



## **SECTION 5.16**

### **Electricity**

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## 5.16 ELECTRICITY

This section addresses the potential impacts of the proposed project with regard to electricity consumption. The analysis identifies the utility that provides electricity services to the project site, describes the existing consumption of electricity at the site, indicates the nature and location of related infrastructure in the local area, and estimates the electricity demands of the proposed project at buildout.

### 5.16.1 REGULATORY SETTING

#### STATE OF CALIFORNIA

The California Public Utilities Commission (CPUC) regulates investor-owned electric power and natural gas utility companies in the State of California. Assembly Bill 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., SCE) was decoupled.

All new construction in the State of California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings.

The utilization of alternative energy applications in development projects (including the proposed project), while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar water heating systems, or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources (i.e., electricity and natural gas). Incentives, primarily in the form of State and Federal tax credits, as well as reduced energy bills, provide a favorable basis for individual builders, property owners, and occupants to install such alternative energy systems.

#### **CALIFORNIA 2010 GREEN BUILDING STANDARDS CODE – CALGREEN CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 11**

The purpose of the *California Green Building Standards Code* is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design;
2. Energy efficiency;
3. Water efficiency and conservation;
4. Material conservation and resource efficiency; and
5. Environmental quality



## CITY OF SANTA CLARITA

### ENERGY CONSERVATION PROGRAMS<sup>1</sup>

The potential for rolling electrical outages will continue as long as statewide energy shortages exist. Because energy conservation can significantly help avert outages by reducing the demand for energy, the City promotes energy conservation.

The three most prevalent energy conservation programs for the City include the Sustainable or “Green Building” Program, the Energy Coalition, and the public education and outreach facilitated by the City. Other energy conservation programs include Title 24 (California’s Energy Efficiency Standards for Residential and Nonresidential Buildings) measure enforced by the City’s Building and Safety Division and energy conservation programs promoted by SCE and state agencies.

The Sustainable Building Program helps to promote energy efficient buildings that are also environmentally responsible. Although energy efficiency has been the foundation of sustainable building programs, sustainable building programs also include indoor air quality, low-impact building products, water quality and conservation, reuse or recycling of construction and demolition waste, and building life cycle. In terms of energy, the Sustainable Building Program encourages utilization of the City’s Community Energy Efficiency Program (CEEP), which provides financial incentives for residential builders that design homes that use up to 10 to 20 percent less energy than Title 24. The program is planned to expand to include waste management and water conservation. The other aspect of the City’s Sustainable Building Program is the promotion of Leadership in Energy and Environmental Design (LEED) criteria when designing and constructing commercial buildings. New development is encouraged to be designed to reduce energy and natural resource consumption by using techniques such as passive solar energy techniques and energy efficient appliances.

Santa Clarita also promotes ridesharing and other alternatives to commuting in single occupant vehicles through Ridesharing Week and Bike to Work Week events. The City provides incentives to its employees for walking, biking, carpooling, or vanpooling to work. City employees ride the City bus for free.

The City has a policy to continue and expand current energy conservation programs. This includes the Sustainable Santa Clarita Program that encourages new development to be designed to do the following:

- Reduce energy and natural resource consumption by using techniques such as use of recycled materials in building construction;
- Use drought-tolerant landscaping;
- Include passive solar energy techniques; and
- Utilize energy and water-efficient appliances.

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<sup>1</sup> *Draft Program Environmental Impact Report for the City of Santa Clarita’s Proposed One Valley One Vision General Plan, Volume I, One Valley One Vision 2010, Section 3.17 Utilities and Infrastructure, Impact Sciences, Inc., September 2010.*



The City has been actively working with the SCE Savings by Design program to ensure that City's buildings are constructed as energy efficiently as possible. Most recently constructed City facilities have enrolled in this program and have greatly increased the energy conservation in public buildings.

## GENERAL PLAN

Applicable goals, objectives, and policies from the *General Plan Conservation and Open Space and Land Use Elements* are listed below.

### Responsible Management of Environmental Systems

**Goal CO 1:** A balance between the social and economic needs of Santa Clarita Valley residents and protection of the natural environment, so that these needs can be met in the present and in the future.

**Objective CO 1.5:** Manage urban development and human-built systems to minimize harm to ecosystems, watersheds, and other natural systems, such as urban runoff treatment trains that infiltrate, treat and remove direct connections to impervious areas.

**Policy CO 1.5.7:** Consider the principles of environmental sustainability, trip reduction, walkability, stormwater management, and energy conservation at the site, neighborhood, district, city, and regional level, in land use decisions.

### Greenhouse Gas Reduction

**Goal CO 8:** Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases.

**Objective CO 8.1:** Comply with the requirements of State law, including AB 32, SB 375 and implementing regulations, to reach targeted reduction of greenhouse gas (GHG) emissions.

**Policy CO 8.1.3:** Revise codes and ordinances as needed to address energy conservation, including but not limited to the following:

- a. Strengthen building codes for new construction and renovation to achieve a higher level of energy efficiency, with a goal of exceeding energy efficiency beyond that required by Title 24.

### Environmentally Responsible Development

**Goal LU 7:** Environmentally responsible development through site planning, building design, waste reduction, and responsible stewardship of resources.

**Objective LU 7.1:** Achieve greater energy efficiency in building and site design.



**Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects.

**Policy LU 7.1.3:** Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.

## 5.16.2 ENVIRONMENTAL SETTING

### ELECTRICITY SUPPLY AND DEMAND

SCE, a division of Edison International, currently provides electricity service in the project area. SCE maintains overhead power lines that run along Oak Spring Canyon Road, adjacent to the project site to the west.

Edison facilities include a hydropower and nuclear power facilities and one coal-powered facility: the Big Creek Hydroelectric Plant, the San Onofre Nuclear Generating Station (SONGS), and the Mojave Generating Station. SCE maintains and operates transmission and distribution infrastructure to provide purchased power to end users throughout its service area.

According to the California Energy Commission (CEC), SCE delivered 104.8 million megawatt-hours (MWh) to its customers during 2009.<sup>2</sup> By 2016, SCE's demand is expected to increase to approximately 113.4 million MWh.<sup>3</sup> Existing conditions within the proposed project area are rural and undeveloped. As such, at the present time there is no demand for electricity on-site.

### 5.16.3 SIGNIFICANCE THRESHOLD CRITERIA

The *City of Santa Clarita Local CEQA Guidelines* (Resolution 05-38) adopted on April 26, 2005 and the Initial Study Environmental Checklist form in *CEQA Guidelines* Appendix G serve as the thresholds for determining the significance of impacts relating to electrical services. As such, a project would be considered to have a significant environmental impact if it would result in following:

- The project would create demands on electricity supply and infrastructure which exceed the capacity of the utility serving the project site.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

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<sup>2</sup> California Energy Commission. California Energy Demand 2006-2016 Staff Energy Demand Forecast Revised September 2005. Staff Final Report. Publication #CEC-400-2005-034-SF-ED2. September 2005. .

<sup>3</sup> Ibid.



## 5.16.4 PROJECT IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT OF THE PROPOSED PROJECT COULD INCREASE DEMANDS ON ELECTRICITY SUPPLIES AND DISTRIBUTION INFRASTRUCTURE.**

**Level of Significance Before Analysis and Mitigation:** Less Than Significant Impact.

**Impact Analysis:** The proposed project involves the development of 99 single-family residential units. Based upon a consumption factor of 5,626.5 kilowatt-hours (kWh) per single-family dwelling unit, buildout of the proposed project would create a demand of approximately 557,024 kWh (557.0 MWh) per year of electricity.<sup>4</sup> According to the California Energy Commission (CEC), SCE delivered 104.8 million megawatt-hours (MWh) to its customers during 2009.<sup>5</sup> By 2016, SCE's demand is expected to increase to approximately 113.4 million MWh.<sup>6</sup> This represents approximately 0.00000531 percent of SCE's electricity deliveries in 2009 (557.0 MWh out of 104.8 MWh) and 0.00000491 percent of SCE's electricity deliveries projected in 2016 (557.0 MWh out of a total of 113.4).

The project site is rural and undeveloped. As such, currently no electricity is consumed on-site. Primary service would come from Soledad Canyon Road via existing power lines, which presently cross the Santa Clara River and the project site. The existing line would be extended to serve the project's initial development phases. New local electrical service lines would be installed underground, to adequately meet the anticipated electric consumption demands of the proposed project. All on-site electricity lines would be installed to serve proposed uses, at the expense of the project applicant. Although the proposed project would create additional demands on electricity supplies and distribution infrastructure, these demands are well within the service capabilities of SCE.<sup>7</sup> In addition, the proposed project would be required to comply with Title 24 and the California 2010 Green Building Standards Code. Thus, impacts would be less than significant in this regard.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance After Analysis and Mitigation:** Less Than Significant Impact.

## 5.16.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS IN THE SANTA CLARITA VALLEY, WOULD INCREASE DEMANDS ON ELECTRICITY SUPPLIES AND DISTRIBUTION INFRASTRUCTURE.**

**Level of Significance Before Analysis and Mitigation:** Less Than Significant Impact.

<sup>4</sup> Consumption factors from South Coast Air Quality Management District *CEQA Air Quality Handbook* (April 1993), Table A9-117.

<sup>5</sup> California Energy Commission. California Energy Demand 2006-2016 Staff Energy Demand Forecast Revised September 2005. Staff Final Report. Publication #CEC-400-2005-034-SF-ED2. September 2005. .

<sup>6</sup> Ibid.

<sup>7</sup> Phone communication with Scott Walker, Residential Planner with Southern California Edison on August 31, 2006.



**Impact Analysis:** In relation to past, present, and reasonable foreseeable future development, the proposed project would cumulatively contribute to an increased demand for energy utilities. The proposed project and related cumulative projects would add to the cumulative demand for such services through the introduction of new residents, tenants, and users of the proposed facilities. Specifically, development of the proposed project and related cumulative projects would result in the consumption of approximately 165,188 MWh of electricity per year (refer to Appendix C, Cumulative Growth Calculations). As previously discussed, SCE delivered 104.8 million MWh to its customers during 2009 and is expected to increase to approximately 113.4 million MWh by 2016. This represents approximately 0.00000531 percent of SCE's electricity deliveries in 2009 (557.0 MWh out of 104.8 MWh) and 0.00000491 percent of SCE's electricity deliveries projected in 2016 (557.0 MWh out of a total of 113.4 MWh).

It is expected that the electrical loads of the proposed project and related projects are within the parameters of projected load growth, which SCE is planning to meet in the area. All electricity lines and other system improvements would be installed, in whole or in part, at the expense of development project applicants, and would serve to avoid adverse impacts to the electricity distribution system. Although the proposed project and related cumulative projects would create additional demands on electricity supplies and distribution infrastructure, these demands are well within the service capabilities of SCE. In addition, the proposed project and related cumulative projects would be required to comply with Title 24 and the California 2010 Green Building Standards Code. Thus, cumulative impacts would be less than significant.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance After Analysis and Mitigation:** Less Than Significant Impact.

## 5.16.6 SIGNIFICANT UNAVOIDABLE IMPACTS

All impacts related to electrical services are less than significant levels. As such, implementation of the proposed project would not result in any significant unavoidable electrical services impacts.

## 5.16.7 SOURCES CITED

California Energy Commission. California Energy Demand 2006-2016 Staff Energy Demand Forecast Revised September 2005. Staff Final Report. Publication #CEC-400-2005-034-SF-ED2. September 2005.

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