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5.10 Socioeconomics

This section describes and evaluates the socioeconomic effects of the proposed Alamitos Energy Center (AEC). Section 5.10.1 describes the project setting, and Section 5.10.2 discusses the affected environment. Section 5.10.3 presents an analysis of the socioeconomic effects of the project. Section 5.10.4 addresses the topic of environmental justice. Section 5.10.5 evaluates potential cumulative effects on socioeconomics, and Section 5.10.6 discusses mitigation measures. Section 5.10.7 describes the laws, ordinances, regulations, and standards (LORS) that apply to the project, and Section 5.10.8 presents agency contacts. Section 5.10.9 discusses permit requirements, and Section 5.10.10 contains the references used to prepare this section.

5.10.1 Setting

AES Southland Development, LLC (AES-SLD) proposes to construct, own, and operate the AEC—a natural-gas-fired, air-cooled, combined-cycle, electrical generating facility in Long Beach, Los Angeles County, California. The proposed AEC will have a net generating capacity of 1,936 megawatts (MW) and gross generating capacity of 1,995 MW.[1] The AEC will replace and be constructed on the site of the existing Alamitos Generating Station.

The AEC will consist of four 3-on-1 combined-cycle gas turbine power blocks with twelve natural-gas-fired combustion turbine generators, twelve heat recovery steam generators, four steam turbine generators, four air-cooled condensers, and related ancillary equipment. The AEC will use air-cooled condensers for cooling, completely eliminating the existing ocean water once-through-cooling system. The AEC will use potable water provided by the City of Long Beach Water Department (LBWD) for construction, operational process, and sanitary uses but at substantially lower volumes than the existing Alamitos Generating Station has historically used. This water will be supplied through existing onsite potable water lines.

The AEC will interconnect to the existing Southern California Edison (SCE) 230-kilovolt (kV) switchyard adjacent to the north side of the property. Natural gas will be supplied to the AEC via the existing offsite 30-inch-diameter pipeline owned and operated by Southern California Gas Company (SoCalGas) that currently serves the Alamitos Generating Station. Existing water treatment facilities, emergency services, and administration and maintenance buildings will be reused for the AEC. The AEC will require relocation of the natural gas metering facilities and construction of a new natural gas compressor building within the existing Alamitos Generating Station site footprint. Stormwater will be discharged to two retention basins and then ultimately to the San Gabriel River via existing stormwater outfalls.

The AEC will include a new 1,000-foot process/sanitary wastewater pipeline to the first point of interconnection with the existing LBWD sewer system and will eliminate the current practice of treatment and discharge of process/sanitary wastewater to the San Gabriel River. The project may also require upgrading approximately 4,000 feet of the existing offsite LBWD sewer line downstream of the first point of interconnection, therefore, this possible offsite improvement to the LBWD system is also analyzed in this AFC. The total length of the new pipeline (1,000 feet) and the upgraded pipeline (4,000 feet) is approximately 5,000 feet.

To provide fast-starting and stopping, flexible generating resources, the AEC will be configured and deployed as a multi-stage generating (MSG) facility. The MSG configuration will allow the AEC to generate power across a wide and flexible operating range. The AEC can serve both peak and intermediate loads with the added capabilities of rapid startup, significant turndown capability (ability to turn down to a low load), and fast ramp rates (30 percent per minute when operating above minimum gas turbine turndown capacity). As California's intermittent renewable energy portfolio continues to grow, operating in either load following or partial shutdown mode will become necessary to maintain electrical grid reliability, thus placing an

[1] Referenced to site ambient average temperature conditions of 65.3 degrees Fahrenheit (°F) dry bulb and 62.7°F wet bulb temperature without evaporative cooler operation.

increased importance upon the rapid startup, high turndown, steep ramp rate, and superior heat rate of the MSG configuration employed at the AEC.

By using proven combined-cycle technology, the AEC can also run as a baseload facility, if needed, providing greater reliability to meet resource adequacy needs for the southern California electrical system. As an in-basin generating asset, the AEC will provide local generating capacity, voltage support, and reactive power that are essential for transmission system reliability. The AEC will be able to provide system stability by providing reactive power, voltage support, frequency stability, and rotating mass in the heart of the critical Western Los Angeles local reliability area. By being in the load center, the AEC also helps to avoid potential transmission line overloads and can provide reliable local energy supplies when electricity from more distant generating resources is unavailable.

The AEC's combustion turbines and associated equipment will include the use of best available control technology to limit emissions of criteria pollutants and hazardous air pollutants. By being able to deliver flexible operating characteristics across a wide range of generating capacity, at a relatively consistent and superior heat rate, the AEC will help lower the overall greenhouse gas emissions resulting from electrical generation in southern California and allow for smoother integration of intermittent renewable resources.

Existing Alamitos Generating Station Units 1–6 are currently in operation. All six operating units and retired Unit 7 will be demolished as part of the proposed project. Construction and demolition activities at the project site are anticipated to last 139 months, from first quarter 2016 until third quarter 2027. The project will commence with the demolition of retired Unit 7 and other ancillary structures to make room for the construction of AEC Blocks 1 and 2. The demolition of Unit 7 will commence in the first quarter of 2016. The construction of Block 1 is scheduled to commence in the third quarter of 2016 and construction of Block 2 is scheduled to commence in the fourth quarter of 2016. The demolition of existing Units 5 and 6 will make space for the construction of AEC Block 3. AEC Block 3 construction is scheduled to commence in the first quarter of 2020 and will be completed in the second quarter of 2022. The demolition of existing Units 3 and 4 will make space for the construction of AEC Block 4. AEC Block 4 construction is scheduled to commence in the second quarter of 2023 and will be completed in the fourth quarter of 2025. The demolition of remaining existing units is scheduled to commence in the third quarter of 2025.

Construction of the AEC will require the use of onsite laydown areas (approximately 8 acres dispersed throughout the existing site) and an approximately 10-acre laydown area located adjacent to the existing site. The adjacent 10-acre laydown area will be shared with another project being developed by the Applicant (Huntington Beach Energy Project [HBEP] 12-AFC-02). Due to the timing for commencement of construction for these two projects, the adjacent laydown area will already be in use for equipment storage before AEC construction begins.

5.10.2 Affected Environment

The region of influence for purposes of evaluating the socioeconomic impacts associated with the AEC is the city of Long Beach and Los Angeles County.

5.10.2.1 Population

Los Angeles County has the largest population of any county in the nation and is located in the densely populated southern California region. It is bordered by Kern County to the north, San Bernardino County to the east, Ventura County to the west, and the Pacific Ocean and Orange County to the south (Los Angeles County, 2012).

As of January 1, 2013, Long Beach had an estimated population of 467,646 (Department of Finance [DOF], 2013a). Historical population data for Long Beach, Los Angeles County, and California are summarized in Table 5.10-1. Annual average compounded population growth rates are summarized in Table 5.10-2. During the 1990s, population for Los Angeles County and Long Beach increased at an average annual rate of 0.7 percent—just less than half that of California as a whole. The average annual growth rate for the

13 years from 2000 to 2013 was 0.1 percent for Long Beach and 0.3 percent for Los Angeles County; whereas, the state's growth rate was substantially higher at 0.9 percent. Over the last two decades, both the county and Long Beach have shown slower population growth rates, with Long Beach experiencing a greater slowing of growth than Los Angeles County.

TABLE 5.10-1
Historical and Projected Populations

Area	1990[a]	2000[a]	2010[b]	2013[b]	2020(p)[c,d]	2030(p)[c]
Long Beach	429,321	461,522	462,257	467,646	491,000	NA
Los Angeles County	8,863,052	9,519,330	9,818,605	9,958,091	10,441,441	10,950,335
California	29,758,213	33,873,086	37,253,956	37,966,471	40,643,643	44,279,354

[a]Source: DOF, 2013b
[b]Source: DOF, 2013a
[c]Source: DOF, 2013c
[d]Source: Southern California Association of Governments (SCAG), 2013

NA = Not Available
(p) = projected

TABLE 5.10-2
Historical and Projected Annual Average Compounded Population Growth Rates

Area	1990-2000 (%)	2000-2013 (%)	2013-2020 (%)	2020-2030 (%)
Long Beach	0.7	0.1	0.7	N/A
Los Angeles County	0.7	0.3	0.7	0.5
California	1.3	0.9	1.0	0.9

Source: DOF, 2013a; 2013b; 2013c; SCAG, 2013.

Appendix Tables 5.10A-1 and 5.10A-2 (provided in Appendix 5.10A) show the minority and the low-income population distributions for the census blocks and census tracts that are within a 6-mile radius of the AEC site. The minority population, in the census blocks within the 6-mile radius of the AEC site, comprises 56.6 percent of this total population. The low-income population, in the census tracts within the 6-mile radius of the AEC site, comprises 13.1 percent. The minority data are from the 2010 U.S. Census, and the income data are from the 2010 American Community Survey (ACS) 5-year Estimates. In Long Beach, 46.1 percent of the population is composed of minorities, and 19.1 percent have incomes below the poverty level. Los Angeles County's population is 50.3 percent minority and 15.7 percent low-income (US Census, 2013a; 2013b). Appendix Figures 5.10A-1 and 5.10A-2 (see Appendix 5.10A) show the percent distribution of minority and low-income populations by 2010 census blocks and census tracts within a 6-mile radius of the AEC site.

5.10.2.2 Housing

As of January 1, 2013, Los Angeles County and Long Beach had 3,463,382 and 176,414 housing units, respectively (DOF, 2013a). Table 5.10-3 shows the housing estimates by city, county, and state in 2013. Within Los Angeles County, single-family homes accounted for 1,948,879 units; multi-family dwellings accounted for 1,456,213 units; and mobile homes accounted for 58,290 units (DOF, 2013a). In Long Beach, single-family homes accounted for 84,590 units; multi-family dwellings accounted for 89,478 units; and mobile homes accounted for 2,346 units (DOF, 2013a). New housing authorizations for Los Angeles County totaled 7,468 units in 2010, of which about 32.7 percent were single-family units and 67.3 percent were multi-family units (DOF, 2013d). These authorizations were valued at $2,842,479. The median home price in Los Angeles County and the city of Long Beach in April 2013 was $400,000 and $360,000, respectively (DataQuick, 2013). As of January 1, 2013, vacancy rates for Los Angeles County and Long Beach were

5.9 percent and 7.1 percent, respectively (DOF, 2013a). As such, housing supply is not considered to be limited in Long Beach because the vacancy rate exceeds the federal standard vacancy rate of 5.0 percent.

TABLE 5.10-3
2013 Housing Estimates by City, County, and State

Area	Total Units	Single-Family	Multi-Family	Mobile Homes	Percent Vacant
Long Beach	176,414	84,590	89,478	2,346	7.1
Los Angeles County	3,463,382	1,948,879	1,456,213	58,290	5.9
California	13,785,797	8,983,275	4,243,133	559,389	8.1

Source: DOF, 2013a

5.10.2.3 Economy and Employment

Los Angeles County is part of the Los Angeles-Long Beach-Glendale Metropolitan District (MD). Between 2000 and 2012, employment in the Los Angeles-Long Beach-Glendale MD decreased by 210,300 jobs, or about 5 percent. This 5 percent decrease contrasts with the less than 1 percent decrease in employment at the state level over the same period (California Employment Development Department ([EDD], 2013a). The services, retail trade, government, and manufacturing sectors were the largest contributors to employment in 2000 and 2012. These four sectors accounted for about 76 percent and 77 percent, respectively, of the total industry employment in the MD in 2000 and 2012. During the past 12 years, employment losses were experienced in all but three sectors (mining and logging, retail trade, and services). As shown in Table 5.10-4, on an average annual compounded growth rate basis, the mining and logging sector experienced the largest average annual increase (at 1.8 percent) in employment, while the manufacturing sector had the largest reduction (at -4.2 percent). However, the percentage growth for the mining and logging sector is misleading because the number of workers is so small. The 1.8 percent annual compound growth rate resulted from an increase of 800 workers over a 12-year period, whereas manufacturing's 4.2 percent annual compound decline was the result of a loss of 249,300 workers over the same 12-year period.

TABLE 5.10-4
Employment Distribution in the Los Angeles-Long Beach-Glendale MD, 2000 to 2012

	2000		2012		2000-2012	
Industry	Number of Employees	Employment Share (%)	Number of Employees	Employment Share (%)	Percentage Change (%)	Average Annual Compound Growth Rate (%)
Agriculture	7,700	0.2	5,400	0.1	-29.9	-2.9
Mining and Logging	3,400	0.1	4,200	0.1	23.5	1.8
Construction	131,700	3.2	108,800	2.8	-17.4	-1.6
Manufacturing	615,000	15.1	365,700	9.5	-40.5	-4.2
Wholesale Trade	216,700	5.3	210,900	5.5	-2.7	-0.2
Retail Trade	392,000	9.6	396,800	10.3	1.2	0.1
Transportation, Warehousing and Utilities	174,600	4.3	154,300	4.0	-11.6	-1.0
Information	243,700	6.0	190,300	4.9	-21.9	-2.0
Financial Activities	222,800	5.5	210,200	5.4	-5.7	-0.5
Services	1,491,100	36.5	1,666,300	43.1	11.7	0.9
Government	581,300	14.2	556,800	14.4	-4.2	-0.4
Total Employment	4,080,000	100.0	3,869,700	100.00	-5.2	-0.4

Source: EDD, 2013a

Table 5.10-5 shows 2012 labor force and employment data for Long Beach and Los Angeles County compared to California. Long Beach had a slightly higher unemployment rate than Los Angeles County and the state. The EDD does not project future unemployment rates; therefore, a projection of the future unemployment rate for Long Beach and Los Angeles County is not available.

TABLE 5.10-5
Employment Data, 2012

Area	Labor Force	Employment	Unemployment	Unemployment Rate (%)
Long Beach	236,600	208,200	28,500	12.0
Los Angeles County	4,879,700	4,345,700	534,000	10.9
California	18,494,900	16,560,300	1,934,500	10.5

Source: EDD, 2013b; 2013c

5.10.2.4 Fiscal Resources

The local agency with taxing power is the City of Long Beach. The City of Long Beach's General Fund expenditures and revenues are presented in Table 5.10-6. General Fund revenues increased by 2 percent from fiscal year (FY) 2009-2010 to FY 2010-2011 and by 7 percent from FY 2010-2011 to FY 2011-2012.

In FY 2011-2012, tax revenues comprised 58 percent of total General Fund revenues. Tax revenues increased by 18 percent between FY 2009-2010 and FY 2010-2011, but were relatively stable (increasing by less than one-tenth of 1 percent) between FY 2010-2011 and FY 2011-2012.

TABLE 5.10-6
City of Long Beach General Fund Revenues and Expenditures (in $Millions)

	FY 2009-2010	FY 2010-2011	FY 2011-2012
Revenues			
Taxes	$202.8	$238.6	$238.7
Property Taxes	$66.4	$116.7	$115.5
Sales Taxes	$51.1	$58.1	$58.3
Utility Users Taxes	$39.2	$38.7	$37.1
Other Taxes	$46.1	$25.1	$27.7
Franchise Fees	NA	$24.2	$23.1
Licenses and Permits	$16.8	$16.3	$16.1
Fines and Forfeitures	$17.0	$16.2	$17.8
Use of Money and Property	$16.9	$50.5	$53.3
From Other Agencies	$46.5	$5.0	$4.1
Charges for Services	$27.3	$26.9	$27.0
Other Revenue	$7.7	$6.1	$8.6
Other Financing Sources	$41.3	$24.6	$23.4
Total Revenues	**$376.4**	**$408.4**	**$412.0**

TABLE 5.10-6
City of Long Beach General Fund Revenues and Expenditures (in $Millions)

	FY 2009-2010	FY 2010-2011	FY 2011-2012
Expenditures			
Legislative and Legal	$10.8	$9.7	$10.3
General Government	$14.8	$18.6	$16.0
Public Safety	$272.9	$274.8	$269.1
Public Health	$5.1	$5.4	$5.2
Community and Cultural	$41.8	$40.3	$41.0
Public Works	$28.5	$28.6	$28.7
Debt Service	$9.7	NA	NA
Oil Operations	NA	$7.2	$9.1
Other Financing Uses	$4.3	$120.7	$22.4
Total Expenditures	**$388.0**	**$505.1**	**$401.8**

N/A: Not Available

Source: City of Long Beach 2013a; 2013b; 2013c.

5.10.2.5 Education

Los Angeles County has 88 elementary, high school, and unified school districts (California Department of Education [CDE], 2013a). The area in which the AEC site is located is served by the Long Beach Unified School District, District 4. Students in the district attend Kettering Elementary School, Rogers Middle School, and Wilson High School (Kirk, 2013). Historical and current enrollment figures for the school district are presented in Table 5.10-7. The projected enrollment for 2013-2014 is 80,466 students for the school district as a whole. There has been an average annual compounded decline of 1.7 percent in the 3-year period from FY 2010-2011 through 2013-2014.

TABLE 5.10-7
Historical and Current Enrollment by Grade for Long Beach Unified School District

Grade Level	2010-11	2011-12	2012-13
Kindergarten	6,312	6,339	6,519
First	6,533	6,505	6,267
Second	6,358	6,410	6,239
Third	6,336	6,260	6,337
Fourth	6,237	6,208	6,091
Fifth	6,289	6,121	6,000
Sixth	6,282	6,172	6,028
Seventh	6,400	6,237	6,076
Eighth	6,586	6,311	6,174
Ninth	6,953	6,863	6,517
Tenth	6,918	6,801	6,624
Eleventh	6,694	6,622	6,543
Twelfth	6,918	6,842	6,837
Ungraded Secondary			4
Total	**84,816**	**83,691**	**82,256**

Source: CDE, 2013b

5.10.2.6 Public Services and Facilities

This section describes public services in the project area.

5.10.2.6.1 Law Enforcement

Law enforcement services for the AEC site are provided by the Long Beach Police Department (LBPD). The LBPD has four stations. The station located at 400 West Broadway serves as headquarters. The East Division substation at 4800 Los Coyotes Diagonal, Long Beach, is the nearest station to the project site. The LBPD has 819 full-time sworn officers. The East Division substation has 108 sworn officers. Officers will respond to calls from the field. The LBPD has an average response time to Priority One calls (emergency calls) of less than 5 minutes (Lopez, 2013).

The California Highway Patrol is the primary law enforcement agency for state highways and roads. California Highway Patrol services include law enforcement, traffic control, accident investigation, and the management of hazardous material spills. Long Beach includes a segment of the Pacific Coast Highway. The California Highway Patrol is the primary law enforcement agency for the Pacific Coast Highway; however, the Highway Patrol and LBPD both serve the portions of the Pacific Coast Highway within the Long Beach city limits.

5.10.2.6.2 Fire Protection

The AEC site is within the Long Beach Fire Department (LBFD) jurisdiction. The LBFD has 23 stations, including two Fireboat Stations and the Airport Station. The stations are spread across 52 square miles of the city, broken into specific geographic response zones. The stations are all within 2 miles of each other to create overlapping coverage (DuRee, 2012). The station at 3205 Lakewood Boulevard serves as the headquarters. The primary response station for the project site is Fire Station 22, located at 6340 Atherton Street, approximately 1 mile from the project site. There are five firefighters assigned to this station daily. Multiple stations (14, 4, 8, and 17) within a few miles of the project site also may respond when additional support is needed. Based on the characteristics of the emergency, the initial alarm response from any of these stations would include three engines, a truck, a paramedic rescue, and a Battalion Chief (Zinnen, 2013). LBFD's citywide average response time is about 5.3 minutes. Average response time to an emergency at the project site from Fire Station 22 is about 4.5 minutes (DuRee, 2012).

The LBFD deploys 17 engine companies, 4 truck companies, 8 paramedic rescue ambulances, 5 Basic Life Support (BLS) ambulances, 3 airport rescue firefighting apparatus, 1 urban search and rescue (CATF type 1) unit, 1 hazardous materials (Type 1) unit, two 86-foot fireboats, four 34-foot rescue boats, 3 beach lifeguard patrol units, and 3 Battalion Chief Officers. Each engine, truck, and specialty unit is staffed with four firefighters consisting of one captain, one engineer, one firefighter, and one firefighter/paramedic. Rescue ambulances are staffed with two firefighter/paramedics, and BLS ambulances are staffed with two Emergency Medical Technician (EMT) ambulance operators. Beach lifeguard units are staffed with one marine safety officer, and the airport units are staffed with one engineer each and one firefighter and one captain in a quick response vehicle (DuRee, 2012).

There are 170 nationally accredited and State-certified paramedics in the LBFD. Currently, there are 96 full-time active paramedics in the program. The remaining staff members have kept certification but are not active within the Advanced Life Support (ALS) program (engineers and captains). Fire Station 22 is a Paramedic Assessment Engine and has one paramedic assigned to the apparatus daily with full scope of practice under Los Angeles County Assessment Engine guidelines. All firefighters on the LBFD are certified EMTs (DuRee, 2012).

The LBFD has mutual and automatic aid agreements with the Los Angeles County Fire Department and the Orange County Fire Authority (DuRee, 2012). In the event of an emergency on the project site requiring additional resources, Stations 17, 42, and 42 of the Orange County Fire Authority would be the responding stations (DuRee, 2012).

5.10.2.6.3 Emergency Response

All firefighters and stations are capable of managing a hazardous materials related incident. Fire Station 24 and Fire Station 19 house specialized apparatus for hazardous materials response, and the personnel assigned to these stations are certified as hazardous materials technicians. These resources can be deployed citywide when requested and, under certain circumstances, are available to respond to a regional request.

5.10.2.6.4 Hospitals

There are six hospitals in Long Beach that offer emergency room services and that accept patients from the LBFD's ALS and BLS systems (DuRee, 2012). The Los Alamitos Medical Center and the Community Hospital of Long Beach are the nearest hospitals to the AEC site (DuRee, 2012). The Los Alamitos Medical Center is at 3751 Katella Avenue in Alamitos, and the Community Hospital of Long Beach is located at 1720 Termino Avenue in Long Beach. In the event of a traumatic injury at the AEC site, the patient would be transported to either Saint Mary's Medical Center or Long Beach Memorial Medical Center. Both of these hospitals are Level 1 Trauma Centers and both are less than 6 miles from the project site (DuRee, 2012).

LBFD provides both ALS and BLS ambulance service. Response time for ambulance service by LBFD, based on traffic and the location of the hospital services required, is 15 minutes (Zinnen, 2013).

5.10.2.7 Utilities

This section describes public utilities available in the AEC area.

5.10.2.7.1 Electricity and Gas

The AEC will connect to the existing onsite SCE switchyard adjacent to the north side of the AES-SLD property. No new offsite transmission lines are planned. See Section 3.0, Transmission System Engineering, for a detailed discussion of the AEC electrical interconnection to the existing SCE 230-kV switchyard.

Natural gas will be supplied to the AEC via an existing 30-inch-diameter pipeline that currently serves the Alamitos Generating Station. No new offsite natural gas supply pipelines will be necessary for the project. The existing natural gas pipeline is owned and operated by SoCalGas. The pipeline operates at a nominal 165 pounds per square inch, and enters the existing Alamitos Generating Station through the northeast corner of the facility near the existing 230-kV switchyard. A new gas metering station will be constructed on the northeast corner of the facility. SoCalGas has provided a "will-serve" letter for the natural gas required for AEC operations (Appendix 2E).

5.10.2.7.2 Water

Potable water for the site is supplied from three separate pipeline interconnections with the LBWD. The AEC's water requirements are significantly less than the existing generating station's current use; therefore, all the existing connections will be used to support the AEC. No new offsite potable water supply pipelines will be required for the project.

The availability of water to meet the needs of AEC is discussed in more detail in Section 5.15, Water Resources. A "will-serve" letter from the LBWD is included in Appendix 2E.

5.10.2.7.3 Wastewater Discharge

The project will require an offsite pipeline for discharge of plant process and sanitary wastewater to the Los Angeles County Sanitation District via an interconnection to an existing LBWD sanitary pipeline. A new 1,000-foot-long, 6-inch pipeline will connect the AEC to the existing LBWD sanitary system. In the event that the LBWD determines that upgrades to the existing sanitary pipeline are required, an additional 4,000 feet of pipeline may need to be installed to replace the existing pipeline. Therefore, this analysis is based on a total wastewater pipeline length of 5,000 feet. Sanitary wastewater from sinks, toilets, showers, dishwashers, and other sanitary facilities will be discharged to the new wastewater pipeline. Likewise,

process wastewater will be conveyed to the Los Angeles County Sanitation District via the LBWD sanitary system by the new wastewater pipeline.

Stormwater will be discharged to two existing retention basins and then ultimately to the San Gabriel River via existing outfalls.

The availability of wastewater collection and treatment capacity to meet the AEC's needs is discussed in more detail in Section 5.15, Water Resources. A "will-serve" letter from the LBWD for connection to the city sewer lines is included in Appendix 2E.

5.10.3 Environmental Analysis

This section assesses the potential socioeconomic impacts of the AEC.

5.10.3.1 Potential Environmental Impacts

Local environmental impacts were analyzed by comparing project demands during construction (and demolition) and operation with the socioeconomic resources of the region of socioeconomic influence (Los Angeles County). A power-generating facility such as the AEC could affect employment, population, housing, public services and utilities, and schools.

Factors used to evaluate the significance of project-related socioeconomic impacts are set forth in Appendix G of the California Environmental Quality Act (CEQA). Appendix G is a screening tool, not a method for setting thresholds of significance. Appendix G is typically used in the Initial Study phase of the CEQA process, asking a series of questions. The purpose of these questions is to determine whether a project requires an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration. As the Governor's Office of Planning and Research stated, "Appendix G of the Guidelines lists a variety of potentially significant effects, but does not provide a means of judging whether they are indeed significant in a given set of circumstances." The answers to the Appendix G questions are not determinative of whether an impact is significant or less than significant. Nevertheless, the questions presented in CEQA Appendix G are instructive.

In terms of project-related impacts from construction and operations of the plant, Appendix G, asks, in part, whether the project would:

- Induce substantial growth or concentration of population
- Displace a large number of people or impact existing housing
- Result in substantial adverse impacts on the local economy and employment
- Create adverse fiscal impacts on the community
- Result in substantial adverse impacts on educational facilities
- Result in substantial adverse impacts on the provision of utility services
- Result in substantial adverse impacts associated with the provision of public services

5.10.3.2 Construction/Demolition Impacts

Construction and demolition activities at the project site are anticipated to span 139 months, from first quarter 2016 until third quarter 2027. The project will commence with the demolition of retired Unit 7 and other ancillary structures to make room for the construction of AEC Blocks 1 and 2. The demolition of Unit 7 will commence in the first quarter of 2016. The construction of Block 1 is scheduled to commence in the third quarter of 2016, and construction of Block 2 is scheduled to commence in the fourth quarter of 2016. The demolition of Units 5 and 6 will make space for the construction of AEC Block 3. AEC Block 3 construction is scheduled to commence in the first quarter of 2020 and to be completed in the second quarter of 2022. The demolition of Units 3 and 4 will make space for the construction of AEC Block 4. AEC Block 4 construction is scheduled to commence in the second quarter of 2023 and to be completed in the fourth quarter of 2025. The demolition of Alamitos Generating Station remaining units is scheduled to commence in the third quarter of 2025.

5.10.3.2.1 Construction/Demolition Workforce

The primary trades required for AEC construction and demolition will include craft manpower such as boilermakers, carpenters, electricians, ironworkers, laborers, millwrights, operators, and pipefitters. Appendix 5.10B provides an estimate of construction personnel requirements for AEC by month and craft.

Total construction and demolition personnel requirements for the AEC will be approximately 20,324 person-months. Construction/demolition personnel requirements will peak at approximately 447 workers in months 29, 30, and 31 (May, June, and July 2018) of the AEC construction and demolition period. Average workforce over the approximately 139-month construction and demolition period is 146 workers.

Available skilled labor in the Los Angeles-Long Beach-Glendale MD was evaluated by contacting the Building and Trades Council (Table 5.10-8) and surveying EDD (Table 5.10-9). Both sources show that the workforce in Los Angeles-Long Beach-Glendale MD will be more than adequate to fulfill the AEC's construction and demolition labor requirements. Therefore, the project will not place an undue burden on the local workforce. Additionally, AEC workforce requirements would not be expected to place undue burden on the local and regional workforce because Long Beach is within the major employment centers of southern California such as the Los Angeles-Long Beach-Glendale MD, Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA), and the San Diego-Carlsbad-San Marcos MSA, all of which have a large available construction/demolition workforce. Finally, the AEC peak construction needs are less than 1 percent (0.4 percent) of the total of the regionally available construction workforce shown in Table 5.10-4. As a result, the construction and demolition activities associated with AEC will not result in a significant adverse impact on the construction labor supply in the area.

TABLE 5.10-8
Labor Union Contacts in Los Angeles/Orange County

Labor Union	Contact	Phone Number
Los Angeles/Orange County Building Trades Council	Ron Miller, Executive Secretary	(213) 483-4222

TABLE 5.10-9
Available Labor by Skill in Los Angeles-Long Beach-Glendale MD, 2010-2020

Occupational Title	Annual Averages		Absolute Change	Percentage Change	Average Annual Compounded Growth Rate (%)
	2010	2020			
Carpenters	15,530	17,960	2,430	15.6	1.5
Cement Masons and Concrete Finishers	2,420	3,020	600	24.8	2.2
Painters, Construction, and Maintenance	9,360	10,740	1,380	14.7	1.4
Sheet Metal Workers	2,230	2,320	90	4.0	0.4
Electricians	10,310	11,360	1,050	10.2	1.0
Industrial Truck and Tractor Operators	16,510	20,280	3,770	22.8	2.1
Operating Engineers and Other Construction Equipment Operators	3,310	4,030	720	21.8	2.0
Helpers, Construction Trades	5,150	6,560	1,410	27.4	2.4
Construction Laborers	23,160	27,810	4,650	20.1	1.8

TABLE 5.10-9
Available Labor by Skill in Los Angeles-Long Beach-Glendale MD, 2010-2020

Occupational Title	Annual Averages		Absolute Change	Percentage Change	Average Annual Compounded Growth Rate (%)
	2010	2020			
Plumbers, Pipefitters, and Steamfitters	8,180	9,230	1,050	12.8	1.2
Administrative Services Managers	8,520	9,890	1,370	16.1	1.5
Mechanical Engineers	5,960	6,430	470	7.9	0.8
Electrical Engineers	5,410	5,840	430	7.9	0.8
Engineering Technicians	8,210	8,980	770	9.4	0.9
Plant and System Operators	6,770	7,000	230	3.4	0.3

Source: EDD, 2013d

Population Impacts

It is anticipated that most of the AEC construction/demolition workforce will be drawn from Los Angeles County or the neighboring counties of Orange, Ventura, Kern, and San Bernardino. Additionally, a portion of the construction workforce could be drawn from other nearby counties in southern California. For the purposes of this analysis, because of the size of the local construction/demolition workforce, it was assumed that most workers will be from the Los Angeles County. Because most workers are expected to commute to the project site on a daily basis, they will not contribute to a significant increase in the population of the area.

5.10.3.2.2 Housing Impacts

The construction/demolition workforce will most likely commute daily to the project site; however, if needed, there are numerous hotels/motels in Los Angeles County and other neighboring counties to accommodate workers who may choose to commute to the project site on a workweek basis. In addition to the available hotel/motel accommodations, there are a few recreational vehicle parks within driving distance of Long Beach and neighboring cities close to the project site. The AEC is not expected to significantly increase the demand for temporary housing (hotel/motels/recreational vehicle parks) in the project area because of the size of the local workforce. As a result, AEC construction and demolition is not expected to significantly increase the demand for permanent or temporary housing in the area.

5.10.3.2.3 Impacts on the Local Economy and Employment

The cost of materials and supplies (excluding major equipment) required for AEC during construction and demolition is estimated at $89.79 million. Although it is expected that most materials and supplies will be purchased in the greater southern California area, for the purpose of this analysis the estimated value of materials and supplies that are assumed to be purchased locally in Los Angeles County during construction and demolition is $89.79 million. All cost estimates are in constant 2013 dollars, as are the economic benefits figures cited later in this section.

The AEC will provide about $401.5 million in construction and demolition payroll, at an average rate of $85.90 per hour, including benefits. The anticipated payroll for employees, as well as the purchase of materials and supplies during construction and demolition, will have a beneficial temporary impact in Los Angeles County and in the neighboring counties. Assuming conservatively that 90 percent of the construction workforce will reside in Los Angeles County, it is expected that approximately $361.4 million will stay in the Los Angeles County area during the AEC construction and demolition period. These additional funds will result in a temporary beneficial impact by creating the potential for other employment

opportunities for workers in other service areas in Los Angeles County, such as transportation and retail. No significant adverse impacts are expected to result related to the local economy and employment.

5.10.3.2.4 Indirect and Induced Economic Impacts from Construction

AEC construction and demolition activities will result in secondary economic impacts (indirect and induced) in Los Angeles County. Indirect employment effects are those resulting from the purchase of goods and services by firms involved with construction/demolition. Induced employment effects are those effects resulting from construction and demolition workers spending their income within the Los Angeles County. In addition to these secondary employment impacts, there are indirect and induced income effects arising from construction and demolition.

Indirect and induced impacts associated with the construction of the AEC and demolition of the existing Alamitos Generating Station Units 1 through 7 (and other ancillary structures) were estimated using an IMPLAN Input-Output (I/O) model of the Los Angeles County economy. IMPLAN is an economic computer database and modeling system used to create input-output models for any combination of U.S. counties (Minnesota IMPLAN Group (MIG), 2010). The estimated indirect and induced employment in Los Angeles County would be 32 and 188 jobs, respectively. These additional jobs result from the $7.75[2] million in annual local construction expenditures and the $21.84 million in annual spending by local construction workers. The $21.84 million represents the disposable portion of the annual construction payroll (here assumed to be 70 percent of $31.2[3] million). Assuming an average direct construction employment of 146 for the AEC, the employment multiplier associated with the construction and demolition phase of the project is approximately 2.5 (i.e., [146 + 32 + 188]/146). This project construction and demolition phase employment multiplier is based on a Type SAM model.

Indirect and induced income impacts associated with AEC construction and demolition were estimated at $1,476,070 and $9,563,090, respectively. Assuming a total annual local construction/demolition expenditure in Los Angeles County (payroll, materials, and supplies) of $29.59 million ($21.84 million in payroll + $7.75 million in materials and supplies), the project's construction and demolition phase income multiplier based on a Type SAM model is approximately 1.4 (i.e., [$29,590,480 + $1,476,070 + $9,563,090]/$29,590,480).

5.10.3.2.5 Fiscal Impacts

The AEC's capital cost for power plant equipment is estimated to be between $1.1 billion and $1.3 billion. Local materials and supplies are estimated at approximately $85.04 million for construction and $4.75 million for demolition of Units 1 through 7 and other ancillary structures, for a total of $89.79 million. For the purposes of this analysis, all of the estimated $89.79 million in local purchases of materials and supplies during construction of the AEC (and demolition of the existing units) is assumed to be within Los Angeles County, with Long Beach being the point of sale for the $89.79 million for local purchases of materials and supplies.

The City of Long Beach sales tax rate is 9 percent (as of July 1, 2013). The split in the sales tax rate is as follows: 6.5 percent goes to the State; 0.25 percent goes to the county transportation funds; 0.75 goes to city operations; 1.5 percent goes to the place of sale (California Board of Equalization [BOE], 2013). The total sales tax expected to be generated during AEC construction and demolition is $8,081,100 (i.e., 9.0 percent of local sales on $89.79 million in local purchases). Assuming all local sales are made in Long Beach, the maximum total sales tax revenues the city could receive would be $2,020,275 (2.25 percent of $89.79 million) during the construction and demolition period. No significant adverse fiscal impacts are expected to result from AEC construction and demolition.

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[2] Annual portion of local construction expenditures = $89.79 million ÷ (139 months/12 months) = $7.75 million.

[3] Annual local portion of construction payroll = $401.53 million ÷ (139 months/12 months) x 90 percent = $31.2 million. The disposable portion of the annual local construction payroll = $31.2 million x 70 percent = $21.84 million.

5.10.3.2.6 Impacts on Education

AEC construction and demolition will not cause any population changes or housing impacts on the region because most, if not all, employees will commute to the site from within the region. As a result, AEC construction and the demolition will not cause an increase in demand for school services. Even if some employees chose to relocate their families to areas within the Long Beach Unified School District, school enrollment has been decreasing, with a reduction of more than 2,500 students since the 2010-2011 school year. Therefore, there is sufficient capacity to absorb the children from the peak workforce of 447 workers.

5.10.3.2.7 Impacts on Public Services and Facilities

Construction and demolition of the existing Alamitos Generating Station Units 1 through 7 (and other ancillary structures) will have minor, if any, impacts on the Long Beach police, fire, or hazardous materials handling resources, including medical and accident response, hazards identification, and other fire services. Copies of the records of conversation with the police, hazardous materials, and fire departments are included in Appendix 5.10C. Implementation of safety procedures for the construction site identified in Section 5.16, Worker Health and Safety, as required by applicable regulations and standards, will ensure that AEC construction and demolition does not create significant adverse impacts on medical or emergency resources in the area.

5.10.3.2.8 Impacts on Utilities

As discussed in Section 5.10.2.7, construction and demolition of the existing Alamitos Generating Station Units 1 through 7 (and other ancillary structures) will not result in significant adverse demands on local water, sanitary sewer, electricity, or natural gas. Water requirements for construction and demolition are relatively small. Given the low number of workers and temporary duration of the construction and demolition period, the impacts on the local sanitary sewer system would not be significant.

5.10.3.3 Operational Impacts

This section discusses the changes to the local economy as a result of bringing the AEC online.

5.10.3.3.1 Operational Workforce

The 51 operational staff will be drawn entirely from the existing plant staff of 66. Because no new operational staff will be employed at the AEC, no population increase is anticipated as a result of this project. There will be no significant adverse impacts on local employment from operations.

5.10.3.3.2 Population Impacts

All 51 operations staff will be drawn from the staff at the existing plant. Consequently, no population increase is anticipated as a result of operation of the AEC.

5.10.3.3.3 Housing Impacts

Because the operational workforce would be from the existing plant workforce and because Los Angeles County and Long Beach vacancy rates indicate that housing is not considered limited, no significant impacts on housing are anticipated.

5.10.3.3.4 Impacts on the Local Economy and Employment

Operation of the AEC will generate a small, permanent beneficial impact by creating employment opportunities for local workers through local expenditures for materials, such as office supplies and services. The average salary per AEC operations employee, including benefits, is expected to be about $124,140 per year. For the assumed average of 51 full-time employees, this will result in an approximate operation payroll, including benefits, of $6,331,000 per year. There will be an annual operations and maintenance (O&M) budget of approximately $8,312,000, all of which is estimated to be spent locally within Los Angeles County. However, it is possible that some of this O&M budget may be spent in other neighboring counties. The additional jobs and spending will generate other employment opportunities and spending in Los Angeles

County (including Long Beach), as well as in neighboring counties where these operational workers may reside or where these expenditures may occur. All cost estimates are in constant 2013 dollars, as are the economic benefits noted in this section. No adverse impacts on the local economy and employment are expected to result from project operations.

Indirect and Induced Economic Impacts from Operations

Operation of the AEC would result in indirect and induced economic impacts in Los Angeles County. These indirect and induced impacts represent permanent increases in the county's economic variables. The indirect and induced impacts would result from annual expenditures on O&M.

Estimated indirect and induced employment in Los Angeles County would be 14 and 13 permanent jobs, respectively. The additional 27 jobs result from the $8,312,000 in local annual expenditures during operation.

Indirect and induced income impacts are estimated at $2,007,560 and $669,190, respectively. The income multiplier associated with the operational phase of the AEC is approximately 1.3 (i.e., [$8,312,000 + $2,007,560 + $669,190]/$8,312,000) and is based on a Type SAM model.

5.10.3.3.5 Fiscal Impacts

The AEC annual non-payroll O&M budget is expected to be approximately $8,312,000 (in 2013 dollars), and for the purpose of this analysis, it is assumed that all of the budget will be spent in Los Angeles County (including Long Beach). As stated earlier, the AEC will bring about $6,331,000 million per year in operational payroll to the region; however, because all the O&M employees will be drawn from the existing plant staff, this operational payroll will not be new money flowing into the regional economy and, as such, does not represent an increase in benefits.

Although the materials and supplies required during the operational phase of the project could come from within Los Angeles County (including Long Beach) or from the neighboring counties in southern California, for the purposes of this analysis it is assumed that all of the O&M purchases will be made in Long Beach. Based on the assumed annual local O&M expenditures of $8,312,000, the estimated sales taxes (9 percent) will be approximately $748,080 per year. The City of Long Beach is assumed to realize approximately $187,020 (2.25 percent of $8,312,000) annually in sales tax revenues from AEC operation. The overall anticipated increase in sales tax revenue will be beneficial but will not be significant, because it would constitute only a small percent of the City of Long Beach's sales tax revenues.

The AEC is expected to bring increased property tax revenue to the City of Long Beach. The BOE has jurisdiction over the valuation of a power generation facility for property tax purposes, if the power plant produces 50 MW or more (Young, 2007). Although the BOE assesses the property value, the property tax rate for the AEC is set by the Los Angeles County Assessor's Office. For the existing Alamitos Generating Station property, this rate is 1.122072 percent for the most recent fiscal year (FY 2011-12). Based on the assumed capital cost of between $1.1 billion and $1.3 billion, the AEC will generate approximately $12.3 million to $14.6 million in property taxes annually. However, the increase to the City of Long Beach will be the difference between the estimated property tax and the amount of property tax currently paid on the existing Alamitos Generating Station. The property tax assessed on the existing Alamitos Generating Station in FY 2011-12 was $2.63 million. Thus, the estimated increase in property tax revenues generated by the construction of the AEC after the existing Alamitos Generating Station is demolished will be approximately $9.71 million to $11.95 million.[4] Because the property taxes are collected at the county level, their disbursement is also at the county level.

[4] The property tax assessed on the existing generating station in FY 2011-2012 of $2.63 million included both the existing infrastructure (the generating station facility) as well as the property/land. Although the difference between the FY 2011-2012 tax bill and the property tax revenue for the AEC is estimated to be an increase of $9.71 million and $11.95 million, respectively, this is a conservative amount because it does not take into account that the property/land also will be reassessed after construction of the AEC is complete. Therefore, it is likely that additional annual property tax revenue will be generated in excess of $11.95 million.

In FY 2011-12, the City of Long Beach's general fund total tax revenues were estimated at $238.7 million (see Table 5.10-6). The net increase in property taxes resulting from the AEC (adjusted by the amount currently paid for Alamitos Generating Station) would be between 4 and 5 percent of the city's total FY 2011-12 tax revenues. Thus, the additional property tax revenues generated will be significant and beneficial to the City of Long Beach.

5.10.3.3.6 Impacts on Education

Because all 51 operational employees will be drawn from the existing staff, there will be no impact on the schools. Additionally, the construction of the AEC will generate revenues for the school district. Any industrial development in the Long Beach Unified School District is charged a one-time developer fee of $0.47 per square foot of commercial development (Ahn, 2013). Based on the approximately 25,551 square feet of occupied structures (control room/water treatment building) and developer fee, the AEC will pay a one-time amount of $12,009 in school impact fees.

5.10.3.3.7 Impacts on Public Services and Facilities

AEC operations will not result in any new demands on public services or facilities because all of the 51 operational employees will be drawn from the existing operational workforce. Thus, the AEC's operation is not expected to result in significant impacts on either the LBFD or the LBPD. The AEC's operation would not create significant adverse impacts on medical resources in the area given the safety record of power plants and few operations staff. Copies of the records of conversation with the police and fire departments are included in Appendix 5.10C.

5.10.3.3.8 Impacts on Utilities

AEC operations will not result in a significant adverse demand on local water, sanitary sewer, electricity, or natural gas because these utilities are currently supplied to the existing Alamitos Generating Station, and the AEC will result in a net reduction in demand on all of these services.

5.10.4 Environmental Justice

President Clinton's Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," was signed on February 11, 1994. The purpose of this Executive Order is to ensure that federal agencies consider whether a project may result in disproportionately high and adverse human health or environmental effects on any minority or low-income population.

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

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

According to the guidelines established by the U.S. Environmental Protection Agency (EPA, 1996) to assist federal agencies to develop strategies to address this circumstance, a minority or low-income population exists if the minority or low-income population percentage of the affected area is 50 percent or more of the area's general population. The guidance suggests using two or three standard deviations above the mean as a quantitative measure of disparate effects.

The AEC analysis of environmental justice following the federal guidelines is presented in Appendix 5.10A. According to this analysis, the AEC does not create significant and adverse impacts. Therefore, there will be no disproportionately high and adverse human health or environmental effects on any minority populations and low-income populations resulting from the construction, operation and demolition activities for the AEC project.

5.10.5 Cumulative Effects

Section 15355 of the CEQA Guidelines defines "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Subsection b of Section 15355 states, in part, that "The cumulative impact *from several projects* is the change in the environment which results from *the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects*." (Emphasis added.) Thus, cumulative impacts under CEQA involve the potential interrelationships of two or more projects, not the impacts from a single project. Specifically, under Section 15130 of the CEQA Guidelines, an EIR is required to discuss cumulative impacts when the project's incremental effect is "cumulatively considerable." Section 15065(a)(3) then defines "cumulatively considerable" as meaning "that the incremental effects of an individual project are significant when viewed in connection with the effects of *other* closely related past projects, the effects of *other* current projects and the effects of probable *future* projects." (Emphasis added.)

Cumulative socioeconomic impacts may occur when more than one project has an overlapping construction schedule that creates a demand for workers that cannot be met by local labor, resulting in an influx of non-local workers and their dependents and resulting in excessive demand on public services.

There are currently two projects under construction in the vicinity of the AEC project. The first one is a commercial development to replace existing Seaport Marina Hotel; while the other, the Lyon Communities Project, proposes to construct restaurant buildings, a three-floor hotel, and parking. Because both projects are in the early development stages, information on the construction schedules and the workforce requirement of these projects is unavailable. The potential for a sufficient worker demand that could pull workers from out of the area and lead to some stress on public facilities and utilities is counterbalanced by the current weakened labor market following the recent economic recession, which has affected the building trades industries particularly hard, and the project's low worker requirements (146 average workforce/447 peak workforce). Although the pace of the economic recovery has been slow and forecasters do not anticipate full recovery to the pre-2008 levels until mid-decade, it is not anticipated that AEC will, in conjunction with these other projects, cause an influx of construction workers into the project area.

Counterbalancing any potentially high demand for construction/demolition workers in the Los Angeles-Long Beach-Glendale MD is the fact that AEC construction and the construction of the identified cumulative projects, including the demolition of existing seven units, can draw construction workers from the entire southern California area. As Table 5.10-9 shows, the AEC would use about three-tenths of 1 percent of the projected construction workforce in the Los Angeles-Long Beach-Glendale MD. It is very unlikely that worker demand would be sufficiently high to cause the relocation of large numbers of workers and dependents.

Finally, AEC peak construction/demolition needs are about four-tenths of 1 percent of the total 2012 construction workforce shown in Table 5.10-4. As a result, the project will not result in a significant adverse impact on the construction labor supply in the area. Additionally, there is a sufficient supply of skilled labor in Los Angeles County (Miller, 2013). Other kinds of cumulative socioeconomic impacts are also unlikely, as the AEC's effects on housing, schools, and public services would be negligible.

5.10.6 Mitigation Measures

Because the project would be in the Long Beach Unified School District service area, the project would be subject to school impact fees. Any industrial development within the Long Beach Unified School District is currently charged a one-time assessment fee of $0.47 per square foot of principal building area (Ahn, 2013). Based on 25,551 square feet of occupied structures, AEC will pay $12,009 in school impact fees. These school impact fees are considered full mitigation for any potential impacts on these school districts.

Because there are no significant adverse socioeconomic impacts caused by the AEC, given its design and the implementation of avoidance and minimization strategies, no additional mitigation measures are required.

5.10.7 Laws, Ordinances, Regulations, and Standards

A summary of the LORS, including the project's conformance to them, is presented in Table 5.10-10.

TABLE 5.10-10
Laws, Ordinances, Regulations, and Standards for Socioeconomics

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
Civil Rights Act of 1964	Prohibits discrimination on the basis of race, color, or national origin. Applies to all federal agencies and agencies receiving federal funds.	Office of Civil Rights	Section 5.10.4
Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community. Applies only to federal agencies.	EPA	Section 5.10.4, 5.10.7.1
State			
Government Code Sections 65996-65997	Establishes that the levy of a fee for construction of an industrial facility be considered to mitigate impacts on school facilities. Long Beach Unified School District may charge a one-time assessment fee to mitigate potential school impacts.	Long Beach Unified School District	Section 5.10.7.2, 5.10.3.3.6
Education Code Section 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities. Long Beach Unified School District may charge a one-time assessment fee to mitigate potential school impacts.	California Department of Education	Section 5.10.7.2, 5.10.3.3.6
Local			
City of Long Beach General Plan (1997)	Encourages pursuit of economic development which focuses upon international trade, while maintaining and expanding its historic economic strengths in aerospace, bio-medicine and tourism.	City of Long Beach	Section 5.10.7.3, 5.10.3.2.7, 5.10.3.3.7

5.10.7.1 Federal LORS

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to consider whether the project may result in disproportionately high and adverse human health or environmental effects on any minority or low-income population. Although the CEC is not subject to this executive order, since the signing of the Executive Order 12898, the CEC has typically included this topic in its power plant siting decisions to ensure that any potential adverse impacts are identified and addressed.

5.10.7.2 State LORS

Government Code Sections 65996 and 65997 provide the exclusive methods of considering and mitigating impacts on school facilities that might occur as a result of the development of real property. Education Code Section 17620, listed in Government Code Section 65997 as an approved mitigation method, allows school

districts to levy a fee or other requirement against construction within the boundaries of the school district for the purpose of funding construction of school facilities.

5.10.7.3 Local LORS

5.10.7.3.1 City of Long Beach

The Land Use Element of the City of Long Beach 1997 General Plan encourages the pursuit of economic development which focuses upon international trade, while maintaining and expanding its historic economic strengths in aerospace, bio-medicine, and tourism (City of Long Beach, 2013d).

5.10.8 Agencies and Agency Contacts

Table 5.10-11 provides a list of agencies and contacts of potentially responsible agencies. Copies of records of conversation are provided in Appendix 5.10C.

TABLE 5.10-11
Agency Contacts for Socioeconomics

Issue	Agency	Person Contacted
Available resources, potential impacts on resources, and average response times	Long Beach Fire Department	Mike DuRee Fire Chief 3205 Lakewood Blvd Long Beach, CA 90808 (562) 570-2565 Michael.DuRee@Longbeach.gov
Available resources, potential impacts on resources, and average response times	Long Beach Fire Department	David Zinnen Deputy Fire Marshall 3205 Lakewood Blvd Long Beach, CA 90808 (562) 570-2572 David.Zinnen@Longbeach.gov
School impact fees, enrollment data, potential enrollment impacts	Long Beach Unified School District	Susan Ahn Project Manager of Facilities 1515 Hughes Way Long Beach, CA 90810 (562) 997-7557 SAhn@lbschools.net
School impact fees, enrollment data, potential enrollment impacts	Long Beach Unified School District	Kenna Kirk Supervising Research Office Technician 1515 Hughes Way Long Beach, CA 90810 (562) 997-8694 KKirk@lbschools.net
Available resources, potential impacts on resources, and average response times	Long Beach Police Department	Commander Lisa Lopez Chief of Staff 400 West Broadway Long Beach, CA 90802 (562) 570-7301 Lisa.Lopez@longbeach.gov
Availability of labor	Los Angeles/Orange County Building Trades Council	Ron Miller Executive Secretary 1626 Beverly Blvd Los Angeles, CA 90026 (213) 483-4222 RonMillerlaoc@sbcglobal.net

5.10.9 Permits and Permit Schedule

Permits dealing with the effects on public services are addressed as part of the building permit process. For example, school development fees are typically collected when the applicant pays in-lieu building permit fees to the city. No permits related to socioeconomic issues are required.

5.10.10 References

Ahn, S. 2013. Personal Communication between Beth Smoker of CH2M HILL and Susan Ahn, Project Manager of Facilities, Long Beach Unified School District. June 27.

California Board of Equalization (BOE). 2013. California City and County Sales and Use Tax Rates *Publication 71*. Available at: http://www.boe.ca.gov/pdf/pub71.pdf. Accessed July 10.

California Department of Education (CDE). 2013a. Educational Demographic Unit, DataQuest – County level Enrollment. Available at: http://dq.cde.ca.gov/dataquest. Accessed July 15.

California Department of Education (CDE). 2013b. Data and Statistics, DataQuest – District level Enrollment. Available at: http://dq.cde.ca.gov/dataquest. Accessed July 12.

California Department of Finance (DOF). 2013a. E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2013 with 2010 Benchmark. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php. Accessed June 20.

California Department of Finance (DOF). 2013b. E-4 Revised Historical City, County and State Population Estimates, 1991-2000, with 1990 and 2000 Census Counts. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/1991-2000/. Accessed June 20.

California Department of Finance (DOF). 2013c. Report P-1 (County): State and County Total Population Projections, 2010-2060 (5-year increments). Available at: http://www.dof.ca.gov/research/demographic/reports/projections/P-1/. Accessed June 21.

California Department of Finance (DOF). 2013d. Table I-5 Residential Construction Authorized by Permits, Units & Valuation, California & Counties. Available at: http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS/Toc_xls.htm. Accessed June 21.

California Employment Development Department (EDD). 2013a. Employment by Industry Data – Historical Annual Average Data – Los Angeles-Long Beach-Glendale MD. Available at: http://www.labormarketinfo.edd.ca.gov/LMID/Employment_by_Industry_Data.html. Accessed June 25.

California Employment Development Department (EDD). 2013b. Employment by Industry Data – Historical Annual Average Data – California. Available at: http://www.labormarketinfo.edd.ca.gov/LMID/Employment_by_Industry_Data.html. Accessed July 15.

California Employment Development Department (EDD). 2013c. Labor & Unemployment Rate for Cities and Census Designated Places – 2012 Annual Averages. Available at: http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133. Accessed July 15.

California Employment Development Department (EDD). 2013d. Occupational Employment Projections. Available at: http://www.labormarketinfo.edd.ca.gov/?PAGEID=145. Accessed July 12.

City of Long Beach. 2013a. Comprehensive Annual Financial Report for the Year ending September, 30, 2010. Available at: http://www.longbeach.gov/finance/accounting/cafr.asp. Accessed July 1.

City of Long Beach. 2013b. Comprehensive Annual Financial Report for the Year ending September, 30, 2011. Available at: http://www.longbeach.gov/finance/accounting/cafr.asp. Accessed July 1.

City of Long Beach. 2013c. Comprehensive Annual Financial Report for the Year ending September, 30, 2012. Available at: http://www.longbeach.gov/finance/accounting/cafr.asp. Accessed July 1.

City of Long Beach. 2013d. General Plan of the City of Long Beach, Land Use Element – July 1, 1989, Revised March 1990 and Revised and Reprinted in April 1997. Available at: http://www.lbds.info/planning/advance_planning/general_plan.asp. Accessed July 22.

DataQuick. 2013. DQNews – California Home Sale Price Medians by County and City, Home Sales Recorded in April 2013. Available at: http://www.dqnews.com/Charts/Monthly-Charts/CA-City-Charts/ZIPCAR.aspx. Accessed June 20.

DuRee, M. 2012. Personal Communication between Jerry Salamy of CH2M HILL and Michael DuRee, Fire Chief, Long Beach Fire Department. June 25.

Kirk, K. 2013. Personal Communication between Beth Smoker of CH2M HILL and Kenna Kirk, Supervising Research Office Technician, Long Beach Unified School District. June 27.

Lopez, L. 2013. Personal Communication between Beth Smoker of CH2M HILL and Lisa Lopez, Commander and Chief of Staff, Long Beach Police Department. June 27.

Los Angeles County. 2012. Los Angeles County, Overview. Available at: http://portal.lacounty.gov/. Accessed on April 11.

Minnesota IMPLAN Group (MIG). 2010. IMPLAN System (data and software). 502 2nd Street, Suite 301, Hudson, WI 54016.

Miller, R. 2013. Personal Communication between Beth Smoker of CH2M HILL and Ron Miller, Executive Secretary, Los Angeles/Orange County Building Trades Council. June 24.

Southern California Association of Governments (SCAG). 2013. Adopted 2012 RTP Growth Forecast. Available at: http://www.scag.ca.gov/forecast/index.htm. Accessed June 21.

U.S. Census Bureau. 2013a. *2006-2010 American Community Survey 5-Year Estimates – Poverty in the Past 12 Months.* Available at: http://factfinder2.census.gov/. Accessed June 17.

U.S. Census Bureau. 2013b. *2010 Census of Population, American Fact Finder - Summary File 1.* Available at: http://factfinder2.census.gov/. Accessed June 21.

U.S. Environmental Protection Agency (EPA). 1996. Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses. July 12.

Young, D. 2007. Personal communication between Fatuma Yusuf of CH2MHILL and David Young, Senior Specialist Property Appraiser, Property and Special Tax Department, Californian Board of Equalization. August 2.

Zinnen, D. 2013. Personal Communication between Beth Smoker of CH2M HILL and David Zinnen, Fire Chief, Long Beach Fire Department. July 12.