater Eastern Sierra MSA. However, it is unknown if this alternative would result in a cumulative number of distributed generation projects that could equal the total MW output of the proposed project SEDAs.

Because utility scale projects result in much higher overall capital cost, should this alternative result in a significant decrease in the number of solar projects developed within the County, it would result in a direct decrease in local economic benefits from local spending and direct/indirect worker wages. Therefore, this alternative would be expected to decrease the potential for adverse socioeconomic effects from temporary worker in-migration, and may result in a decrease in beneficial economic effects when compared to the proposed project.

6.3.4 Reduced SEDA Alternative

Under the Reduced SEDA Alternative, the County would eliminate certain SEDAs from potential development, while maintaining the total allowable MW capacity (900 MW) and allowable developable acreage (5,400 acres) included in the proposed project. Under this alternative, the Western Solar Energy Group would be reduced to only the Owens Lake SEDA (the Laws, Rose Valley, and Pearsonville SEDAs would be eliminated). The solar energy development cap of 250 MW on 1,500 acres would be maintained for this SEDA. The Southern Solar Energy Group (the Trona SEDA) would not change. The Eastern Solar Energy Group

would maintain a solar energy development cap of 550 MW on 3,300 acres; however, the Chicago Valley SEDA would be eliminated; the Sandy Valley SEDA would be reduced to a 50-MW cap; and, the Charleston View SEDA would be increased to a 500 MW cap. Refer to Table 6-1 for a summary of the Reduced SEDA Alternative.

Solar Energy Group (Total Allowable Capacity [megawatts])	Solar Energy Development Area	Total Allowable Capacity (megawatts)	Total Allowable Developable Area (acres)
Western (Owens Lake only) (250 megawatts)	Owens Lake	250	1,500
Southern (100 megawatts)	Trona	100	600
Eastern (550 megawatts)	Charleston View	500	3,000
	Sandy Valley	50	300

The overall MW cap for the REGPA under the Reduced SEDA Alternative would be 900 MW. This alternative would likely result in reduced impacts to aesthetics and cultural resources because it would restrict the total development allowed in the Western Solar Energy Group to the Owens Lake SEDA. However, because the total acreage of development would remain the same, the impacts of this alternative would not likely be below a level of significance.

The Owens Lake is land that is under jurisdiction of the SLC and is leased to LADWP. Development of this area would need to be coordinated with both agencies. The County would receive no tax benefit from development of this land; therefore, beneficial economic impacts would be slightly less than under the proposed project.

The primary differences between the Reduced SEDA Alternative and the proposed project are discussed below.

6.3.4.1 Aesthetics

Aesthetic impacts associated with the Reduced SEDA Alternative would be similar to the proposed project in that the types of activities associated with development of renewable energy under the No Project Alternative would be the same as with the proposed project. However, under the Reduced SEDA Alternative, renewable projects would not be built in the Laws, Rose Valley, Pearsonville, and Chicago Valley SEDAs. This would reduce potential visual impacts to certain locations identified in Section 4.1.1. Eliminating the Laws SEDA would potentially reduce visual impacts to viewers in the community of Laws and viewers from the White Mountains. Eliminating the Rose Valley SEDA would reduce visual impacts to viewers from the nearby Sierra Mountains, although views of the Owens Lake SEDA would likely still be visible for many of these viewers. Views of development in the south end of the SEDA from Red Hill or Coso Volcanic field would be eliminated. Eliminating the Pearsonville SEDA would potentially reduce visual impacts to viewers in the community of Pearsonville and viewers in the Sierra Mountains. Eliminating the Chicago Valley SEDA would potentially reduce visual

impacts to viewers in the Nopah and Resting Spring Range. The increase in the cap for the Charleston View SEDA could result in slight increase in visual impacts from surrounding areas. Because the Reduced SEDA Alternative would reduce the potential locations for renewable development, it would reduce the number of viewers of the renewable energy projects. However, because of the size and location of the remaining SEDAs, the impacts of development would be lessened but would remain significant and unmitigated.

6.3.4.2 Biological Resources

The Reduced SEDA Alternative would further restrict the areas that could be impacted by solar development in the Western and Eastern Solar Energy Groups when compared with the proposed project. The Western Solar Energy Group is the most biologically diverse and rich of the Solar Energy Groups. The Owens Valley (in which the OVSA and Laws SEDA are located) contain diverse habitats with a wide variety of sensitive biological resources including special status plants and wildlife, sensitive natural communities, critical habitat, migration and wildlife movement areas, and federal and state protected areas. Four species of fish and one plant are endemic to the Owens Valley. The Rose Valley and Pearsonville SEDAs also have special status species with the potential to occur, and sensitive natural communities/habitats. The Rose Valley SEDA contains Mohave ground squirrel Conservation Area, a special status natural community, and Important Bird Areas. The Eastern Solar Energy Group is less biologically diverse, but contains sensitive habitats and important habitat for various special status species, notably the desert tortoise. Of the SEDAs in the Eastern Solar Energy Group, the Chicago Valley SEDA is the only SEDA containing a sensitive natural community. By excluding these areas from potential utility scale solar energy development under the Reduced SEDA Alternative, potential impacts to biological resources occurring in those areas would be substantially reduced or eliminated (but still significant).

The Owens Lake SEDA contains special status species habitat, including habitat for fish endemic to the Owens River. The SEDA provides important bird and wildlife migration and movement habitat. However, the majority of the lake is a dry, barren lake bed uninhabitable to most species. Like the proposed project, development in the Owens Lake SEDA under the Reduced SEDA Alternative would involve constructing up to 250 MW of solar facility on up to 1,500 acres (2.3 square miles) on the approximately 100 square mile lake bed. Therefore, impacts to biological resources would be similar to those identified under the proposed project for development in the Owens Lake SEDA. Under this alternative, up to 600 more acres of solar development (3,000 acres total) could occur in the Charleston View SEDA, which would result in overall greater potential to impact biological resources in this SEDA. Impacts in the Sandy Valley SEDA would be reduced by 300 acres.

The total acreage of impacts would remain the same under the Reduced SEDA Alternative as the proposed project, and this alternative has the potential to increase impacts to biological resources in the Charleston View SEDA. However, by eliminating more biologically sensitive areas from potential development, overall impacts to biological resources would be reduced from those identified under the proposed project, although likely not below a level of significance without mitigation. Additionally, solar thermal projects could still be implemented under the Reduced SEDA Alternative, resulting in similar significant and unavoidable impacts to biological resources as those determined for the proposed project.

6.3.4.3 Cultural Resources

The impacts to cultural resources associated with the Reduced SEDA Alternative would have a potentially significant effect when viewed programmatically. Reducing the SEDAs to only the Owens Lake SEDA in the Western Solar Energy Group and eliminating the Chicago Valley SEDA from the Eastern Solar Energy Group would likely lessen the number of cultural resources potentially impacted by solar development in particular in the eastern portion of the County. Additionally, this would remove two SEDAs, Chicago Valley and Rose Valley, that are considered highly sensitive for cultural resources. At the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to these resources. Because of this uncertainty, the impact is considered to remain significant and unavoidable. Mitigation Measures CUL-1a through CUL-1g and CUL-3a would be applied under the Reduced SEDA Alternative and therefore would reduce affects to cultural resources. The Reduced SEDA Alternative would likely have a lesser impact to cultural resources than the proposed project at the programmatic level, although likely not below a level of significance without mitigation.

6.3.4.4 Greenhouse Gas Emissions

The Reduced SEDA Alternative would allow the same technologies, total acreage of development and MW capacity as the proposed project; therefore, the Reduced SEDA Alternative would result in GHG emissions and offsets similar to the proposed project at a programmatic level.

6.3.4.5 Hazards and Hazardous Materials

Because the Reduced SEDA Alternative would permit the same solar technologies as the proposed project, it would result in similar impacts due to hazardous materials use. This is because the types of hazardous materials (fuels, hydraulic and dielectric fluids, oil and grease, cleaning solutions/solvents, and storage batteries) used in the proposed project would be similar to the types of hazardous materials used for renewable development under the Reduced SEDA Alternative. Standard measures would be required to reduce the potential spill of any hazardous materials and the developers would be required to incorporate spill prevention plans into their construction and operation.

6.3.4.6 Hydrology and Water Quality

The Reduced SEDA Alternative would result in impacts associated with hydrology and water quality that would be similar in nature to those described for the proposed project. This includes impacts to drainage patterns and flow directions, runoff rates, flooding, existing or planned storm drainage system capacity, groundwater supplies and recharge, and impacts to water quality. The Owens Lake SEDA is nearly entirely within a 100-year floodplain, whereas the SEDAs eliminated from the Western Solar Energy Group under this alternative do not contain large areas of 100-year floodplain. Although development in the Owens Lake SEDA is possible under the proposed project, restricting all solar development to the Owens Lake SEDA under the Reduced SEDA Alternative results in a more likely and possibly greater impact to the 100-year floodplain than under the proposed project which would allow the development in other areas outside of the

100-year floodplain. At the programmatic level, because the Reduced SEDA Alternative would develop the same technologies, total acreage of development, and MW capacity as the proposed project, the Reduced SEDA Alternative would result in impacts to hydrology and water quality similar to the proposed project.

6.3.4.7 Socioeconomics

The Reduced SEDA Alternative would allow the same technologies, total acreage of development and MW capacity as the proposed project; therefore, the potential for temporary worker in-migration and social disruption effects (including those to public services) would be similar to the proposed project as development of large utility scale solar projects within the County would continue under this alternative. This alternative restricts solar developments in the Western Solar Energy Group to the Owens Lake SEDA while maintaining the solar energy development cap of 250 MW; and eliminates the Chicago Valley SEDA from the Eastern Solar Energy Group while maintaining the solar energy development cap of 550 MW for the remaining SEDAs in that solar energy group. Because socioeconomic effects are region-based, this alternative would have the same potential for adverse socioeconomic effects as the proposed project. Like the proposed project, utility scale and larger distributed generation projects, which create the greatest potential for temporary worker in-migration and social disruption, would be developed under this alternative. As a result, the long-term fiscal and job growth effects would also be similar to the proposed project. Therefore, socioeconomic impacts would be similar to those described for the proposed project.

6.3.5 Solar Energy Development on Previously Disturbed Lands Only Alternative

Under this alternative, the County would require that future applicants for solar energy development projects site the majority of their projects on previously disturbed lands within the eight proposed SEDAs under this alternative. The term “majority” is defined as greater than 60 percent. Disturbed lands include Owens Lake, abandoned mine lands, degraded lands, former landfill sites, Superfund sites, brownfields, and/or abandoned grazing/agricultural lands. The acreage and development caps presented under the proposed project would remain intact for the Solar Energy Development on Previously Disturbed Lands Alternative, although the feasibility of providing adequate sites to achieve this development potential is unknown. This alternative does not meet the project objectives to the degree as the project.

This alternative is environmentally superior to the proposed project in that it substantially reduces impacts to aesthetics, air quality, biological resources, and cultural resources over the proposed project but not to below a level of significance.

The primary differences between the Solar Energy Development on Previously Disturbed Lands Only Alternative and the proposed project are discussed below.

6.3.5.1 Aesthetics

Aesthetic impacts associated with the alternative would be similar to those described for the proposed project described in Section 4.1, but at a reduced scale. While development in some of the SEDAs could remain at utility scale, many of the other disturbed land sites could likely be smaller in acreage. Smaller sites include areas such as the Independence Disposal Site, 40 acres,

and the Bishop Sunland site, 69 acres. Some disturbed sites, such as the Saline Valley Air to Air Gunnery Range, a Formerly Used Defense Site, are much greater at 591,000 acres. Because the majority of the disturbed sites in the County are located on smaller sites, this alternative would likely result in more solar PV projects than solar thermal projects. Therefore, the operational aesthetic impacts would be limited primarily to those described for PV facilities. This would limit the height structures of the solar panels themselves to 30 feet as compared with solar thermal technologies that can include structures up to 750 feet tall. On the other hand, a greater number of smaller sites would most likely result in more intertie facilities across the landscape, particularly since existing distribution and/or transmission lines may not be located nearby.

As noted for the proposed project, PV arrays are comprised of low-profile elements, and do not result in dominant vertical massing effects. However, because some of the disturbed areas could still be large, they could still create a large-scale dominant visual feature that covers large areas of relatively flat land. This visual impact would be greatly reduced when compared with the proposed project but would still introduce visual features that substantially contrast with, and degrade the existing visual character or quality of the site and its surroundings. In many instances, using disturbed land only for solar projects would reduce visual impacts to less than significant. However, depending on the size and location of the project and the nearby sensitive viewers, a project sited on already disturbed land could result in significant visual impacts. Therefore, the Previously Disturbed Lands Alternative would result in impacts similar to the proposed project at a programmatic level.

6.3.5.2 Biological Resources

As described under aesthetics, under the Solar Energy Development on Previously Disturbed Lands Only Alternative, development at some of the SEDAs (such as portions of the Owens Lake, Charleston View, Pearsonville, and Trona SEDAs), could remain at utility scale but many of the other disturbed land sites would likely be smaller in acreage. Because the majority of the disturbed sites in the County are located on smaller sites, this alternative would likely result in more solar PV projects than the solar thermal projects that could be constructed under the proposed alternative. Therefore, the operational impacts to biological resources would be limited primarily to those described for PV facilities, and the potential for impacts associated with solar power tower facilities would be reduced from the potential impacts under the proposed project, although not potentially to less than significant levels. Additionally, by limiting future development to previously disturbed sites in the SEDAs, existing natural areas providing quality habitat to plants and wildlife in the region would be avoided. It is unknown whether the Solar Energy Development on Previously Disturbed Lands Only Alternative would achieve 900 MW of solar development, so there is the potential for reductions in physical impacts to biological resources from those identified under the proposed project. Overall, the Previously Disturbed Lands Alternative would have a slightly lesser impact to biological resources than the proposed project.

6.3.5.3 Cultural Resources

The impacts to cultural resources associated with the Solar Energy Development on Previously disturbed Lands Only Alternative would have a potentially significant effect when viewed programmatically. The reduced acreage allowed for development under this alternative could

reduce the impacts to cultural resources. However, it is possible that this alternative could increase the impacts to historic period cultural resources. Disturbed lands, including abandoned mine lands, degraded lands, former landfill sites, Superfund sites, brownfields, and abandoned grazing and agricultural lands, are areas that can be sensitive for historic period cultural resources and, if older than 50 years, may be eligible as historical resources themselves. Impacts to cultural landscapes could still occur.

Prehistoric sites may still be present below the level of surface disturbance and would not be identified through field survey and could be impacted by the solar development. At the programmatic level of analysis, it is not possible to know precisely the location, extent and particular characteristics of impacts to these resources. Because of this uncertainty, at the programmatic level of analysis the impact is considered significant and unavoidable. Mitigation Measures CUL-1a through CUL-1g and CUL-3a would be applied under the Disturbed Lands Only Alternative and therefore would reduce affects to cultural resources. Based on the reduced acreage, Solar Energy Development on Previously Disturbed Lands Only Alternative would likely have a slightly lesser impact to cultural resources than that of the proposed project.

6.3.5.4 Greenhouse Gas Emissions

The Solar Energy Development on Previously Disturbed Lands Only Alternative would result in similar impacts due to GHG emissions as the proposed project but at a reduced scale. The types of construction and operation impacts would be similar because the construction and operational activities would be similar. The exact offset of the proposed project and the alternative are not known. However, the proposed project would permit up to 900 MW of solar projects. While it is possible for up to 900 MW could be built on disturbed areas in the County, the amount of renewable energy would be subject to the number of disturbed areas available. Therefore, the Solar Energy Development on Previously Disturbed Lands Only Alternative would likely result in fewer GHG offsets when compared with the proposed project. Overall, the Previously Disturbed Lands Only Alternative would likely have a similar impact to GHG emissions than that of the proposed project.

6.3.5.5 Hazards and Hazardous Materials

The Solar Energy Development on Previously Disturbed Lands Only Alternative could result in slightly increased impacts due to hazardous materials compared with the proposed project. While the types of hazardous materials (fuels, hydraulic and dielectric fluids, oil and grease, cleaning solutions/solvents, and storage batteries) used in the construction would be similar between the two alternatives, the Solar Energy Development on Previously Disturbed Lands Only Alternative could result in projects being located on sites that have more existing hazardous materials. For example, the Saline Valley Air to Air Gunnery Range has potential contaminants including explosives, lead, perchlorate, and munitions debris, that would need to be addressed prior to development of a renewable project (DTSC, 2007). As such, the impacts could be greater than those addressed for the proposed project.

It is unknown whether the Solar Energy Development on Previously Disturbed Lands Only Alternative would achieve 900 MW of projects so the amount of hazardous materials used under this alternative would be reduced. Overall, the Previously Disturbed Lands Only Alternative

would likely have similar impacts due to hazards and hazardous materials compared to the proposed project.

6.3.5.6 Hydrology and Water Quality

The Solar Energy Development on Previously Disturbed Lands Only Alternative would result in impacts associated with hydrology and water quality that would be similar in nature to those described for the proposed project. This includes impacts to drainage patterns and flow directions, runoff rates, flooding, existing or planned storm drainage system capacity, groundwater supplies and recharge, and impacts to water quality.

Because the Solar Energy Development on Previously Disturbed Lands Only Alternative would likely be comprised primarily of solar PV projects, it would require only minimal water during operations. Solar thermal technologies require additional water during operations even with implementation of dry cooling technology. As such, the Solar Energy Development on Previously Disturbed Lands Only Alternative would result in reduced impacts to groundwater supplies and recharge compared with the proposed project. It is unknown whether the Solar Energy Development on Previously Disturbed Lands Only Alternative would achieve 900 MW of projects so the impacts to hydrology and water quality would likely be reduced.

This PEIR is an informational document to inform decision-makers and the public of the potential environmental consequences of approving the proposed REGPA. This PEIR contains mitigation measures designed to help avoid or minimize significant environmental impacts from future development under the REGPA. A detailed description of the proposed project and project alternatives are contained in Section 3.0 and Section 6.0, respectively.

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6.3.5.7 Socioeconomics

The acreage and development caps presented under the proposed project would remain intact for this alternative, but with solar project development allowed only on disturbed lands including Owens Lake, abandoned mine lands, degraded lands, former landfill sites, Superfund sites, brownfields, and/or abandoned grazing/agricultural lands. Because socioeconomic effects are region-based, this alternative would only slightly decrease the potential for adverse socioeconomic impacts by reducing the total area allowable for project development. However, utility scale and larger distributed generation projects, which create the greatest potential for temporary worker in-migration and social disruption, would continue to be developed under this alternative. Beneficial long-term fiscal and job growth effects would also be slightly less than the proposed project because of the overall reduction in allowable project areas. Therefore, socioeconomic impacts would be similar or slightly less than that described for the proposed project.

6.4 SUMMARY OF ALTERNATIVES ANALYSIS

Table 6-2 provides a comparison of the impacts resulting from the proposed project and the alternatives. In summary, depending on the location and size of approved projects, the No Project Alternative could result in slightly greater impact than the proposed project to aesthetics, hydrology/water quality, and socioeconomics. The Reduced SEDA Alternative would be expected to result in similar impacts to all environmental issue areas as those identified for the proposed project except that fewer areas of the County would be affected. The Solar PV Only and Distributed Generation Only Alternatives would likely result in lesser impacts to biological resources and cultural resources; the Disturbed Lands Only Alternatives would likely result in lesser impacts for cultural resources.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6(e)(2) of the State CEQA Guidelines requires identification of an alternative other than the No Project Alternative as the environmentally superior alternative. As identified in this PEIR, the No Project Alternative, depending on the location and size of approved projects under the No Project Alternative, could likely result in an exacerbation of the potential impacts in relation to the proposed project. The following alternatives are identified as being environmentally superior to the proposed project: Solar PV Only Alternative; Distributed Generation Only Alternative; Reduced SEDA Alternative; and Solar Energy Development on Previously Disturbed Lands Only Alternative. These alternatives would not meet the project objectives to the degree as the project.

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**Table 6-2
COMPARISON OF PROJECT ALTERNATIVES IMPACTS TO THE PROPOSED PROJECT IMPACTS**

Environmental Issue Area	Proposed Project	No Project Alternative *	Solar Photovoltaic Only Alternative	Distributed Generation Only Alternative	Reduced SEDA Alternative	Disturbed Lands Only Alternative
Aesthetics	SU	Potentially greater degree of impact (SU)	Similar (SU)	Similar (SU)	Lesser degree of impact (SU)	Similar (SU)
Agricultural Resources	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Air Quality	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Biological Resources	SU	Potentially greater degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)
Cultural Resources	SU	Potentially greater degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)	Lesser degree of impact (SU)
Geology and Soils	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Greenhouse Gas	SM	Potentially lesser degree of impact (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Hazards and Hazardous Materials	SM	Potentially greater degree of impact (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Hydrology and Water Quality	SM	Potentially greater degree of impact (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Land Use and Planning	LTS	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)
Mineral Resources	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Noise	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Population and Housing	LTS	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)
Public Services	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Recreation	LTS	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)

**Table 6-2 (cont.)
COMPARISON OF PROJECT ALTERNATIVE IMPACTS TO THE PROPOSED PROJECT IMPACTS**

Environmental Issue Area	Proposed Project	No Project Alternative *	Solar Photovoltaic Only Alternative	Distributed Generation Only Alternative	Reduced SEDA Alternative	Disturbed Lands Only Alternative
Socioeconomics	SM	Potentially greater degree of impact (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Transportation and Circulation	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)
Utilities	SM	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)	Similar (SM)

Notes:

*No Project Alternative comparison depends on the location and size of projects actually approved.

LTS = less than significant impact; SM = significant but mitigated impact; SU = significant and unmitigated impact; Similar = potentially the same degree of impact;

Greater = potentially greater degree of impact.