

CHAPTER 6.0

ALTERNATIVES

CEQA Guidelines Section 15126.6(a) states that an environmental impact report shall describe and analyze a range of reasonable alternatives to a project. These alternatives should feasibly attain most of the basic objectives of the project while avoiding or substantially lessening one or more of the significant environmental impacts of the project. An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The discussion of alternatives shall focus on those which are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6(b)).

CEQA Guidelines Section 15126.6(d) states that the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. The matrix appears as **Table 6.0-1** at the end of this section.

6.1 PROJECT OBJECTIVES

Southern Power Company proposes to install a utility-scale Battery Energy Storage System on the existing site of the Campo Verde Solar Project and contract with a load-serving entity to buy electricity generated by the solar facility and stored in the batteries. The following objectives have been identified for the proposed Battery Energy Storage System:

- To allow for the storage and sale of renewable power that the Campo Verde Solar Project is capable of generating to help meet energy needs.
- To be able to receive solar-generated electricity during times of excess generation or times of less desirable generation and store that power for release when the customer (load-serving entity) deems it to be more valuable.
- To be a valuable tool in allowing the customer and system operators to manage and convert intermittent renewable generation and into reliable, dispatchable generation.
- To build on available land previously disturbed during construction of the Campo Verde Solar Project, thus minimizing environmental and land impacts.

6.2 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

6.2.1 OFF-SITE LOCATION ALTERNATIVE

The possibility of locating the proposed Battery Energy Storage System on a site outside of the Campo Verde Solar Project was considered. However, this alternative was deemed infeasible because it would not be possible to charge Phase 1 with excess solar energy generation at the site and would require additional electric generation from within California to charge the batteries. For Phase 2, an off-site location would prevent the shifting of renewable generation from the solar panels to later times of the day to meet critical customer demand. Additionally, another site would likely require impacts to farmland or other undisturbed lands. As a result, the Off-Site Location Alternative was considered, but rejected from further review.

6.2.2 FLOW BATTERY ALTERNATIVE

The Flow Battery Alternative would be sited in the same location as the proposed Project but would employ flow batteries as the method of storage. Flow Batteries have a long life, but a low

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efficiency (i.e. high energy losses). In addition, flow batteries are difficult to configure for small systems such as the 5 MWH storage system proposed for Phase 1. As a result, the Flow Battery Alternative was considered, but rejected from further review.

6.2.3 LEAD-ACID BATTERY ALTERNATIVE

The Lead-Acid Alternative would be sited in the same location as the proposed Project but would employ lead-acid batteries as the method of storage. These batteries contain lead, a toxic heavy metal. In addition, lead-acid batteries do not have a long operational life and would require multiple replacements over the life of the Campo Verde Solar Project. Lastly, lead-acid are large and occupy a larger area than other technologies. As a result, the Lead-Acid Alternative was considered, but rejected from further review.

6.2.4 ALEVO SPECIAL LITHIUM ION BATTERY ALTERNATIVE

The Alevo Special Lithium Ion Battery Alternative would be sited in the same location as the proposed Project but would employ Alevo special lithium ion batteries as the method of storage. These batteries work well. The expense to procure this technology is cost-prohibitive. As a result, the Alevo Special Lithium Ion Battery Alternative was considered, but rejected from further review.

6.3 SUMMARY OF ALTERNATIVES ANALYZED

In accordance with the provisions of CEQA Guidelines Section 15126.6, the following alternatives to the proposed Project are evaluated:

This SEIR considered three alternatives in addition to the proposed Project. Alternative 1 and Alternative 2 are depicted in Figure 6.0-1.

6.3.1 ALTERNATIVE 1 – PHASE 1 SOUTH OF DIEHL ROAD IN BLOCK 1

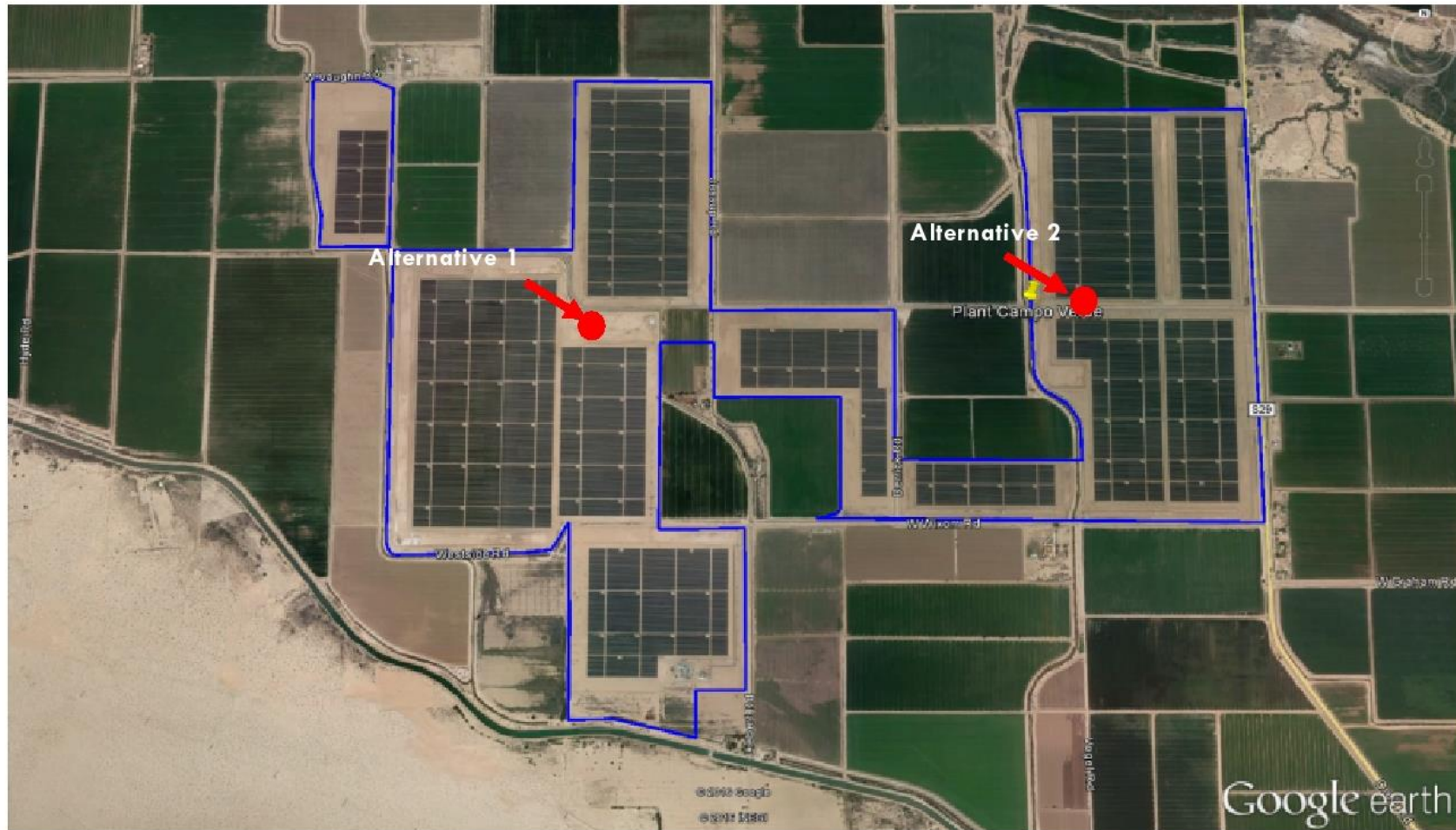
Alternative 1 is located in the area south of Diehl Road in the north section of Block 1. This location would only accommodate Phase 1. A 1,400-yard gravel access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from the Battery Energy Storage System would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

6.3.2 ALTERNATIVE 2 – PHASE 1 ALONG DIEHL ROAD AT THE NORTH SECTION OF BLOCK 4B

Alternative 2 is located along Diehl Road at the north section of Block 4B. This location would only accommodate Phase 1. A 90-yard access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from the Battery Energy Storage System would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

6.3.3 ALTERNATIVE 3 – NO PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(1) requires that a No Project Alternative be analyzed in order to allow the decision-makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. Under this alternative, the proposed Battery Energy Storage System would not be constructed nor would an amendment to CUP 11-0007 be requested. The Project site would remain in its existing state as undeveloped land within the Campo Verde Solar Project site to the west of the Substation.



Source: Southern Power Company 2016.

FIGURE 6.0-1
LOCATION OF ALTERNATIVES

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6.4 ANALYSIS OF ALTERNATIVES

This section identifies the environmental effects of the alternatives and compares the environmental effects with those resulting from the proposed project. A table at the end of this section provides a summary of the comparisons. An "environmentally superior" alternative is also identified.

6.4.1 ALTERNATIVE 1 – PHASE 1 SOUTH OF DIEHL ROAD IN BLOCK 1

Characteristics

Like the proposed Project, Alternative 1 is located within the boundaries of the Campo Verde Solar Project. This alternative is located in the area south of Diehl Road in the north section of Block 1. This location would only accommodate Phase 1 rather than both phases as would occur with the proposed Project. A 1,400-yard gravel access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from Alternative 1 would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

Structures and Facilities

Alternative 1 would include all the same components as Phase 1 of the proposed Project. It would be designed to store up to 5 megawatt-hours (MWH) of energy and include an approximately 424 square foot (sq. ft.) metal modular battery system container placed on a concrete foundation. Other components located adjacent to the battery system container include the power conversion system (PCS) cabinets and transformer; supervisory control and data acquisition (SCADA) cabinet; power distribution panel; and the station service transformer. The components will be spaced to provide isolation as well as access and occupy approximately 707 sq. ft. No offices or staffed control centers will be located within the container or other components. Two Heating Ventilation and Air Conditioning (HVAC) units will be required: one for the container and one for the SCADA cabinet.

The proposed Project will extend wiring from the battery container to connect the PCS to the transformers and ultimately to the Campo Verde Substation (either underground or above ground). In contrast, the wiring for Alternative 1 would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation. Similar to the proposed project, the wiring for Alternative 1 would not span any roads or canals.

Construction Activities

Construction activities for Alternative 1 would be the same as that described for Phase 1 of the proposed Project with the exception that a new and longer access road would need to be constructed. Refer to Chapter 2.0, subsection 2.1.3, item C, "Battery Energy Storage System Design", Phase 1 and item D, "Construction Process for Battery Energy Storage System."

Operations and Maintenance Activities

The operations and maintenance activities for Alternative 1 would be the same as that described for the Phase 1 of the proposed Project. Refer to Chapter 2.0, subsection 2.1.3, item E, "Operations and Maintenance of Battery Energy Storage Facility".

Decommissioning Activities

The decommissioning activities for Alternative 1 would be the same as for the proposed Project. Refer to Chapter 2.0, subsection 2.1.4, item F, "Decommissioning Plan".

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Relationship to Project Objectives

Implementation Alternative 1 would fulfill the project's objectives to allow for the storage and sale of renewable power that the Campo Verde Solar Project is capable of generating to help meet energy needs. Alternative 1 would allow the Campo Verde Solar Project to receive solar-generated electricity during times of excess generation or times of less desirable generation and store 5 MWH of that power for release when the customer (load-serving entity) deems it to be more valuable. Alternative 1 would be a valuable tool in allowing the customer and system operators to manage and convert intermittent renewable generation and into reliable, dispatchable generation. By virtue of its location in Block 1, Alternative 1 would build on available land previously disturbed during construction of the Campo Verde Solar Project, thus minimizing environmental and land impacts.

Comparative Impacts

Air Quality/Greenhouse Gases

Alternative 1 would result in less short-term construction-related air emissions than the proposed Project because only Phase 1 would be constructed rather than both Phase 1 and Phase 2. However, the access road for Alternative 1 would be approximately 1,400 feet long compared to the 1,000-foot long access road needed to accommodate the proposed Project, overall emissions for Alternative 1 would be less than the proposed Project. Construction emissions of ROG, NO_x, CO, and PM₁₀ would be generated in association with site preparation, equipment operation and vehicle trips. However, as shown in Table 4.1-7 in Section 4.7, Air Quality & Greenhouse Gases, construction of the proposed Project would not generate emissions exceeding any of the ICAPCD thresholds. Operational and decommissioning air quality emissions would also be below ICAPCD thresholds. Although construction, operation and decommissioning impacts for the proposed Project were below ICAPCD thresholds, the quantity of emissions would be less in association with Alternative 1 because less land would be disturbed and only Phase 1 would be constructed. Therefore, potential impacts to air quality would be slightly better for Alternative 1 compared to the proposed Project.

Short-term construction-related greenhouse gas impacts are anticipated to be slightly less for Alternative 1 compared to the proposed Project because less construction would be required. Constructing only Phase 1 would mean less land disturbance and construction trips and associated emissions compared to the proposed Project. Potential operational greenhouse gas impacts for operations and maintenance would be the same as those of the proposed Project as existing Campo Verde Solar Project staff would operate both Alternative 1 and the proposed Project with no need for additional staff. Therefore, greenhouse gas impacts would slightly better under Alternative 1 as compared to the proposed Project.

Biological Resources

Both the proposed Project and Alternative 1 are located on previously disturbed land within the Campo Verde Solar Project site. As a result, the areas affected by both the proposed Project and Alternative 1 have been disturbed and would not provide suitable habitat for special-status plant species, Southwestern Willow Flycatcher, Ridgway's Rail, Greater Sandhill Crane, Mountain Plover, Burrowing Owl, Golden Eagles, Pallid Bats and California Leaf-nosed Bats, or Flat-tailed horned lizard. In addition, due to prior disturbance both the proposed Project and Alternative 1 would not affect riparian habitat or other sensitive natural community. No wetlands, wildlife corridors or native wildlife nursery sites are located the proposed Project site or Alternative 1. Neither the proposed Project or Alternative 1 would conflict with local policies or ordinance protecting biological resources. Likewise, neither the proposed Project nor Alternative 1 would

conflict with the provisions of a Habitat Conservation Plan. Similar to the proposed Project, Burrowing Owl and pre-construction avian surveys would be conducted for Alternative 1. Therefore, impacts to biological resources would be considered similar for both Alternative 1 and the proposed Project.

Cultural Resources

Construction activities required to install Alternative 1 would disturb less land (707 sq. ft.) than the proposed Project (707 sq. ft. for Phase 1 and 16,068 sq. ft. for Phase 2) because only Phase 1 would be constructed which would require less excavation and trenching. Therefore, potential impacts to unrecorded subsurface archaeological resources, impacts to subsurface human remains, and impacts to fossil remains would be better for Alternative 1 compared to the proposed Project.

Geology and Soils

The Alternative 1 site and proposed Project site would be exposed to similar seismic hazards as the proposed Project. These would be mitigated through design in accordance with seismic considerations contained in the current California Building Code, Uniform Building Code or the standards of care established by the Structural Engineers Association of California and the County of Imperial building requirements (MM 4.4.1). While a Geotechnical Report has not been prepared for Alternative 1, this location would likely be exposed to similar geologic and soils conditions as the proposed Project. These would be mitigated through the findings and recommendation similar to those of the Geotechnical Report prepared for the proposed Project. Potential impacts associated with liquefaction would be addressed through design for post liquefaction settlement (MM 4.4.2a), proper drainage (MM 4.4.2b), new bearing capacities (MM 4.4.2c), reinforced footings (MM 4.4.2d), and proper backfill of soil (MM 4.4.2e). Soil corrosivity would be addressed through project design to incorporate protection for metal structures (MM 4.4.5). Therefore, geology and soils impacts are assumed to be similar for both Alternative 1 and the proposed Project.

Hazardous and Hazardous Materials

Both Alternative 1 and the proposed Project would involve the transport, use, and disposal of hazardous materials in association with construction, operation and decommissioning. Because Alternative 1 only involves the construction of Phase 1, fewer hazardous materials would be needed. However, all materials would be transported, used and disposed of in accordance with all applicable local, state and federal requirements. Therefore, impacts associated with accidental release during hazardous materials transport, use and disposal would be similar for both Alternative 1 and the proposed Project.

Both Alternative 1 and the proposed Project are located on previously disturbed land within the Campo Verde Solar Project site. Therefore, both Alternative 1 and the proposed Project are located on lands that were previously farmed. However, the Phase I ESA prepared for the Campo Verde Solar Project did not identify the use of pesticides as a Recognized Environmental Condition. Both Alternative 1 and the proposed Project will be designed to include safety features to reduce potential for fires. Thus, neither Alternative 1 nor the proposed Project present a risk of hazard through upset/release of hazardous materials. Because Alternative 1 only includes Phase 1, the overall hazardous risk of Alternative 1 would be better than the proposed Project.

Noise

Short-term construction-related noise impacts for Alternative 1 would be slightly less than the proposed Project. Less construction noise would be generated by Alternative 1 because only

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Phase 1 would be constructed. Operational noise would be similar to the proposed Project because no new operational traffic trips would be generated for either Alternative 1 or the proposed Project. Decommissioning noise would be anticipated to be less for Alternative 1 because only Phase 1 would require removal rather than Phase 1 and 2 as part of the proposed Project. Therefore, noise impacts would be better for Alternative 1 compared to the proposed project.

Transportation and Circulation

Construction traffic associated with Alternative 1 would be slightly less than the proposed Project because only Phase 1 would be constructed. While different intersection and roadway segments along Drew Road would be affected as compared to the proposed Project, construction traffic volumes would be slightly lower in association with Alternative 1. Similar to the proposed Project, no impacts would be anticipated to intersection and roadway LOS in Year 2016 Plus Alternative 1 and in Year 2016 Plus Project Plus Cumulative. A 1,400-yard gravel access road would need to be constructed off of Diehl Road from an existing gate to the site. The access would be required to be designed in accordance with applicable roadway standards and thus is not anticipated to create a hazard due to a design feature. Likewise, Alternative 1 is not considered an incompatible use with surrounding agricultural uses. As with the proposed Project, the Imperial County Fire Department will require that all fire apparatus access roads are properly designed to accommodate emergency access and would not create an impact with regard to emergency access similar to the proposed Project. Both Alternative 1 and the proposed Project would not add any new operational traffic as current Campo Verde Solar Project staff would serve as operational staff. Decommissioning traffic impact would be considered similar to construction traffic impacts of the proposed Project.

6.4.2 ALTERNATIVE 2 – PHASE 1 ALONG DIEHL ROAD AT THE NORTH SECTION OF BLOCK 4B

Characteristics

Like the proposed Project, Alternative 1 is located within the boundaries of the Campo Verde Solar Project. This alternative is located along Diehl Road at the north section of Block 4B. This location would only accommodate Phase 1. A 90-yard access road would need to be constructed off of Diehl Road from an existing gate to the site. Wiring from the Battery Energy Storage System would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation.

Structures and Facilities

Alternative 2 would include all the same components as Phase 1 of the proposed Project. It would be designed to store up to 5 MWH of energy and include an approximately 424 square foot (sq. ft.) metal modular battery system container placed on a concrete foundation. Other components located adjacent to the battery system container include the PCS cabinets and transformer; SCADA cabinet; power distribution panel; and the station service transformer. The components will be spaced to provide isolation as well as access and occupy approximately 707 sq. ft. No offices or staffed control centers will be located within the container or other components. Two HVAC units will be required: one for the container and one for the SCADA cabinet.

The proposed Project will extend wiring from the battery container to connect the PCS to the transformers and ultimately to the Campo Verde Substation (either underground or above ground). In contrast, the wiring for Alternative 2 would be connected to an existing Photovoltaic System Control box at this location which is currently connected to the Substation. Similar to the proposed project, the wiring for Alternative 2 would not span any roads or canals.

Construction Activities

Construction activities for Alternative 2 would be the same as that described for Phase 1 of the proposed Project with the exception that a new and longer access road would need to be constructed for Phase 1. Refer to Chapter 2.0, subsection 2.1.3, item C, "Battery Energy Storage System Design", Phase 1 and item D, "Construction Process for Battery Energy Storage System."

Operations and Maintenance Activities

The operations and maintenance activities for Alternative 2 would be the same as that described for the Phase 1 of the proposed Project. Refer to Chapter 2.0, subsection 2.1.3, item E, "Operations and Maintenance of Battery Energy Storage System".

Decommissioning Activities

The decommissioning activities for Alternative 2 would be the same as for the proposed Project. Refer to Chapter 2.0, subsection 2.1.4, item F, "Decommissioning Plan".

Relationship to Project Objectives

Implementation Alternative 2 would fulfill the project's objectives to allow for the storage and sale of renewable power that the Campo Verde Solar Project is capable of generating to help meet energy needs. Alternative 1 would allow the Campo Verde Solar Project to receive solar-generated electricity during times of excess generation or times of less desirable generation and store 5 MWH of that power for release when the customer (load-serving entity) deems it to be more valuable. Alternative 2 would be a valuable tool in allowing the customer and system operators to manage and convert intermittent renewable generation and into reliable, dispatchable generation. By virtue of its location in Block 4B, Alternative 2 would build on available land previously disturbed during construction of the Campo Verde Solar Project, thus minimizing environmental and land impacts.

Comparative Impacts

Air Quality/Greenhouse Gases

Alternative 2 would result in less short-term construction-related air emissions than the proposed Project because only Phase 1 would be constructed rather than both Phase 1 and Phase 2. However, the access road for Alternative 2 would be only 90-yards compared to the 1,000-foot long access road needed for the proposed Project. Construction emissions of ROG, NO_x, CO, and PM₁₀ would be generated in association with site preparation, equipment operation and vehicle trips. However, as shown in Table 4.1-7 in Section 4.7, Air Quality & Greenhouse Gases, construction of the proposed Project would not generate emissions exceeding any of the ICAPCD thresholds. Operational and decommissioning air quality emissions would also be below ICAPCD thresholds. Although construction, operation and decommissioning impacts for the proposed Project were below ICAPCD thresholds, the quantity of emissions would be less in association with Alternative 2 because less land would be disturbed, a shorter access road would be needed, and only Phase 1 would be constructed. Therefore, potential impacts to air quality would be slightly better for Alternative 2 compared to the proposed Project.

Short-term construction-related greenhouse gas impacts are anticipated to be slightly less for Alternative 2 compared to the proposed Project because less construction would be required. Constructing only Phase 1 as proposed by Alternative 2 would mean less land disturbance, less gravel hauled and laid for the access road, and fewer construction trips and associated emissions compared to the proposed Project. Potential operational greenhouse gas impacts for operations and maintenance of Alternative 2 would be the same as those of the proposed Project as existing

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Campo Verde Solar Project staff would operate both Alternative 2 and the proposed Project with no need for additional staff. Therefore, greenhouse gas impacts would slightly better under Alternative 2 as compared to the proposed Project.

Biological Resources

Both the proposed Project and Alternative 2 are located on previously disturbed land within the Campo Verde Solar Project site. As a result, the areas affected by both the proposed Project and Alternative 2 have been disturbed and would not provide suitable habitat for special-status plant species, Southwestern Willow Flycatcher, Ridgway's Rail, Greater Sandhill Crane, Mountain Plover, Burrowing Owl, Golden Eagles, Pallid Bats and California Leaf-nosed Bats, or Flat-tailed horned lizard. In addition, due to prior disturbance both the proposed Project and Alternative 2 would not affect riparian habitat or other sensitive natural community. No wetlands, wildlife corridors or native wildlife nursery sites are located the proposed Project site or Alternative 2. Neither the proposed Project or Alternative 2 would conflict with local policies or ordinance protecting biological resources. Likewise, neither the proposed Project nor Alternative 2 would conflict with the provisions of a Habitat Conservation Plan. Similar to the proposed Project, Burrowing Owl and pre-construction avian surveys would be conducted for Alternative 2. Therefore, impacts to biological resources would be considered similar for both Alternative 2 and the proposed Project.

Cultural Resources

Construction activities required to install Alternative 2 would disturb less land (707 sq. ft.) than the proposed Project (707 sq. ft. for Phase 1 and 16,068 sq. ft. for Phase 2) because only Phase 1 would be constructed which would require less excavation and trenching. Therefore, potential impacts to unrecorded subsurface archaeological resources, impacts to subsurface human remains, and impacts to fossil remains would better for Alternative 2 compared to the proposed Project.

Geology and Soils

The Alternative 2 site and proposed Project site would be exposed to similar seismic hazards as the proposed Project. These would be mitigated through design in accordance with seismic considerations contained in the current California Building Code, Uniform Building Code or the standards of care established by the Structural Engineers Association of California and the County of Imperial building requirements (MM 4.4.1). While a Geotechnical Report has not been prepared for Alternative 2, this location would likely be exposed to similar geologic and soils conditions as the proposed Project. These would be mitigated through the findings and recommendation similar to those of the Geotechnical Report prepared for the proposed Project. Potential impacts associated with liquefaction would be addressed through design for post liquefaction settlement (MM 4.4.2a), proper drainage (MM 4.4.2b), new bearing capacities (MM 4.4.2c), reinforced footings (MM 4.4.2d), and proper backfill of soil (MM 4.4.2e). Soil corrosivity would be addressed through project design to incorporate protection for metal structures (MM 4.4.5). Therefore, geology and soils impacts are assumed to be similar for both Alternative 2 and the proposed Project.

Hazardous and Hazardous Materials

Both Alternative 2 and the proposed Project would involve the transport, use, and disposal of hazardous materials in association with construction, operation and decommissioning. Because Alternative 2 only involves the construction of Phase 1, fewer hazardous materials would be needed. However, all materials would be transported, used and disposed of in accordance with all applicable local, state and federal requirements. Therefore, impacts associated with

accidental release during hazardous materials transport, use and disposal would be similar for both Alternative 2 and the proposed Project.

Both Alternative 2 and the proposed Project are located on previously disturbed land within the Campo Verde Solar Project site. Therefore, both Alternative 2 and the proposed Project are located on lands that were previously farmed. However, the Phase I ESA prepared for the Campo Verde Solar Project did not identify the use of pesticides as a Recognized Environmental Condition. Both Alternative 2 and the proposed Project will be designed to include safety features to reduce potential for leaks and fires. Thus, neither Alternative 2 nor the proposed Project present a risk of hazard through upset/release of hazardous materials. Because Alternative 2 only includes Phase 1, the overall hazardous risk of Alternative 2 would be better than the proposed Project.

Noise

Short-term construction-related noise impacts for Alternative 2 would be slightly less than the proposed Project. Less construction noise would be generated by Alternative 2 because only Phase 1 would be constructed. Operational noise would be similar to the proposed Project because no new operational traffic trips would be generated for either Alternative 2 or the proposed Project. Decommissioning noise would be anticipated to be less for Alternative 2 because only Phase 1 would require removal rather than Phase 1 and 2 as part of the proposed Project. Therefore, noise impacts would be better for Alternative 2 compared to the proposed project.

Transportation and Circulation

Construction traffic associated with Alternative 2 would be slightly less than the proposed Project because only Phase 1 would be constructed. While different intersection and roadway segments along Drew Road would be affected as compared to the proposed Project, construction traffic volumes would be slightly lower in association with Alternative 2. Similar to the proposed Project, no impacts would be anticipated to intersection and roadway LOS in Year 2016 Plus Alternative 2 and in Year 2016 Plus Project Plus Cumulative. A 90-yard gravel access road would need to be constructed off of Diehl Road from an existing gate to the site. The access would be required to be designed in accordance with applicable roadway standards and thus is not anticipated to create a hazard due to a design feature. Likewise, Alternative 2 is not considered an incompatible use with surrounding agricultural uses. As with the proposed Project, the Imperial County Fire Department will require that all fire apparatus access roads are properly designed to accommodate emergency access and would not create an impact with regard to emergency access similar to the proposed Project. Both Alternative 2 and the proposed Project would not add any new operational traffic as current Campo Verde Solar Project staff would serve as operational staff. Decommissioning traffic impact would be considered similar to construction traffic impacts of the proposed Project.

6.4.3 ALTERNATIVE 3 - NO PROJECT ALTERNATIVE

Alternative 3 is the No Project Alternative. Analysis of the No Project Alternative is required by CEQA Guidelines Section 15126.6(e)(1). The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. This alternative considers the circumstance under which the project does not proceed. This discussion analyzes the impacts of the No Project Alternative by projecting what can reasonably be expected to occur in the foreseeable future if the project were not approved, as compared to the proposed project. For the purposes of this analysis, the No Project Alternative assumes the proposed Battery Energy Storage System would

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not be constructed nor would an amendment to CUP 11-0007 be requested. The Project site would remain in its existing state as undeveloped land within the Campo Verde Solar Project site to the west of the Substation.

Characteristics

Under the No Project Alternative, Battery Energy Storage System would not be constructed. The project site would remain in its existing state as undeveloped land within the Campo Verde Solar Project site to the west of the Substation (refer to Figure 2.0-3, Campo Verde Battery Energy Storage System Site). No amendment to CUP 11-0007 would be requested from the County.

Relationship to Project Objectives

Implementation of the No Project Alternative would fail to fulfill the Project's objectives to develop a battery energy storage facility component to the Campo Verde Solar Project. Failure to construct the Project would forego development of a means of storing 105 MWH of renewable energy for sale to a load-serving entity and forfeit the ability of the Campo Verde Solar Project to store solar-generated electricity during times of excess generation or times of less desirable generation for release when the customer (load-serving entity) deems it to be more valuable. Without the Battery Energy Storage System, the Campo Verde Solar Project would not have the ability to manage and convert intermittent renewable generation and into reliable, dispatchable generation. While the Campo Verde Solar Project would continue to produce and provide electricity to the grid, the No Project Alternative would not achieve the objectives of the proposed Project to store electricity for use when needed by the load-serving entity, including helping meet the California energy storage mandate.

Comparative Impacts

Air Quality/Greenhouse Gases

The No Project Alternative would eliminate short-term construction-related air emissions because no construction would occur. Operational and decommissioning emissions would remain unchanged in association with the Campo Verde Solar Project. Therefore, potential impacts to air quality would be better for No Project Alternative compared to the proposed Project.

Short-term construction-related greenhouse gas impacts are anticipated to be better for the No Project Alternative compared to the proposed Project because less construction would be required. Potential operational greenhouse gas impacts for operations and maintenance of the No Project Alternative would be the same as those of the existing Campo Verde Solar Project. Therefore, greenhouse gas impacts would slightly better under the No Project Alternative as compared to the proposed Project.

Biological Resources

The No Project Alternative would result in no change in conditions within the boundaries of the Campo Verde Solar Project. As a result, the No Project Alternative would have no impact on special-status plant species, Southwestern Willow Flycatcher, Ridgway's Rail, Greater Sandhill Crane, Mountain Plover, Burrowing Owl, Golden Eagles, Pallid Bats and California Leaf-nosed Bats, or Flat-tailed horned lizard. In addition, the No Project Alternative would not affect riparian habitat or other sensitive natural community. Likewise, no wetlands, wildlife corridors or native wildlife nursery sites would be impacted by the No Project Alternative. Neither the No Project Alternative nor the proposed Project would conflict with local policies or ordinance protecting biological resources. Further, neither the proposed Project nor the No Project Alternative would conflict with the provisions of a Habitat Conservation Plan. With no construction proposed, the No Project Alternative would avoid the need for pre-construction Burrowing Owl and avian species

surveys. Therefore, impacts to biological resources would be considered slightly better for the No Project Alternative compared to the proposed Project.

Cultural Resources

Under the No Project Alternative, no excavation and trenching would occur. Therefore, potential impacts to unrecorded subsurface archaeological resources, impacts to subsurface human remains, and impacts to fossil remains would be better for the No Project Alternative compared to the proposed Project.

Geology and Soils

Under the No Project Alternative, no new structures would be built avoiding exposure to seismic hazards. Likewise, no impacts associated with liquefaction, expansive soils, erosion or corrosivity would occur under the No Project Alternative. Therefore, geology and soils impacts would be better under the No Project Alternative than the proposed Project.

Hazardous and Hazardous Materials

The No Project Alternative would not involve the transport, use, and disposal of hazardous materials as no construction, operation or decommissioning for a battery energy storage system would occur. Therefore, impacts associated with accidental release during hazardous materials transport, use and disposal would be better for the No Project Alternative compared to the proposed Project.

Noise

No short-term construction-related noise impacts would occur under the No Project Alternative as no battery energy storage would be built. Operational noise would be similar to the proposed Project because no new operational traffic trips would be generated for either the No Project Alternative or the proposed Project. Decommissioning noise would be eliminated because there would not be a battery energy storage system to dismantle. Therefore, noise impacts would be better for the No Project Alternative compared to the proposed Project.

Transportation and Circulation

No construction, operational or decommissioning traffic would be generated in association with the No Project Alternative because no battery energy storage would be constructed. No design hazards or creation of incompatible uses would occur under the No Project Alternative as conditions would remain unchanged.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based upon the evaluation described in this section, the No Project Alternative (Alternative 3) is considered to be the environmentally superior alternative, as it would avoid all adverse impacts associated with the proposed Project. The No Project Alternative was determined to have less adverse environmental impacts than the proposed Project on an overall basis. However, the No Project Alternative would have a greater impact with regard to continued reliance on fossil fuels for electricity rather than renewable energy created and stored by the proposed Project. The No Project Alternative would also forfeit the addition of battery storage to the Campo Verde Solar Project which would balance electricity supply within the electric grid.

Under CEQA Guidelines Section 15126.6 (e)(2), if the environmentally superior alternative is the No Project Alternative, another environmentally superior alternative must be selected from the other alternatives analyzed. For this analysis, after the No Project Alternative, both Alternative 1 and 2 resulted in very similar impacts with none worse than those of the proposed Project.

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Alternative 2 requires a shorter access road than Alternative 1 so it would result in slightly less disturbance and fewer construction trips.

However, neither Alternative 1 nor Alternative 2 would achieve the entirety of Project objectives to store 105 MWH of electricity. Only the proposed Project would accommodate both Phase 1 and Phase 2 and allow storage of 105 MWH of electricity within the Campo Verde Solar Project site boundaries thereby avoiding disturbance of additional land. All impacts associated with the proposed Project could be reduced to less than significant levels with mitigation. Therefore, overall, the proposed Project is considered the environmentally superior alternative.

Table 6.0-1, below, provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed Project.

**TABLE 6.0-1
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT**

ISSUE AREA/IMPACT	ALTERNATIVE 1	ALTERNATIVE 2	NO PROJECT ALTERNATIVE
AIR QUALITY/GREENHOUSE GAS EMISSIONS			
Impact 4.1.1 Conflict With or Obstruct Air Quality Plan	B	B	B
Impact 4.1.2 Violate Any Air Quality Standard/Contribute to an Existing Air Quality Violation	B	B	B
Impact 4.1.3 Result in Cumulatively Considerable Net Increase of Criteria Pollutant	B	B	B
Impact 4.1.4 Greenhouse Gas Emissions	B	B	B
BIOLOGICAL RESOURCES			
Impact 4.2.1 Impacts to Special-Status Species – Plants	S	S	B
Impact 4.2.2 Impacts on Special Status Species – Birds (SWFL)	S	S	B
Impact 4.2.3 Impacts on Special Status Species – Birds (Ridgway’s Rail)	S	S	B
Impact 4.2.4 Impacts on Special Status Species – Birds (Greater Sandhill Crane)	S	S	B
Impact 4.2.5 Impacts on Special Status Species – Birds (MOPL)	S	S	B
Impact 4.2.6 Impacts on Special Status Species – Raptors (BUOW)	S	S	B
Impact 4.2.7 Impacts on Special Status Species – Raptors (Golden Eagles)	S	S	B
Impact 4.2.8 Impacts on Special Status Species – Mammals (Pallid Bats and California Leaf-nosed Bats)	S	S	B
Impact 4.2.9 Impacts on Special Status Species – Reptiles (FTHL)	S	S	B
Impact 4.2.10 Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community	S	S	B
Impact 4.2.11 Substantial Adverse Effect on Federally Protected Wetlands	S	S	B
Impact 4.2.12 Interfere with Migratory Fish or Wildlife Movement/Impede Native Wildlife Nursery Sites	S	S	B
Impact 4.2.13 Conflict with Local Policies or Ordinances Protecting Biological Resources	S	S	B
Impact 4.2.14 Cumulative Impacts to Biological Resources	S	S	B
CULTURAL RESOURCES			
Impact 4.3.1 Impacts to Unrecorded Subsurface Archaeological Resources	B	B	B
Impact 4.3.2 Impacts to Subsurface Human Remains	B	B	B
Impact 4.3.3 Impacts to Fossil Remains	B	B	B
Impact 4.3.4 Cumulative impacts to Archaeological Resources and Fossil Remains	B	B	B
GEOLOGY AND SOILS			
Impact 4.4.1 Strong Seismic Ground Shaking	S	S	B

6.0 ALTERNATIVES

**TABLE 6.0-1
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT**

GEOLOGY AND SOILS (CON'T.)			
Impact 4.4.2 Liquefaction/Unstable Soils	S	S	B
Impact 4.4.3 Erosion	S	S	B
Impact 4.4.4 Expansive Soils	S	S	B
Impact 4.4.5 Soil Corrosivity	S	S	B
Impact 4.4.6 Cumulative Exposure to Geologic and Seismic Impacts	S	S	B
HAZARDS AND HAZARDOUS MATERIALS			
Impact 4.5.1 Hazardous Materials Transport, Use, Disposal and Accidental Release	B	B	B
Impact 4.5.2 Hazard Through Upset/Release of Hazardous Materials	B	B	B
Impact 4.5.3 Cumulative Hazards and Hazardous Materials Impact	B	B	B
NOISE			
Impact 4.6.1 Noise Levels in Excess of Standards/Substantial Temporary Noise Increase	B	B	B
Impact 4.6.2 Exposure to Excessive Groundborne Vibration or Groundborne Noise	B	B	B
Impact 4.6.3 Noise Levels in Excess of Standards/Substantial Permanent Noise Increase	B	B	B
Impact 4.6.4 Cumulative Project-Related Noise Impacts	B	B	B
TRANSPORTATION AND CIRCULATION			
Impact 4.7.1 Impacts to Intersection and Roadway Segment LOS (Year 2016 Plus Project)	B	B	B
Impact 4.7.2 Impacts to Intersection and Roadway Segment LOS (Year 2018 Conditions)	B	B	B
Impact 4.7.3 Increase in Hazards Due to a Design Feature or Incompatible Uses	B	B	B
Impact 4.7.4 Emergency Access	B	B	B
Impact 4.7.5 Cumulative Impacts to Intersection and Segment LOS (Existing Year 2016)	B	B	B
Impact 4.7.6 Cumulative Impacts to Intersection and Segment LOS (Near-Term Year 2018)	B	B	B
Impact 4.7.7 Cumulative Impacts to Intersection and Segment LOS (Decommissioning Year 2038)	B	B	B

Notes: S = Similar Impact compared to the Proposed Project
 B = Better Impact compared to the Proposed Project
 W = Worse Impact compared to the Proposed Project.