

5.10 Socioeconomics

5.10.1 Introduction

This section discusses the environmental setting, consequences, regional and local impacts, and mitigation measures associated with the socioeconomic aspects of the Carlsbad Energy Center Project (CECP). Environmental Justice (EJ) issues are summarized in this section. A screening-level EJ analysis is provided in Appendix 5.10A.

5.10.2 Laws, Ordinances, Regulations, and Standards

A summary of the laws, ordinances, regulations, and standards (LORS) applicable to socioeconomic, including the project's conformance to them, is presented in Table 5.10-1.

TABLE 5.10-1
Laws, Ordinances, Regulations, and Standards Applicable to Socioeconomics

LORS	Purpose	Applicability	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.	5.10.2
Executive Order 12898	Avoid disproportionately high and adverse impacts to minority and low-income members of the community.	Applies only to federal agencies.	5.10.2
State			
Government Code Sections 65996-65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities.	Carlsbad Elementary and Sweetwater Union High School Districts may charge a one-time assessment fee to mitigate potential school impacts.	5.10.4
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.	Carlsbad Unified School District may charge a one-time assessment fee to mitigate potential school impacts.	5.10.4
Local			
County General Plan, Public Facilities and Service Element	There are no goals or policies that pertain to socioeconomic.		
City of Carlsbad General Plan, Housing Element	Identifies and addresses housing needs for the current and future populations	Encourages the expansion of the local economy through improved business, employment and housing opportunities	5.10.2.3 and 5.10.3.2
City of Carlsbad Redevelopment Plan	To assist the city in eliminating blight related to deteriorating and dilapidated buildings, health and safety hazards, incompatible land uses, inadequate utilities and infrastructure	CECP site is located in a redevelopment project area	5.10.2.3.1

5.10.2.1 Federal LORS

The Civil Rights Act of 1964, Public Law 88-352, 78 Stat. 241 (codified as amended in various sections of 42 U.S.C.) Title VI prohibits discrimination on the basis of race, color, or national origin by all federal agencies or activities receiving federal financial assistance.

Executive Order 12898, “Federal Actions to Address Environmental Justice (EJ) 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 California Energy Commission (CEC) is not obligated as a matter of law to conduct an EJ analysis, since the signing of the executive order, the CEC has typically included this topic in its power plant siting decisions to ensure that any potential adverse impacts are identified and addressed.

5.10.2.2 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 any construction within the boundaries of the school district for the purpose of funding construction of school facilities.

5.10.2.3 Local LORS

5.10.2.3.1 City of Carlsbad

Carlsbad General Plan

The City of Carlsbad General Plan (City of Carlsbad, 1994) does not specifically address economic development through its General Plan. However, the City’s General Plan’s Housing Element (2000) has several themes, one of which addresses housing needs for the current and future populations. Thus, various portions of the socioeconomic analysis of the CECP conform with the City’s goals and policies with regard to Housing Element.

Carlsbad Redevelopment Agency

The Carlsbad Commission was formed in 1981 to facilitate redevelopment activities in the City of Carlsbad. In 1999, the Commission initiated the adoption of the South Carlsbad Coastal Redevelopment Project Area, with final adoption on July 18, 2000. The Project area includes the Ponto Beach area and the Encina Power Station. Development of CECP is consistent with the objectives of the Redevelopment Plan, i.e., to “facilitate the redevelopment of the Encina Power Generating Facility to a physically smaller, more efficient power generating plant.”

5.10.2.3.2 San Diego County

The San Diego County General Plan 2020 (GP2020) (San Diego County, 2007a) describes goals for economic growth and diversification as part of its Land Use Element based on land use patterns as well as other priorities, including physical characteristics, environmental and social concerns. Additionally, the General Plan describes that through appropriate land use policies, the County will foster stable economic growth.

General Plan 2020 is a comprehensive update of the San Diego County General Plan, which will establish future growth and development patterns for the unincorporated areas of the county. GP2020 is still a work in progress.

In several areas of the County, General Plan 2020 proposes to change land use designations and densities from those in the existing General Plan. Because of this, some applications for General Plan Amendments or Tentative Maps that are currently in process based on the existing General Plan do not conform to the General Plan 2020 Working Copy of the Regional Land Use Distribution Map.

The existing San Diego GP does not contain an economic development element and does not have specific goals and policies that pertain to socioeconomics.

5.10.3 Affected Environment

5.10.3.1 Population

San Diego County lies in the highly populated southern California region. The County is bordered by Orange County to the north, Imperial County to the east, the Pacific Ocean to the west, and Mexico to the south. With a January 1, 2007 estimated population of about 3,098,300 (California Department of Finance (DOF) 2007a) and a projected population of 3,855,100 by the year 2030 (San Diego Association of Governments (SANDAG) 2007), San Diego County's growth rate is slightly less than the state average. The county population is expected to increase by about 37 percent between 2000 and 2030, for an average annual compounded growth rate of 1.05 percent.

The City of Carlsbad, with an estimated January 1, 2007 population of about 101,300 is the fifth largest city in the county, after San Diego, Chula Vista, Oceanside, and Escondido. Historical population data for the Carlsbad, San Diego County, and the State of California (State) are summarized in Table 5.10-2. In the last 5-year period (from 2000-2005), the Carlsbad's population has grown at a substantially faster rate than the County or the State (see Table 5.10-3). Population projections for the City are made by SANDAG.

TABLE 5.10-2
Historical and Projected Populations*

Area	1990	2000	2007	2010(p)	2020(p)	2030(p)
City of Carlsbad	63,300	78,200	101,300	107,300	120,600	128,800
San Diego County	2,498,000	2,813,800	3,098,300	3,259,000	3,633,500	4,005,600
California	29,758,200	33,871,600	37,194,200	39,246,800	43,851,700	48,110,700

Source: Department of Finance (DOF), 2007a; 2007b; 2007c; SANDAG, 2007

* Population projections rounded to nearest 100.

(p) = projected

Based on population projections by the DOF, San Diego County was projected to have its greatest population growth during the 2000-2005 period. Historically, the County's growth rate has exceeded that of the State and this trend is projected to continue through 2020.

TABLE 5.10-3
Historical and Projected Annual Average Compounded Population Growth Rates

Area	1990-2000 Percent	2000-2006 Percent	2006-2010 Percent	2010-2020 Percent	2020-2030 Percent
City of Carlsbad	2.14%	3.94%	2.14%	1.18%	0.66%
San Diego County	1.20%	1.43%	1.55%	1.09%	0.98%
California	1.30%	1.57%	1.35%	1.12%	0.93%

Appendix Tables 5.10A-1 and 5.10A-2 (provided in Appendix 5.10A) show the minority (both racial and ethnic) as well as the low-income population distribution for the census block groups that are within a 6-mile radius of CECP. The minority and income data are from the 2000 U.S. Census data. Of the overall total population in the Census Block Groups within the 6-mile radius of 304,136, approximately 26 percent are racial minority while the ethnic minority (as represented by individuals of Hispanic origin¹) account for 23 percent (see Table 5.10A-1). The distribution of low income population in the Census Block Groups within the 6-mile radius is 10 percent (see Table 5.10A-2). This estimate is based on a total population for whom poverty status is determined of about 284,600. According to the 2000 US Census, the City of Carlsbad's population is 14 percent racial minority, 12 percent Hispanic, and 6 percent low-income. San Diego County's population is 34 percent racial minority, 27 percent Hispanic, and 12 percent low-income.

Figures 5.10-1, and 5.10-2 (figures are located at the end of this section) show the percent distribution of minority and low-income populations by 2000 census block groups within a 6-mile radius of the proposed CECP site.

5.10.3.2 Housing

As shown in Table 5.10-4, housing stock for San Diego County as of January 1, 2007, was about 1,129,750 units. Single-family homes accounted for about 678,670 units, multiple-family dwellings accounted for 403,440 units, and mobile homes accounted for 47,650 units (DOF, 2007a). New housing authorizations for San Diego County in 2006 totaled about 10,770 units; about 44 percent were single-family units and 56 percent were multi-family units. These authorizations were valued at \$2,470.7 million (DOF 2007d). The median home price in San Diego County in January 2007 was \$479,000 (DOF 2007d). San Diego County's vacancy rate has declined from the more than 6 percent rate that existed in the 1990s to the current (January, 2007) rate of 4.5 percent. As such, housing supply is limited in the County based on the federal standard vacancy rate of 5 percent.

According to the San Diego Union Tribune (2007) median home prices by zip code for the City of Carlsbad ranged from \$573,750 in Northwest Carlsbad to \$935,000 in Southwest Carlsbad. These prices represent all home prices combined for the month of June 2007 and include new and existing single-family and condominiums.

¹ Hispanics or Latinos are those people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2000 questionnaire—"Mexican, Mexican Am., Chicano," "Puerto Rican," or "Cuban"—as well as those who indicate that they are "other Spanish/Hispanic/Latino." People who identify their origin as "other Spanish/Hispanic/Latino" may be of any race. Thus, the percent Hispanic should not be added to percentages for racial (i.e., minority) categories.

TABLE 5.10-4
Housing Estimates by City, County, and State, January 1, 2007

Area	Total Units	Single-Family	Multi-Family	Mobile Homes	Percent Vacant
City of Carlsbad	43,120	29,423	12,406	1,291	6.7
San Diego County	1,129,749	678,669	403,435	47,645	4.5
California	13,312,456	8,603,213	4,117,587	591,656	5.9

Source: DOF (2007a).

5.10.3.3 Economy and Employment

Between 2001 and 2006, employment in the San Diego-Carlsbad-San Marcos Metropolitan Statistical Area (MSA) increased by 81,100 jobs, or about 7 percent. This 7 percent increase is almost twice California's net increase (3.7 percent) during the 2000 to 2006 period (California Employment Development Department [CEDD] 2007a). As shown in Table 5.10-5, on a percent increase basis, natural resources and mining experienced the largest increase in employment, followed by construction. Although the percentage increase in the natural resources and mining sector was the highest between 2001 and 2006, the contribution of this sector to the San Diego-Carlsbad-San Marcos MSA economy remained negligible. By contrast, during the same 5-year period, the construction workforce increased by about 17,500 workers to a total of 92,600 workers. This sector alone comprises about 7 percent of the total workforce in the Carlsbad-San Marcos MSA. Employment losses were experienced in the agriculture; manufacturing; transportation, warehousing and utilities; and information sectors.

TABLE 5.10-5
Employment Distribution in San Diego-Carlsbad-San Marcos MSA, 2001 to 2006

Industry	2001		2006		2001-2006	
	Number of Employees	Employment Share (%)	Number of Employees	Employment Share (%)	Percentage Change (%)	Average Annual Compound Growth Rate (%)
Agriculture	11,400	0.9	11,000	0.8	-3.5	-0.7
Natural Resources, Mining	300	0.0	500	0.0	66.7	10.8
Construction	75,100	6.1	92,600	7.1	23.3	4.3
Manufacturing	119,000	9.7	103,600	7.9	-12.9	-2.7
Wholesale Trade	41,500	3.4	45,100	3.4	8.7	1.7
Retail Trade	135,600	11.0	147,600	11.3	5.10	1.7
Transportation, Warehousing and Utilities	32,000	2.6	28,300	2.2	-11.6	-2.4
Information	38,800	3.2	37,200	2.8	-4.1	-0.8
Financial Activities	72,000	5.9	83,700	6.4	16.3	3.1
Services	490,500	39.9	543,600	41.5	10.8	2.1
Government	213,800	17.4	217,700	16.6	1.8	0.4
Total Employment	1,229,800	100.0	1,310,900	100.0	6.6	1.3

Source: CEDD, 2007a

Table 5.10-6 provides detail on the characteristics of the County labor force. It shows 2006 employment data for San Diego County and the City of Carlsbad compared to California. Both San Diego County and the City of Carlsbad have unemployment rates that are lower than the state average. CEDD does not project future unemployment rates.

TABLE 5.10-6
Employment Data, 2006

Area	Labor Force	Employment	Unemployment	Unemployment Rate (%)
City of Carlsbad	47,000	45,800	1,200	2.6
San Diego County	1,518,000	1,457,500	60,500	4.0
California	17,901,900	17,029,300	872,600	4.9

Source: CEDD (2007b).

5.10.3.4 Fiscal Resources

The local agencies with taxing power include San Diego County and the City of Carlsbad. San Diego County's General Fund expenditures and revenues are presented in Table 5.10-7. The County's General Fund revenues increased by about 3 percent from fiscal year (FY) 2003-04 to fiscal year 2004-05. During the following fiscal year, the increase doubled to 6.6 percent from 3.3 percent. From FY 2004-05 to FY 2005-06, revenues increased by about one and one-half times from the preceding year, to 9.4 percent. Tax revenues contributed between 16 and 32 percent of the County's total General Fund revenues.

TABLE 5.10-7
San Diego County Revenues and Expenditures (\$ Million)

	FY 2004	FY 2005	FY 2006
Expenditures:			
General Government	\$216.2	\$211.5	\$199.3
Public Protection	\$1,216.3	\$939.1	\$1,014.7
Public Ways and Facilities	\$115.4	\$84.6	\$67.1
Health & Sanitation	\$562.7	\$541.9	\$556.2
Public Assistance	\$1,053.5	\$970.2	\$1,011.3
Education	\$31.3	\$27.1	\$32.0
Recreation & Cultural	\$24.7	\$19.6	\$23.0
Capital Outlay	\$55.0	\$54.2	\$109.9
Debt Service	\$166.4	\$157.3	\$197.2
Total Expenditures	\$3,441.5	\$3,005.5	\$3,210.7
Revenues:			
Taxes	\$497.2	\$717.2	\$1,102.0
Licenses, Permits & Franchises	\$42.3	\$43.0	\$41.8
Fines, Forfeitures, and Penalties	\$46.5	\$55.5	\$60.1
Use of Money and Property	\$25.9	\$50.8	\$76.6
Aid from Other Government Agencies	\$1,972.2	\$1,884.7	\$1,755.0
Charges for Current Service	\$277.6	\$286.6	\$314.0
Other Revenue	\$65.9	\$84.4	\$67.4
Total Revenue	\$2,927.5	\$3,122.2	\$3,416.9

Source: San Diego County, 2007
Numbers may not add up due to independent rounding.

As shown in Table 5.10-8, the General Fund revenue for the City of Carlsbad has been growing somewhat steadily over the last few fiscal years. Property tax revenue has consistently been responsible for the observed growth during this period. Property tax revenues have averaged 39 percent while sales tax revenues have averaged about 26 percent of the City's General Fund revenues during the period shown in Table 5.10-10.

TABLE 5.10-8
City of Carlsbad General Fund Revenues and Expenditures (\$ Million)

Grade Level	FY 2005-06 Actual	FY 2006-07 Adopted	FY 2007-08 Estimated
Expenditures			
Policy and Leadership Group	\$4.0	\$4.5	\$4.7
Administrative Services	\$5.9	\$6.8	\$7.9
Public Safety	\$36.1	\$39.2	\$43.0
Community Development	\$6.2	\$6.9	\$7.8
Community Services	\$15.4	\$16.6	\$17.2
Public Works	\$18.0	\$21.0	\$22.9
Non-Departmental	\$12.2	\$9.1	\$9.7
Contingencies		\$2.3	\$2.3
Total Expenditures	\$97.8	\$106.4	\$115.6
Revenues			
Taxes	\$87.2	\$95.3	\$102.0
Property Taxes	\$38.0	\$44.9	\$50.0
Sales Taxes	\$27.3	\$28.0	\$28.5
Other Taxes	\$21.9	\$22.3	\$23.6
Intergovernmental	\$1.1	\$1.8	\$2.9
Licenses and Permits	\$2.5	\$1.9	\$1.6
Charges for Services	\$7.8	\$7.8	\$6.2
Fines and Forfeitures	\$1.1	\$1.1	\$1.1
Income from Investments and Property	\$2.4	\$3.7	\$3.9
Interdepartmental Charges	\$2.6	\$2.2	\$2.6
Other Revenue Sources	\$1.3	\$0.8	\$0.8
Total Revenues	\$105.9	\$114.5	\$121.0

Source: City of Carlsbad, 2007
Numbers may not add up due to independent rounding.

5.10.3.5 Education

There are a total of 43 elementary, high school, and unified school districts in San Diego County. The CECP site is in the Carlsbad Unified School District. Current and historical enrollment figures for the school district are presented in Table 5.10-9. Projected enrollment figures are not available.

TABLE 5.10-9
Current and Projected Enrollment by Grade

Grade Level	Carlsbad Unified School District		
	Enrollment (2004-05)	Enrollment (2005-06)	Current Enrollment (2006-07)
Kindergarten	666	733	736
First	740	774	844
Second	753	744	778
Third	775	767	800
Fourth	740	830	794
Fifth	763	738	866
Sixth	780	789	794
Seventh	798	794	824
Eighth	773	795	823
Ungraded Elementary	143	133	0
Ninth	877	803	809
Tenth	794	867	807
Eleventh	808	768	876
Twelfth	697	798	798
Ungraded Secondary	67	79	0
TOTAL	10,174	10,412	10,549

Source: California Department of Education (CDE), 2007.

5.10.3.6 Public Services and Facilities

This section describes public services in the project area.

5.10.3.6.1 Law Enforcement

The CECP site comes under the jurisdiction of the Carlsbad Police Department (CPD), which serves the City of Carlsbad. The Carlsbad Police Department is located at 2560 Orion Way, Carlsbad, CA. There are approximately 148 authorized officers, all serving the City of Carlsbad from this one station (Perasall, 2007).

The CPD's average response time to a call from the CECP would be 5 minutes for a Type I incident and 5 to 10 minutes for a Type II incident (Perasall, 2007).

The California Highway Patrol (CHP) is the primary law enforcement agency for state highways and roads. Services include law enforcement, traffic control, accident investigation, and the management of hazardous materials spill incidents.

5.10.3.6.2 Fire Protection

The CECP site is within the City of Carlsbad Fire Department (CFD) jurisdiction. The CECP site is located closest to Station No. 1. CFD Station No. 1 is located at 1275 Carlsbad Village Drive in Carlsbad. Station No. 1 has 1 Seagrave engine and 1 Horton ambulance. The engine is manned by 3 fire fighters and the ambulance by 2. The response time to an emergency from the project site from Station No. 1 is approximately 6 minutes (Ryan, 2007).

5.10.3.6.3 Emergency Response

CFD firefighters are the first responders to any emergencies involving hazardous materials (hazmat). CFD has a contract with the San Diego County Department of Environmental Health Hazardous Materials Division (HMD) for additional hazmat support (Ryan, 2007). The HMD has a Hazardous Incident Response Team (DEH-HIRT), which consists of 10 California State Certified Hazardous Materials Specialists. DEH-HIRT responds jointly with the San Diego Fire-Rescue Department Hazardous Incident Response Team to investigate and mitigate chemically related emergencies or complaints. Emergency response activities include mitigation, containment and control actions as well as hazard identification, evaluating the threat to the local populations and the environment. Thus, the DEH-HIRT is capable of handling any emergency involving spills, e.g., aqueous ammonia.

5.10.3.6.4 Hospitals

The nearest hospital to the project site with a trauma center (Level II²) is the Scripps Memorial Hospital La Jolla. Scripps Memorial Hospital La Jolla, one of the county's six designated trauma centers, offers a wide range of clinical and surgical services including 24-hour emergency services; intensive care; interventional cardiology and radiology; radiation oncology; cardiothoracic and orthopedic services; neurology; ophthalmology; and mental health and psychology services. It has 293 licensed beds and more than 2,200 employees. It is approximately 19 miles from the project site.

The nearest hospital to the project site with an emergency room is Tri-City Medical Center, located at 4002 Vista Way, Oceanside (7.35 miles). Tri-City Medical Center has 397 acute-care licensed beds and more than 2,100 employees. Services at Tri-City Medical Center include an adult critical care unit, operating suite with 12 operating rooms, rehabilitation services, and an intermediate care 60 bed unit. Tri-City Medical Center operates a 24-hour emergency department. However, it does not have a trauma center (Schultz, 2007).

In addition to the above hospitals Scripps Memorial Hospital Encinitas, located at 354 Santa Fe Drive, Encinitas (about 8 miles) provides emergency care. The hospital has 140 acute-care licensed beds and more than 700 employees. Scripps Encinitas offers a full range of clinical and surgical services including 24-hour emergency services, intensive care, cancer/oncology, nuclear medicine, radiology, orthopedics, neurology, urology, ophthalmology and an ambulatory surgery center. Specialty services and programs based on the campus include the Scripps Rehabilitation Center, Spine Program, Licata Family Birth Pavilion, cancer services, outpatient imaging center and kidney dialysis. However, it does not have a trauma center.

5.10.3.7 Utilities

This section describes utilities in the area.

5.10.3.7.1 Electricity and Gas

The CECP units will connect to the electrical transmission system via 138 kV and 230 kV lines that connect to the respective, nearby existing SDG&E switchyards at the existing Encina Power Station. Electrical: one train to 138 kV and one train to 230 kV; Gas: existing gas line;

² Level I has 24-hour neuro/open heart/all other surgeries plus research capabilities. Level II has 24-hour neuro/open heart/all other surgeries.

Water: new connection to reclaimed water supply from City of Carlsbad; Discharge: new connection to City of Carlsbad sewer line on the site.

Natural gas for the facility will be delivered via Southern California Gas Company's (SoCalGas) existing 20-inch gas transmission line ("TL 2009, Rainbow line").

5.10.3.7.2 Water

Reclaimed water used by the CECP will be delivered to CECP by the City of Carlsbad through a reclaimed water pipeline from a connection point in the existing pipe system at Cannon Road and Avenida Encinas. Potable water will be provided to the plant from existing city water lines. It will be used for drinking, safety showers, eye-wash, fire protection, and service water. It will also serve as an emergency water supply, should the recycled water be unavailable for an extended period of time.

5.10.3.7.3 Wastewater Discharge

The wastewater streams (evaporative cooler and heat recovery steam generators (HRSG) blowdowns) will be internally recycled for reuse. Miscellaneous plant drains (sample cooling, pump leaks, equipment washwater, etc.) will be collected and treated for oil and suspended solids contaminations and recycled to the raw water storage tanks. A wastewater collection system will collect sanitary wastewater from sinks, toilets, showers, eye washes and other sanitary facilities, and discharge it to City of Carlsbad (Encina Wastewater Authority's) sanitary sewer system.

Accidental leaks and discharges inside the power generating areas will be contained and disposed offsite in accordance with approved Spill Prevention, Control and Countermeasures (SPCC) Plans.

5.10.4 Environmental Analysis

This section assesses the potential environmental impacts of the project and linear.

5.10.4.1 Potential Environmental Impacts

Local environmental impacts were determined by comparing project demands during construction and operation with the socioeconomic resources of the region of influence (i.e., San Diego County). A proposed power-generating facility could impact employment, population, housing, public services and utilities, and/or schools. Impacts could be local and/or regional, though most impacts would tend to be more local (city/county) than regional (outside the county).

5.10.4.2 Significance Criteria

The criteria used to determine the significance of project-related socioeconomic impacts are as suggested in the CEQA Checklist. project-related impacts from construction and the differences between the operations of the two plants are determined to be significant if they:

- Induce substantial growth or concentration of population
- Displace a large number of people or impact existing housing
- Result in substantial adverse impacts to the local economy and employment
- Create adverse fiscal impacts to the community
- Result in substantial adverse impacts to educational facilities

- Result in substantial adverse impacts to the provision of utility services
- Result in substantial adverse impacts associated with the provision of public services

Other impacts may be significant if they cause substantial change in community interaction patterns, social organization, social structures, or social institutions; substantial conflict with community attitudes, values, or perceptions; or substantial inequities in the distribution of project cost and benefit.

5.10.4.3 Construction Impacts

The economic impacts from construction activities are considered in this section. Since there are two construction schedule and commercial online dates (CODs), the economic analysis associated with the construction phase of the project is done separately for the Single Phased Construction that has a single COD for both units in the Second Quarter of 2010 and the Phased Construction that has one unit ready for commercial operations by the Second Quarter of 2010, and the second unit ready for commercial operations in the First Quarter of 2011. The Single Phased Construction is expected to take 19 months while the Phased Construction is expected to take 25 months.

5.10.4.3.1 Construction Workforce

The primary trades in demand will include boilermakers, carpenters, electricians, ironworkers, laborers, millwrights, operators, and pipefitters. Tables 5.10-10 and 5.10-11 estimate construction personnel requirements for the plant and linear facilities for the Single Phased Construction and the Phased Construction. Total personnel requirements during construction will be approximately 4,494 person-months, or 375 person-years for the Single Phased Construction. Construction personnel requirements will peak at approximately 357 workers in month 13 of the construction period. The Phased Construction has a total personnel requirement of 4,434 person-months (or 370 person-years) and a peak of 325 workers in month 14.

Available skilled labor in the San Diego County was evaluated by surveying local labor unions (Table 5.10-12) and contacting CEDD (Table 5.10-13). Both sources show that the workforce in the San Diego-Carlsbad-San Marcos MSA will be adequate to fulfill CECP's construction labor requirements. Therefore, CECP construction will not place an undue burden on the local workforce. In addition, as shown in Table 5.10-5, the construction workforce within the County has been growing at an average annual rate of 4.8 percent per year. In 2006, the construction workforce was estimated at 92,600 workers. Thus, the CECP peak construction needs are less than 0.5 percent of the total workforce.

TABLE 5.10-10
Construction Personnel By Craft – Single Phased Construction

Craft	Months After Notice to Proceed																			Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Plant																				
Insulation													8	10	12	12	12	20	16	90
Boiler Makers			4	4	6	12	14	14	24	24	22	24	24	22	18	12	8	8	8	248
Masons				3	4	4	5	5	4	2	2	1	1	1	1	1	1	1		36
Carpenters	4	4	24	32	24	32	32	32	32	32	32	18	18	18	12	10	8	6	6	376
Electricians	4	4	6	10	10	12	18	26	28	32	40	40	40	40	30	20	15	12	8	395
Ironworkers			6	12	8	10	20	22	22	34	32	34	34	18	16	14	20	14	10	326
Laborers	26	42	46	46	46	46	46	46	46	46	40	32	32	32	24	18	16	18	18	666
Millwrights							8	8	8	8	8	14	14	18	16	12	12	12	10	148
Operating Engineers	30	38		4	7	11	9	10	12	12	14	17	18	18	12	10	10	10	10	252
Plasterers								1	1	3	3	5	4	5	2	2				26
Painters								1	1	3	3	5	4	5	5	5	5	5	4	46
Pipefitters	4	6	12	12	16	24	38	38	42	42	42	42	42	42	42	34	28	22	18	546
Sheetmetal Workers					3	6	8	10	10	10	12	12	12	12	12	8	6	4	4	117
Sprinkler Fitters					1	1	1	1	2	4	5	8	8	8	6	6	6	6	6	63
Teamsters	28	32	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	93
Surveyors	4	5	6	6	5	6	4	4	4	4	4	4	4	4	3	2	2	1	2	74
Manual Staff Subtotal	100	131	106	131	128	163	203	218	237	256	258	255	265	255	215	168	151	140	122	3,502
Other Plant Staff	18	24	39	54	54	54	40	40	46	45	52	52	52	48	46	40	36	25	25	790
Plant Total	118	155	145	185	182	217	243	258	283	301	310	307	317	303	261	208	187	165	147	4,292

Reclaimed Water Line

TABLE 5.10-10
Construction Personnel By Craft – Single Phased Construction

Craft	Months After Notice to Proceed																			Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Laborers	20	24																		44
Operating Engineers	10	8																		18
Pipefitters	8	8																		16
Teamsters	6	4																		10
Manual Staff Subtotal	44	44																		88
Reclaimed line staff	4	4																		8
Reclaimed Water Line Total	48	48																		96
Transmission Line																				
Masons												4	4							8
Carpenters												3	3							6
Electricians												6	8	12						26
Ironworkers												6	6							12
Laborers												8	8	8						24
Operating Engineers												4	4	4						12
Teamsters												1	1							2
Surveyors												2	2							4
Manual Staff Subtotal												34	36	24						94
Transmission Staff												4	4	4						12
Transmission Line Total												38	40	28						106
TOTAL CONSTRUCTION STAFF	166	203	145	185	182	217	243	258	283	301	310	345	357	331	261	208	187	165	147	4,494

TABLE 5.10-11
Construction Personnel By Craft – Phased Construction

Craft	Months After Notice to Proceed																									Total
	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																										
Insulation													4	5	6	6	6	10	8	4	5	6	6	10	8	84
Boiler Makers					4	4	7	7	12	12	22	24	24	22	18	16	16	16	16	12	9	6	4	4	4	259
Masons					3	3	4	4	4	2	4	4	4	3	3	1	1	1	1	1	1	1	1	1	1	48
Carpenters	1	1	2		16	20	20	20	22	22	32	32	32	32	32	18	16	14	6	6	6	5	4	3	3	365
Electricians	1	1	2		6	8	12	13	14	16	35	40	40	35	30	24	22	20	18	20	15	10	8	6	4	400
Ironworkers					6	8	12	14	14	22	32	32	32	20	20	19	19	19	17	9	8	7	10	7	5	332
Laborers	13	17	17	10	35	35	35	30	30	30	46	46	46	40	32	32	32	32	32	16	12	9	8	9	9	653
Millwrights									5	5	5	9	9	9	16	15	15	15	14	9	8	6	6	6	5	157
Operating Engineers	13	15	16	3	0	4	7	10	10	10	14	14	15	15	12	11	11	11	11	9	6	5	5	5	5	237
Plasterers								1	1	2	2	2	2	2	2	1	2	2	2	2	2	0	0	0	0	27
Painters								1	1	2	2	2	2	3	3	4	4	4	4	3	3	3	2	2	2	47
Pipefitters	2	2	3		8	8	10	16	25	42	42	42	42	42	42	34	28	28	28	25	21	17	14	11	9	541
Sheetmetal Workers						2	3	4	5	5	6	8	8	10	10	10	10	8	8	6	6	4	3	2	2	120
Sprinkler Fitters						1	1	1	1	1	2	4	5	5	5	4	4	4	4	4	4	3	3	3	3	62
Teamsters	12	15	15	2	2	2	2	1	1	1	2	2	2	2	2	2	2	1	2	1	1	1	1	1	1	76
Surveyors	2	2	1		4	4	4	4	2	2	6	6	6	4	3	2	2	2	2	2	2	2	2	2	2	70
Manual Staff Subtotal	44	53	56	15	84	99	117	126	147	174	252	267	273	249	236	200	189	187	173	129	109	87	77	72	63	3,478
Contractor Staff	7	8	9	3	25	35	35	35	35	35	52	52	52	52	52	40	36	35	35	30	25	25	25	15	15	768
Plant Total	51	61	65	18	109	134	152	161	182	209	304	319	325	301	288	240	225	222	208	159	134	112	102	87	78	4,246
Reclaim Line																										
Laborers		10	12	8																						30
Operating Engineers		5	4	3																						12
Pipefitters		4	4	4																						12
Teamsters		3	2	2																						7

TABLE 5.10-11
Construction Personnel By Craft – Phased Construction

Craft	Months After Notice to Proceed																									Total
	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	
Manual Staff		22	22	17																						61
Subtotal																										
Reclaim line staff		4	4	3																						11
Reclaim line total		26	26	20																						72
Transmission																										
Masons														2	3	3					1					9
Carpenters														2	2	2					1					7
Electricians														6	8	8					4					26
Ironworkers															5	5					2					12
Laborers														6	6	6					8					26
Operating Engineers														4	4	3					2					13
Teamsters														1	1											2
Surveyors														2	2											4
Manual Staff														23	31	27					18					99
Subtotal																										
Transmission Staff														4	5	5					3					17
Transmission total														27	36	32				21						116
Total Construction Staff	51	87	91	38	109	134	152	161	182	209	304	319	325	328	324	272	225	222	208	180	134	112	102	87	78	4,434

TABLE 5.10-12
Labor Union Contact

Labor Union	Contact	Phone Number
San Diego Building and Construction Trades Council	Tom Lemmon, Business Manager	619-521-2914

TABLE 5.10-13
Available Labor by Skill in San Diego-Carlsbad-San Marcos Metropolitan Statistical Area (MSA), 2004 to 2014

Occupational Title	Annual Averages		Absolute Change	Percentage Change	Average Annual Compounded Growth Rate (%)
	2004	2014			
Carpenters	20,750	23,620	2,870	13.8	1.3
Cement Masons & Concrete Finishers	2,350	2,770	420	17.9	1.7
Painters, Construction & Maintenance	8,100	8,980	880	10.9	1.0
Sheet Metal Workers	2,520	2,830	310	12.3	1.2
Electricians	6,000	6,690	690	11.5	1.1
Welders, Cutters, Solderers, & Brazers	2,610	2,840	230	8.8	0.8
Industrial Truck & Tractor Operators	2,850	3,280	430	15.1	1.4
Operating Engineers and Other Construction Equipment Operators	3,630	4,200	570	15.7	1.5
Helpers, Construction Trades	3,870	4,310	440	11.4	1.1
Construction Laborers	13,140	13,520	380	2.9	0.3
Plumbers, Pipefitters, & Steamfitters	6,660	7,630	970	14.6	1.4
Administrative Services Managers	2,150	2,470	320	14.9	1.4
Mechanical Engineers	2,710	3,040	330	12.2	1.2
Electrical Engineers	1,960	2,340	380	19.4	1.8
Engineering Technicians	5,450	6,350	900	16.5	1.5
Plant and System Operators	1,480	1,670	190	12.8	1.2

Source: CEDD (2007c).

5.10.4.3.2 Population Impacts

It is anticipated that most of the construction workforce will be drawn from San Diego, County. Construction workforce could also be drawn from other nearby counties or from out of state, if necessary. For the purposes of our analysis, because of the size of the local construction workforce, we have assumed that 90 percent of the construction workers will be from the local area. Since most workers are expected to commute to the project site, they will not contribute to an increase in the population of the area.

5.10.4.3.3 Housing Impacts

The construction workforce will most likely commute daily to the project site; however, if needed, there are about 448 hotels/motels with 53,598 rooms in San Diego County (Cates, 2006) to accommodate workers who may choose to commute to the project site on a workweek basis. In addition to the available hotel/motel accommodation, there are about 16 recreational vehicle (RV) parks within 13 miles of the City of Carlsbad. As a result, construction of the proposed project is not expected to increase the demand for housing.

5.10.4.3.4 Impacts to the Local Economy and Employment

Single Phased Construction

The cost of materials and supplies required by the project during construction of the CECP is estimated at approximately between \$245 million and \$315 million. The estimated value of materials and supplies that will be purchased locally is \$30 million (in 2007 dollars).

CECP will provide an estimated \$54.6 million in construction payroll, at an average salary of \$70 per hour, including benefits (375 person-yrs * 2,080 hrs/yr * \$70/hr). The anticipated payroll for employees, as well as the purchase of materials and supplies during construction, will have a slight beneficial impact on the area. Assuming, conservatively, that 90 percent of the construction workforce will reside in San Diego County, it is expected that approximately \$49.14 million will stay in the local area during the 19-month construction period. These additional funds will cause a temporary beneficial impact by creating the potential for other employment opportunities for local workers in other service areas, such as transportation and retail. All cost estimates are in constant 2007 dollars as are the economic benefits noted in this section.

Indirect and Induced Economic Impacts from Construction from Single Phased Construction.

Construction activities would result in secondary economic impacts (indirect and induced impacts) within San Diego County. Indirect and induced employment effects include the purchase of goods and services by firms involved with construction, and induced employment effects include construction workers spending their income within the county. In addition to these secondary employment impacts, there are indirect and induced income effects arising from construction.

Indirect and induced impacts were estimated using an IMPLAN Input-Output model of San Diego County. IMPLAN is an economic modeling software program. The estimated indirect and induced employment within San Diego County would be 281 and 274 jobs, respectively. (Impacts are summarized in Table 5.10-14). These additional jobs result from about \$18.9³ million in annual local construction expenditures as well as the \$21.7 million in spending by local construction workers. The \$21.7 million represents the disposable portion of the annual construction payroll (assumed to be 70 percent of \$31⁴ million in annual construction payroll spent locally). Assuming an average monthly direct construction employment of 237, the employment multiplier associated with the construction phase of the project is approximately 3.3 (i.e., $[237 + 281 + 274]/237$). This project construction phase employment multiplier is based on a Type SAM model.

³ Annual portion of the \$30 million construction expenditure = \$30 million x (19 months/12 months) = \$18.9 million in 2007 dollars.

⁴ Annual local portion of construction payroll = \$54.6 million x (19 months/12 months) x 90% = \$31,035,790. The disposable portion of the annual local construction payroll = \$31,035,790 x 70% = \$21,725,050.

TABLE 5.10-14
Single Phase Construction Impacts to Local Economy and Employment (Annual)

Item	
Indirect Construction Employment	281
Induced Construction Employment	274
Average Monthly Direct Construction Employment	237
Construction Employment Multiplier	3.3
Annual Local Construction Expenditures	\$18,900,000
Annual Average Construction Payroll (Disposable)	\$21,725,050
Indirect Income Impact	\$11,019,540
Induced Income Impact	\$10,019,540
Construction Phase Income Multiplier	1.5

Indirect and induced income impacts were estimated at \$11,019,540 and \$10,755,210, respectively. Assuming a total annual local construction expenditure (payroll, materials, and supplies) of about \$40.7 million (\$21.7 million in payroll + \$18.9 million in materials and supplies), the project construction phase income multiplier based on a Type SAM model is approximately 1.5 (i.e., [$\$40,672,420 + \$11,019,540 + \$10,755,210$]/ $\$40,672,420$).

Phased Construction

The cost of materials and supplies required by the project during the Phased Construction is the same as that during the Single Phased Construction.

The Phased Construction will provide approximately \$53.9 million in construction payroll. The anticipated payroll for employees, as well as the purchase of materials and supplies during the Phased Construction, will have a slight and temporary beneficial impact on the area. Since 90 percent of the construction workforce is assumed to reside in San Diego County, it is expected that about \$48.48 million will stay in the local area during the 25-month construction period. These additional funds will cause a temporary beneficial impact by creating the potential for other employment opportunities for local workers in other service areas, such as transportation and retail. All cost estimates are in constant 2007 dollars as are the economic benefits noted in this section.

Indirect and Induced Economic Impacts from Phased Construction

Construction activities would result in secondary economic impacts (indirect and induced impacts) within San Diego County. Indirect and induced employment effects include the purchase of goods and services by firms involved with construction, and induced employment effects include construction workers spending their income within the county. In addition to these secondary employment impacts, there are indirect and induced income effects arising from construction.

Indirect and induced impacts were estimated using an IMPLAN Input-Output model of San Diego County. IMPLAN is an economic modeling software program. The estimated indirect and induced employment within San Diego County would be 214 and 207 jobs,

respectively. These additional jobs result from the \$14.4 million in annual local construction expenditures as well as the \$16.3⁵ million in spending by local construction workers. The \$16.3 million represents the disposable portion of the annual construction payroll (assumed to be 70 percent of \$23.3 million⁶ in annual construction payroll spent locally). Assuming an average monthly direct construction employment of 177, the employment multiplier associated with the construction phase of the project is approximately 2.9 (i.e., $[177 + 214 + 207]/177$). This project construction phase employment multiplier is based on a Type SAM model. (Impacts are summarized in Table 5.10-15).

TABLE 5.10-15
Phased Construction Impacts to Local Economy and Employment

Item	Impact
Indirect Construction Employment	214
Induced Construction Employment	207
Average Monthly Direct Construction Employment	177
Construction Employment Multiplier	2.9
Annual Local Construction Expenditures	\$14,400,000
Annual Average Local Construction Payroll (Disposable)	\$6,290,890
Indirect Income Impact	\$8,374,850
Induced Income Impact	\$8,092,300
Construction Phase Income Multiplier	1.5

Indirect and induced income impacts were estimated at \$8,374,850 and \$8,092,300, respectively. Assuming a total annual local construction expenditure (payroll, materials, and supplies) of \$30.6 million (\$16.3 million in payroll + \$14.3 million in materials and supplies), the project construction phase income multiplier based on a Type SAM model is approximately 1.5 (i.e., $[\$30,690,890 + \$8,374,850 + \$8,092,300]/\$30,690,890$).

5.10.4.3.5 Fiscal Impacts *Single Phase Construction*

CECP initial capital cost is estimated to be between \$350 million and \$450 million; of this, materials and supplies are estimated at approximately between \$245 million and \$315 million. The estimated value of materials and supplies that will be purchased locally (within San Diego County) is \$30 million. The effect on fiscal resources during construction will be from sales taxes realized on equipment and materials purchased in the County and from sales taxes from expenditures. The sales tax rate in the City of Carlsbad is 7.75 percent (as of April 1, 2007). Of this, 6.25 percent goes to the state; 0.25 percent goes to the County; 1 percent goes to the place of sale; and 0.25 percent goes to the special districts (BOE, 2007). The total local sales tax expected to be generated annually during construction is \$1,468,420 (i.e., 7.75 percent of local sales). Assuming all local sales are made in Carlsbad, the maximum sales tax the City could receive is \$236,840, annually. The additional sales tax

⁵ Annual portion of the \$30 million construction expenditure = \$30 million x (25 months/12 months) = \$18.4 million in 2007 dollars.

⁶ Annual local portion of construction payroll = \$53.8 million x (25 months/12 months) x 90% = \$23,272,700. The disposable portion of the annual local construction payroll = \$23,272,700 x 70% = \$16,290,900.

revenues that would go to the City annually during construction are less than one percent (0.85 percent) of the City's General Fund revenues from sales tax (see Table 5.10-8). The total sales tax to be generated during the 19-month construction phase of the project is \$2,325,000. Of this amount, the total portion going to the county, the place of sale and the special district is \$450,000 while that going specifically to the place of sale and the special district is \$375,000. The remainder (\$1,875,000) is the portion that goes to the State.

Phased Construction

The total local sales tax expected to be generated annually during the Phased Construction is \$1,116,000 (i.e., 7.75 percent of local sales). Assuming all local sales are made in Carlsbad, the maximum sales tax the City could receive is \$180,000, annually. The additional sales tax revenues that would go to the City annual during the Phased Construction are less than one percent (0.64 percent) of the City's General Fund revenues from sales tax (see Table 5.10-9). The total sales tax to be generated during the 25-month Phased Construction of the project is \$2,325,000. Of this amount, the total portion going to the county, the place of sale and the special district is \$450,000 while that going specifically to the place of sale and the special district is \$375,000. The remainder (\$1,875,000) is the portion that goes to the State.

5.10.4.3.6 Impacts on Education

The schools in the Carlsbad Unified School District are not considered overcrowded (Agramonte, 2007). Construction of CECP will not cause population changes or housing impacts to the region because most employees will commute to the site from areas within the County, as opposed to relocating to the area. As a result, CECP construction will not cause a significant increase in demand for school services.

5.10.4.3.7 Impacts on Public Services and Facilities

The construction phase of the project may have minor impacts on police, fire, or hazardous materials handling resources. However, since the peak workforce is only 357 workers, it is not expected to place a burden on public service providers. Copies of the records of conversation with the Sheriff and Fire departments are included in Appendix 5.10B. Typically, construction sites hold a higher risk of emergency due to the types of activities taking place. With construction companies putting an emphasis on safety, CECP construction is not expected to create significant adverse impacts on medical resources in the area since minor injuries could be treated at the Tri-City Medical Center and Scripps Memorial Hospital Encinitas.

5.10.4.3.8 Impacts on Utilities

CECP construction will not make significant adverse demands on local water, sanitary sewer, electricity, or natural gas. Impacts will involve the extension of existing utility lines. Water requirements for construction are relatively small. Given the number of workers and temporary duration of the construction period, the impacts on the local sanitary sewer system would not be significant.

5.10.4.4 Operational Impacts

This section looks at the changes to the local economy as a result of closing one power plant and bringing a new plant online.

5.10.4.4.1 Operational Workforce

The proposed CECP facility is expected to begin commercial operation in second quarter 2010. It is expected to have a workforce of up to 14 full-time employees. Anticipated job classifications are shown in Table 5.10-16. The permanent workforce for CECP is expected to come from the O&M workforce at the existing Encina Power Station.

TABLE 5.10-16
Typical Plant Operation Workforce

Department	Personnel	Shift	Workdays
Operations	6 operating technicians	Rotating 12-hour shift	7 days a week
Maintenance	2 maintenance technicians	Standard 8-hour days	5 days a week (Maintenance technicians will also work unscheduled days and hours as required [weekends])
Administration	6 administrators	Standard 8-hour days	5 days a week with additional coverage as required

The CECP workforce will be drawn from the existing workforce at the Encina Power Station. Consequently, no increase in population is anticipated as a result of this project. There will be no significant impact on local employment.

5.10.4.4.2 Population Impacts

Since the existing workforce at the Encina Power Station will also operate the CECP, the CECP operations will not create an influx of new workers to the community. Thus, there will be no significant impacts on population.

5.10.4.4.3 Housing Impacts

Since CECP will be sharing its workforce with the existing Encina Power Station, there will not be a demand for new housing. Therefore, no significant impacts to housing are expected.

5.10.4.4.4 Impacts on the Local Economy and Employment

CECP operation will generate a small, permanent beneficial impact by creating secondary employment opportunities for local workers through local expenditures for materials, such as office supplies and services. There will be an annual operations and maintenance budget of approximately \$4.5 million, all of which is assumed to be spent locally, (i.e., within San Diego County). These additional jobs and spending will generate other employment opportunities and spending in the City of Carlsbad and San Diego County area. All cost estimates are in constant 2007 dollars as are the economic benefits noted in this section.

Indirect and Induced Economic Impacts from Operations

The operation of the project would result in indirect and induced economic impacts that would occur within San Diego County. These indirect and induced impacts represent permanent increases in the county's economic variables. The indirect and induced impacts would result from annual operations and maintenance (O&M) expenditures.

Estimated indirect and induced employment within San Diego County would be 12 and 9 permanent jobs, respectively. These additional 21 jobs result from the \$4.5 million in annual operations and maintenance budget. Since there are no new operation workers, an operational phase employment multiplier cannot be estimated for the project.

Indirect and induced income impacts are estimated at \$1,338,830 and \$339,420, respectively. The income multiplier associated with the operational phase of the project is approximately 1.4 (i.e., [$\$4,500,000 + \$1,338,830 + \$339,420$]/ $\$4,500,000$) and is based on a Type SAM model.

5.10.4.4.5 Fiscal Impacts

The annual operations and maintenance budget is expected to be approximately \$4.5 million (in 2007 dollars), all of which is assumed would be spent locally within San Diego County.

During operations, additional sales tax revenues will be obtained by the City of Carlsbad and San Diego County. O&M expenses spent locally will be approximately \$4.5 million annually. Based on the assumed local O&M expenditures of \$4.5 million, the estimated sales taxes will be approximately \$348,750. Of this amount, the place of sale will receive \$56,250 in sales tax revenue. The overall anticipated increase in sales tax revenue will be beneficial but will not be significant, since it would constitute such a small percent of total City and County revenues. (All estimates are in 2007 dollars).

CECP is expected to bring increased property tax revenue to the City of Carlsbad. The California State Board of Equalization (BOE) has jurisdiction over the valuation of a power-generating facility for property tax purposes, if the power plant produces 50 megawatts (MW) or more. For power-generating facility producing less than 50 MW, the County has jurisdiction over the valuation (Young, 2007). Since the CECP is a nominal 560-MW power-generating facility, BOE is responsible for assessing property value. Although, the BOE assesses the property value, the property tax rate is set by the San Diego County Assessors Office. For the current property, this rate is 1.0185 percent (as of FY 2006-07). Assuming a capital cost between \$350 million and \$450 million, CECP will generate between \$3,564,610 and \$4,583,070 in property taxes annually. Since the property taxes are collected at the county level, their disbursement is also at the county level.

Since the CECP is in a redevelopment area (the South Carlsbad Coastal Redevelopment Area), a portion of the property taxes collected from the project will go to the Redevelopment Agency.

In FY 2006, the County's total revenues were estimated at \$3,416.9 million (see Table 5.10-7). Of this amount, \$1,102 million was in tax revenues. The increase in property taxes resulting from the CECP is less than one percent (0.5 percent) of the County's total tax revenues.

Annual purchases of natural gas are estimated at \$111 million. Natural gas purchases are assessed a franchise fee which is collected by the City. The natural gas franchise fee is set at 2.13 percent of the total gas purchases and is paid to the City of Carlsbad. Based on the estimated annual \$111 million in natural gas purchases, the CECP would pay approximately \$2.4 million in gas franchise fees to the City.

5.10.4.4.6 Impacts on Education

The schools in the Carlsbad Unified School District are currently not considered overcrowded (Agramonte, 2007). Since the CECP will not be requiring new operations

workforce, there will be no population changes and thus no impact to the local school system.

Regardless of any impact to the public schools, they are allowed to assess new construction for impact fees. A one-time assessment fee of \$0.42 per square foot of principal building area (Agramonte, 2007) will be assessed by the school district. This fee and its amount are discussed further in Section 5.10.6, Mitigation Measures.

5.10.4.4.7 Impacts on Public Services and Facilities

Project operation will not make any new significant demands on public services or facilities even if both of the operational employees reside in Carlsbad. The CPD did not express any concerns about increased service demands during plant operations (Perasall, 2007). The CECP's operation is not expected to result in significant impacts to the CFD. CECP's operation would not create significant adverse impacts on medical resources in the area due to 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 5.10B.

5.10.4.4.8 Impacts on Utilities

CECP operation will not make significant adverse demands on local water, sanitary sewer, electricity, or natural gas because adequate supply and capacity currently exist.

5.10.5 Cumulative Effects

Cumulative socioeconomic impacts could occur if the construction schedules for additional large projects overlap creating a demand for construction workers that exceeds the capacity of the local labor force; thus, creating an influx of construction workers that would result in impacts to local housing, schools, and/or public services.

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Pub. Resources Code § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15065(c), 15130, and 15355). 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.

Since the majority of the construction will reside primarily in the San Diego County and live within commuting distance, no adverse impact to local schools or housing is anticipated. Although there are a number of projects that are currently under development in the vicinity of CECP (see Section 5.6, Land Use) that could potentially have an adverse cumulative socioeconomic impact, most of these projects have not advanced to the point where enough is known about them in terms of construction workforce requirements or construction schedule. The only project that has a construction completion date is the I-5 North Coast Corridor. The construction on the I-5 North Coast Corridor is expected to be completed in 2015, thus, it could overlap with that of the CECP. Despite the potential for construction schedule overlap with the I-5 North Coast Corridor, no adverse cumulative socioeconomic impacts are anticipated from either the construction or operation of CECP because construction workforce in the area is large and the CECP construction workforce demand, with a peak demand of 328 (Phased construction) or 357 (Single Phase construction), is relatively small compared to the overall construction workforce in the area.

Instead, San Diego County will enjoy a beneficial (but not significant) impact from short-term construction and longer-term operations employment. In addition, the long-term payment of taxes and fees are expected to have a significant beneficial impact to the County.

For additional cumulative effects the reader is referred to Section 5.6, Land Use.

5.10.6 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 consider whether the 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 and/or low-income population.

According to the guidelines established by USEPA 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. The guidance suggests using two or three standard deviations above the mean as a quantitative measure of disparate effects.

A screening-level analysis of EJ is presented in Appendix 5.10A. According to that analysis, this project does not create high and adverse impacts. Therefore, there are no environmental impacts that are likely to fall disproportionately on minority and/or low-income members of the community.

5.10.7 Mitigation Measures

Since there are no significant adverse impacts caused by the project, no socioeconomic-specific mitigation measures are proposed.

However, since the project would be located within the Carlsbad Unified School District service area, the project would be subject to school impact fees. Any development (industrial or residential) within the Carlsbad Unified School District is currently charged a one-time assessment fee of \$0.42 per square foot of principal building area (Agramonte, 2007). However, since CECP will be sharing O&M workers with the existing Encina Power Station and these workers will continue to occupy existing buildings, the project will not be required to pay the school impact fees on occupied structures.

5.10.8 Proposed Conditions of Certification

There are no proposed conditions of certification that apply.

5.10.9 Involved Agencies and Agency Contacts

Table 5.10-17 provides a list of agencies and contact persons of potentially responsible agencies. Copies of records of conversation are provided in Appendix 5.10B.

TABLE 5.10-17
Agencies and Agency Contacts for Socioeconomics

Agency	Contact/Title	Phone Number	Address
San Diego Building and Trades Council	Tom Lemmon, Business Manager	619-521-2914	3737 Camino Del Rio S # 202 San Diego, CA 92108 tomlemmon@sbcglobal.net
Carlsbad Unified School District	Denise Agramonte, Administrative Assistant, Business Services	760-331-5036	6225 El Camino Real Carlsbad, CA 92009 DeniseAg@sdcoe.net
Carlsbad Fire Department	Greg Ryan, Deputy Fire Marshall	760-602-4665	1635 Faraday Center Carlsbad, CA 92008 gryan@ci.carlsbad.ca.us
Tri-City Medical Center	Sharon Schultz, Emergency Unit Director	886-226-5111	Tri-City Medical Center 4002 Vista Way Oceanside, CA 92056-4506 schultzs@tcmc.com
Carlsbad Police Department	Lewis Perasall, Senior Volunteer Patrol	760-931-2100	Carlsbad Police Department 2560 Orion Way Carlsbad, CA 92010 [no email available for Lewis Perasall]

5.10.10 Permits Required 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. These permits are addressed in Table 5.6-7 in the Land Use section and listed in Appendix 1F. No permits are required to comply with the socioeconomic impacts of the project.

5.10.11 References

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LEGEND

PROJECT SITE BOUNDARY

PERCENT MINORITY POPULATION

0 - 50%

> 50%

0 5,000 10,000
FEET
1 INCH = 10,00 FEET

N

FIGURE 5.10-1
MINORITY POPULATION
DISTRIBUTION BY CENSUS BLOCK
GROUPS WITHIN 6 MILES
CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CALIFORNIA



LEGEND

PROJECT SITE BOUNDARY

PERCENT LOW INCOME

0%

0 - 50%

> 50%

0 5,000 10,000
FEET
1 INCH = 10,00 FEET

N

FIGURE 5.10-2
LOW INCOME POPULATION
DISTRIBUTION BY CENSUS BLOCK
GROUPS WITHIN 6 MILES
CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CALIFORNIA