6.0 ALTERNATIVES TO THE PROPOSED PROJECT

6.1 INTRODUCTION

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. Section 15126.6(b) further states the purpose of the alternatives analysis, as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The CEQA Guidelines further require that the alternatives be compared to the project’s environmental impacts and that the “no project” alternative be considered (CEQA Guidelines Section 15126.6(d) [e]). In defining “feasibility” CEQA Guidelines Section 15126.6(f)(1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, an EIR must contain a discussion of “potentially feasible” alternatives, the ultimate determination whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body (See PRC Section 21081[a][3]). The essential goal of the proposed project is to provide renewable solar energy to a load serving entity through a power contract, generating electrical power from a clean source that would supplement the energy capacity of the existing power grid, thereby increasing the stability and
operability of the transmission system, as well as offsetting supplies from fossil fuel generating sources. The applicant is proposing to construct the proposed project to meet the objectives identified in Section 2, Project Description, supporting statewide and local objectives.

At the project and/or cumulative level, the Draft EIR has identified the following environmental issues which may result in significant impacts. This list only includes significant impacts that can be reduced by mitigation measures as the proposed project did not identify any significant and unavoidable impacts:

Aesthetics

- The proposed project would substantially degrade the existing visual character and quality of the site and its surroundings.

Air Quality and Greenhouse Gases

- The proposed project could potentially violate any air quality standard or contribute substantially to an existing or projected air quality violation.

- The proposed project could potentially result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).

Biological Resources

- The proposed project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- The proposed project could potentially have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

- The proposed could potentially interfere substantively with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Cultural Resources

- The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

- The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
• The proposed project could disturb any human remains, including those interred outside of formal cemeteries.

Geology and Soils

• The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Hazards and Hazardous Materials

• The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment.

• The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

• The proposed project would expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Hydrology and Water Quality

• The proposed project could potentially violate any water quality standards or waste discharge requirements.

Noise

• The proposed project would potentially result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

• The proposed project could potentially result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Transportation and Traffic

• The proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
6.2 ALTERNATIVES CONSIDERED AND REJECTED FROM FURTHER CONSIDERATION

CEQA Guidelines Section 15126.6(c) provides the following guidance in selecting a range of reasonable alternatives for the proposed project. The range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency’s determination.

6.2.1 Methodology and Screening Criteria

A range of potential alternatives was developed and subjected to the screening criteria. Several representative alternatives were considered. There was no attempt to include every conceivable alternative. The following criteria were used to screen potential alternatives:

- Does the alternative meet most or all of the project objectives?
- Is the alternative potentially feasible?
- Would the alternative substantially reduce one or more of the significant impacts associated with the project?

In addition, potential solar facility locations needed to meet all of the following conditions:

- There must be an electrical substation or transmission line nearby.
- Suitable electrical infrastructure capacity must be available.
- Minimum area of 1,000 acres for a 150 megawatt (MW) project.

Based on the State CEQA Guidelines, “feasible” is defined as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors” (State CEQA Guidelines Section 15364). CEQA does not require that an EIR determine the ultimate feasibility of a selected alternative, but rather that an alternative be potentially feasible.

The significant effects of the proposed project may include those that are significant and unavoidable or that are less than significant with mitigation. The alternative should provide a means of reducing the level of impact that would otherwise result from implementation of the proposed project. Those alternatives that meet the project objectives, that are potentially feasible, and that would reduce one or more of the project’s impacts are discussed in greater detail below.

6.2.2 Alternative Location

Alternative locations to the project site were considered as an alternative for the proposed project. Such sites would need to be large enough to accommodate the size of the proposed project; consist of undeveloped or underdeveloped properties; be within close proximity to a
regional electrical substation or transmission line and within the Fairmont Competitive Renewable Energy Zone (CREZ) that are within the City of Lancaster. The proposed project is located in the Fairmont CREZ which has been identified by the CEC as an area having “potential for cost-effective and environmentally responsible renewable development,” (Black and Veatch Corporation 2010). Alternative sites in the Fairmont CREZ would meet the project objective of close proximity to existing substations or transmission lines and minimal cost of connection to existing electrical infrastructure; however, there were no suitable lands at the same size and scale as the proposed project. However, the applicant currently has site “control” over a number of parcels in western Lancaster, with applications under review by the City. Additionally, given the patchwork of undeveloped lands on the southwestern side of the City of Lancaster, there are limited lands that meet the proposed project evaluation criteria that also fall within the Fairmont CREZ. Alternative sites in the Fairmont CREZ range from vegetated or actively used, and would also be within the range of the desert kit fox and Burrowing Owl, and provides potential habitat for many of the same species as the proposed project site. As noted above, alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects. Therefore, this alternative was eliminated from further consideration because:

- It would not substantially reduce the significant environmental impacts associated with aesthetics, air quality and biological resources.
- The site would not offer a substantial reduction in impacts relative to the project. Both it and the proposed project would utilize low value lands.
- It would fail to meet the applicant’s objectives for the proposed project related to providing GHG reduction and economic benefits to City of Lancaster.

### 6.2.3 Phased Development Alternative

Under this alternative, the proposed project would be constructed over a longer period of time than currently proposed. This would reduce the number of daily vehicle trips necessary, thereby reducing traffic impacts on roadways in the project area.

The project owner has financial obligations to bring the majority of the facility online by the end of 2016 in order to qualify for the 30% Federal Investment Tax Credit (ITC) that is set to expire on that date. The proposed project economics are predicated on leveraging the ITC to finance and construct the proposed project. Without the ability construct the project on a 24 month build schedule, the proposed project would not be able to capture the 30% ITC on the majority of the proposed project and would be unable to generate sufficient returns to finance and construct.

The Lancaster Energy Center Project is being constructed to contribute to California’s Renewable Portfolio Standard (RPS). Originally established in 2002 under Senate Bill (SB) 1078, the RPS was accelerated in 2006 under SB 107 and expanded in 2011 under SB 2. California’s RPS program requires investor-owned utilities (as well as electric service providers and community choice aggregators) to increase the amount of energy procured from eligible renewable energy resources, such as solar power, to 33% of the utilities’ total procurement by 2020. The mandate is being phased to meet the ultimate target and one of the key milestones is 25% of
retail sales by December 31, 2016. If the proposed project is not fully online by this date, the off-taking utility will not be able to receive RPS credit from the project until it comes online, and the proposed project may be liable for damages that undermine the proposed project’s economics.

6.2.4 Wind Power Alternative

Wind power is an alternative energy source that would help meet California’s RPS. Typical wind farm installations consist of three-bladed turbines that range in height from 300 to 500 feet, with blades up to 150 feet in length. The turbines are arranged on a site in patterns that maximize the wind available at each turbine. As with a solar energy facility, individual turbines would be interconnected with a medium-voltage power collection system and a communications network. A substation would increase the medium voltage electrical current through a transformer before connection to the high-voltage transmission system.

However, wind power is only feasible in those areas of the State with substantial, sustained winds. Areas with annual average wind speeds of 6.5 meters per second or more at a height of 80 meters are generally considered to have a resource suitable for wind development, according to the U.S. Department of Energy. Areas with average winds speeds below 6.5 meters per second are not considered suitable (U.S. Department of Energy 2010).

One of the most important climatic factors is the direction and intensity of the prevailing winds. Prevailing winds in the project area are out of the west and southwest. These prevailing winds are due to the proximity of the area to coastal and central regions and the blocking nature of the mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the desert. The project site has an annual wind speed of 7-8 meters per second at a height of 80 meters according to mapping by the National Renewable Energy Lab (U.S. Department of Energy 2014). Therefore, the project site is feasible from a naturally occurring wind perspective. However, while wind is a renewable energy source and the project site may be suitable for wind farms, the City’s Municipal Code does not allow for utility scale wind farms to be constructed within the City limits.

6.2.5 Avenue L Access Restrictions Alternative

This alternative assumes the proposed project would be designed with no site access along Avenue L. Having no access along Avenue L would prove to be infeasible, as the site design must accommodate multiple access points throughout the proposed project to provide adequate emergency response. As currently designed, the proposed project limits access driveways along Avenue L directly across from the existing rural residential homes; however, restricting access along the entire stretch of Avenue L would create a greater level of impact on emergency services than the proposed project. Given that the proposed project has been revised based on feedback reviewed from a variety of sources, this alternative would have a higher level of impact on emergency response times, public services, and wildfire hazards than the proposed project, because emergency response would have to gain access from other streets surrounding the site. In other words, it would not substantially reduce any of the proposed project’s impacts, therefore it is not feasible.
6.2.6 Distributed Power Alternative

This alternative assumes the 150 MW production capacity of the proposed project would be provided by solar panels placed on the roofs of residential, commercial, industrial, and institutional buildings throughout the City of Lancaster. The Distributed Power Alternative would not convert the project site’s existing land use, impact the surrounding roadway network during construction, or impact species and habitats.

The Distributed Power Alternative is less efficient than the proposed project in terms of the amount of surface area that would be required to support a sufficient number of solar panels to produce 150 MW. Rooftop solar installed on industrial and commercial buildings can typically utilize about 60% to 65% of the roof area due to limitations of structural adequacy and shading (panels must be sufficiently far apart to avoid shading) (California Energy Commission 2007). Assuming that 15% of the proposed project site is utilized for roads and other infrastructure related to the facility, rooftop solar alone would require substantially more space than the approximately 1,191 acres of area of the proposed project site that would be disturbed during construction. Parking lots at commercial and industrial building sites may also support solar panels, which would expand the opportunities for solar arrays at these locations. Matching the proposed project’s production capacity would require more than 9,993 sites in order to generate the 150 MW proposed by the applicant. As of the end of January 2015, the City had 39,941 MW of distributed generation throughout the city on 2,661 sites (2,576 single family residences, 16 multifamily residential complexes, 35 commercial uses, 4 college and high schools, 5 City sites, and 25 elementary schools).

The electricity produced at each distributed location is used by the building occupants. The remaining electricity, if any, is supplied to the electric utility. In many cases, the size of rooftops on which solar panels would be placed may not be sufficiently expansive to generate more electricity than would be consumed by the users of the building on which the panels are placed. Where that is the case, the solar panel installation would reduce a portion of the building’s demand on the electrical grid, but would not directly contribute energy to the grid.

Unlike the proposed project, proximity to an electrical substation or transmission line and specific site conditions are not critical concerns for this alternative because power generation is distributed across many locations with limited capacity at each site and panels would be placed on existing roofs. The balance of power produced that is not used locally would be fed into the grid such that demand for capacity within any one decentralized, local and/or regional transmission facility would be minimal. Neither a substation nor switchyard facility would be needed. Small inverters would be used at each site to convert power from direct to alternating current.

It is assumed that the solar panel rooftop installations would be constructed and owned/operated by private entities or owners of the buildings on which the installations are placed. Because of this the energy production would be limited to the owners and operators of the system on which the buildings are placed, because the energy production would take place close “behind the meter,” which would limit the availability of other users to benefit from the alternative energy. This in combination with the limited amount of available structures would make this alternative practically infeasible. This alternative could proceed on a site-by-site basis without any additional action by the City. Consequently, significant impediments to commercial
viability, including transaction costs, legal access, and contractual obligations, prevent the Distributed Power Alternative from becoming a reality. Additional impediments to this alternative’s viability include the fact that the applicant does not control or have legal access to the hundreds to thousands of rooftops that would be required to construct 150 MW of solar generation by way of the Distributed Power Alternative. It is anticipated that the Distributed Power Alternative would result in great levels of impact related to construction level of noise and traffic, as well as additional services demands on public services and potable water use. Therefore, this alternative would have a higher level of impact while having similar levels of all other impacts. In other words, it would not substantially reduce any of the proposed project’s impacts.

6.3 ALTERNATIVES CONSIDERED

Section 15126 of the CEQA Guidelines requires an EIR to identify and discuss a No Project Alternative, as well as a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project and would avoid or substantially lessen any of the significant environmental impact.

Alternatives to the proposed project considered for analysis in this EIR are:

- No Project/No Development
- No Project/Existing Land Use and Zoning
- Reduced Size and Increased Setback

6.3.1 Alternative 1- No Project/No Development

CEQA Guidelines Section 15126.6(e)(1) requires that the no project alternative be described and analyzed “to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project.” The no project analysis is required to discuss “the existing conditions at the time the notice of preparation is published . . . as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (Section 15126.6(e)(2)).

The No Project/No Development Alternative assumes no development would occur on the project site. The project site would remain in an undeveloped open space state. Grazing could occur on the project site under this alternative, as allowed by the City of Lancaster General Plan and zoning for the site.

6.3.1.1 Impact Analysis

Aesthetics

The project site under Alternative 1 would remain vacant and undeveloped. Solar arrays and other project components would not be developed at the project site and views of the project site would not be altered. The area surrounding the project site is mostly undeveloped land. Under Alternative 1 no impact to the undeveloped nature of the project area would occur.
Therefore, because the project site would remain unchanged this alternative would result in fewer aesthetic impacts than the proposed project.

**Agriculture and Forest Resources**

The project site would remain vacant and undeveloped. As with the proposed project all Farmland of Statewide Importance and Prime Farmland in the vicinity of the project site would remain undeveloped and potentially usable as farmland for the foreseeable future. Although none of the project site includes agricultural uses, the proposed project would not preclude future agricultural uses from occurring on the project site. However, one of the proposed genties of the proposed project could impact active agricultural lands. As such, under Alternative 1 existing agricultural uses would be able to continue and would not be impacted. Therefore, Alternative 1 would have a lesser degree of impact on agricultural resources than the proposed project.

**Air Quality and Greenhouse Gases**

Under Alternative 1 the project site would not be developed and no construction would occur. Therefore, impacts to air quality would be less than the proposed project. However, Alternative 1 would not assist the City in meeting AB 32 or Executive Order S-3-05 emission reduction targets, nor would it offset emissions generated by fossil-fuel-based sources of energy. Therefore, Alternative 1 would have fewer construction air quality impacts than the proposed project, but would result in greater impacts during the proposed project’s operational period. Because the construction period is temporary and is anticipated to last for only 24 months, whereas the operational period is anticipated to last for many decades, the long-term impact of the Alternative 1 on GHG emissions is greater than the impact of the proposed project.

**Biological Resources**

Numerous sensitive plant and animal species have the potential to be located within two miles of the project site or on the site itself. Under Alternative 1, no construction or operational activities would result. There would be no impacts to biological resources from Alternative 1 as compared to the proposed project. As discussed in Biological Resources Section of this EIR, the project-level impacts resulting from the proposed project would be less than significant with mitigation. Implementation of Alternative 1 would successfully avoid project-level impacts to biological resources, including sensitive species and habitat. Therefore, Alternative 1 would result in fewer impacts than the proposed project.

**Cultural Resources**

Unlike the proposed project, Alternative 1 would not have a potentially significant impact on cultural resources, should there be unknown resources on the project site. The proposed project would include mitigation measures that would reduce this impact to a less than significant level. Impacts to cultural resources from Alternative 1 would be less than those impacts resulting from the proposed project, due to the lack of ground disturbance and identification of subsurface resources.
Geology and Soils

Implementation of Alternative 1 would result in a continuation of a non-active land use. The site is expected to continue to be used in its current capacity and condition. No change in geology or soils conditions would occur under this alternative and geology and soils impacts would be less than those resulting from the proposed project.

Hazards and Hazardous Materials

Implementation of Alternative 1 would result in a continuation of existing land uses and no development would occur. The site is expected to be left in its current condition. No change in hazards and hazardous materials would occur under this alternative and hazards/hazardous materials impacts would be less than those resulting from the proposed project.

Hydrology and Water Quality

Implementation of Alternative 1 would not result in any construction activities occurring on the project site. The project site's existing drainage patterns would remain unchanged. Because Alternative 1 would not result in any changes to the existing conditions, neither a SWPPP nor a drainage plan would be required. Accordingly, there would be less hydrology/water quality impacts from Alternative 1 than the proposed project.

Land Use and Population and Housing

Under Alternative 1, the project site would remain undeveloped and vacant. Similar to the proposed project, Alternative 1 would not physically divide an established community. Unlike the proposed project, Alternative 1 would not conflict with the existing general plan land use designations on the project site; therefore, this alternative would not require approval of certain discretionary requests such as a General Plan Amendment. However, with approval of all discretionary requests, the proposed project would also be consistent with the land use and zoning designations at the project site and would not conflict with any applicable land use plans, policies, or regulations.

Since Alternative 1 would not require the approval of a general plan amendment or zone change in order to be consistent with applicable land use plans, there would be less impacts to land use from Alternative 1 than the proposed project.

Noise

Under Alternative 1, no development activities would occur and the associated noise levels would not be generated. Alternative 1 would result in the continuation of existing onsite conditions and noise levels. Since no new sources of noise would be generated under Alternative 1, noise impacts would be less than those generated by the proposed project.

Public Services, Utilities, Service Systems, and Recreation

Under Alternative 1, no development would occur on-site and no increase in demand for fire or police protection services would be required. Under Alternative 1, no development would take place and thus services such as fire and sheriff protection services would not be required.
Therefore, there would be less impact to fire protection and law enforcement services under Alternative 1 than the proposed project.

**Transportation and Traffic**

No development would occur on the project site under Alternative 1. Therefore, Alternative 1 would not have the potential to affect traffic volumes on nearby roadways from construction activities. Project operations would likely have similar impacts as Alternative 1 because the proposed project would generate limited to no vehicle trips during the operation of the proposed project. Based on the project operations trip comparison with existing traffic conditions, the transportation and traffic impact level associated with project operations would result in a minimal increase, six vehicle trips, to existing levels. Because transportation and traffic impacts associated with construction of the proposed project would be greater than existing operations, Alternative 1 would result in less impact as compared to the proposed project.

**6.3.1.2 Conclusion and Relationship to Project Objectives**

Alternative 1 would result in fewer impacts to all resource categories. Alternative 1 would avoid most impacts associated with the proposed project’s short-term and long-term impacts. However, Alternative 1 would result in greater long-term impacts from greenhouse gas emissions as no alternative energy would be produced under this alternative. Unlike the proposed project, this alternative would have greater impacts associated with air quality (project-level and cumulative). Therefore, long-term air quality and GHG impacts would be substantially greater with Alternative 1. Given that Alternative 1 would not provide emission reductions for the State from non-fossil fuel based energy production, there would be no ability to offset emissions. While Alternative 1 would result in fewer environmental impacts than the proposed project, it would not meet the majority of the project objectives. Specifically, Alternative 1 would meet the project objective to minimize impacts to threatened or endangered species or their habitats, wetlands and waters of the United States and the State of California, cultural resources, and sensitive land uses.

**6.3.2 Alternative 2- No Project/ Existing Land Use and Zoning**

Under Alternative 2, the project site could be developed to the maximum intensity allowed under the existing land use designations of the City of Lancaster General Plan. The project site is currently designated as NU (Non-Urban Residential), UR (Urban Residential), and C (Commercial). Under this alternative, the project site could be developed with approximately 1,450 single family residences and 240,000 square feet of commercial uses. No utility scale solar would be constructed.

**6.3.2.1 Impact Analysis**

**Aesthetics**

Under Alternative 2, the project site would be developed with approximately 1,450 single family residences and 240,000 square feet of commercial uses. Development of the project site with structures other than solar panels would not necessarily reduce the aesthetic impacts associated with the proposed project. The project site under Alternative 2 would be fully developed with residential and commercial uses; therefore, views of the project site would be altered from its undeveloped condition. Although different structures would be built, the build out of the existing
land uses would still impact the aesthetic character of the project site but at a much higher intensity, shape, form, and scale. Buildings and structures would exceed those in the local project vicinity and the rural nature and feel which adds to the visual character of the area would be substantially changed. Impacts to aesthetic resources resulting from implementation of Alternative 2 would be greater than those of the proposed project.

**Agriculture**

Under Alternative 2, the project site would be developed with residential and commercial uses. As with the proposed project, all Farmland of Statewide Importance and Prime Farmland in the vicinity of the project site (Figure 3.2-1) would remain undeveloped and potentially usable as farmland for the foreseeable future. Although none of the project site includes active agricultural uses, the proposed project could potentially impact agricultural lands if Gen-tie Route 4 is constructed. Alternative 2 would result in fewer impacts to agricultural resources than the proposed project.

**Air Quality and Greenhouse Gases**

Both the proposed project and Alternative 2 would result in short-term construction emissions. However, build out of Alternative 2 would require more equipment and more ground disturbance. Alternative 2 would also require a longer construction period to facilitate necessary infrastructure (e.g., utility lines, etc.), site improvements, and buildings, which would result in significantly higher short-term air quality impacts.

Once operational, emissions associated with the proposed project would be minor and limited to maintenance activities. The facility would reduce future regional air pollution by taking the place of fossil fuel burning power generation, or reducing the need for construction of additional polluting facilities. Conversely, operational emissions associated with development under Alternative 2 would be greater due to increased traffic and other emissions sources. As such, impacts to air quality during operation of Alternative 2 would be greater than the proposed project.

The proposed project would result in short-term GHG emissions during construction activities. However, its ongoing operations would offset GHG emissions generated by fossil-fuel-based sources of energy. Alternative 2 would continue to generate operational GHG emissions throughout the life of the proposed development from increased traffic, residential and commercial operations resulting in a net gain of GHG emissions within California. Also unlike the proposed project, Alternative 2 would not assist in meeting AB 32 or Executive Order S-3-05 emission reduction targets and the land uses under this alternative would increase energy demand in the area, which would increase the need for fossil-fueled energy generation plants. Therefore, because Alternative 2 would result in a net gain of GHG emissions within California, GHG impacts from this alternative would be greater as compared to the proposed project.

**Biological Resources**

Alternative 2 would result in the development of the entire 1,191 acres with commercial and residential uses. This alternative is considered to be more intensive than the proposed project. Therefore implementation of mitigation measures would be required to reduce the severity of potential impacts to biological resources. However, unlike the proposed project, transmission line corridors would not be built out. Under Alternative 2, this additional space would be
developed and disturbed. Impacts would be permanent. This would increase biological impacts associated with the project. Therefore, impacts to biological resources from Alternative 2 would be greater than those of the proposed project.

**Cultural Resources**

As with the proposed project, Alternative 2 could have potentially significant impacts on cultural resources, should there be unknown resources on the project site. The mitigation measures identified for the proposed project would reduce this impact to a less than significant level. Alternative 2 would require similar mitigation measures to reduce impacts to below a level of significance. Impacts to cultural resources from Alternative 2 would be similar to those resulting from the proposed project.

**Geology and Soils**

Alternative 2 would result in impacts to geology and soil that are greater than the proposed project. During construction, the amount of soil disturbance would be greater than the proposed project. State and City requirements discussed in the analysis of the proposed project would remain applicable to the build out of Alternative 2. Alternative 2 would include an increase in habitable structures on the site as compared to the proposed project which has none. The character of on-site soils and the depth of the groundwater table make the potential for liquefiable materials to be present in very limited areas beneath the site. As such, a geotechnical survey would need to be conducted to assess these liquefiable areas. Seismic-related hazards, although possible due to the location of the nearest active fault system, would be unlikely at the project site because all structures would be designed according to the IBC and the CBSC and thus made to withstand design peak ground accelerations. Actions required by law through the IBC and the CBSC would reduce the risks of seismic ground shaking hazards and would ensure that all impacts related to seismic ground shaking would be less than significant. Impacts to geology and soil impacts from Alternative 2 would be greater than those resulting from the proposed project.

**Hazards and Hazardous Materials**

As with the proposed project, Alternative 2 would also result in the potential for onsite hazards. Unlike the proposed project, Alternative 2 would reduce the potential for significant impacts from potential wildfires given the developed urbanizing nature of the anticipated land uses. In comparison to the proposed project, the potential use of hazardous materials and chemicals stored onsite would be greater given the mixed of commercial uses. In addition, impacts from Electric Magnetic Fields would be less than the proposed project because it is anticipated that Alternative 2 would have fewer high voltage transmission lines. Furthermore, impacts from valley fever as a result of construction activities would be greater than the proposed project. So in summary, impacts from Hazards and Hazardous Materials from Alternative 2 would be greater than those resulting from the proposed project.

**Hydrology and Water Quality**

The proposed project would require limited grading during construction. Alternative 2 would require substantial changes to the landscape and drainage patterns of the portion of the project site where development of residential and commercial uses would occur. Construction could also result in the discharge of wastewater and urban runoff at the project site. If not
properly managed, this wastewater could violate the water quality standards of the RWQCB.

Alternative 2 would result in a significant increase of imperious surfaces and be required to
devise and submit a site-specific SWPPP to minimize the discharge of wastewater and urban
runoff during construction activities in accordance with NPDES General Construction Permit
requirements. Therefore, because both projects would be required to comply with NPDES
standards, short-term, construction-related impacts to on- and off-site flooding, erosion and
siltation from implementation of Alternative 2 would be greater than the proposed project.

The proposed project would reduce site perviousness by less than 1% percent; Alternative 2
would increase perviousness by a much higher percentage. Once operational, water demand
associated with the proposed project would be minimal and limited to maintenance activities
(i.e., panel washing and landscaping). Operational water demand associated with Alternative 2
would be significantly greater. As such, impacts to ground water supplies under Alternative 2
would be greater than the proposed project.

Land Use and Population and Housing

The build out of the project site under Alternative 2 would not conflict with the existing general
plan land use designations; therefore, this alternative would not require approval of a General
Plan Amendment or zone change. However, with approval of all discretionary requests, the
proposed project would also be consistent with the land use and zoning designations at the
project site and would not conflict with any applicable land use plans, policies, or regulations.
Similar to the proposed project, Alternative 2 would not be located between housing
developments or communities; therefore, this alternative would not physically divide an
established community.

Because the build out of Alternative 2 would not require approval of certain discretionary
requests in order to maintain consistency with all applicable land use plans, policies, or regulations,
there would be fewer impacts to land use and population and housing from Alternative 2 than the proposed
project.

Noise

Construction of Alternative 2 would result in increased noise levels in and near the construction
area. The increase in noise levels in this area would be significant, but can be reduced to a less
than significant level by implementation of the mitigation measures identified for the proposed
project.

Alternative 2 would involve construction at a greater density and use than the proposed project.
Although the type of machinery and the methods used during construction would not be similar,
Alternative 2 would require more intensive construction activities, and result in a longer period of
construction, increasing the length of time that neighboring properties would be exposed to
excessive noise levels. Additionally, compared to the proposed project, Alternative 2 would
increase neighboring properties exposure to operational noise levels. This exposure would be a
significant long-term impact. Therefore, Alternative 2 would have a greater impact.

Public Services, Utilities and Service Systems, and Recreation

Impacts to public services would increase as a result Alternative 2 when compared to the
proposed project. Unlike the proposed project, the build out of Alternative 2 involves residential
and commercial development that would increase the demand for fire protection, law enforcement services, schools, libraries, and other public services. Unlike the proposed project, Alternative 2 would be required to pay impact development fees on a per-acre basis in order to mitigate for potential impacts to sheriff and fire protection services, and to pay for construction of new facilities as needed. Because impacts would be tied to population increase and the increase in residential and commercial land uses, fees would be greater under Alternative 2. Impacts resulting from Alternative 2 would be greater when compared to the proposed project.

Alternative 2 would require significantly more water and wastewater systems as compared to the proposed project. Solid waste disposal needs and compliance with regulations related to solid waste would also result in an increased impact if this alternative was implemented.

Transportation and Traffic

Both the proposed project and the build out of Alternative 2 would result in short-term increases in traffic volumes on local streets as a result of construction vehicles and equipment traveling to and from the project site. However, Alternative 2 would require more equipment and a significantly longer construction period to construct the necessary infrastructure (e.g., utility lines, etc.), site improvements and buildings. While the precise length of the construction period cannot be known until a site plan and accompanying phasing plan is developed, the construction of residential and commercial uses would require more time than the proposed construction period of the proposed project. Additionally, Alternative 2 would necessitate more construction workers than those required for the proposed project generating higher levels of construction traffic. Therefore, Alternative 2 would result in significantly greater construction period traffic impacts.

Once operational, additional vehicle trips associated with the proposed project would be minor and limited to maintenance activities. Operational vehicle trips associated with the development of Alternative 2 would be greater due to the nature and intensity of the land uses. Therefore, although the exact amount of operational vehicle trips cannot be ascertained for Alternative 2 at this time, it can be assumed that vehicle trips would be significantly higher than the proposed project given the urbanizing land uses. As such, impacts to traffic and transportation during operation of Alternative 2 would be greater than the proposed project.

6.3.2.2 Conclusion and Relationship to Project Objectives

Alternative 2 would result in a significantly greater level of impact to most of the resource categories when compared to the proposed project. However, Alternative 2 would result in fewer impacts related to Agriculture and Land Use and an equivalent impact related to cultural resources. In addition, Alternative 2 would only meet 1 of 9 project objectives; Alternative 2 would provide an investment in California and the City of Lancaster that would create jobs and other economic benefits.

6.3.3 Alternative 3- Reduced Size and Increased Setback

Under Alternative 3, the project site would be reduced to those areas located southwest of the 500 kV transmission line corridor and the setback along Avenue L would be increased across from all existing rural residential housing. The additional setback would be approximately 100 feet from the southern edge of Avenue L. All other aspects of the alternative (i.e., construction, operations, and maintenance) would be the same as the proposed project. The project site
under Alternative 3 would be approximately 986.34 acres (approximately 92% of the size of the project), and would disturb approximately 993.42 acres through installation of solar arrays and gen-tie lines. Figure 6-1 illustrates the geographical extent of Alternative 3. From the point of view of energy production, Alternative 3 would reduce the energy generation capacity of the proposed project.

6.3.3.1 Impact Analysis

Aesthetics

Alternative 3 would avoid placing solar energy collection arrays on the easternmost extent of the project site and would increase the setback buffer along Avenue L. Alternative 3 would still result in a change in the aesthetics of the project site and surrounding area as the visual character of the site would change from undeveloped open space to a utility scale solar facility. Therefore, Alternative 3 would have similar impact on scenic vistas as the proposed project.

Alternative 3 would involve less construction activity and the visual impact of construction of this alternative would be less than significant. The aesthetics impact of Alternative 3 would be similar to, although slightly less extensive than, the proposed project.

Agriculture

This alternative would result in the conversion of undeveloped lands during the lifespan of the project. The impact of Alternative 3 on agricultural resources would be equal to the proposed project because it would potentially impact agricultural lands but would not require conversion of agricultural lands to non-agricultural uses.

Air Quality and Greenhouse Gas Emissions

Alternative 3 would have a smaller footprint and require commensurately less grading, which would reduce the production of criteria pollutants during construction in comparison to the proposed project. However because of the smaller project footprint, there would be less solar panels, decreasing the offsetting potential of GHG during the long-term. Accordingly, impacts to air quality would be less but impacts to GHG resources resulting from implementation of Alternative 3 would be greater than the proposed project.

Biological Resources

Alternative 3 would have biological resources impacts similar to the proposed project. All of the potentially significant effects would be reduced to less than significant levels by the mitigation measures identified for the proposed project. Because of its smaller footprint, it would have a smaller construction impact on some biological resources (e.g. special status species, etc.). However, the reduced area by itself would not be expected to reduce any impacts to a less than significant level without mitigation. Therefore, Alternative 3 would result in a similar level of impact as the proposed project.
Figure 6-1
Alternative 3 Site Plan

Legend
- Gen-tie Route 1
- Gen-tie Route 2
- Gen-tie Route 3
- Gen-tie Route 4
- Gen-tie Route 5
- Gen-tie Route 6
- Existing Power Lines
- Waters of the State Delineated within the Project Area
- Alternative 3 Solar Array
- Revised Area
- Switching Station

Project: 185702885; Sources: Stantec 2014, Los Angeles County GIS. Created By: Kate Gross. Updated: 3/17/2015. Service ... Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Cultural Resources

Alternative 3 would have potentially significant impacts on cultural resources should there be unknown resources on the project site. The same mitigation measures identified for the proposed project would reduce this impact to a less than significant level. The risk of significant effect is marginally lessened in comparison to the proposed project because Alternative 3 encompasses a slightly smaller area. However, the reduced area by itself would not be expected to reduce any impacts to a less than significant level without mitigation. Alternative 3 would result in similar level of impact as the proposed project.

Geology and Soils

Alternative 3 would have a smaller development footprint and result in a smaller disturbed area than the proposed project. Nonetheless, it would have the same level of impacts as the proposed project, which would be reduced to less than significant level by the mitigation measures. Mitigation would still be required and Alternative 3 would result in similar level of impact as the proposed project.

Hazards and Hazardous Materials

Alternative 3 would require onsite electrical equipment that would have the same fire and hazardous materials release risks as the proposed project. Although the array would be smaller than that of the proposed project, it would nonetheless have potential significant effects (e.g., fire potential, release of hazardous materials, wildfire potential) and the effects would be the same. These effects would be reduced below the level of significance by the mitigation measures identified for the project. As with the proposed project, Alternative 3 would also result in the potential for onsite hazards. In addition, impacts from Electric Magnetic Fields would be similar the proposed project because it is anticipated that Alternative 3 would have the same amount of high voltage transmission lines. Furthermore, impacts from valley fever as a result of construction activities would be similar to the proposed project. In summary, impacts from Hazards and Hazardous Materials from Alternative 3 would have the same significant effects as the project.

Hydrology and Water Quality

Alternative 3 would result in minimal grading and installation activities using heavy machinery that could result in the release of sediment and nonpoint source pollutants into onsite drainage channels. This would be a significant effect that can be reduced to a less than significant level by the mitigation measure identified for the proposed project. Alternative 3 would result in similar level of impact as the proposed project although over a smaller area.

Land Use, Population and Housing

As with the proposed project, Alternative 3 would result in the conversion of undeveloped land to a solar facility. Alternative 3 would also require a general plan amendment and zone change to ensure consistency with the City’s General Plan. In comparison to the proposed project, Alternative 3 would result in similar level of impact.

Noise
Construction of Alternative 3 would result in increased noise levels in and near the project site. The increase in noise levels area would be significant, but can be reduced to a less than significant level by implementation of the mitigation measures identified for the proposed project. In addition Alternative 3 would include an additional setback from adjacent sensitive receptors reducing construction level noise impacts.

Alternative 3 would involve construction on a smaller site than the proposed project. Although the type of machinery and the methods used during construction would be the same as the proposed project, the period of construction would be slightly shorter. Reducing the length of time that neighboring properties would be exposed to excessive noise levels somewhat reduces this impact. Additionally, the increased separation between the closet adjacent sensitive receptor to construction noise activities would be increased by an additional 100 feet. This distance would help reduce exposure levels from construction level noise, but not to less than significant without mitigation. Alternative 3 would have the same impact as the project.

Public Services, Utilities and Service Systems, and Recreation

Impacts to public services would be similar as a result Alternative 3 when compared to the proposed project. Alternative 3 would have a similar demand for fire protection, law enforcement services, schools, libraries, and other public services. Alternative 3 would require slightly less water when compared to the proposed project. The reduced amount of solar panels would also reduce the amount of water used for panel washing. As with the proposed project, Alternative 3 would have service demands on the City’s recycled water program for dust suppression during construction and for photovoltaic panel wash water during operations. As discussed for the proposed project, sufficient water is available for these demands. The impact would be less than significant. Additionally, solid waste disposal needs and compliance with regulations related to solid waste would also be similar to that of the proposed project if this alternative was implemented.

Transportation and Traffic

Alternative 3 would generate traffic from deliveries of material and equipment during construction. This would not result in a significant effect on the environment. The effect would be reduced to a less than significant level by the mitigation measures identified for the project. Minimal traffic would be generated during operations and operational impacts would be less than significant.

Because Alternative 3 is smaller than the project, it would generate similar levels of construction traffic to deliver materials. Further, these deliveries would be made over a similar period of time as anticipated for the proposed project. As a result, Alternative 3 would have similar impacts as the proposed project, although mitigation would still be necessary to ensure that the impacts would be less than significant.

6.3.3.2 Conclusion and Relationship to Project Objectives

Alternative 3 would result in a similar level of impact when compared to the proposed project related to all resource categories with the exception of Air Quality and Greenhouse Gases. Alternative 3 would result in a greater level of impact when compared to the proposed project.
Additionally, the size of this project is based on the economics of constructing the transmission interconnection facilities needed to interconnect the project to the previously approved collector substation or LADWP transmission line and the competitive landscape of the renewable energy market in California. By spreading the transmission costs across a 150-MW solar project, the costs per unit can support the economics of interconnecting the project.

However, by reducing the size of the project by 8%, the interconnection per unit cost becomes prohibitively high making the project uncompetitive and ultimately uneconomical.

The project owner has financial obligations to bring the majority of the facility online by the end of 2016 in order to qualify for the 30% Federal Investment Tax Credit (ITC) that is set to expire on that date. The proposed project economics are predicated on leveraging the ITC to finance and construct the proposed project. Resizing the project by 8% may trigger a long series of interconnection re-evaluations that jeopardize the project’s ability to come online before expiration of the Federal ITC making the project uneconomical. The development, permitting, and land costs have been predicated on a 150-MW project. If the generation capacity were to be reduced by 8%, the project development and deployments costs would not support the economics of developing a smaller project. Given the location of the project, it is unlikely that the Network upgrades costs assigned to the project would be reduced in the event of a downsizing. Thus, the smaller project would need to support large Network upgrade costs, making it uneconomical.

In addition, Alternative 3 would meet 6 of 9 project objectives. The three objectives which Alternative 3 will not meet include: Develop an economically feasible and commercially financeable project; maximize the use of existing transmission infrastructure while minimizing the network upgrade costs borne by the California ratepayer; and ensure that the proposed project can be technologically constructed in a manner that allows electricity to be provided at a competitive price.

### 6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify an “environmentally superior alternative.” The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 6-1. To quantitatively identify an environmentally superior alternative a value has been applied to each environmental effect. Additionally, Table 6-2 provides a comparison of the alternatives with the project objectives. Accordingly, the alternative with the fewest amounts of impacts and the ability to achieve the most project objectives is the environmentally superior alternative.

Based on a comparison of Alternative 1 (No Project/No Development), Alternative 2 (No Project/Existing Land Use and Zoning), and Alternative 3 (Reduced Size and Increased Setback), environmental impacts associated with all resource categories would be fewer under the Alternative 1: No Project/No Development. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. The No Project Alternative is the environmentally superior alternative, as the project site would remain in its existing condition, thereby avoiding any potentially adverse environmental impacts. As stated above, if the No Project Alternative is environmentally superior, the EIR must also identify another environmentally superior alternative.
among the remaining alternatives. As such Alternative 3, Reduced Size and Increased Setback, would have similar impacts to the proposed project and would meet most of the project objectives. Overall, based on the analysis presented above, the Reduced Size and Increased Setback Alternative is considered the environmentally superior alternative.
<table>
<thead>
<tr>
<th>Environmental Resource Area</th>
<th>Proposed Project</th>
<th>No Project/No Development (Alternative 1)</th>
<th>No Project/Existing Land Use and Zoning (Alternative 2)</th>
<th>Reduced Size and Increased Setback (Alternative 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Agriculture</td>
<td>LTS/M</td>
<td>L</td>
<td>L</td>
<td>E</td>
</tr>
<tr>
<td>Air Quality and Greenhouse Gases</td>
<td>LTS/M</td>
<td>G</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>LTS/M</td>
<td>L</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Land Use, Population and Housing</td>
<td>LTS</td>
<td>L</td>
<td>L</td>
<td>E</td>
</tr>
<tr>
<td>Noise</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Public Services and Utilities, Service Systems, and Recreation</td>
<td>LTS</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>LTS/M</td>
<td>L</td>
<td>G</td>
<td>E</td>
</tr>
</tbody>
</table>

Notes:
L = Lesser impact than the proposed project.  
G = Greater impact than the proposed project.  
NI = No Impact  
E = Equivalent impact to the proposed project.  
LTS = Less than Significant Impact  
LTS/M = Less than Significant Impact with Mitigation
### Table 6-2: Project Alternatives Comparison to Project Objectives

<table>
<thead>
<tr>
<th>Project Objectives</th>
<th>Proposed Project</th>
<th>No Project/ No Development (Alternative 1)</th>
<th>No Project/ Existing Land Use and Zoning (Alternative 2)</th>
<th>Reduced Size and Increased Setback (Alternative 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support the efforts of City of Lancaster and the State of California to reduce greenhouse gas (GHG) emissions consistent with the timeline established by California Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Assist the State of California in complying with Executive Order (EO) S-21-09 and California utilities in meeting their obligations under California’s Renewables Portfolio Standard (RPS) Program.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Support the energy goals stated in the City of Lancaster General Plan 2030, as well as other policies in the plan designed to protect City of Lancaster's environment and economy.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Minimize impacts to threatened or endangered species or their habitats, wetlands and waters of the United States and the State of California, cultural resources, and sensitive land uses.</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Provide an investment in California and the City of Lancaster that would create jobs and other economic benefits.</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Develop an economically feasible and commercially financeable project.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Project Objectives</td>
<td>Proposed Project</td>
<td>No Project/ No Development (Alternative 1)</td>
<td>No Project/ Existing Land Use and Zoning (Alternative 2)</td>
<td>Reduced Size and Increased Setback (Alternative 3)</td>
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</tr>
<tr>
<td>Maximize the use of existing transmission infrastructure while minimizing the network upgrade costs borne by the California ratepayer.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Ensure that the proposed project can be technologically constructed in a manner that allows electricity to be provided at a competitive price.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Develop a facility that is situated in a California Renewable Energy Zone close to existing electrical infrastructure or transmission lines.</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>