

5.11 Socioeconomics

This section discusses the potential socioeconomic impacts of the construction and operation of the BSEP. It includes an evaluation of Project-related impacts on public services and infrastructure (e.g., schools, protective services, and housing), as well as an evaluation of impacts on community issues such as environmental justice.

5.11.1 LORS Compliance

A summary of potentially applicable LORS is presented in Table 5.11-1 and in the text following the table. The Project will comply with all applicable Federal, State, and local LORS.

Table 5.11-1 LORS Applicable to Socioeconomics

LORS	Applicability	Where Addressed in AFC
Federal:		
Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations."	As a result of the Executive Order, U.S. Environmental Protection Agency (EPA) issued guidelines requiring Federal agencies and State agencies receiving Federal funds to develop strategies to address environmental justice issues.	Section 5.11.2
State:		
California Government Code (GC) Sections 65995-65997 (amended by SB 50).	Public agencies may impose fees, charges or other financial requirements on developers to offset the cost for school facilities.	Sections 5.11.1 and 5.11.3
Title 14 California Code of Regulations (CCR), Section 15131.	California Environmental Quality Act (CEQA) and its guidelines state that economic or social factors of a project may be included in an Environmental Impact Report (EIR), but shall not be treated as significant effects on the environment.	Sections 5.11.2 and 5.11.3
Local:		
Kern County General Plan (Public Services and Utilities, Industrial, and Resource Elements).	Establishes goals and implementing policies to accommodate anticipated future growth while maintaining a safe and healthful environment and prosperous economy.	Sections 5.11.2 and 5.11.3

5.11.1.1 Federal LORS

Executive Order 12898

This law requires Federal agencies and State agencies receiving Federal funds to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low income populations. Federal agency permits and approvals are considered “activities,” making this requirement more broadly applicable than merely to agencies receiving Federal funds. Because the BSEP will require a Federal agency approval (under the Endangered Species Act), the Executive Order applies to the proposed Project.

5.11.1.2 State LORS

California Government Code Sections 67995-65997

These codes state that public agencies may impose fees, charges, or other financial requirements on developers to offset the cost of school facilities. For the Project, the administering agency implementing school impact fees is the Mojave Unified School District.

Title 14, CCR, Section 15131

CEQA and its guidelines state that economic or social factors of a project may be included in a CEQA document, but shall not be treated as significant effects on the environment. However, economic or social effects of a project may be used to determine the significance of physical changes caused by the project. Additionally, economic, social, and particularly housing factors should be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment.

5.11.1.3 Local LORS

Kern County General Plan

Although the proposed Project does not require socioeconomic-related permits, the Kern County General Plan contains goals related to maintaining and improving the socioeconomic aspects of the county. One goal of the Public Services and Utilities Element is to ensure that Kern County residents and businesses receive adequate and cost-effective public services. A policy set in place to help achieve this goal states that new discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development. A goal of the Industrial Element of the General Plan is to ensure that an adequate and geographically balanced supply of land is designated for a range of industrial uses. Goal 4 of the Resource Element promotes safe and orderly energy development within the county, including research and demonstration projects, and recognizes that the county should become actively involved in the decisions and actions of other agencies as they affect energy development in Kern County.

5.11.1.4 Involved Agencies and Local Contacts

No socioeconomic-related permits are required by the proposed Project. Therefore, there are no applicable permitting agencies or agency contacts.

5.11.1.5 Required Permits and Permitting Schedule

There are no required permits related to socioeconomics.

5.11.2 Affected Environment

This subsection discusses existing socioeconomic conditions in the areas potentially affected by BSEP. For purposes of this evaluation, the regional area is defined as Kern County, San Bernardino County, and Los Angeles County, including the cities of California City, Ridgecrest, Lancaster, Palmdale, Bakersfield, Adelanto, Victorville, Apple Valley, Barstow, and Hesperia. The local area is defined as the City of California City, the unincorporated communities of Mojave, Rosamond, and Cantil, and the City of Tehachapi. The socioeconomic characteristics discussed include population, housing, employment and economy, public services, utilities, schools, local government finance, and environmental justice.

5.11.2.1 Regional Setting

The Project site is located in a rural part of unincorporated Kern County, approximately four miles north of the northern boundary of California City and approximately 20 miles north of Edwards Air Force Base (see Figure 5.11-1). California City, although one of the largest cities in the county based on area, is largely undeveloped and sparsely populated in some areas. The City of Bakersfield, which is the most populated city in Kern County, is located approximately 65 miles to the northwest of the Project site. Additional incorporated areas in Kern County near the Project site include the cities of Ridgecrest, which is approximately 30 miles north of the site and Tehachapi, located approximately 30 miles southwest of the Project site. Nearby unincorporated communities in Kern County include Cantil, Mojave, and Rosamond, which are approximately 5 miles, 20 miles, and 30 miles from the Project site, respectively. The nearest sizable cities in Los Angeles County include Lancaster and Palmdale, which are located approximately 40 and 50 miles south of the Project site, respectively. The nearest sizeable cities in San Bernardino County include Adelanto (56 miles southeast), Victorville (64 miles southeast), Apple Valley (70 miles southeast), Barstow (60 miles east), and Hesperia (70 miles southeast).

5.11.2.2 Local Setting

The majority of the 2,012-acre BSEP plant site consists of undeveloped land or land that was previously (but no longer) in agricultural use. A small cluster of abandoned structures is located offsite, adjacent to SR-14 and just south of the northwest corner of the site near the site access road. The nearest residence is approximately 0.3 mile from the plant site boundary. The rural communities surrounding the Project site are typically sparsely populated, isolated, and consist of smaller residences (one- and two-story structures) of desert-style character.

5.11.2.3 Population

Kern County is the seventh most populous county in southern California and the third largest county in land area in the State, covering more than 8,000 square miles. The population of Kern County grew from 541,337 in 1990 to 661,645 in 2000 and reached an estimated 801,648 in 2007 (Kern Council of Governments, 2007). This growth represents a population increase of approximately 48 percent in 17 years. The population growth experienced during 1990s has continued into the first decade of the twenty-first century and mainly reflects the migration of people to the county seeking affordable housing from the

higher-cost regions of southern California. Population estimates and future population projections for the local and regional area are summarized in Table 5.11-2.

Table 5.11-2 Population Estimates and Projection

County/Community	Year				
	2000	2007 ³	2010	2020	2030
Kern County ¹	665,519	801,648	1,086,113	1,352,628	1,808,239
California City	8,385	13,123	13,600	18,400	24,900
Bakersfield	246,899	323,213	342,700	433,800	549,100
Ridgecrest	24,927	27,944	27,900	31,800	36,200
Tehachapi	11,125	13,063	13,900	17,800	22,800
Los Angeles County ²	9,578,960	10,331,939	10,718,007	11,501,884	12,221,799
Lancaster	119,416	143,818	168,032	215,468	259,696
Palmdale	117,729	145,468	176,506	259,712	299,324
San Bernardino County ²	1,709,434	2,028,013	2,059,420	2,397,709	2,713,149
Adelanto	18,176	27,139	25,939	35,351	44,129
Victorville	64,871	102,538	81,592	103,353	123,641
Apple Valley	54,585	70,297	70,873	83,707	95,675
Barstow	21,133	23,943	25,401	32,215	38,571
Hesperia	62,835	85,876	95,800	139,049	179,383

Note 1: Growth projections for unincorporated communities, such as Cantil and Mojave, are not calculated by Kern Council Association of Governments, and thus population data and forecasts of growth are unavailable.

Note 2: Population data in this table is a compilation of three sources. There are instances in the table (e.g., Ridgecrest and Victorville) where actual population growth, as estimated by the California Department of Finance, has exceeded expectations (most recent available projections) of the regional planning agencies, which means that the table seems to predict a population decline between 2007 and 2010. This is an anomaly of the data, but the forecasts for growth are consistent for all communities shown in the table.

Sources: ¹ Kern Council of Governments, 2007;
² Southern California Association of Governments, 2004;
³ California Department of Finance, 2007.

As shown in the table, the population of California City in 1990 was 5,955, and in 2000 grew to 8,385. In 2007, the population of California City was estimated at 13,123, which represents a more than doubling of the population in 17 years. California City is estimated to grow by another 11,777 people by 2030. The estimated population of Bakersfield in 2007 was 323,213, an increase of 30 percent since 2000. The growth projections in Bakersfield for 2010 and 2020 are 342,700, and 433,800, respectively (California Department of Finance, 2007; Kern Council of Governments, 2004). The estimated populations for the cities of Lancaster and Palmdale, both of which are in Los Angeles County, are approximately 143,818

and 145,468, respectively. These Los Angeles County cities are expected to grow to 259,696 and 299,324, respectively by 2030. The population of Barstow, the nearest city in San Bernardino County, was estimated at 23,943 in 2007, and is expected to grow to 38,571 (61 percent) by 2030.

Average annual population growth rates in the local and regional areas are shown in Table 5.11-3. As shown in the table, between 2000 and 2007, the fastest growth in the vicinity of the Project has occurred (in order) in California City, Bakersfield, Tehachapi, and Ridgecrest. California City has grown more than twice as fast as either Kern County or Los Angeles County as a whole, and represents the fastest growing community in the Project vicinity. Growth rates in California City for the years 2010 to 2020 and 2020 to 2030 are predicted to decrease from the rates of the recent past, but still are expected to remain high (over five percent) and to exceed the growth rates of the other nearby communities. Growth rates in Los Angeles and San Bernardino Counties are projected to be lower than in Kern County, with the most growth projected in Victorville.

Table 5.11-3 Average Annual Population Growth Rates

County/City	Annual Growth Rates		
	2000-2007 ³	2010-2020	2020-2030
Kern County ¹	2.92%	2.45%	3.37%
California City	8.07%	5.04%	5.04%
Bakersfield	4.41%	2.66%	2.66%
Ridgecrest	1.73%	1.40%	1.38%
Tehachapi	2.49%	2.80%	2.80%
Los Angeles County ²	1.12%	0.73%	0.62%
Lancaster	2.92%	2.82%	2.05%
Palmdale	3.11%	4.71%	1.52%
San Bernardino County	2.66%	1.64%	1.31%
Adelanto	7.04%	3.6%	2.48%
Victorville	8.29%	2.67%	1.96%
Apple Valley	4.11%	1.81%	1.43%
Barstow	1.90%	2.68%	1.97%
Hesperia	5.24%	4.51%	2.90%
<p>Note: Growth rates based on population estimates and projections in Table 5.11-2. As discussed, growth rates are unavailable for Cantil or Mojave.</p> <p>Sources: ¹ Kern Council of Governments, 2007; ² Southern California Association of Governments, 2004; ³ California Department of Finance, 2007.</p>			

5.11.2.4 Housing

In 2000, California City had 3,560 housing units, with a vacancy rate of 13.8 percent. Of the 3,067 occupied housing units, 2,058 were owner occupied and 1,009 were renter occupied. The City of Bakersfield contained approximately 88,262 housing units in 2000, with a vacancy rate of 5.5 percent. Of the 83,441 occupied housing units, 50,502 were owner occupied and 32,939 were renter occupied (U.S. Census Bureau, 2000). Mojave had a total of 1,806 housing units with a vacancy rate of 22.0 percent, and 679 renter occupied units. Ridgecrest had a total of 11,309 housing units, with a vacancy rate of 13.1 percent, and 3,635 renter occupied units. Tehachapi had a total of 2,914 housing units, a vacancy rate of 13.1, and 1,152 renter occupied units.

In 2000, Kern County as a whole contained approximately 231,564 housing units and had a housing vacancy rate of 9.9 percent. As a comparison, Los Angeles County had 3,270,909 housing units with a vacancy rate of 4.2 percent, and San Bernardino County had 601,369 housing units with a vacancy rate of 12.1 percent. Of the 208,652 occupied housing units in Kern County, 129,609 were owner occupied and 79,043 were renter occupied. The U.S. Department of Housing and Urban Development has reported that 61,542 housing permits were issued in Kern County in 2007 (through June), which represents a 67 percent increase over what was issued last year (U.S. Department of Housing and Urban Development, 2007). California City's housing market also continued to grow through 2007. From January through November of 2007, 270 building permits were issued for housing permits, including 216 for single-family dwellings and 54 for multi-family dwellings (CaliforniaCity.com, 2007).

In addition to local housing availability, there is also ample availability of short-term housing accommodations in the form of hotels and motels. The nearest hotel to the Project site is located approximately five miles south in California City. There are approximately 12 hotels/motels in nearby communities (California City, Mojave, Rosamond, Tehachapi, and Ridgecrest).

5.11.2.5 Economy and Employment

Kern County ranks amongst the top five most productive agricultural counties in the U.S., and is one of the nations leading petroleum-producing counties (Kern Economic Development Corporation, 2007a). Kern County's economy has historically been rooted in the oil and agricultural industries. Employment by industrial sector for Kern, Los Angeles, and San Bernardino Counties for 2006 is summarized in Table 5.11-4. As of November 2006, Kern County employment was 277,200, Los Angeles County employment was 4,100,200, and San Bernardino employment was 1,345,100. As shown in Table 5.11-4, the government, construction and manufacturing, and retail trade sectors are the largest employers in all three counties. Kern County also has a large agricultural sector that employs 16.1 percent of the working population. Though oil production remains an important part of economic growth in Kern County, it is not one of the largest direct employers.

Table 5.11-4 2006 Employment by Industry for Kern, Los Angeles, and San Bernardino Counties

Sector	Kern County		Los Angeles County		San Bernardino County	
	Employment	Percentage	Employment	Percentage	Employment	Percentage
Government	57,300	20.7%	588,600	14.4%	231,600	17.3%
Agriculture	44,600	16.1%	7,600	0.2%	16,000	1.1%
Construction and Manufacturing	32,900	11.9%	619,000	15.1%	255,000	19.3%
Retail Trade	29,200	10.5%	423,200	10.3%	181,500	13.5%
Professional and Business Services	25,000	9.0%	594,700	14.5%	152,700	11.4%
Education and Health Services	22,900	8.3%	481,300	11.7%	129,900	8.7%
Leisure and Hospitality	20,700	7.5%	387,500	9.5%	136,000	10.1%
Finance, Information, Insurance and Real Estate	11,600	4.2%	457,700	11.2%	69,400	5.4%
Transportation and Utilities	9,300	3.4%	165,700	4.0%	69,200	5.3%
Natural Resources and Mining	9,300	3.4%	4,000	0.1%	1,400	0.1%
Wholesale Trade	7,500	2.7%	225,200	5.5%	57,100	4.3%
Other Services	6,900	2.5%	145,700	3.6%	45,300	3.5%
Total	277,200	100%	4,100,200	100%	1,345,100	100%
Source: California Employment Development Department, 2007.						

Kern County's workforce makes up approximately 43 percent of its population, with the remaining 57 percent including, among others, children, the retired, military personnel, and prisoners. Between 2001 and 2006, the County's labor force grew at an average annual rate of 1.7 percent, adding 5,800 members. Kern's labor force increased from 322,600 in 2005 to 328,400 in 2006, while employment grew by approximately 7,000 jobs during this same period. Total employment grew 2.4 percent between 2005 and 2006, from 296,500 to 303,500 (Kern Economic Development Corporation, 2007b). As job growth exceeded labor force growth from 2005 to 2006, unemployment decreased from 26,100 to 24,900. Transformation from a resource-based economy to an industrial and service-oriented economy has contributed to a drop in the County's unemployment rate from 8.1 percent in 2005 to 7.6 percent in 2006, two percent above the state average.

In Kern County, industries that experienced rapid growth between 2005 and 2006 included energy and chemicals; transportation, logistics, and warehousing; business and professional services; and tourism, recreation, and entertainment (Kern Economic Development Corporation, 2007a). Between 2002 and 2006, the construction employment sector experienced the fastest growth rate of all major industries, increasing by 50 percent. As of 2006, the top employers in Kern County were the Kern County Public Schools, Edwards Air Force Base, and the San Joaquin Community Hospital, at 27,000, 11,285, and 11,000 employees, respectively (Kern Economic Development Corporation, 2007c). In 2000, the employed labor force in California City was 3,227, with the top employer being public administration, employing 26.3 percent of the workforce. The construction sector employed an estimated 4.6 percent of the workforce (Table 5.11-5). In the nearby communities of Mojave and Tehachapi, the top employers were government and education, health, and social services. The construction sector employed 5.3 percent of workers in Mojave and 3.2 percent of workers in Tehachapi.

As of January 2008, unemployment rates for the U.S., Los Angeles County, Kern County, and San Bernardino County were estimated at 4.8, 4.5, and 7.6 percent, respectively. Available census data for local communities indicates that unemployment rates for Mojave, Ridgecrest, Rosamond, and Tehachapi were 14.7 percent, 6.4 percent, 9.4 percent, and 8.0 percent, respectively.

Kern County's total employment is expected to grow about 1.5 percent on average, each year between 2004 and 2014, adding approximately 41,400 new jobs by 2014. Non-farm wage and salary employment, which accounts for 78 percent of the total employment, is expected to grow at an average annual rate of 1.6 percent. Nearly 73 percent of all non-farm wage and salary jobs are forecasted to occur in construction, professional and business services, government, retail trade, and education and health services (California Employment Development Department, 2007).

Table 5.11-5 Employment by Industry (Year 2000 Annual Average)

Industrial Sector	California City Employment (%)	Mojave Employment (%)	Ridgecrest Employment (%)	Rosamond Employment (%)	Tehachapi Employment (%)
Public Administration	848 (26.3%)	106 (9.0%)	2,457 (23.2%)	810 (14.3%)	423 (18.8%)
Education, Health, and Social Services	375 (11.6%)	192 (16.3%)	1,720 (16.3%)	927 (16.4%)	317 (14.1%)
Professional Services	341 (10.6%)	83 (7.0%)	925 (8.7%)	543 (9.7%)	156 (6.9%)
Arts, Recreation, and Food Services	283 (8.8%)	191 (16.2%)	929 (8.8%)	456 (8.1%)	239 (10.6%)
Retail Trade	265 (8.2%)	91 (7.7%)	1,110 (10.5%)	734 (13.1%)	258 (11.5%)
Manufacturing	262 (8.1%)	140 (11.9%)	642 (6.1%)	793 (14.0%)	174 (7.7%)
Transportation and Public Utilities	189 (5.9%)	112 (9.5%)	428 (4.0%)	347 (6.1%)	121 (5.4%)
Construction	147 (4.6%)	63 (5.3%)	650 (6.1%)	354 (6.3%)	73 (3.2%)
Finance, Insurance, and Real Estate	135 (4.2%)	22 (1.9%)	487 (4.6%)	281 (5.0%)	74 (3.2%)
Agriculture and Mining	113 (3.5%)	65 (5.5%)	250 (2.5%)	149 (2.6%)	116 (5.2%)
Other Services	269 (8.3%)	115 (9.7%)	971 (9.2%)	249 (4.4%)	301 (13.4%)
Total	3,227 (100%)	1,180 (100%)	10,569 (100%)	5,643 (100%)	2,252 (100%)

Note: Cantil is not recognized as a census designated place by the U.S. Bureau of the Census and therefore no data are available.

Source: U.S. Census Bureau, 2007.

5.11.2.6 Public Services and Utilities

This subsection describes public services and utilities in the Project area.

Law Enforcement

The Kern County Sheriff's Department provides police protection and public safety services to the Project site. These services include traffic and neighborhood police control, emergency calls, and crime prevention. The Kern County Sheriff's Department employs approximately 1,050 sworn, non-sworn, and civilian employees, and provides police services to the unincorporated parts of Kern County, in addition to

several small cities, including nearby Tehachapi (Kern County, 2007a). The County Sheriff would respond to the Project site from the Mojave Substation station at 1771 Highway 58, which is located approximately 16 miles south of the Project site. This substation provides law enforcement services to an estimated 14,000 people over 1,320 square miles, covering the largest area of any Kern County Sheriff substation. Average response time to the Project site depends on the severity of the incident and the location of the deputies on call. In extreme cases, the California City Police Department (located approximately 10 miles south of the Project site) may respond to emergencies outside the city's jurisdictional boundaries, however, the Mojave Substation would be the primary responder.

Fire Protection

As the Project site is in unincorporated Kern County, fire protection services would be provided by the Kern County Fire Department (KCFD). The two nearest stations to the Project site are Station 14 in Mojave and Station 12 in Tehachapi. Station 14 is located approximately 15 miles south of the Project site at 1953 Highway 58, and is equipped with two Type 1 Fire Engines, a Wildland Patrol Vehicle, and a Wildland Engine. Station 14 is staffed with one captain, one engineer, and one firefighter. Station 12 is located approximately 30 miles west of the Project site at 800 South Curry Street. It is equipped with a Type 1 Fire Engine and a 4x4 watershed patrol vehicle. Station 12 is staffed with a captain, engineer, and firefighter. Average response time to the Project site depends on the severity of the incident and the location of the deputies on call. The nearest station with hazardous materials equipment is Station 66, which is located approximately 70 miles west of the Project site, in Bakersfield.

According to KCFD personnel, the Kern County Fire Department provides dispatch services for the California City Fire Department and the two departments augment each other's capabilities when needed and requested (Diftenbaugh, personal communication, January 15, 2008). The California City Fire Station is located at 20890 Hacienda Boulevard, approximately 10 miles south of the Project site. The California City Fire Department is a full-service department providing fire management, fire operations, fire and environmental safety, and emergency medical services to the residents of California City. The fire station is staffed with an estimated 12 full time firefighters, including a fire chief, three fire captains, three fire apparatus engineers, three firefighters, and two auxiliary firefighters (CH2M HILL, 2006). It is equipped with two medic engines, a water tender, a fire engine, and a patrol vehicle.

Hospitals

Emergency medical services in the Project area are provided by Kern County Emergency Medical Services, which provides transportation, including ambulance service and monitoring, service area performance standards, and communication systems. The Project site is located in the Liberty Ambulance-Ridgecrest Regional Hospital trauma care system catchment area. The nearest hospitals to the Project site include Ridgecrest Regional Hospital and Drummond Medical Center, approximately 33 miles north in Ridgecrest; and Antelope Valley Hospital and Medical Center and the High Desert Hospital, approximately 38 miles south in Lancaster. The Kern Medical Center, which is owned and operated by Kern County, is located in Bakersfield, approximately 60 miles west of the Project site, and operates the County's only Trauma Center. Table 5.11-6 provides a summary of the hospital services in the Project area.

Natural Gas and Electricity

Natural gas services in the Project area are provided by the Southern California Gas Company. Electrical service to local consumers is provided by Southern California Edison.

Water and Wastewater

The Project site and vicinity is within the California City water service area. The area receives its water from groundwater resources underlying the California City water service area and from the Antelope Valley-East Kern Water Agency. The Rosamond Water Treatment Plant supports the needs of consumers in southeast Kern County, including Rosamond, California City, Edwards Air Force Base, and Boron. It is a 14-million-gallon per day treatment plant that is capable of providing water for 60,000 people (Antelope Valley Kern Water Agency, 2007). California City owns and operates a wastewater treatment (WWTP) plant located near Nelson Drive. The WWTP has a treatment capacity of 1.5 million gallons per day (City of California City, 2006), but is planning an increase in capacity as well as an upgrade at the facility which will provide tertiary treatment, thus enabling the plant to produce reclaimed water for various uses. Landscape irrigation and power plant cooling are allowable uses for reclaimed water, but human consumption of reclaimed water is not permitted under the law.

Table 5.11-6 Hospitals Serving the Project Area

Hospital/Address	Available Services
Ridgecrest Regional Hospital 1081 North China Lake Blvd., Ridgecrest	Emergency, Out/In Patient Surgery, Home Health, Critical Care Unit, Cardio Thoracic (Heart Unit), Maternal Facilities, Rehabilitation Services, and Telemedicine. An estimated 80 beds are available.
Drummond Medical Center 1111 North China Lake Blvd., Ridgecrest	Urgent Care, Surgery Center, Laboratory Services, Chemotherapy, Eye Care, Diagnostic Imaging, and Medical Specialists
Antelope Valley Hospital and Medical Center 1600 West Ave. J, Lancaster	24-hour Emergency Room, Obstetrical Services, Critical Care Units, Rehabilitation, Maternal Child Health Care, Physical Therapy, Home Care Services, Radiology, Transportation Services, and Mental Health Care. An estimated 420 beds are available.
High Desert Hospital 44900 North 60th St., Lancaster	Multi-service Ambulatory Care Center
Kern Medical Center 1830 Flower St., Bakersfield	Trauma Center, Teaching Facility and Residency Programs, Surgery Center, Obstetrical Services, Family Medicine, Pediatrics, and Neonatal Intensive Care Unit. An estimated 222 beds are available.

Solid Waste

The Kern County Waste Management Department operates seven landfills, five transfer stations, and four transfer bin sites within the County. They are also responsible for the operation of two special waste facilities and provide information to the residents of Kern County regarding recycling and waste reduction techniques. The nearest landfills that serve the Project site include the Mojave-Rosamond Landfill, which is five miles south of Mojave, and the Ridgecrest Landfill, which is five miles southwest of Ridgecrest.

5.11.2.7 Schools

Educational needs in the Project area are served by the Mojave Unified School District, which serves the needs of California City, Mojave, and Cantil. As of November 2007, there were two elementary schools (one serving kindergarten through 3rd grade and another serving kindergarten through 5th grade), two middle schools (one serving 4th through 8th grade and one serving 6th through 8th grade), and two high schools (both serving 9th through 12th) within the Mojave Unified School District. Table 5.11-7 summarizes location, grades served, and student enrollment for schools within the Mojave Unified School District. The Robert P. Ulrich School located at 9124 Catalpa Avenue is the closest school to the Project site, approximately nine miles to the southeast.

Table 5.11-7 Summary of Schools and Enrollment in Mojave School District

School Name	Grades	Location	Students
Mojave Elementary School	K – 3	15800 O Street, Mojave	343
Robert P. Ulrich Elementary School	K – 5	9124 Catalpa Avenue, California City	965
Joshua School	4 – 8	3200 Pat Avenue, Mojave	353
California City Middle School	6 – 8	9736 Redwood Boulevard, California City	496
Red Rock School	7 – 11	33387 Norton Road, Cantil	9
Mojave High School	9 – 12	15732 O Street, Mojave	690
Mountain View High School (Continuation)	9 – 12	3500 Douglas Avenue, Mojave	18
Source: Great Schools, 2007.			

5.11.2.8 Fiscal Resources

The local agency with taxing power is Kern County. For the fiscal year (fy) 2007-2008, Net assets as of June 30, 2007 for Kern County totaled approximately \$1.3 billion, which was an increase of over \$90 million (7 percent) from fiscal year 2006-2007. Kern County's key expenditures were on public safety, which comprised 34.4 percent of total expenditures. Over \$63 million of total assets has been reserved in contingency. A summary of Kern County's expenses and revenues for the fiscal year is provided in Table 5.11-8.

Table 5.11-8 Kern County Expenses and Revenues for FY 2007-2008

	Amount	Percentage
Expenses	\$1,395,119,310	100%
General Government	\$175,302,693	12.6%
Public Safety	\$479,524,538	34.4%
Health and Sanitation	\$199,164,578	14.3%
Public Ways and Facilities	\$67,747,629	4.9%
Recreation and Culture	\$14,597,382	1.0%
Education	\$10,318,462	0.7%
Public Assistance	\$374,180,864	26.8%
Debt Services	\$11,055,983	0.8%
Contingencies and Reserves	\$63,227,181	4.5%
Financing Sources	\$1,395,119,310	100%
Current Property Taxes	\$218,974,900	15%
Fines, Forfeitures, and Penalties	\$24,959,925	1.8%
Other Taxes	\$135,418,541	9.7%
Revenues from Use of Money/Prop.	\$17,506,248	1.3%
State Aid	\$445,134,888	31.9%
Licenses and Permits	\$15,445,241	1.1%
Federal Aid	\$229,101,754	16.4%
Other Aid	\$5,017,709	0.4%
Charges for Services	\$168,288,667	12.1%
Misc. Other Revenues	\$18,912,449	1.4%
Other Financing Sources	\$37,322,127	2.7%
Balances from Prior Year	\$79,036,861	5.7%
Source: Kern County, 2007b.		

5.11.3 Environmental Impacts

The following sections discuss the effects of BSEP construction and operation on the socioeconomic resources of the Project area.

5.11.3.1 Evaluation Methods and Significance Criteria

For the purposes of this evaluation, local environmental impacts were determined by comparing Project demands during construction and operation with the socioeconomic resources of Kern County, California City, and nearby communities. The criteria used to determine the significance of Project-related

socioeconomic impacts are those suggested in the CEQA guidelines. Project-related impacts would be considered significant if they:

- Induce substantial growth or concentration of population;
- Displace a large number of people or existing housing;
- Cause a substantial decrease in employment or property values;
- Result in the addition of students into an impacted school;
- Cause a substantial increase in the demand for public services that would affect local agencies' ability to provide public services; or
- Cause substantial disruption or division of the physical arrangement of an established community.

Project socioeconomic impacts also could be considered significant if they cause substantial change in community interaction patterns, social organization, social structures, or social institutions; cause substantial conflict with community attitudes, values, or perceptions; or cause substantial inequities in the distribution of Project costs and benefits.

5.11.3.2 Construction

The following subsections describe the potential construction phase impacts of the Project on population, housing, employment, public services, utilities, schools, and the economic base and fiscal resources of Kern County and the nearby communities of California City, Mojave, Rosamond, Ridgecrest, and Tehachapi.

Project Work Force and Population

Project construction is expected to occur over a total of 25 months. Including linear facilities as well as the plant site facilities, Project construction would require an average of 477 employees per day over the entire 25-month construction period with manpower requirements peaking at approximately 836 workers in Month 15 of construction (see Table 5.11-9).

The primary trades required for construction of the proposed Project will include carpenters, cement masons, electricians, ironworkers, millwrights, equipment operators, welders, painters, pipefitters, insulators, boilermakers, skilled and unskilled laborers, supervisors, teamsters, management, operating engineers, and administrative staff. The anticipated number of workers anticipated by trade required for Project construction is shown in Table 5.11-9.

According to the Electric Power Research Institute (EPRI) report titled *Socioeconomic Impacts of Power Plants*, construction workers will commute as much as two hours to construction sites from their homes, rather than relocate (EPRI, 1982). The availability of construction workers by trade in Kern County is shown in Table 5.11-10; Tables 5.11-11 and 5.11-12 show the same data for the counties of Los Angeles and San Bernardino. As shown in Table 5.11-13, nearly 350,000 construction workers are available within the combined Kern, Los Angeles, and San Bernardino county region. Approximately 1,290 of these construction workers are located in the local area (California City, Mojave, Rosamond, Ridgecrest, and Tehachapi) (refer to Table 5.11-5). The proposed Project would be expected to draw from the entire construction work force in the region, not merely those workers that are available within the immediate area.

Table 5.11-9 BSEP Construction Workforce by Skill

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Plant Site																										
Boilermaker														11	11	11	11	11	11	11	11					
Carpenter				7	7	13	37	48	68	72	50	50	32	32	32	32	32	32	32	27	7	7	7	7	4	
Electrician				9	9	12	6	6	45	91	91	130	130	146	253	160	147	106	86	100	100	100	23	23	2	
Insulators																			30	56	56	56	56	56		
Ironworkers				6	25	25	15	15	52	57	57	57	50	45	43	43	43	41	38	38	6	6				
Laborer	7	7	11	14	27	38	30	29	41	65	65	65	57	45	45	36	36	33	45	33	21	21	21	21	13	
Cement Masons				4	4	4	6	6	12	10	10	10	6	6	6	6	6	6	6	6						
Millwrights									7	7	7	7	7	20	18	18	18	18	23	23	19	8	8	8		
Operating Engineers	57	57	85	99	108	65	21	22	30	69	62	62	56	47	44	41	40	40	36	30	19	18	18	19	6	
Painters														4	4						15	15	15	15	5	
Pipefitters						5	5	5	145	339	339	339	339	316	316	316	316	316	155	165	188	48	36	36	9	
Teamsters	13	13	14	14	14	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	3	
Construction Staff	28	38	40	40	40	40	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	36	30	22	
Subcontractors	6	6	6	6	6	6	4	3	3	3	3	2	2	2	2	2	2	2	8	8	8	8	8	6	2	
Technical Advisor								2	2	2	4	4	4	4	6	6	6	6	6	6	6	4	4	2	2	
Solar Field Subs									7	7	7	7	7	7	7	7	7	7	7	7						
Subtotal	111	121	156	199	240	213	173	185	461	771	744	782	739	730	836	731	713	667	532	559	503	338	235	226	68	

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Gas Pipeline																										
Operator						40	91	72	100	29																
Teamster								2	4	1																
Mechanic						4	1																			
Laborer						84	100	52	70	20																
Welder						1	36	36	36	9																
Foreman						18	14	12	15	4																
Subtotal	0	0	0	0	0	147	242	174	225	63	0	0	0													
Transmission Line																										
Laborer												4	4	2												
Operator												3	4	2												
Teamster												1	1	1												
Electrician												7	11	10												
Subtotal	0	15	20	15	0	0	0																			
Project Total	111	121	156	199	240	360	415	359	686	834	744	797	759	745	836	731	713	667	532	559	503	338	235	226	68	

Note 1: Based on 22 days per working month.

Note 2: Peak number of employees is 836; average number of employees is 477.

Table 5.11-10 Available Labor: Bakersfield Metropolitan Statistical Area (Kern County)

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percent-	New Jobs	Net Replacements	Total
Construction Managers	530	740	210	39.6	21	10	31
Construction Trades Workers	14,140	19,550	5,410	38.3	541	256	797
Brickmasons and Blockmasons	290	410	120	41.4	12	4	16
Carpenters	1,990	2,820	830	41.7	83	32	115
Cement Masons and Concrete Finishers	780	1,140	360	46.2	36	16	52
Construction Laborers	3,500	4,770	1,270	36.3	127	47	174
Paving, Surfacing, and Tamping Equipment Operators	50	80	30	60.0	3	1	4
Operating Engineers and Other Construction Equipment Operators	550	770	220	40.0	22	14	36
Electricians	1,590	2,180	590	37.1	59	32	91
Insulation Workers	80	100	20	25.0	2	2	4
Painters, Construction and Maintenance	1,080	1,450	370	34.3	37	16	53
Plumbers, Pipefitters, and Steamfitters	1,080	1,540	460	42.6	46	25	71
Plasterers and Stucco Masons	230	320	90	39.1	9	4	13
Reinforcing Iron and Rebar Workers	80	110	30	37.5	3	2	5
Structural Iron and Steel Workers	60	90	30	50.0	3	1	4
Helpers, Construction Trades	640	920	280	43.8	28	27	55
Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	170	250	80	47.1	8	7	15
Helpers—Carpenters	250	370	120	48.0	12	11	23

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percent-	New Jobs	Net Replacements	Total
Helpers—Pipelayers, Plumbers, Pipefitters, and Steamfitters	150	220	70	46.7	7	6	13
Welders, Cutters, Solderers, and Brazers	810	1,000	190	23.5	19	23	42
Plant and System Operators	1,780	1,990	210	11.8	21	51	72
Surveyors	70	80	10	14.3	1	3	4
Engineering Managers	360	390	30	8.3	3	7	10
Supervisors, Construction and Extraction Workers	2,090	2,850	760	36.4	76	36	112
First Line Supervisors / Managers of Construction Trades and Extraction Workers	2,090	2,850	760	36.4	76	36	112
Structural Metal Fabricators and Fitters	50	50	0	0.0	0	1	1
Machinists	460	560	100	21.7	10	11	21
Source: California Employment Development Department, 2007.							

Table 5.11-11 Available Labor: Long Beach Metropolitan Statistical Area (Los Angeles County)

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percentage	New Jobs	Net Replacements	Total
Construction Managers	7,300	7,950	650	8.9	65	132	197
Construction Trades Workers	130,460	140,910	10,450	8.0	1,045	2,352	3,397
Brickmasons and Blockmasons	2,210	2,370	160	7.2	16	33	49
Carpenters	24,680	27,330	2,650	10.7	265	402	667
Cement Masons and Concrete Finishers	3,870	4,370	500	12.9	50	78	128
Construction Laborers	24,820	25,880	1,060	4.3	106	330	436
Paving, Surfacing, and Tamping Equipment Operators	590	660	70	11.9	7	8	15
Operating Engineers and Other Construction Equipment Operators	4,080	4,580	500	12.3	50	105	155
Electricians	13,600	14,550	950	7.0	95	269	364
Insulation Workers	910	910	0	0.0	0	27	27
Painters, Construction and Maintenance	12,410	13,440	1,030	8.3	103	189	292
Plumbers, Pipefitters, and Steamfitters	12,580	13,780	1,200	9.5	120	289	409
Plasterers and Stucco Masons	2,810	2,930	120	4.3	12	51	63
Reinforcing Iron and Rebar Workers	1,210	1,300	90	7.4	9	24	33
Sheet Metal Workers	2,810	2,990	180	6.4	18	67	85
Helpers' Construction Trades	7,070	7,500	430	6.1	43	293	336

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percentage	New Jobs	Net Replacements	Total
Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	1,370	1,500	130	9.5	13	57	70
Helpers—Carpenters	960	1,100	140	14.6	14	40	54
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	400	430	30	7.5	3	17	20
Welders, Cutters, Solderers, and Brazers	8,520	8,270	-250	-2.9	0	241	241
Plant and System Operators	4,700	4,890	190	4.0	19	136	155
Surveyors	730	810	80	11.0	8	25	33
Engineering Managers	6,660	7,270	610	9.2	61	133	194
Supervisors, Construction and Extraction Workers	13,480	14,600	1,120	8.3	112	229	341
First Line Supervisors/Mgrs of Construction Trades & Extraction Workers	13,480	14,600	1,120	8.3	112	229	341
Structural Metal Fabricators and Fitters	1,270	1,380	110	8.7	11	25	36
Machinists	9,550	9,090	-460	-4.8	0	223	223
Source: California Employment Development Department, 2007.							

**Table 5.11-12 Available Labor: Ontario Metropolitan Statistical Area
(San Bernardino/Riverside Counties)**

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percentage	New Jobs	Net Replacements	Total
Construction Managers	3,160	4,370	1,210	38.3	121	57	178
Construction Trades Workers	106,020	135,250	29,230	27.6	2,923	1,876	4,799
Brickmasons and Blockmasons	2,630	3,760	1,130	43.0	113	39	152
Carpenters	28,050	34,500	9,450	33.7	945	457	1,402
Cement Masons and Concrete Finishers	5,170	3,950	1,780	34.4	178	104	282
Construction Laborers	20,010	25,290	5,280	26.4	528	266	794
Paving, Surfacing, and Tamping Equipment Operators	230	280	50	21.7	5	3	8
Operating Engineers and Other Construction Equipment Operators	4,080	3,980	1,190	29.9	119	102	221
Electricians	6,730	7,860	1,130	16.8	113	133	246
Insulation Workers	220	240	20	9.1	2	7	9
Painters, Construction and Maintenance	7,570	9,410	1,840	24.3	184	115	299
Plumbers, Pipefitters, and Steamfitters	4,660	5,650	990	21.2	99	107	206
Plasterers and Stucco Masons	1,520	1,830	310	20.4	31	28	59
Reinforcing Iron and Rebar Workers	1,580	2,040	460	29.1	46	31	77
Sheet Metal Workers	3,930	3,480	550	18.8	55	70	125
Helpers' Construction Trades	4,040	5,350	1,310	32.4	131	168	299

Occupational Title	Annual Average Employment		Employment Change		Average Annual Job Openings		
	2004	2014	Number	Percentage	New Jobs	Net Replacements	Total
Helpers— Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	1,450	2,000	550	37.9	55	60	115
Helpers—Carpenters	860	1,220	360	41.9	36	36	72
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	700	880	180	25.7	18	29	47
Welders, Cutters, Solderers, and Brazers	3,920	4,420	470	11.9	47	112	159
Plant and System Operators	1,810	2,150	340	18.8	34	53	87
Surveyors	450	540	90	20.0	9	16	25
Engineering Managers	1,110	1,480	370	33.3	37	22	59
Supervisors, Construction and Extraction Workers	3,810	13,450	3,640	37.1	364	167	531
First Line Supervisors/Mgrs of Construction Trades & Extraction Workers	9,810	13,450	3,640	37.1	364	167	531
Structural Metal Fabricators and Fitters	930	1,040	110	11.8	11	22	33
Machinists	2,740	3,090	350	12.8	35	64	99
Source: California Employment Development Department, 2007.							

Table 5.11-13 Available Construction Labor by Skill

Trade	Available Workers By Metropolitan Area				Total Workers Needed (Peak)
	Bakersfield (Kern)	Los Angeles/ Long Beach	San Bernardino/ Riverside	Total for Three Areas	
Welders, Ironworkers, Millwrights, Boilermakers	960	8,710	4,570	14,040	152
Carpenters, Bricklayers, Masons	2,280	26,890	5,330	34,500	84
Electricians	1,590	13,600	6,730	21,920	253
Laborers (Construction)	3,500	24,820	45,300	73,620	65
Pipefitters, Sprinklerfitters	1,080	12,580	10,310	23,970	339
Painters, Plasterers	1,310	15,220	20,330	36,860	15
Unskilled Labor	3,500	24,820	45,300	73,620	44
Equipment Operators, Operating Engineers	550	4,080	10,170	14,800	108
Insulation Workers	80	910	220	1,210	56
Supervisors, Planners, Management, Administration	4,180	26,960	22,520	53,660	8
Source: California Employment Development Department, 2007					

The availability of over 350,000 construction workers in Kern, Los Angeles, and San Bernardino counties alone would be more than sufficient to meet the Project peak needs of 836 employees. Therefore, Project construction labor demand would not significantly affect the availability of construction labor in the region.

As described above, it was assumed that few if any construction workers would permanently relocate to the nearby communities of California City, Mojave, Rosamond, Ridgecrest, and Tehachapi during the proposed Project construction phase. This is because construction workers typically commute relatively long distances to their work sites. Should some construction workers choose to stay temporarily at a local area motel or hotel, there are at least 12 hotels in the vicinity (California City, Mojave, Tehachapi, Rosamond, and Ridgecrest) with rooms available to meet this demand. Should a portion of the workers relocate to the area for the duration of their construction assignments, impacts to available housing and population would be minor, as vacancy rates in California City, Mojave, Ridgecrest, and Tehachapi are estimated at 13.8, 22.0, 13.1, and 13.0 percent, respectively.

With the exception of some specialized trades that likely will be drawn from the greater Los Angeles area, it is anticipated that the Project construction work force would be drawn from the local area (e.g., California City, Tehachapi, Ridgecrest, Rosamond, and Mojave), the communities of the greater Bakersfield area, the Antelope Valley (e.g., Lancaster, and Palmdale), and perhaps Barstow and the

Victor Valley (e.g., Victorville, Apple Valley, Hesperia) in San Bernardino County. Therefore, Project construction labor demand would not significantly affect the availability of construction labor in the region.

Population

As noted above, it is anticipated that the vast majority of the construction workforce (a peak workforce of 836 workers and an average of 477 workers per day over the 25-month duration of BSEP construction) would commute to the Project site rather than relocate. Thus, impacts to population are expected to be minimal, and the Project would not induce substantial growth. Additionally, the Project is located in a remote, uninhabited area, and would not displace existing populations.

Housing

Because the BSEP construction workforce largely will commute to the area rather than relocate, increased demand on the local housing supply are expected to be negligible. In addition, because of the availability of hotel and motel accommodations, and the housing vacancy rates in nearby communities as described above, workers who choose to relocate temporarily would not be expected to have a significant impact on housing availability.

Employment and Economy

Project construction would create a temporary, positive impact on the local economic base and fiscal resources. Construction employment wages and salaries would provide additional income to the area, as would local expenditures for construction materials and services. The Project construction payroll has been estimated at \$165 million total (approximately \$79 million annually), including the power generating facilities and linear facilities (transmission line and gas pipeline). Local expenditures for construction materials and supplies are estimated to total \$14.5 million. These include everything from permanent materials and equipment to small tools and consumables, concrete, rebar, formwork materials, asphalt, fencing, and local purchases in support of the field staff.

BSEP construction is expected to create an average of 477 and peak of 836 direct jobs. These direct jobs will create both indirect and induced secondary employment in the region. Indirect employment is defined as employment that will be generated by the purchase of goods and services required by the Project. Induced employment is defined as employment that will be generated by the purchase of goods and services by the businesses that are indirectly supported by the Project.

An Input-output model (IMPLAN Professional™) was used to estimate economic impacts within Kern County and surrounding counties based on Project construction-phase expenditures that would benefit the local economies. For the purpose of the input-output model, the following Project expenditures (rounded values) were assumed to be the project expenditures which would benefit the local economies: 1) Total Craft Payroll (\$151,000,000); 2) Total Staff Payroll (\$14,500,000); and 3) Local Expenditures (\$14,500,000). The summation of these expenditures; or \$180,000,000 was used as an input into the model to predict economic impacts.

Based on the assumptions stated above (during the 25-month construction phase), the estimated annual beneficial economic output impacts within Kern County and surrounding counties would be as follows (rounded values):

Direct expenditures	=	\$ 180,000,000
Indirect regional revenues	=	\$ 55,000,000
Induced regional revenues	=	\$ 69,000,000
Total impact	=	\$ 304,000,000

The top ten industries that would benefit the most in terms of economic output impacts include: 1) Other new construction; 2) Architectural and Engineering Services; 3) Owner-Occupied Dwellings; 4) Petroleum Refineries; 5) Wholesale Trade; 6) Offices of Physicians – Dentists and Other Health; 7) Real Estate; 8) Food Services and Drinking Places; 9) Oil and Gas Extraction; and 10) Insurance Carriers.

Also, using the assumptions stated above, during the construction phase, the Project's estimated annual job creation within Kern County and surrounding counties would be as follows:

Direct (Project) jobs	=	477 workers
Indirect jobs	=	118 workers
Induced jobs	=	180 workers
Total jobs creation	=	775 workers

These additional jobs would result from the BSEP's local construction expenditures as well as from spending by local construction workers. These indirect and induced jobs are expected to be filled both locally and regionally, and would result in positive economic impacts.

Public Services

No significant impacts are expected on local public services during construction. Current police, fire, and medical facilities should be sufficient to handle emergencies at the site. A security fence would be erected around the entire perimeter of the construction site; no significant adverse impacts would be expected on the Kern County Sheriff's Department or the Kern County Fire Department. In addition to Kern County emergency services, the California City Police and Fire Departments would provide emergency response service in the case of an extreme emergency, or if requested by Kern County. Fire extinguishers will be available on site during "hot work," and personnel will be trained in their proper use; no significant impacts would be expected on local fire fighting agencies. Communication equipment will be available on site at all times to contact outside agencies if emergencies arise. No significant impacts are expected on local public social and medical services; construction workers would be expected to obtain health insurance from their employers.

Utilities

Although minimal or no population impacts are expected, there would be some demands on utility services during construction as a result of onsite activities. BSEP construction would require potable water and electrical utility supplies and would generate wastewater and solid waste. Utility hookups would be available at the site for electrical service, but water would be obtained from onsite wells. Sanitary wastes generated during construction would be collected in portable, self-contained toilets and hauled to an appropriate disposal site. No significant impacts would be expected.

Schools

The overwhelming proportion of the Project construction workforce would be expected to commute to the site daily. Further, construction workers who relocate temporarily for a work assignment typically do not bring their families with them. Finally, the nearest school to the Project site is approximately nine miles away and school activities would not be affected by Project construction activities (e.g., equipment noise, air emissions). Thus, BSEP construction would have very minor impact on local schools.

Fiscal Resources

Local expenditures on construction materials, supplies, and equipment are estimated to total \$14.5 million, which, at the Kern County sales tax rate of 7.25 percent, would generate approximately \$1.05 million annually in sales tax revenue. The 7.25 percent Kern County sales tax rate is divided into 6.25 percent for the State; 0.75 percent for Kern County operations, and 0.25 percent to the Kern County Transportation Fund. Based on local construction expenditures of \$14.5 million, the sales tax generated for the State is estimated at \$0.9 million; Kern County operations would receive approximately \$109,000; and County Transportation Fund sales tax revenues are estimated at approximately \$36,000. Fiscal impacts associated with operation of the Project are considered beneficial.

5.11.3.3 Operation

The following subsections describe the potential impacts of BSEP operations on socioeconomic conditions and resources in Kern County.

Project Work Force and Population

The Project is expected to employ a total of 66 workers during operation. Some of the Project operations jobs may involve relocation to the area for workers with specialized technical or managerial skills. Given the moderate size of the Project work force and the likelihood that some of these workers already would be residents of the local area, Project population impacts would be less than significant.

Housing

Operation of the Project is expected to have an insignificant impact on housing because of the small number of workers needed for operation of the plant and the availability of local housing (e.g., current vacancy rates of 13.8 percent in California City). The Project would be constructed in a rural area and would not physically alter any residential or commercial community. Residential property values would not be expected to be negatively impacted by the BSEP. Because the Project site location is away from residences and the Project-related population increase is expected to be minimal, no substantial change is expected in community interaction patterns, social organization, social structures, or social institutions.

Employment

As stated above, 66 full-time employees would be needed to operate and maintain the BSEP facility, including 32 operations and power block routine maintenance staff; 24 solar field project and maintenance staff; 8 clerical and technical staff; and 2 administrative and management staff. Most of the 66 employees will be hired locally with some specialized employees coming from outside the local area.

An Input-output model (IMPLAN Professional™) was used to estimate economic impacts within Kern County and surrounding counties based upon operation-phase Project expenditures which would benefit the local economies. For the purpose of the input-output model, the annual expenditures that would benefit local economies were assumed to be \$6 million annually; and this figure was used as an input into the model to predict employment and economic impacts.

Based upon the Implan model results, (during the operation phase), the Project's estimated annual job creation (throughout the operation phase) within Kern County and surrounding counties as follows:

Direct jobs (Project) = 66 workers

Indirect jobs = 25 workers

Induced jobs = 73 workers

Total jobs creation = 164 workers

Public Services

BSEP operation would slightly increase demands on local police, fire, medical, and other emergency services. Population immigration is expected to be minimal and one additional industrial facility (BSEP) with a modest size workforce would not be expected to have a significant adverse impact on the capacity of most local public services. Additionally, the services provided by Kern County Sheriff and Fire Services could be enhanced by emergency services in California City, if requested.

Utilities

The Project would utilize site groundwater and thus would have no impact on local water utilities. Project sanitary wastes would be disposed of by an onsite septic system and leach field and thus would have no impact on the availability of local wastewater treatment capacity. The Project would utilize natural gas for start-up and for heat transfer fluid (HTF) freeze protection. A new pipeline would be constructed to connect the Project with an existing SCG gas line; Project impacts on natural gas supply/service will be less-than-significant. The Project also will require electrical power for operational activities during nighttime hours when the facility is not generating its own power; impacts on electrical supply/service would be less-than-significant.

Schools

Operation of the Project is expected to have an insignificant local and regional impact on schools because of the relatively small number of workers needed for operation of the plant (maximum of 66 employees).

The proposed Project would be required to pay a school impact fee to the Mojave Unified School District. The school impact fee for industrial projects in the Mojave School District is \$0.36/square foot of new industrial floor space (CH2M HILL, 2006). Based on a total square footage of 28,800 square feet, the proposed Project would be required to pay a total school impact fee of approximately \$10,400 to the Mojave Unified School District.

Fiscal Resources

At present, there is no property tax on solar components (mirrors, solar boiler, heat exchangers) improvements by law (Section 73 of the California Taxation and Revenue Code). Components included under the exemption include storage device, power conditioning equipment, transfer equipment, and parts. The proposed Project property value is estimated at roughly \$1 billion. After applying the California solar equipment property tax exemption, the taxable portion of the property value would be approximately \$40 million. Assuming a Kern County tax rate of 1.1 percent, the first operational year (2010) would generate an estimated \$440,000 in property taxes. Accounting for depreciation during a 20-year life of the Project (through year 2030), (and assuming the salvage value would be 50 percent of present value after 20 years) the total property taxes that would be paid to Kern County during the operation phase (2010 to 2030) would be approximately \$6,930,000. These taxes would be distributed among local agencies and programs in Kern County, as outlined in Table 5.11-8. Fiscal impacts associated with operation of the Project are considered beneficial.

The plant is expected to begin operation in the third quarter of 2011. During operation, it is expected that local purchases for materials, supplies, equipment, and services would total approximately \$6 million annually. Applying the Kern County sales tax rate of 7.25 percent, approximately \$435,000 would be generated annually in local sales tax as a direct result of the Project, or approximately \$8.7 million for the life of the Project (based on the year 2030 for estimation purposes). The 7.25 percent Kern County sales tax rate is divided into 6.25 percent for the State; 0.75 percent for Kern County operations, and 0.25 percent to the Kern County Transportation Fund. Based on annual non-labor expenditures of \$6 million, the sales tax generated annually is estimated at approximately \$375,000 for the State; \$45,000 for Kern County operations; and \$15,000 for the Kern County Transportation Fund.

5.11.3.4 Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low income Populations" was signed by then-President Bill Clinton on February 11, 1994. The purpose of this Executive Order is to identify and address whether high and adverse human health or environmental effects are likely to fall disproportionately on minority and/or low income populations of the community.

According to the guidelines established by the EPA to assist Federal agencies to develop strategies to address this circumstance, a minority and/or low income population exists if the minority and/or low income population percentage of the affected area is 50 percent or more of the area's general population; Council on Environmental Quality (CEQ) guidance additionally suggests determining whether minority and/or low income populations in potentially affected areas are present in proportions meaningfully greater than those of the general population of the area. The thresholds for poverty level for an individual and a family of four in 2000 were income levels of \$8,501 and \$17,029, respectively (U.S. Census Bureau, 2000). The CEQ defines the term "minority" as persons from any of the following groups: Black/African American; Asian; Native Hawaiian or Other Pacific Islander; American Indian or Alaska Native; and Hispanic, regardless of race. Additionally, for the purposes of this analysis, "minority" also includes all other nonwhite racial categories such as "some other race" and "two or more races."

The Federal guidelines set forth a three-step screening process:

1. Identify which impacts of the Project are high and adverse;
2. Determine if minority or low income populations exist within the high and adverse impact zones; and
3. Examine the spatial distribution of high and adverse impact areas to determine if these impacts are likely to fall disproportionately on the minority and/or low income population.

To assess the potential for disproportionate environmental impacts on minority or low income populations as a result of the Project, population, poverty, and minority data within a six-mile radius of the Project site were gathered using database and mapping software provided by the U.S. Census Bureau. The Project site is located entirely within census block group 55.03.01. Five census block groups located adjacent to block group 55.03.01 are also at least partially within the six-mile radius, including block groups 52.02.01, 55.03.02, 55.04.04, 55.05.02, and 60.04.01. Of these block groups, one block group, 55.04.04, has a zero population, so it has been eliminated from further discussion in this analysis. The majority of block groups within the six-mile radius were generally sparsely populated with population densities well below that of Kern County and similar to that of California City.

As shown in Table 5.11-14, as of 2000 approximately half of the residents of Kern County were considered to be part of a minority population. Figure 5.11-2 illustrates the proportion of the population in each block group that was considered minority. The proportions of minority populations in census block groups located within the six-mile radius ranged between 17.4 and 40.1 percent. Census block group 52.02.01, which contains the Project site, had a substantially lower minority population (18 percent) than the surrounding area and county as a whole. The block group having the highest minority levels was 55.05.02, which is located partially within California City, approximately five miles south of the Project site. However, at 40.1 percent, this proportion was substantially lower than the 50.5 percent total minority proportion of the Kern County population as a whole. California City had total minority populations less than Kern County as a whole at 38.7 percent. There were no block groups within the six-mile radius with meaningfully greater minority populations than that within the general population of the county. Therefore, the Project area is not considered to contain minority populations that would be of concern for environmental justice analysis.

Table 5.11-14 illustrates the proportion of people with income considered below poverty (low income population) in the census blocks within a six-mile radius of the Project site, potentially affected regional population centers, and Kern County in 2000. Figure 5.11-3 illustrates the proportion of the population below the poverty level for each block group. The proportion of the low income population in the study area ranged from 8.5 to 27.0 percent. As with minority populations, block group 52.02.01, containing the Project site, had the lowest proportion of the low income population. The highest proportion of low income individuals occurred in census block group 52.02.01, which is located approximately 2.5 miles north of the Project site. Although not constituting 50 percent or more of the general population, the proportion of individuals living below poverty levels in this block group (27.0 percent) is considered meaningfully greater (in this case almost seven percent higher) than the Kern County average (20.8).

Table 5.11-14 Environmental Justice Characteristics

Geographic Area (Census Block Group)	Total Population	Total Minority (Percentage Minority)	Proportion of the Population Living Below the Poverty Level
52.02.01	792	138 (17.4%)	27.0%
<i>55.03.01</i>	<i>551</i>	<i>99 (18.0%)</i>	8.5%
55.03.02	713	211 (29.6%)	14.6%
55.05.02	1,141	464 (40.1%)	20.6%
60.04.01	797	169 (21.2%)	21.1%
California City	8,385	3,249 (38.7%)	17.3%
Kern County	661,645	334,455 (50.5%)	20.8 %
Source: U.S. Bureau of the Census 2000. Note: Italicized census block group contains the Project site.			

The primary environmental justice issues for power plant siting and development would be related to potential air emissions, noise levels, and water use that could adversely affect the health or environmental quality of the local community. These issues are discussed in detail in other sections of this AFC. Within the context of environmental justice, impacts are determined by evaluating whether the Project will have a disproportionate high and adverse impact on low income and minority populations.

The proposed Project is not expected to disproportionately impact low income or minority populations, based on a number of factors. The Project site is located more than six miles from a census tract with a minority or low income population exceeding 50 percent of the tract total or a tract with a minority population meaningfully greater than that of the general population of Kern County. Although census block group 55.01.02 had a low income population nearly seven percent greater than the county estimate, it is located 2.5 miles from the Project site and would not be likely to disproportionately experience Project-related impacts. Additionally, the Project site is located in an undeveloped area away from residential areas and population centers and would likely affect very few, if any, nearby populations, regardless of ethnic or financial standing.

5.11.3.5 Cumulative Impacts

The potential for cumulative socioeconomic impacts exists where there are multiple projects proposed in an area which have overlapping construction schedules and/or project operations that could impact similar resources. Projects with overlapping construction schedules and/or operations collectively could result in a demand for labor that cannot be met by the Project area labor pool, which could lead to an influx of nonlocal workers and their dependents. This population increase could impact socioeconomic resources.

Two cumulative projects have been identified: the Pine Tree Wind Development Project and the Barren Ridge-Castaic Transmission Project. In early 2008, the Pine Tree project is in the early stages of construction and the Barren Ridge-Castaic project is in the early portions of the environmental review process. Even if there is some overlap in construction schedules among the BSEP and the other two

projects, all three projects would be expected to draw on the large regional construction work force in southern California. BSEP construction and operation are not expected to lead to more than minimal population immigration (construction workers and families) and the Project will contribute positively to the local economy, e.g., through increased property and sales tax revenues. Thus, the BSEP would not be expected to contribute substantially to significant adverse cumulative socioeconomic impacts during either its construction or operations phase.

5.11.4 Mitigation Measures

No significant adverse socioeconomic impacts have been identified and thus, no mitigation measures are required.

5.11.5 References

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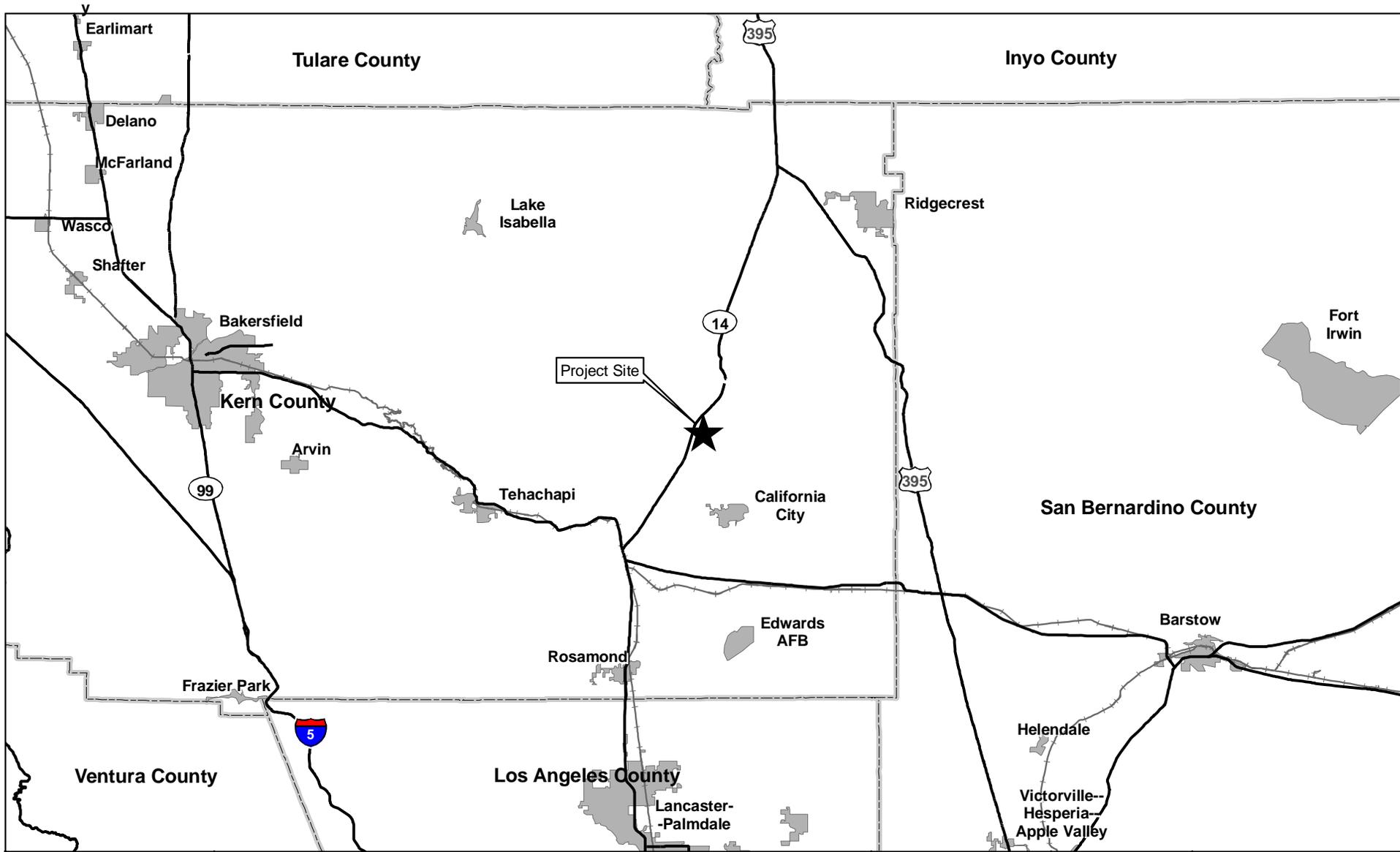
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Legend

- County Boundary
- Highway
- Urban Area
- Railroad

1:1,000,000

0 10 20 30 40 Miles

Beacon Solar Energy Project

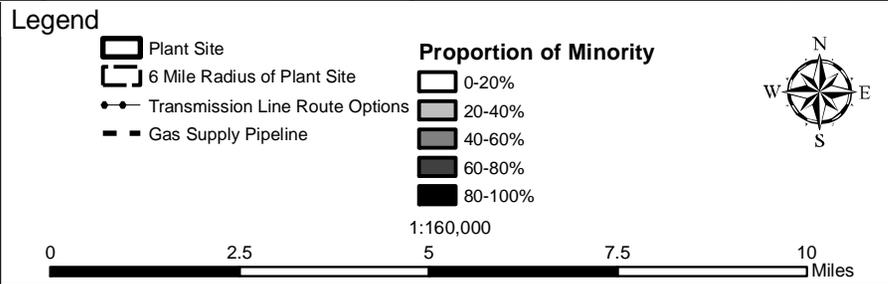
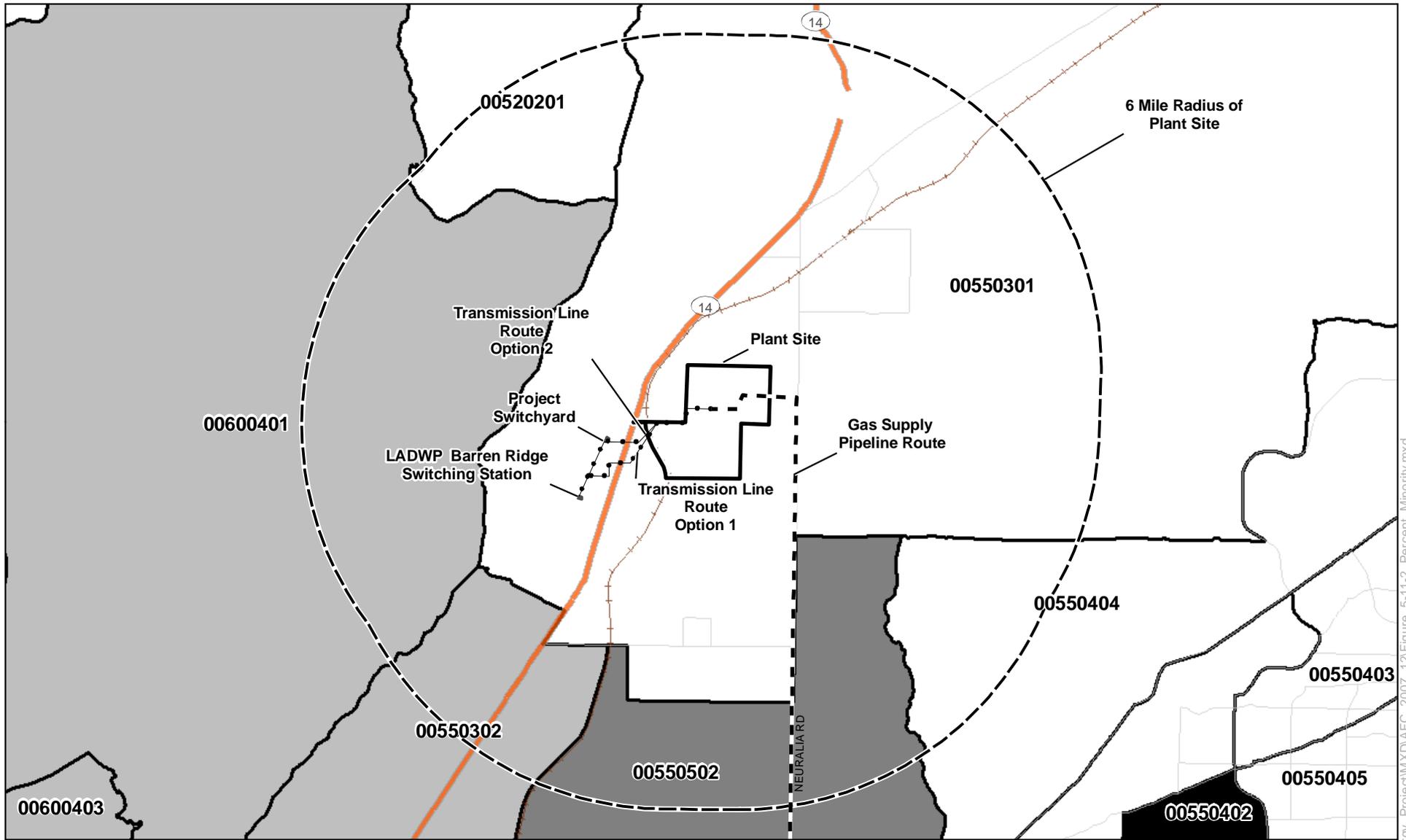
Figure 5.11-1
Regional Socioeconomic Setting

Source: ESRI 2007

Beacon Solar

ENSR | AECOM

Project: 10056-014
Date: March 2008



Beacon Solar Energy Project

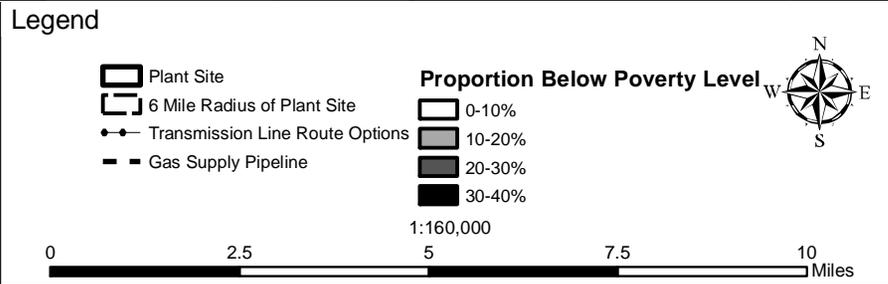
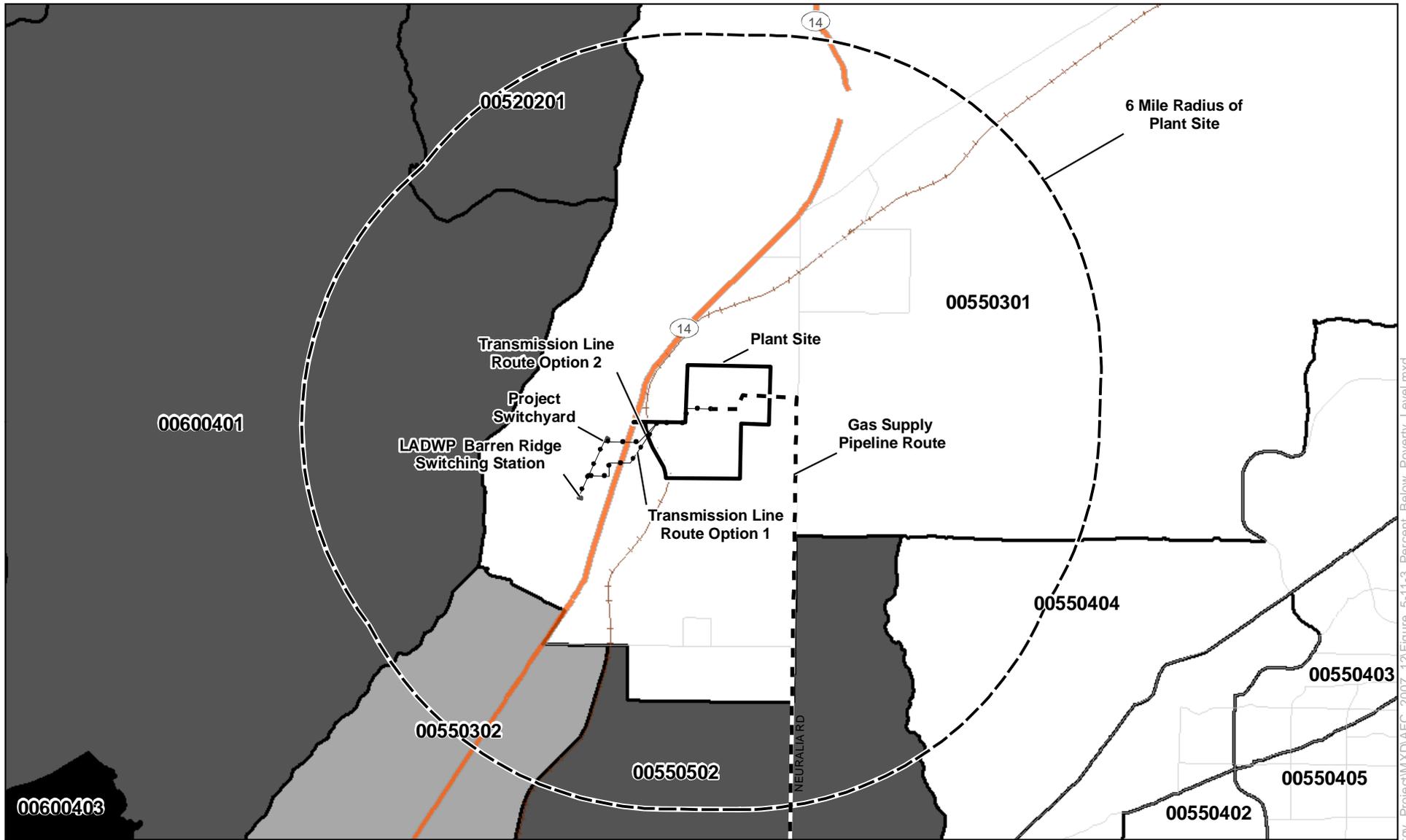
**Figure 5.11-2
Percent Minority
by Block Group**

Source: Tetra Tech 2007; US Census 2000;
Kern County 2007

Beacon Solar

ENSR | AECOM

Project: 10056-014
Date: March 2008



Beacon Solar Energy Project

Figure 5.11-3
Percent Below Poverty Level
by Census Block Group

Source: Tetra Tech 2007; US Census 2000;
 Kern County 2007

Beacon Solar

ENSR | AECOM

Project: 10056-014
 Date: March 2008

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