

## 4.5 Energy

### 4.5.1 Existing Setting

The Project site receives electricity from Southern California Edison and natural gas from the Southern California Gas Company. Since 2007, Cate School has incorporated a total of eight Leadership in Energy & Environmental Design (LEED) certified buildings designed with energy efficient features. Additionally, six faculty residences built in 2005 integrated a sustainable design with drought tolerant landscape and alternative energy features such as photovoltaic cells (Cate School 2015). All of the buildings certified LEED Platinum are served by a 21 kW solar array. In addition, the Emmett Horowitz Aquatic Center, certified LEED Gold, was built with a micro-turbine fueled by natural gas to assist in providing electricity to fully power the aquatic center. The 65 kW micro-turbine in the aquatic center is 80 percent efficient and generates far more electricity than the facility uses, moreover the waste heat released provides 40 percent of the energy required for heating the pool to comfortable swimming conditions, locker rooms, and space heating. A 72 kW solar array on the roof of the gym supplies additional renewable energy to the campus. All three of these electric generating systems have a capacity of 158 kW and after the temperature and inverter losses, these systems generate a total of 54,088 kWh per month.

In addition to the electrical generation systems and the energy conservation features on all LEED certified buildings, most of the structures on campus have been equipped with new energy efficient lighting. Most of the incandescent and fluorescent lighting have been replaced with light-emitting diode (LED) fixtures and most of the exterior lighting is now controlled by timers or motion detectors. Furthermore, when window replacements occur building insulation and dual paned windows are utilized. With the incorporation of energy conservation features on all buildings since 2005, Cate School has achieved a net reduction in electricity purchased from Southern California Edison grid. Cate School is focused on the use of sustainable energy and environmentally responsible materials.

### 4.5.2 Regulatory Setting

State of California regulations that are applicable to the Project include:

- *California Coastal Act of 1979* was established to extend the temporary authority of the Coastal Commission indefinitely. The Coastal Commission is tasked with the protection of coastal resources within the Coastal Zone. Section 30253(4) requires new development to minimize energy consumption and vehicle miles traveled.
- *California Code of Regulations, Title 24, Part 6 (California Energy Code)* promotes efficient energy use in new buildings constructed in California. The standards regulate energy consumed for heating, cooling, ventilations, water heating, and lighting. Title 24 is the State Building Code, and is enforced through the local building permit process.
- *California Code of Regulations, Title 24, Part 11 (California Green Building Standards Code [CALGreen])* requires that new buildings reduce water consumption, increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. CALGreen has approximately 52 nonresidential mandatory measures and an

additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds (VOCs), and commissioning for new, nonresidential buildings over 10,000 sf.

County of Santa Barbara policies that are applicable to Project include:

- The *County of Santa Barbara Comprehensive Plan Energy Element* contains long-range planning guidelines to encourage energy efficiency and the use of alternative energy sources available in the County of Santa Barbara (County of Santa Barbara 2015). The proposed Project is subject to the two following energy goals and its respective policies:
  - *Energy Goal 2 Buildings*: The County shall encourage development whose location, construction, and systems reduce nonrenewable energy resources. In encouraging energy efficient development, the County shall provide information and education to the general public, businesses, and organizations on the importance of energy conservation (Policy 2.3: Public Information) and encourage increased use of passive, solar design and daylighting in existing and new structures (Policy 2.4: Passive Solar Designs).
  - *Energy Goal 5 Alternative Energy*: The County shall encourage the use of alternative energy for environmental and economic benefits. New and existing development shall include alternative energy technology when appropriate (Policy 5.2: Alternative Energy Technologies) and solar photovoltaic equipment shall be used when it is cost-effective on a life-cycle basis (Policy 5.4: Solar Photovoltaic Equipment). All projects shall provide feedback to the Board of Supervisors on the effectiveness of alternative energy programs (Policy 5.12: Alternative Energy Status).

### 4.5.3 Impact Analysis

This section reviews the analysis and mitigation measures in the Scoping Document and MND. The renovation, demolition, and construction of new structures would increase energy demand under the proposed Project and may result in impacts to energy resources as summarized in Table 4.5-1 below.

**Table 4.5-1. Summary of Energy Resources Impacts**

Energy Impacts	Mitigation Measure	Residual Significance
Impact EN-1. The proposed Project would generate new energy demands.	No mitigation required	Less than significant (Class III)

#### 4.5.3.1 Thresholds of Significance

The County’s Environmental Thresholds and Guidelines Manual and the CEQA Guidelines do not contain significance thresholds for energy. Therefore, energy resource impacts are determined through use of the guidelines contained in the MND and the CEQA Guidelines Appendix F for determining significance of impacts. The proposed Project may result in a significant environmental impact if it would:

- a) Substantially increase the demand, especially during peak periods, upon sources of energy; or

- b) Require the development or extension of new sources of energy.

### 4.5.3.2 Project Impacts

#### Impact EN-1. The proposed Project would generate new energy demands.

Construction of the Project would require energy in the form of gasoline and diesel for construction equipment, worker and haul vehicles, and electricity for lighting and hand tools. While the amount of energy required for Project construction is unknown, it is anticipated to be comparable to construction projects of a similar scale. Energy consumed for construction activities would not significantly affect local and regional energy supplies to the extent that additional energy sources would be required.

Operation of the proposed Project would increase energy demand associated with electricity for lighting, natural gas for heat, and gasoline and diesel fuel for additional vehicle trips. The proposed Project consists of a net increase of 154,279 sf of development, including a net of four new single family dwellings for faculty and renovations of existing structures. The existing structural floor area of 249,444 sf would be increase by 25 percent, to a total structural floor area of 329,586 sf. The net increase in building square footage and operation of additional facilities under the proposed Project would increase energy demand. However, renovations of existing structures would incorporate energy conservation measures, such as replacement of older doors and windows with more efficient products, new lighting, insulation, and other fixtures that would reduce energy demand and would be in compliance with Title 24 building code requirements for energy efficiency through the building permit process. Moreover, replacement of older buildings, such as the 1925 Dormitory and two existing staff residences, with new, more energy efficient buildings, would help increase the overall energy efficiency on campus. Implementation of these standards would partially offset additional energy needs for the proposed Project. The Project would require an additional 35,267 kWh per month. This new electrical demand, along with the demand from buildings built since 2007, would total a demand of 41,113 kWh per month. However, the current electrical generation systems produce 54,088 kWh per month, which is more than enough to meet this demand. Therefore, the impacts to energy from increase in electrical demand under the proposed Project would not be substantial and would be *less than significant* (Class III).

### 4.5.3.3 Mitigation Measures

None required.

### 4.5.3.4 Residual Impacts

With the incorporation of energy conservation measures in the design of the new buildings under the proposed Project and as required by Title 24, residual impacts would be *less than significant* (Class III).

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