

the top five including hydroelectric, nuclear, coal, natural gas, and geothermal. These sources have remained stable producers over the ten-year period representing roughly 70 percent of the power generated in the state over this time.

These are not the only sources of power available to residents of the state since power generation and distribution systems located throughout the western United States are linked together by a network of transmission lines and relay substations. Under normal circumstances, California exports electricity in the winter months when demand is lower and imports electricity during the summer when peak loads are high. This is evident on **Table 4.11.4-1**, which also identifies the energy imported into the state during this same 10-year period.

For purposes of comparison, **Table 4.11.4-2** provides a breakdown of electrical demand for the State of California from 1980 through the year 2010. This represents a measurement of the amount of electricity used at homes and business within California and does not include the actual amount of energy provided by generators and supplied over the grid to account for losses during distribution. As shown, the state has experienced an annual average growth rate of 3.2 percent for the ten-year period from 1980 to 1990. Due to the recession of the early 1990s, the demand slowed during the period from 1990 to 1998 with an annual average rate of growth calculated at 0.9 percent. Total electrical consumption in the state was 244,409 gigawatt hours for the year 1998. Future demand is projected to increase at a 2.0 percent annual average rate for the period 1998 to 2010.

**Table 4.11.4-2**  
**Electricity Consumption Year 1980 to 2010 (GWh)**

Year	PG&E	SMUD	SCE	LADWP	SDG&E	Other	State
1980	66,197	5,352	59,624	17,669	9,730	8,406	166,979
1990	86,806	8,358	81,673	21,971	14,798	14,432	228,038
1998	95,601	9,123	88,434	23,004	17,630	10,617	244,409
2004	109,219	10,460	100,822	24,985	20,539	13,541	279,565
2010	121,041	11,692	113,137	26,684	23,022	14,293	309,868

Source: California Energy Commission, **Technical Report to California Energy Outlook, June 2000.**

## **Regulatory Environment**

### **Deregulation**

The Electricity Utility Industry Restructuring Act of 1996 allowed the generation of electricity to become a competitive market in the State of California. This law was intended to benefit consumers by

allowing energy companies to become competitive with one another, lowering prices of energy; and creating competition between energy companies to develop better technologies. Problems arose in the summer of 2000 when retail prices hit all time highs in California and generation capacity shortages forced temporary power outages in northern California. The energy problem involved a combination of large increases in wholesale electricity prices; intermittent power shortages during peak demand periods and deterioration of the financial stability of California's three major investor-owned utilities, Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric.

The State of California developed a three-part plan to address the situation consisting of increasing power supplies, improving energy conservation, and stabilizing the electricity industry in California. To increase energy supplies, the Governor issued executive orders designed to expedite the construction and permitting of generation facilities and boost the output from existing generation plants in the State. The orders provide incentives for renewable and distributed generation. Conservation is also being emphasized to reduce demands.

#### **Title 24 of the California Administration Code**

In response to the energy crisis of 2000, the California Assembly passed AB 970 or the California Energy and Reliability Act of 2000. The legislation modified Title 24 of the California Government Code in order to promote energy efficiency in new construction. The new energy reducing standards were issued and implemented into building permits issued after June 1, 2000. The act created a team that formulated amendments to standards focusing on reducing peak electricity consumption and demand in the shortest time possible without disturbing construction practices, increasing cost of construction significantly and length of time to change specifications. Since AB 970 was adopted in 2000, there have been more additions to the requirements in order to save energy.<sup>2</sup> These requirements are duct sealing; air conditioner calibration and testing; radiant barriers in attics; and improved fenestration. Most of these new requirements only apply to homes that are in hot climates where air conditioning energy contributes significantly to California's summer electricity peak. The mandatory measures established by AB 970 are listed below:

#### **List of Mandatory Measures**

1. Certified space conditioning equipment sizing regulated by the Uniform Building Code (UBC)
2. Intermittent Ignition device on Gas Cooking Appliances, Clothes Dryers, Central Furnaces, and Pool Heaters

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<sup>2</sup> Residential Manual for Compliance with California's 2001 Energy Efficiency Standards, June 2001, page 1-3.

3. Tighter Air Ducts Installed and Insulated
4. Kitchen and Bathroom Lighting: 40 Lumens/Watt Efficiency
5. IC (Insulation Cover) Approved Recessed Lighting Fixture
6. Insulation Certificate for Heater
7. Certificate for All Manufactured Devices
8. Appliances Certified and Labeled
9. Certified Wall Insulation
10. Insulation on First 5 Feet of Inlet and Outlet Pipes for Storage Tank Water Heaters
11. Fireplace Measures: Closeable Doors, Outside Air Intake for Combustion with Damper & Control, Flue Damper & Control
12. Raised Floor Insulation
13. Joints and Penetrations Caulked & Sealed
14. Manufactured Doors & Windows Certified as Meeting Air Leakage Standards and Certified as to U-factor and SHGC; Field-Fabricated Doors & Windows Weather-stripped
15. Roof/Ceiling Insulation

## **Natural Gas Service**

Natural gas is imported to Ventura County by TGC from its interstate system and distributed to the area through a fixed transmission and distribution system. Existing facilities in the area include a 4-inch high pressure natural gas line running along Vineyard Avenue, a 4-inch line along the Ventura Freeway and another 4-inch line along Carnegie Street and along the northeastern border of the Specific Plan Area parallel to Montgomery Avenue.<sup>3</sup>

## **IMPACT ANALYSIS**

### **Thresholds of Significance**

Based on Appendices F and G of the *CEQA Guidelines*, the City of Oxnard considers a project to result in a significant energy impact if it would:

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<sup>3</sup> RiverPark Gas Master Plan. November 2001.

- consume fuel or energy in a wasteful manner or fail to comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Administrative Code*).
- Consume energy in an amount that could not be accommodated within the long-term electricity source and distribution planning of the utilities serving the area.
- Consume energy in an amount that would result in the need for new power system; and/or
- Require significant alterations to an existing distribution system.

## Electricity

### Short-Term Construction Impacts

Electrical energy would be consumed on a temporary basis during construction activities. The energy would serve construction trailers, power tools, tool sheds, work and storage areas, and other facilities associated with construction activity. Construction activity is not expected to consume significant amounts of SCE energy, because the construction of residential subdivisions and other allowed uses would occur in phases over a 15 to 17 year period.

### Operational Impacts

Development of the uses allowed by the project would place new demands on electrical service provided by SCE, and would require new or upgraded delivery infrastructure to transmit the energy to uses on the site. Table 4.11.4-3 identifies consumption rates by land use type and estimates the total amount of electricity that would be consumed if all uses permitted by the proposed Specific Plan were built out at the maximum allowed intensity.

**Table 4.11.4-3**  
**Projected Electrical Consumption at Total Build-out of the Project**

Land Use	Quantity	Units	Usage Rate (watts/unit/year)	Total Watts/year
Single Family Residential	1,477	Units	10,000	14,770,000
Multi-Family Residential	1,328	Units	10,000	13,280,000
Public Facilities	668,000*	SF	10 Watts/SF	6,668,000
Commercial/Office	2,485,000	SF	10 Watts/SF	24,850,000
<b>Total</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>59,568,000</b>

Source: Impact Sciences. Usage rates provided by Huitt-Zollars, Inc.

\* Assumes 35 percent of the total acreage of both the school and fire station sites are occupied with buildings.

As shown in **Table 4.11.4-3** the total amount of electricity consumed at build-out of the project is estimated at approximately 60 million kilowatt-hours (kWh) per year.

The development of new energy power resources is steadily developing. By the end of the 2001 year, there will be 39 new power generation stations developed and online creating a total of 2,236 megawatts of new power. There are 23 additional projects estimated to be online by September 1, 2002 expected to produce 3,749 megawatts of additional new power for the State.<sup>4</sup> The California Energy Commission projects the demand for electricity to be about 67,000 megawatts of energy in 2004 during the peak energy season. The estimated supply in 2004 is estimated at about 74,000 megawatts.<sup>5</sup> This projections shows California will have a surplus of 7,000 megawatts of power by 2004.

As shown previously in **Table 4.11.4-2**, anticipated growth within the state is expected to increase total demand to approximately 309,868 GWh in 2010.<sup>6</sup> A total of 14 large-scale power plants have been approved by the CPUC throughout the state to meet anticipated demand. **Table 4.11.4-4** provides a list of these power plants and identifies the estimated date the plants will be activated. As shown, approved facilities located in central and southern California alone will provide approximately 3,613 additional megawatts, which is enough power to supply over 2.7 million homes.<sup>7</sup> Approved plants include the Pastoria Energy Facility (750 megawatts), Antelope Valley (1,000 megawatts), La Paloma (1,043 megawatts), Sunrise Power (320 megawatt) and Elk Hills (500 megawatt). In a report prepared for the California Energy Commission, staff concluded that if only eleven power plants are placed into service between 2001 and 2003, there would be more generation available than load growth requires for most of the following decade.<sup>8</sup>

The additional electrical demand of the project can be accommodated within the long-term source and distribution planning. In addition, individual building projects within the Specific Plan Area would be required to comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Administrative Code*) as mitigation against the wasteful use of energy. For these reasons, no significant impacts on electrical supply or service will result from the project.

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<sup>4</sup> 2002 Monthly Electricity Forecast: California Supply/Demand Capacity Balance for January – September 2002.

<sup>5</sup> Staff Draft California Energy Outlook: Electricity and Natural Gas Trends Report, September 2, 2001.

<sup>6</sup> California Energy Commission Technical Report to California Energy Outlook 2000.

<sup>7</sup> One megawatt represents enough energy to power 750 homes.

<sup>8</sup> California Energy Commission, Market Clearing Prices Under Alternative Resource Scenarios 2000 to 2010. March 13, 2000.