CHAPTER 7.0
OTHER CEQA CONSIDERATIONS

This section discusses the additional topics statutorily required by CEQA Guidelines Section 15126.2. The topics include whether the proposed Project would: cause significant irreversible environmental changes; result in growth inducing impacts; or create unavoidable significant environmental impacts. A discussion of Mandatory Findings of Significance is also included. In addition, this section discusses socioeconomic impacts associated with implementation of the proposed Project as addressed in CEQA Guidelines Section 15131. This section begins with a discussion of CEQA Guidelines, Appendix F, Energy Conservation.

7.1 ENERGY CONSERVATION

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include: 1) decreasing overall per capita energy consumption; 2) decreasing reliance on fossil fuels such as coal, natural gas and oil; and 3) increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed Projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code [PRC] section 21100(b)(3)).

The Wistaria Ranch Solar Energy Center (i.e. proposed Project or Project) is a renewable energy project employing photovoltaic (PV) or concentrated photovoltaic (CPV) technology. The proposed Project consists of 32 parcels divided into 17 CUPs of approximately 20 megawatts (MW) each which may be constructed individually or as a consolidated Project generating approximately 250 MW of renewable energy. The ultimate energy output is dependent on several variables, including off-take arrangements and the evolving efficiency of PV panels. As a result, the Project could generate more or less than 250 MW of renewable energy. However, the Project would not disturb more than 2,793 acres. Implementation of the Project would result in production of renewable solar energy that would help the State of California meet its goals for reducing reliance on fossil fuels and increasing use and production of and reliance on alternative renewable energy sources.

7.1.1 ENERGY BACKGROUND

The study area for energy resources includes the entire State of California. The following sections describe the electricity supply in California, and summarize California's status in achieving statewide renewable energy goals.

A. CALIFORNIA'S ENERGY SUPPLY

In 2002, California established its Renewable Portfolio Standard (RPS) program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least one percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission (CPUC) subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code [PUC] Section 399.15(b)(1)). Governor Schwarzenegger signed EO S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. Specifically, California's RPS requires retail sellers [investor-owned utilities (IOUs), electric service providers (ESPs) and community choice aggregators (CCAs)] regulated by the CPUC to procure 33 percent of annual retail sales from eligible renewable sources by 2020. The RPS also requires retail sellers to achieve intermediate RPS targets of 20 percent from 2011-2013 and of 25 percent from 2014-2016. The CPUC and the California Energy Commission (CEC) are jointly responsible for implementing California's 33 percent RPS program (CPUC 2014).

California produces almost 70 percent of its electricity consumption from power plants located within the state with the remaining 30 percent imported. The amount of power imported in a given year varies due to several factors, including the availability of in-state hydropower. California's three large IOUs: Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) currently provide approximately 68 percent of the state's electric retail sales. On August 1, 2013, these large IOUs reported in their Preliminary 2012 Annual RPS Compliance Reports that they served 19.6 percent of their retail electric load with RPS-eligible generation in 2012. PG&E served 19.04 percent of its 2012 retail sales with RPS-eligible renewable energy, SCE with 19.9 percent, and SDG&E with 20.31 percent. Pursuant to the procurement requirements in Senate Bill 2 (SB 2 [1X]), the IOUs must average 20 percent renewable energy during the first RPS compliance period (2011-13) (CPUC 2014).

Since 2003, 7,627 MW of renewable capacity achieved commercial operation under the RPS program. More than 2,769 MW of renewable capacity came online in 2013, and another 2,721 MW of capacity is forecasted to reach commercial operation by the end of 2014. The 2,769 MW of renewable generation capacity that came online in 2013 represents the largest year-to-year increase in capacity since the beginning of the program (CPUC 2014).

In 2011, Californians consumed 278,626 million kilowatt hours (kWh) of electricity, and 12,977 million therms of natural gas (CEC 2014). The IID, the provider of electricity to the County of Imperial, uses a comprehensive energy strategy that relies on expansion of customer energy efficiency and demand-side management programs to meet its customers' future power needs in ways that are consistent with the state's Energy Action Plan. The strategy also includes securing additional renewable power resources before seeking to meet customer energy needs through efficient traditional generation sources.

B. Energy Resources

Issues related to energy use include the levels of consumption of non-renewable and renewable energy sources for the construction, operation, and decommissioning of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052). Transportation energy use is related to the following factors: the efficiency of automobiles, trucks, off-road equipment, and other mobile transportation; the choice of employee travel mode (automobile, carpool, or public transit); and miles traveled for each mode. Energy would also be consumed with construction equipment and routine operation activities, and decommissioning activities associated with both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario.

C. California Building Standards Code (Title 24, California Code of Regulations)

California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code, is a compilation of three types of building criteria from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns (CBSC 2014).

Notwithstanding, the national model code standards adopted into Title 24 apply to all occupancies in California except for modifications adopted by state agencies and local governing bodies. Title 24 applies to all building occupancies, and related features and equipment throughout the state, and contains

requirements to the structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety, and accessibility. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code Sections 17958, 17960, 18938(b), & 18948) (CBSC 2010). The proposed O&M building(s) will need to comply with Title 24.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2013 Standards will continue to improve upon the current 2008 Standards for new construction of, and additions and alterations to, residential and non-residential buildings. The 2013 standards will go into effect on July 1, 2014.

7.1.2 ENERGY THRESHOLDS AND ENERGY RESOURCE IMPACTS

A. ENERGY THRESHOLDS

Based on Appendix F, Energy Conservation, of the State CEQA Guidelines, in order to ensure energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources. Accordingly, this section assesses the potential impacts of construction, operation, and decommissioning of the Project on energy resources. Environmental effects may include the Project's energy requirements and its energy use efficiencies by amount and fuel type during construction, operation and decommissioning; the effects of the Project on local and regional energy supplies; the effects of the Project on peak and base period demands for electricity and other forms of energy; the degree to which the Project complies with existing energy standards; the effects of the Project on energy resources; and the Project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable. The discussion of energy resources impacts collectively addresses these topics.

B. ENERGY RESOURCES IMPACTS

Use of Energy Resources

Impact 7.0.1 Energy requirements for construction, operation, and decommissioning of the proposed Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would not result in inefficient energy use by amount or fuel type. Therefore, the Project would therefore have a **less than significant impact** on energy use by amount or fuel type.

FULL BUILD-OUT SCENARIO/ALL 17 CUPs (13-0036 THRU 13-0052)

Construction

Construction energy refers to the energy required to construct the proposed Project. Energy would be required for site preparation activities such as light grading and compaction, as well as for demolition of the landowner irrigation ditches that are located within the boundary of each CUP that would conflict with the site's configuration. Other energy consumption also includes changes in energy demand due to transportation of building materials and construction of buildings and infrastructure on the Project site. Indirect energy consumption from the production of fuel as well as transportation/transmission services for end users is too speculative to consider in this analysis because the data need to quantify this information is neither readily available nor reliable.

Construction of both the proposed Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would result in a new single switchyard common to all CUPs. Alternatively, each CUP may independently construct a 230 kilovolt (kV) step-up transformer and

switchyard. The Project would also include additional auxiliary facilities such as raw water/fire water storage, treated water storage, water filtration buildings and equipment, equipment control buildings, Onsite Wastewater Treatment System (OWTS) and parking. All of these construction activities would require the use of energy.

Natural-gas fired and electrically-powered construction equipment or vehicles are not expected to be used during construction of the proposed Project. Thus, there would not be a need for new or substantially altered electrical power or natural gas utility systems during construction.

Construction equipment and vehicles would use diesel fuel and gasoline in customary ways during the construction process. **Table 7.0-1** includes a summary of the types and pieces of equipment associated with construction

TABLE 7.0-1
SUMMARY OF EQUIPMENT BY USE AND NUMBER

Type of Equipment	Number									
	Mobilization	Site Preparation	Miscellaneous	Substation	Post Installation	Transmission Line	Below Grade Electrical	Above Grade Electrical	Module Installation	O&M Building
Tractors/Loaders/Backhoes		4		2			4			2
Air Compressors			2							
Graders		8								
Scrapers		4								
Generator Sets			5							
Off-Highway Trucks	5	13	2			2				
Off-Highway Tractors		6								
Plate Compactors		6	7							
Cranes				2		2				2
Trenchers							2			
Rough Terrain Forklifts		2			8			3	15	
Aerial Lifts						2				
Excavators							4			
Bore/Drill Rigs					12					

Source: Appendix A of AECOM 2014d.

As shown, a variety of equipment would be needed in association with various aspects of Project construction. Worker and construction truck traffic would generate 664 Average Daily Trips (ADT). These trips would be generated along designated Project haul routes during construction. However, use of gasoline and diesel in association with worker trips and equipment operation is not considered a wasteful use of energy resources. This is because the Project will use energy-conserving construction equipment, including standard mitigation measures for construction combustion equipment recommended in the ICAPCD CEQA Air Quality Handbook and discussed in Section 4.4, Air Quality of this EIR. The use of better engine technology, in conjunction, with the ICAPCD's standard mitigation measures will reduce the amount of energy used for the projects. The standard mitigation measures for construction combustion equipment include:

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
- Minimize idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum.
- Replace fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner).

Furthermore, vehicle trips would be limited to construction workers and equipment traveling to and from the site (i.e. no wasteful trips). As Project construction activities represent a necessary, one-time expenditure of non-renewable energy in order to achieve a new source of renewable solar energy that would generate electricity for approximately 30 years, the associated energy use is not considered wasteful. Thus, construction of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would create a **less than significant** impact on energy requirements and energy use efficiencies by amount and fuel type.

Operation

During the operation of the Solar Energy Complex, energy would be consumed for building heating and cooling, use of consumer products, lighting, and vehicular traffic. The majority of fuel consumption associated with operation of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would involve the use of motor vehicles by employees that operate and maintain the solar facilities. Once operational, the Project will have approximately 15 full-time personnel and generate approximately 30 ADT, which will not result in the use of significant amounts of fuel, particularly considering the size and scope of the Project.

There would also be an increase in diesel fuel usage associated maintenance equipment during operation of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052). The Project does not propose use of natural gas. While diesel fuel is a non-renewable resource, the use of diesel fuel to operate and maintain a solar energy generation facility that enables the County and State to comply with the requirements of the AB 2076 regulation (i.e., CEC and CARB strategy to reduce petroleum dependence) is not considered a wasteful or inefficient use of energy resources. Further, as a renewable energy generation facility, the Project would contribute to California's supply of non-fossil fuel energy resources over the long-term. The Project would also incorporate energy efficient measures in the O&M building(s) (i.e. energy efficient light bulbs).

It should also be noted that the Project will generate its own solar energy to serve much of its operational energy needs. The Project proposes solar facilities that, once operational, would only require energy consumption for the operation of conversion and transmittal facilities, O&M buildings operations, panel washing, and maintenance of Project roadways. During the day much of the on-site power will be provided by the Project itself. In the evening hours, the transmission facilities proposed by the Project to export power would also be used to supply a backfeed of power from IID to the Solar Energy Center to operate the O&M building(s) and keep the inverters warm. Through backfeed, on-site power needs are partially satisfied by the renewable energy generated by the Project.

The AQIA prepared for the Project estimated operational energy use for the typical CUP (CUPs 13-0036 through 13-0052) at 375 megawatt hours per year (MWh/year). CUP 13-0037, as one of the largest (22 MW) CUPs within the Solar Energy Center, was used as a model representing a conservative base for calculating energy use per typical CUP. According to the CEC, in 2011 Imperial County used 1,425,794,010 MWh (CEC 2014). The operational energy consumption for a typical CUP would therefore

be approximately 0.000026 percent ([375 ÷ 1,425,794,010] x 100 = 0.000026) of the Imperial County consumption.

The AQIA prepared for the Project also estimated operational energy use for the Full Build-out Scenario at 4,265 MWh/year. The operational energy consumption for the Full Build-out Scenario would therefore be 0.00029 percent ([4,265 ÷ 1,425,794,010] x 100 = 0.00029) of the Imperial County consumption. However, the proposed Project is a PV/CPV Solar Energy Center producing renewable energy. Annual energy production from the completed 250 MW Full Build-out Scenario would likely be approximately 724,261 MWh. Therefore, the Full Build-out Scenario would result in an increase to the State's renewable energy supply.

The Project's features described above, as well as the Project's contribution towards compliance with the State's RPS policies and implementation programs, taken as a whole, would ensure that the proposed Project is operated in a manner that does not use fuel or energy in a wasteful manner. Additionally, because the proposed Project would result in an increase in renewable energy supply, and use of gasoline and diesel during Project operations would be minimal and in support of the creation of renewable energy, impacts related to efficient use of electricity and diesel fuel during Project operations would be **less than significant**.

Decommissioning

Similar to Project construction, decommissioning of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would require energy in the form of gasoline and diesel fuel for worker vehicles, equipment and water for controlling dust. These activities would be carried out as efficiently as possible by minimizing idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum. Where possible, replacement of fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner) would also be used to reduce the use of diesel and gasoline (refer to MM 4.4.1b in Section 4.4 Air Quality).

The use of diesel fuel and gasoline as part of Project decommissioning is not considered a wasteful use of energy resources because these activities represent an efficient and necessary use of energy. Decommissioning of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would be a necessary, one-time expenditure of non-renewable energy in order to implement the Reclamation Plan and restore the solar field site parcels to a condition suitable for future agricultural uses. Thus, decommissioning of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would create a **less than significant** impact on energy requirements and energy efficiency by use and fuel type.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Effects on Local and Regional Energy Supplies

Impact 7.0.2 The proposed Project, whether implemented as the Full Build-out Scenario or the Phased CUP Scenario, would not use substantial amounts of local and regional energy supplies or create requirements for additional capacity. Therefore, the Project's impact on local and regional energy supplies would be **less than significant**.

Construction

As described under Impact 7.0.1, construction of the proposed Project would require a one-time expenditure of non-renewable fossil fuels (diesel and gasoline). Based on the size of the Project (2,793 acres), the limited duration of construction (18 months for the Full Build-out Scenario or an approximately 10-year period with each of the 17 individual CUPs taking approximately seven months), and the availability of diesel fuel and gasoline, the Project would not have a significant impact on local and regional energy supplies. Moreover, the Project whether constructed as the Full Build-out Scenario or the Phased CUP Scenario would implement energy efficiency measures during construction including use of alternative fueled or catalyst equipped diesel construction equipment, minimizing idling time, etc. All of these measures would serve to reduce fossil-fuel use and minimize the waste of energy. Thus, construction of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would create a **less than significant** impact on local and regional energy supplies or create or contribute to the need for additional capacity.

Operation

The Project will ultimately generate more or less than 250 MW of renewable energy. Implementation of the Project would result in production of renewable solar energy that would help the State of California meet its goals for reducing reliance on fossil fuels and increasing reliance upon and use and production of renewable energy sources. The Project proposes solar facilities that, once operational, would only require energy consumption for the operation of conversion and transmittal facilities, O&M buildings operations, panel washing, and maintenance of Project roadways. During the day, the on-site power is provided from the Project itself. In the evening hours, the transmission facilities proposed by the Project to export power would be used to supply a backfeed of power to the Project from IID to operate the O&M building(s) and keep the inverters warm. Through backfeed, on-site power needs are partially satisfied by the renewable energy generated by the Project. Therefore, the Project will have a **less than significant impact** on local and regional energy supplies and the need for additional capacity during operation.

Decommissioning

Similar to Project construction, decommissioning of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would require energy in the form of gasoline and diesel fuel for worker vehicles, equipment and water for controlling dust. Likewise, as with construction, decommissioning would occur for a limited duration over a limited area and is not anticipated to have a significant impact on local and regional energy supplies based on the availability of diesel fuel and gasoline.

Again, as with construction, mitigation measures would be implemented during decommissioning, to reduce wasteful or inefficient use of energy (e.g. shutting equipment off when not in use, reducing the time of idling to five minutes at a maximum, etc.) (refer to MM 4.4.1b in Section 4.4 Air Quality). Therefore, decommissioning of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would create a **less than significant** impact on local and regional energy supplies or the need for additional capacity.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Effects on Peak and Base Period Demands

Impact 7.0.3 The proposed Project would not impose additional demands on peak and base period demands for electricity and other forms of energy. To the contrary, both the Full Build-out Scenario and the Phased CUP Scenario would contribute electricity during peak and base period demands. Therefore, the Project's impact on peak and base period demands for electricity and other forms of energy would be **less than significant**.

Construction

IID does not have electric infrastructure in place to provide temporary electric service during construction of the proposed Project. Instead, the Project proposes to use propane or diesel generator power for temporary portable construction trailer(s), and construction and decommissioning work where on-site electrical lines are not available (WRS 2014). Use of either propane or diesel fuel would occur for a limited duration during Project construction. [As no electric infrastructure is in place to accommodate construction activities, the proposed Project would not impose demands on peak and base period demands for electricity. Both propane and diesel are readily available fuel sources and as discussed above, will be used in an efficient and non-wasteful manner. Therefore, the proposed Project whether implemented as the Full Build-out Scenario or the Phased CUP Scenario would result in a **less than significant impact** on peak and base period demands for electricity and other forms of energy during construction.

Operation

Operational energy use for the typical CUP (CUPs 13-0036 through 13-0052) is expected to be at 375 megawatt hours per year (MWh/year) and 4,265 MWh/year for the Full Build-out Scenario. Energy use by a typical CUP will represent approximately 0.000026 percent ([375 ÷ 1,425,794,010] x 100 = 0.000026) of Imperial County's 1,425,794,010 MWh; the Full Build-out CUP will represent approximately 0.00029 percent ([4,265 ÷ 1,425,794,010] x 100 = 0.00029) (CEC 2014).

Tables 7.0-2 and **7.0-3** provide the energy usage during generating and non-generating hours for the Full Build-Out Scenario; **Tables 7.0-4** and **7.0-5** provide the energy usage during generating and non-generating hours for the Phased CUP Scenario. As shown, each unit would result in similar generating and non-generating hours.

TABLE 7.0-2
ENERGY CONSUMPTION - GENERATING HOURS - FULL BUILD-OUT SCENARIO*

Unit Description	Number of Units	Power Requirements Per Unit (W)	Total Power Consumption (kW)
Solar Arrays	250	0	0
Substation	1	0	0
O&M Building	1	20,000	20
Miscellaneous	1	5,000	5
Total Power Consumption (kW)			25.0
Total Electrical Consumption over 12 Hours (MWh)			0.3

Source: WRS 2014b.

TABLE 7.0-3
ENERGY CONSUMPTION - NON-GENERATING HOURS - FULL BUILD-OUT SCENARIO*

Unit Description	Number of Units	Power Requirements Per Unit (W)	Total Power Consumption (kW)
Solar Arrays	250	0	587.5
Substation	1	0	115.0
O&M Building	1	20,000	20.0
Miscellaneous	1	5,000	5.0
Total Power Consumption (kW)			727.5
Total Electrical Consumption over 12 Hours (MWh)			8.73

Source: WRS 2014b.

The Full Build-out Scenario would use 0.3 MWh during generating and 8.73 MWh during non-generating hours which is substantially less than the overall energy usage of the County (1,425,794,010 MWh (CEC 2014).

TABLE 7.0-4
ENERGY CONSUMPTION - GENERATING HOURS – PHASED CUP SCENARIO*

Unit Description	Number of Units	Power Requirements Per Unit (W)	Total Power Consumption (kW)
Solar Arrays	250	0	0
Substation	1	0	0
O&M Building	1	20,000	20.0
Miscellaneous	1	5,000	5.0
Total Power Consumption (kW)			25.0
Total Electrical Consumption over 12 Hours (MWh)			0.3

Source: WRS 2014b.

TABLE 7.0-5
ENERGY CONSUMPTION - NON-GENERATING HOURS – PHASED CUP SCENARIO*

Unit Description	Number of Units	Power Requirements Per Unit (W)	Total Power Consumption (kW)
Solar Arrays	250	2,350	47.0
Substation	1	115,000	60.0
O&M Building	1	20,000	20.0
Miscellaneous	1	5,000	5.0
Total Power Consumption (kW)			132.0
Total Electrical Consumption over 12 Hours (MWh)			1.58

Source: WRS 2014b.

***Basis of estimates:**
Solar Arrays (MV transformer no-load losses, inverter and data acquisition system tare losses): Approximately 305-kW for 130-MW at ISECS (actual).
Substation (HV Transformer no-load losses): Approximately 115-kW for 2-100% capacity transformers (81 MVA base) at ISECS (actual).
O&M Building/Miscellaneous: Approximately 180,000-kWh/year based on actual consumption at ISECS (IID-5Y3DKS-102581).
Generating/Non-generating hour basis based on the anticipated 8,760 energy production profile.

As shown in **Tables 7.0-4** and **7.0-5**, the Phased CUP Scenario would use 0.3 MWh during generating and 8.73 MWh during non-generating hours which is substantially less than the overall energy usage of the County (1,425,794,010 MWh (CEC 2014). Thus, both the Full Build-out Scenario and the Phased CUP Scenario would generate far more energy than the amount consumed in association with operation.

During operation, the proposed Project will generate its own power supply during the day. The Full Build-out Scenario would contribute approximately 250 MW, or approximately 20 MW each CUP under the Phased CUP Scenario. This creation of renewable energy will contribute to the availability of energy during peak and base period demands providing a positive input to the existing system. Annual energy production from the completed 250 MW Full Build-out Scenario would likely be approximately 724,261 MWh. Therefore, the Full Build-out Scenario would result in an increase to the State's renewable energy supply.

In addition, the transmission facilities proposed by the Project to export power would be used to supply a backfeed of power to the Solar Energy Center from IID in the evening hours to operate the O&M building(s) and keep the inverters warm. The amount of electricity required by the Full Build-out Scenario or each individual CUP (13-0036 thru 13-0052) would be more than off-set by the 250 MW the Project would generate. The O&M building(s) would be designed to meet the requirements of the California Building Code, which encompasses the California Energy Code. The Applicant would use energy-star appliances, energy efficient light bulbs, and energy efficient windows, insulation, etc. as required by the California Energy Code to minimize peak hour demands. Based on the Project's contribution of renewable energy supplies for use during peak and base periods of demand, the relatively small increases in electricity consumption during operation of the Project would have a **less than significant impact** on local or regional energy supplies and would not create a significant effect on either peak and base period demands for electricity and other forms of energy.

Decommissioning

As with construction, the Project would likely use propane or diesel generator power for temporary portable construction trailer(s), and construction and decommissioning work where on-site electrical lines are not available (WRS 2014). Use of either propane or diesel fuel would occur for a limited duration during Project construction and would be used in an efficient and non-wasteful manner. As no electric infrastructure is expected to be in place to accommodate construction activities, the proposed Project would not impose demands on peak and base period demands for electricity. Both propane and diesel are readily available fuel sources. Therefore, the proposed Project whether decommissioned as the Full Build-out Scenario or the Phased CUP Scenario would result in a **less than significant impact** on peak and base period demands for electricity and other forms of energy.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Compliance with Existing Energy Standards

Impact 7.0.4 Implementation of the Full Build-out Scenario or individual CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario complies with existing energy standards. The Project would result in production of renewable solar energy that would help the State of California meet its goals for use and production of alternative renewable energy sources. Therefore, the Project's impact on compliance with existing energy standards would be **less than significant**.

FULL BUILD-OUT SCENARIO/INDIVIDUAL CUPs (13-0036 THRU 13-0052)

The proposed Project is not subject to any adopted energy conservation plans, and thus would not conflict with existing energy standards. Any new electrical equipment installed for the proposed Project would be required to comply with established energy standards.

Compliance with State RPS Requirements

As discussed above, California's RPS, enacted in 2002 and later amended in 2003 and 2006, requires IOUs and certain other electricity service providers to increase the percentage of renewable energy supplied by one percent of retail sales per year, reaching a total of 20 percent by 2010. The RPS does not apply to IID. However, IID has its own renewable goals, including "Resolution 12-12011 – Renewable Portfolio Standards" outlining IID's adherence to state requirements, including the compliance targets for delivering renewable energy to its retail load within the state-defined compliance periods. IID's goals and timing are identical to the state RPS Program (20 percent by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020). When in office, former Governor Schwarzenegger also set a statewide goal to achieve 33 percent renewable energy sales by 2020.

Eligibility for the California RPS is primarily contingent on a facility's fuel source and its location. Renewable facilities that are located in California or have first point of interconnection to the electrical transmission system within the state are considered RPS eligible as long as the facility meets the fuel and technology-related requirements. This proposed Project is a solar energy generation facility which would be eligible to be considered as a RPS source.

Energy would be consumed throughout the construction and operation of the proposed Project.

Implementation of the proposed Project would result in a contribution of approximately 250 MW of renewable energy to California's energy supply, which would be a beneficial contribution toward meeting the RPS goals. Therefore, impacts related to compliance with existing energy standards, including California's RPS, would be **less than significant**.

General Plan Consistency

The Imperial County General Plan states "The general plan seeks to direct growth, particularly urban development, to areas where public infrastructure exists or can be provided, where public health and safety hazards are limited, and where impacts to the County's abundant natural, cultural, and economic resources can be avoided. This directive nature of the general plan is needed in order to provide for the preservation and conservation of adequate scenic, recreational, and wildlife habitat open space, agricultural areas, mineral resources, and the air and water quality of the County" (Imperial County, n.d., p. 1).

The County's General Plan includes goals and objectives that are focused on improving the sustainability of the community, including those contained in the Geothermal/Alternative Energy and Transmission Element. These goals and objectives encourage development of renewable and alternative energy sources to support the County's economy and energy needs.

Goal 1 of the Conservation and Open Space Element regarding Conservation of Environmental Resources for Future Generations, directs that environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions. As a solar energy facility, the proposed Project would protect environmental resources through the generation of 250 MW of renewable energy that would otherwise be generated by non-renewable fossil fuels. Further, the Project is located on active agricultural land, and would be required to reclaim the acreage for future agricultural use at the end of each CUP or 30 years, whichever is later. Therefore, the proposed Project is consistent with this goal.

Objectives 1.2, 1.5 and 1.6 further expand upon Goal 1 by encouraging land use compatibility with the environment; providing for the most beneficial use of land recognizing natural constraints; and ensuring the conservation, development and utilization of the County's natural resources. The Project is proposed to be developed on the disturbed soils of agricultural lands and therefore will not impact fragile desert habitats. In addition, the Project's configuration would be consistent with applicable regulations, Applicant proposed Measures/Project Design Features (refer to Table 2.0-9 in Chapter 2.0, Project Description), and Project-specific mitigation measures designed to protect biological resources and water quality. The proposed Project would provide a beneficial use of the land by creating local jobs during construction and to a lesser degree during operation. The proposed Project would also result in only a temporary conversion of agricultural lands with the required restoration of the CUPs back to agricultural uses at the end of the Project's operational life thus assuring the conservation of valuable agricultural soils. During the life of the Project, the County's immense solar resource would be used for generation of clean electrical energy thus conserving air quality resources that would otherwise be polluted from fossil fuel emissions necessary to develop 250 MW of power. Therefore, the proposed Project is consistent with these objectives.

Goal 6 of the Conservation and Open Space Element regarding Conservation of Energy Sources directs that the County seek to achieve maximum conservation practices and maximum development of renewable alternative sources of energy, and ensure the conservation, development and utilization of the County's natural resources. The proposed Project is consistent with this goal and objective because the proposed Project would tap into the the County's immense solar resource for the generation of clean electrical energy thus conserving air quality resources that would otherwise be polluted from fossil fuel emissions necessary to develop 250 MW of power.

Objectives 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 and 6.7 further expand upon Goal 6 by emphasizing the importance of adequate energy supplies; encouraging alternative passive and renewable energy resources; maximizing energy conservation and efficiency utilization; minimizing environmental impacts of energy sources; minimizing energy shortages; encouraging compatibility with energy goals; and supporting local utility company's energy conservation programs. The proposed Project, as a solar energy generation facility, would rely on the sun to generate electricity while complying with State mandates for renewable energy development and energy storage development. As an alternative/renewable energy project, the Wistaria Ranch Solar Energy Center would be integral to assuring adequate energy supplies for Imperial County as well as helping the State with meeting and exceeding its RPS. The Project would efficiently produce clean energy and reduce the need for fossil-fuel based electricity generation. The proposed Project would be developed on lands that were previously disturbed by agricultural activity. As such, the environmental impacts to biological resources would be reduced compared to a similar project developed in the desert or other biologically sensitive area. The production of renewable energy would also expand IID's existing programs and reduce the reliance on fossil based energy production. Therefore, the proposed Project is consistent with the objectives regarding Conservation of Energy Sources.

The solar field site parcels were chosen based on proximity to existing IID transmission lines and similar previously-approved solar projects. The Project proposes limiting Vehicle Miles Traveled related to the construction, operation, and decommissioning of Gen-Tie lines by co-locating its Gen-Tie line with the nearby Mount Signal Solar Farm Project.

Based upon these considerations, the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario will have a **less than significant** impact on compliance with existing energy standards.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Effects on Energy Sources

Impact 7.0.5 Implementation of the Full Build-out Scenario or individual CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario does not have an adverse effect on energy resources. The Project creates a new source of renewable energy resources. Therefore, the Project's effect on energy resources would be **less than significant**.

FULL BUILD-OUT SCENARIO/INDIVIDUAL CUPs (13-0036 THRU 13-0052)

Construction

As described under Impact 7.0.1 and Impact 7.0.2, construction of the proposed Project would require a one-time expenditure of non-renewable fossil fuels (diesel and gasoline). However, the Project will have a less than significant effect on energy resources based its size (2,793 acres), the limited duration of construction (18 months for the Full Build-out Scenario or an approximately 10-year period with each of the 17 individual CUPs taking approximately seven months), and the availability of diesel fuel and gasoline. Moreover, the Project whether constructed as the Full Build-out Scenario or the Phased CUP Scenario would implement energy efficiency measures during construction including use of alternative fueled or catalyst equipped diesel construction equipment, minimizing idling time, etc. All of these measures would serve to reduce energy use, whether fossil-fuel use or otherwise. Thus, construction of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would have a **less than significant** impact energy resources.

Operation

As previously discussed under Impact 7.0.3, operational energy use for a typical CUP (CUPs 13-0036 through 13-0052) was estimated at 375 megawatt hours per year (MWh/year) and 4,265 MWh/year for the Full Build-out Scenario.

The Project will generate its own power supply during the day and require minimal energy in the evening hours and at night. Annual energy production from the completed 250 MW Full Build-out Scenario would likely be approximately 724,261 MWh. In contrast, the Full Build-out Scenario will only need 4,265 MWh of energy to operate the O&M building(s) and keep the inverters warm in the evening hours. This represents approximately 0.6 percent ([4,265 MWh ÷ 724,261 MWh] x 100 = 0.6) of the Full Build-out Scenario's MWh. Further, energy use by a typical CUP represents approximately 0.000026 percent ([375 ÷ 1,425,794,010] x 100 = 0.000026) of Imperial County's 1,425,794,010 MWh; the Full Build-out CUP represents 0.00029 percent (CEC 2014). Based on this information, it is obvious that both the Full Build-out Scenario and the Phased CUP Scenario would result in an overall increase to the State's renewable energy supply and beneficially contribute to IID local energy supplies. Therefore, impacts to energy resources are considered **less than significant** during operation of both the Full Build-out Scenario and the Phased CUP Scenario.

Decommissioning

As with construction, the Project would require temporary non-electrical use of energy including propane, diesel, and gasoline. Use of these fuels would occur for a limited duration during Project decommissioning. Propane, diesel and gasoline are readily available fuel sources that would be necessary in order to decommission and restore the solar field site parcels to pre-Project conditions.

Therefore, the proposed Project whether decommissioned as the Full Build-out Scenario or the Phased CUP Scenario would result in a **less than significant impact** on energy resources.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Transportation Energy Use

Impact 7.0.6 Implementation of the Full Build-out Scenario or individual CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario will generate minimal traffic during the operational phase. The Applicant will implement strategies to minimize transportation energy use and ensure overall use of efficient transportation alternatives, as appropriate. Therefore, the Project's impact on transportation energy would be **less than significant**.

Construction

Transportation energy use is related to the following factors: the efficiency of automobiles, trucks, off-road equipment, and other mobile transportation; the choice of employee travel mode (automobile, carpool, or public transit); and miles traveled for each mode. Energy would also be consumed by construction equipment used for both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario.

As described under Impact 7.0.1, above, Project construction activities represent a necessary, one-time expenditure of non-renewable energy in order to achieve a new source of renewable solar energy that would generate electricity for approximately 30 years, the associated energy use is not considered wasteful. Construction energy expenditures would occur for a limited duration (e.g. 18-months for the Full Build-out Scenario) and would be minimized through implementation of standard mitigation measures identified to reduce amount of energy used for the projects (i.e. use of alternative fueled or catalyst equipped diesel construction equipment; minimize idling time; replace fossil-fueled equipment with electrically driven equivalents). Therefore, construction transportation and equipment energy impacts would be **less than significant** for both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario.

With regard to transportation during construction, energy can be saved through worker carpooling. Based on the Applicant's experience in the current construction of ISECS approximately 25% of the workers carpool. Worker carpooling will be encouraged during construction. The Applicant will encourage carpooling during construction by hanging posters and having voluntary sign-up sheets available at the site and discussing carpooling at morning tailgate meetings and other team gatherings.

Operation

Transportation energy would also be consumed in association with routine operation activities required for both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario. Based on the small number of employees (15 fulltime) needed to operate the facility, transportation energy use would not be substantial and the implementation of transportation alternatives would not be practical or impactful on the environment. In addition, standard mitigations including use of alternative fueled or catalyst equipped diesel construction equipment; minimizing idling time; and replacing fossil-fueled equipment with electrically driven equivalents would also be applicable during Project operation and maintenance. For these reasons, operational transportation energy

impacts would be **less than significant** for both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario.

Decommissioning

As with construction, transportation energy would be expended in association with worker and equipment trips as well as equipment use. Decommissioning of both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would require energy in the form of gasoline and diesel fuel for worker vehicles, equipment and water for controlling dust. These activities would be carried out as efficiently as possible by minimizing idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum. Where possible, replacement of fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner) would also be used to reduce the use of diesel and gasoline (refer to MM 4.4.1b in Section 4.4 Air Quality). Worker carpooling will also be encouraged during decommissioning activities.

The use of these diesel fuel and gasoline as part of Project decommissioning is not considered a wasteful use of energy resources because these activities represent an efficient and necessary use of energy. Decommissioning of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would be a necessary, one-time expenditure of non-renewable energy in order to implement the Reclamation Plan and restore the solar field site parcels to a condition suitable for future agricultural uses. Therefore, decommissioning transportation energy impacts would be **less than significant** for both the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

7.2 SOCIOECONOMIC IMPACTS

Perceived Socioeconomics Impacts/Urban Decay

Impact 7.0.7 Through the temporary conversion of agricultural land to a solar generation facility, the proposed Project would create perceived socioeconomic impacts. However, the Project will not cause physical blight (urban decay) because the facility is a stand-alone solar generation facility and will have its own contracts based on power purchase demand (DMG 2014, pp. 25-27). In addition, the Project would result in an increase in jobs, wages, sales and property taxes in the Imperial Valley Region. Therefore, the Project has a **less than significant direct or indirect impact** on urban decay.

Construction, Operation and Decommissioning

As a policy matter, as Imperial County has emerged as a center for alternative energy uses, the Board of Supervisors has recognized and addressed the perceived economic impacts of temporary use of agricultural land for alternative energy projects, both in terms of financial mitigation measures and to meet general plan requirements.

Additionally, changes to the physical environment caused by a project's social and economic effects an indirect effect that must be analyzed in EIR if they are significant (14 CCR Section 15064(e)). This

analysis has focused on the potential for "urban decay," especially in relation to commercial projects, where large retailers could cause smaller business to go out of business, leading to loss of jobs, deterioration and possible blighted conditions. This issue has been raised in public comments on the NOP.

The County does not consider the possible socio-economic effects of the physical conversion of farmland to cause indirect physical changes to the limited environment of this project. Such impacts do not cause physical change but are economic issues, which need not be analyzed under CEQA; such secondary impacts are themselves speculative and hard to predict. For example, it is speculative to suggest that there would be an impact on businesses providing services to agricultural producers from this Project itself. Such impacts could be offset by the provision of other services to the solar project or for weed and pest control.

The CEQA Guidelines discuss and define the parameters for which the consideration of socioeconomic impacts should be included in an environmental evaluation. CEQA Guidelines Section 15131 states that "economic or social information may be included in an EIR or may be presented in whatever form the agency desires." Section 15131(a) of the Guidelines states that "economic or social effects of a project shall not be treated as significant effects on the environment."

Section 15064(e) of the Guidelines states:

> *Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project. Alternatively, economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment. If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether the physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect.*

An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus on the analysis shall be on the physical changes." CEQA Guidelines Section 15131(b) also state that "economic or social effects of a project may be used to determine the significance of physical changes caused by the project." One example that has been used by others has been the physical division of a community if rail lines were installed thereby bisecting the community. It is possible that the impacts upon the community could be measured (DMB 2014, p. 26).

CEQA Guidelines Section 15131(c) provides that "Economic, social and particularly housing factors shall be considered by public agencies….in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR…" And, as a policy matter, as Imperial County has emerged as a center for alternative energy uses, the Board of Supervisors has recognized and addressed the perceived economic impacts of temporary use of agricultural land for alternative energy projects, both in terms of financial mitigation measures and to meet general plan requirements.

Accordingly, the following discussion focuses on whether socioeconomic impacts of the proposed Project in turn create a significant indirect environmental impact, sometimes called "urban decay."

Urban Decay

In recent years, California Courts have generally defined the term "urban decay" to mean the physical changes that a project's potential socioeconomic impacts could bring to other parts in a community, i.e., whether construction of the proposed Project at the proposed site would result in substantial and adverse physical changes to surrounding areas (i.e., cause a shift in the marketplace that other portions of the community become visually blighted evidencing "urban decay") (DMB 2014, p. 26).

Commercial scale renewable energy projects (by their very nature) are built to generate power at a specific location to export it to another location for use by various consumers (residents and businesses). Each power generation facility is a stand-alone project that is built generally as a result of a contractual obligation (power purchase agreement [PPA]) in which a power provider contracts with a power producer (DMB 2014, p. 26). The California Public Utilities Commission (CPUC) approves the authority of a power utility company to enter into a PPA, thus regulating the amount of power produced to assure that there is sufficient power to meet planned growth and that there are sufficient redundancies in the power grid system to assure that the delivery of power is reliable in the event a power generation source or transmission system is interrupted.

Additionally, development permits for commercial scale energy projects, whether renewable or non-renewable, are generally for a limited term. Such development permits generally plan for the decommissioning of the power plant at the conclusion of the permit term. In other circumstances, safety issues can trigger the closing of a power plant. For example, the recent decision to close the San Onofre Nuclear Power Plant in North County San Diego was caused by safety concerns following inspections from the Nuclear Regulatory Commission and other regulators. Incidentally, this means that a greater amount of overall power generation must be developed to replace the power that was being generated by that specific nuclear source. The fact that Imperial County has been developing renewable energy projects will contribute to the overall reliability of the grid in the absence of this nuclear plant. Accordingly, the decision to approve one power plant project does not cause the shutdown of another power plant, much less cause urban decay. Furthermore, the proposed Project site will not directly cause urban decay because the Applicant is required to implement and financially assure a Reclamation Plan to restore the site back to agricultural use (i.e. pre-Project soil conditions). Finally, the *Wistaria Ranch Solar Economic Impact Analysis (EIA), Employment (Jobs) Impact Analysis (JIA), Fiscal Impact Analysis (FIA)* determined that the development of the Wistaria Ranch Solar Energy Center will not cause physical blight (urban decay) because the facility is a stand-alone and will have its own contracts based on power purchase demand, meaning that there is not another commercial scale energy facility that will cease to operate as a result of the Wistaria Ranch Solar Energy Center (DMG 2014, pp. 25-27). Therefore, the Project has a **less than significant direct or indirect impact** on urban decay.

Renewable Portfolio Standard

For informational purposes, it is important to understand the role of the state's Renewable Portfolio Standard in energy production. It can be argued that most (if not all) of the renewable power generation constructed over the last five years in the Imperial Valley of Imperial County and the state have been a direct result of action by the State of California Legislature commonly known as Renewable Portfolio Standard (RPS) whereby the major utility companies in the state are required to provide 33% of their energy portfolio from renewable sources.. The RPS has essentially created a new market or industry for renewable energy in the State of California because renewable energy production is generally more expensive per kilowatt than non-renewable energy and utility companies may not seek

to enter into power purchase agreements with renewable energy producers, but for the legal requirements of the RPS (DMB 2014, p. 27). The RPS does not cause the shutdown of non-renewable energy sources or any potential urban decay impacts associated with the shutdown of a plant without a decommissioning plan (which is not likely). Such plants are still need to generate the other 67% of major utilities energy portfolio.

The real impact and benefit of the RPS is its ability to displace development of future non-renewable peaker power plants to meet existing and planned future energy demands. This in turn has the indirect benefit of displacing greenhouse gas emissions that would otherwise be generated by such non-renewable, typically carbon-based, peaker power plants.

The socioeconomic impacts that flow from a temporary conversion on agricultural land are varied and not subject to precise quantification. In this case, the Board of Supervisors has been concerned with the socioeconomic impacts of solar facilities placed on agricultural lands given the loss of agricultural jobs and possible resulting consequences, such as loss of ability to pay for housing, foreclosures, and the associated ripple effects through the local economy. The County has addressed the possible or perceived impacts of farmland conversion including loss of agricultural jobs and the domino effect of deterioration of house and urban blight through imposition of the conditions in a September 2, 2011 Staff Memorandum (Villa 2011). Mitigation Measure MM 4.9.1a included in Section 4.9, Agricultural Resources, addresses such socioeconomic impacts.

Imperial County General Plan

Objective 1.8 of the General Plan allows conversion of agricultural land to non-agricultural uses only where a clear and immediate need can be demonstrated, based on population projections and lack of other available land (including land within incorporated cities) for such non-agricultural uses (County of Imperial 1996b, p. 30). This need includes economic considerations. The *Wistaria Ranch Solar Economic Impact Analysis (EIA), Employment (Jobs) Impact Analysis (JIA), Fiscal Impact Analysis (FIA)* provides evidence of the clear and immediate need for the Project including:

1. A net increase of 17 jobs compared to the jobs for the existing agricultural use;
2. A net increase of $243 million in new wages compared to the wages for the existing agricultural use; solar job wages are estimated to be $293 million compared to estimated $50 million from continuing existing agricultural jobs (Exhibit A; DMG 2014);
3. Approximately 573 construction jobs (DMG 2014, p. 24);
4. Approximately $451.41 million in overall economic impact to the Imperial Valley Region over the possible 30+ year term from the construction and operation of the Project (Exhibit A; DMG 2014); and
5. Approximately $24.28 million in gross revenues (sales and property taxes) during the same period (DMG 2014, p. 19).

Based on the analysis above, the Project would result in an increase in jobs, wages, sales and property taxes in the Imperial Valley Region. Therefore, the Project has a **less than significant direct or indirect impact** on urban decay.

Mitigation Measures

None required.

Significance After Mitigation

Less than Significant.

7.3 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. In addition, Section 15093(a) of the CEQA Guidelines requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits (including region-wide or statewide environmental benefits of a proposed Project) against its unavoidable environmental risks when determining whether to approve the project. The County of Imperial can approve a project with unavoidable adverse impacts if it adopts a "Statement of Overriding Considerations" setting forth the specific reasons for its decision. Based on the analysis provided in Sections 4.1 through 4.13, the proposed Wistaria Ranch Solar Energy Center would only result in a significant and unavoidable adverse impact to property losses associated with damage to solar panels constructed within the eastern boundary of CUP 13-0047, within the incised New River flood channel and flood plain, which would be subject to loss or damage due to liquefaction settlement and ground fissures during a strong seismic event. (See Sections 4.6.2, 4.6.7.) The Project is being proposed despite this significant, unmitigated impact because the impact is not a habitable structure and the County decision-makers should have the option to decide if the benefits from energy production on this CUP outweigh the unmitigated risks of property loss on the CUP.

7.4.1 LONG-TERM GROWTH-INDUCING IMPACTS

7.4.1 INTRODUCTION

CEQA Guidelines Section 15126.2[d] requires that an EIR evaluate the growth-inducing impacts of a proposed action. A "growth-inducing impact" is defined by the CEQA Guidelines as:

> *"…the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth… It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Growth inducement potential can result from a project either directly or indirectly. Direct growth inducement results from a project which can accommodate population growth such as residential subdivision or apartment complex. Indirect growth inducement potential can result from a large number of new permanent employment opportunities associated with commercial or industrial development. Likewise, indirect growth can occur if a project removes an obstacle to additional growth and development, such as removing a constraint on a required public service. Growth inducing projects provide resources (such as water) or infrastructure capacity (such as wastewater conveyance and treatment) that has previously been missing or inadequate to allow growth.

Environmental effects of growth inducement are considered indirect impacts. These indirect impacts or secondary effects of growth have the potential to result in significant, adverse environmental impacts. Potential secondary effects of growth include: increased traffic and noise; increased demand on other community and public services and infrastructure; adverse environmental impacts such as degradation of air and water quality; degradation or loss of plant and animal habitat; and conversion of agricultural and open space land to developed uses.

The Imperial County General Plan provides for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by public utilities and services. A project that would induce unplanned growth or growth that conflicts with the local land use plans could

indirectly cause additional adverse environmental and public services and utilities impacts. To determine if a growth-inducing project will result in adverse secondary effects, it is important to assess the degree to which the growth occurring as part of a project would or would not be consistent with applicable land use plans.

7.4.2 COMPONENTS OF GROWTH

The timing, location and extent of development and population growth in a community or region are based on multiple factors. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. The general plan is the primary mechanism used to regulate development and growth in California as it is used to define location, type, and intensity of growth.

7.4.3 PROJECT-SPECIFIC GROWTH-INDUCING IMPACTS

A. GROWTH INDUCEMENT POTENTIAL

As described in Chapter 2.0, Project Description, the Wistaria Ranch Solar Energy Center proposes to build, operate, and maintain a renewable energy project employing photovoltaic (PV) or concentrated photovoltaic (CPV) technology. The proposed Project consists of 17 CUPs of approximately 20 megawatts (MW) each which may be constructed individually or as a consolidated Project generating approximately 250 MW. The proposed Project includes the construction and operation of the following:

- Up to 17 individual solar projects on 32 parcels built at one time (i.e the Full Build-out Scenario); alternatively, the Project could be built out in groups of multiple CUPs (i.e. the Phased CUP Scenario);
- An Operations & Maintenance (O&M) building and additional auxiliary facilities such as raw water/fire water storage, treated water storage, evaporation ponds, water filtration buildings and equipment, equipment control buildings, septic system(s) and parking within each CUP area or group of multiple CUP areas;
- Use of a single Project switchyard common to all CUPs - alternatively, each CUP may independently construct a 230 kilovolt (kV) step-up transformer and switchyard;
- Internal electric transmission lines from each of the CUPs to an Electric Collector Line Corridor previously analyzed for impacts under CEQA as part of the Mount Signal Solar Project and Calexico Solar Project (addition of 18 new transmission line poles within the existing Electric Collector Line Corridor); and
- Co-location of Gen-Tie lines with the existing Mount Signal Solar Farm Project Gen-Tie line (construction of eight new transmission line poles within the Mount Signal Solar Farm Project Gen-Tie line corridor).

As described in Section 4.2, Land Use, the proposed solar field site parcels are located in unincorporated Imperial County, and are subject to the Imperial County General Plan and Land Use Ordinance. The General Plan land use designation “Agriculture” applies to all of the 32 solar field site parcels. The solar field site parcels are also zoned as “Agriculture” (General Agriculture [A-2], General Agriculture Rural [A-2-R] and Heavy Agriculture [A-3]) by the Imperial County Land Use Ordinance. Per Title 9, Division 5, Sections 90508.02 and 90509.02 of the Land Use Ordinance, solar energy electrical generators, electrical power generating plants, substations, and facilities for the transmission of electrical energy are allowed

as conditional uses in Agricultural zones. A maximum 120-foot height limit applies in A-2, A-2-R and A-3 zones.

In keeping with zoning requirements, the Project requires 17 CUP applications (CUP 13-0036 thru CUP 13-0052) for the proposed Wistaria Ranch Solar Energy Center. In addition, the Project requires 17 variance requests (V 13-0002 thru V-13-0018) to allow Gen-Tie structures to be up to 140 feet high

Approval of the CUPs, variance requests and Development Agreement by the Imperial County Board of Supervisors would allow the Project to attain consistency with the General Plan and Land Use Ordinance allowable land uses. By its nature as a solar energy facility, the Project would not directly induce growth because it does not create new housing and it does not create a substantial number of new permanent residents or employees. Upon completion, the Full Build-out Scenario will only require approximately 15 full-time employees to maintain and operate the facility. Thus, the Project would not induce substantial population growth in the area.

The Project's creation of approximately 350 temporary construction jobs will not induce growth because the majority of workers will come from the adequate local supply of labor available to fill the Project-generated construction jobs. The County of Imperial currently has an unemployment rate in excess of 20%, with the construction industry representing a significant portion of the local unemployed population. As such, construction of the Project, whether constructed as the Full Build-out Scenario or the Phased CUP Scenario, would not have a growth inducing effect related to workers moving into the area and increasing the demand for housing and services.

Lastly, the Project does not induce growth because the Project would provide renewable energy to meet existing and future planned electricity demands of the region and provide a new source of renewable energy to assist the State of California in achieving the RPS. Moreover, energy generated by the Project will integrate directly into the grid to serve regional energy needs and will not be available to directly serve potential population growth in surrounding areas.

B. GROWTH EFFECTS OF THE PROJECT

Existing and Proposed Land Uses

Criterion "e" in Section 4.9, Agricultural Resources section of this Draft EIR (Section 4.9) inquires whether the project would "Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to nonagricultural use." The Project would conditionally allow a solar energy generation facility on lands designated for agriculture on the Imperial County General Plan Land Use Map. Although implementation of the proposed Project would result in the temporary conversion of agricultural land, it is not anticipated to result in growth-related land use impacts as it does not propose residential development or other use that would attract a large population base. As noted above, local construction workers are expected to supply Project construction labor. During the operation, the Project will require only 15 employees. This small increase in employment is not sufficient to have a growth inducing impact. Further, at the end of the useful life of the Wistaria Ranch Solar Energy Center Project, each of the 17 CUPs (13-0036 thru 13-0052) would be reclaimed for use as active agricultural land, similar to the existing conditions at the solar field site parcels.

Infrastructure

The Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would include electric line and vehicular crossings of Imperial Irrigation District (IID) facilities and County facilities as shown on the Access Point and Electric Flow diagram (refer to Figures 2.0-6 thru 2.0-22 in Chapter 2.0-Project Description). It is anticipated that electric lines would require either

overhead or underground crossings. If the crossings are constructed underground, either trenching or horizontal directional drilling may be required to place the electric or water lines under existing IID and County facilities.

Each CUP (13-0036 thru 13-0052) would connect to transmission lines within the Electric Collector Line Corridor. The southern portion of the Electric Collector Line Corridor includes solar transmission line infrastructure previously analyzed and approved under CEQA as part of the Mount Signal and Calexico Solar Farm Project EIR (SCH. No. 2011071066). The northern portion of the Electric Collector Line Corridor is currently being analyzed as part of the Iris Cluster Solar Farm Project EIR (SCH. No. 2014041091). The CUPs would also connect, via the Electric Collector Line Corridor, to the existing Mount Signal Solar Project Gen-Tie line. The Project is not expected to have an impact on infrastructure availability to adjacent parcels.

As a general rule, extension of utilities or increased capacity of infrastructure has the potential to result in growth inducement. Any such improvements not only accommodate a project for which they are built, but also for any other projects in the surrounding area that would be proposed or become feasible as a result of the availability of new infrastructure. However, the proposed Project is located in a rural and remote area of south-central Imperial County with limited infrastructure. The Project would generate electricity to serve existing and projected growth that is ultimately transferred to the existing electrical grid. The Project does not extend infrastructure into an undeveloped area in a way that attracts new residential or urban growth to the Project site or surrounding area. The extension of IID electrical lines would be limited to serving the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario and is not considered growth inducing. Thus, implementation of the proposed Project would not contribute to growth in this area of the County.

Housing

The Regional Housing Needs Assessment has determined that the unincorporated area of the County will need 13,427 housing units for the period 2006–2014 (Imperial County 2013). No housing is proposed as part of the Wistaria Ranch Solar Energy Center nor is the Project anticipated to induce growth in other regions, as discussed above.

Roadways and Other Systems

Multiple County maintained roads provide access throughout the Project site and to each CUP (refer to Figures 2.0-6 thru 2.0-22 in Chapter 2.0-Project Description). Access to the each CUP would primarily be via the following existing paved roads: County Highway S30, Anza Road, Kubler Road, Lyons Road, and SR 98. Additionally, the Project may use existing County-maintained unpaved roads when access from existing paved roads or roads internal to the Project boundary is unavailable. These unpaved roads would include Wahl Road, Mandrapa Road, Ferrell Road, George Road, Preston Road, and Rockwood Road. Access to components of the Project would be controlled through security gates at several entrances. Implementation of the proposed Project, whether implemented as the Full Build-out Scenario or as 17 CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario, would not result in new or improved roadways that would induce growth in other regions. Additionally, the Project would not involve the development of any new water systems, or sewer that could serve areas beyond the Project site. For these reasons, the Project would not further facilitate additional development into other areas.

7.4.4 SECONDARY EFFECTS OF GROWTH

Secondary effects of the proposed Wistaria Ranch Solar Energy Center would include the creation of increased traffic, noise, and air emissions during construction. However, during operation and maintenance of the Project, traffic, noise and air emissions would not increase substantially over

existing levels currently experienced in the Project area. Because the Project will generate very few permanent jobs, no long-term substantial increase in traffic, noise or air emissions would occur as a result of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario. The Wistaria Ranch Solar Energy Center would also not result in the introduction of people and activities to an area that was formerly in agricultural use. The use of agricultural land for renewable solar energy generation facilities is a temporary condition. Once operational, the Project would require limited trips to each CUP for operation and maintenance activities during the operational lifespan of each CUP or 30 years, whichever is later. At the end of the Project's operational lifespan, each of the 17 CUPs (13-0036 thru 13-0052) would be reclaimed for agricultural use, similar to the existing condition.

7.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

7.5.1 INTRODUCTION

CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as follows:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Build-out of the proposed solar field site parcels would result in the temporary conversion of parcels previously used for agricultural purposes to solar energy production and transmission facilities.

Development of the Project site would irretrievably commit building materials and energy to the construction and maintenance of the Project, Electric Collector Line Corridor, Gen-Tie line and associated buildings and infrastructure. Renewable, nonrenewable, and limited resources that would likely be consumed as part of the development of the proposed Project would include, but are not limited to, oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. Energy would also be irreversibly consumed, both as part of the construction and during operation of the proposed Project. However, the Project would provide a clean, renewable energy resource while implementing many Federal, State, and local goals and policies directed at moving away from reliance upon fossil fuels, and development of reliable sources of renewable energy. Moreover, the Applicant is required to restore the solar field site parcels to pre-Project conditions at the end of each CUP or 30 years, whichever is later.

7.6 MANDATORY FINDINGS OF SIGNIFICANCE

CEQA Guidelines Section 15065 identifies four mandatory findings of significance that must be considered as part of the environmental review process of a project. These findings are identified below with an analysis of the Project's relationship to these findings.

1) The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

The Project's impacts on biological resources and cultural resources are evaluated in Section 4.12, Biological Resources, and Section 4.7, Cultural Resources, of this DEIR, respectively. Both sections identify mitigation measures to reduce impacts to these resources to a level of insignificance. Upon implementation these of these measures, impacts to biological and cultural resources will be **less than significant**.

2) The project has potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

The Project would result in short-term construction-related impacts with regard to traffic, air quality, archaeological resources, previously unknown human remains, water quality, erosion or siltation, and runoff. During operation, long-term impacts could occur with regard to: exposure to strong seismic shaking; liquefaction/ground failure; seismically-induced flooding; landslides; expansive soils; soil capability to support on-site Wastewater Treatment Systems; soil corrosivity; temporary conversion of agricultural land; placement of structures within an area subject to flood hazards; sensitive vegetation communities/land cover types; impacts to jurisdictional areas; impacts to special status plant species; Southwestern Willow Flycatcher; Yuma Clapper Rail; Sandhill Crane; Burrowing Owl; Loggerhead Shrike; Yellow-headed Blackbird; Merlin; Mountain Plover; Bats, American Badger; nesting migratory birds; and wildlife movement. However, the Wistaria Ranch Solar Energy Center would expand the renewable energy sector in Imperial County and reduce the emission of GHGs from the generation of electricity. In doing so, the Project would assist the State of California in achieving the RPS. Development of the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario may result in temporary disadvantages to long-term preservation goals for agricultural resources, biological resources, geologic, seismic and flood hazards. However, at the end of the Project's useful life, all CUPs (13-0036 thru 13-0052) would be reclaimed for agricultural uses similar to existing conditions on the solar field site parcels. Therefore, the proposed Project would result in **less than significant** impacts to long-term environmental goals.

3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

The Project's potential cumulative impacts are summarized in Chapter 5.0 of this DEIR. Sections 4.1 through 4.13 evaluate cumulative impacts related to each resource and technical discussion area and identify mitigation measures addressing each cumulatively considerable impact. Upon implementation of these measures, cumulative impacts will be less than cumulatively considerable.

4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

Potential adverse impacts on humans are discussed and evaluated in Section 4.4, Air Quality, Section 4.10, Hazards and Hazardous Materials, Section 4.8, Noise, and Section 4.5, Climate Change and Greenhouse Gases. As appropriate, each section identifies mitigation measures to reduce significant impacts associated with these resource areas. In addition, the Full Build-out Scenario and all CUPs (13-0036 thru 13-0052) proposed as part of the Phased CUP Scenario would remain subject to applicable local, state, and federal regulations intended to avoid adverse effects on humans. The proposed Project would comply with all required regulatory/legal requirements, and Project-specific conditions of approval, whether developed as the Full Build-out Scenario or the Phased CUP Scenario and would therefore result in **less than significant** impacts on humans.