# 6.7 Energy

## 6.7.1 Introduction

This section discusses existing conditions and the regulatory setting regarding energy, and it describes impacts under CEQA that would result from construction and operation of the CEQA Alternatives.

Please refer to Chapter 4, Section 4.7.2.1, *Environmental Setting*, for a summary of existing state energy generation and demand, as well as information on local energy providers and distribution.

## 6.7.2 Regulatory Setting

The relevant state, regional, and local energy regulations and policies are provided below.

### Senate Bill 1389, Chapter 568, Statutes of 2002

The California Energy Commission (CEC) is responsible for, among other things, forecasting future energy needs for the state and developing renewable energy resources and alternative renewable energy technologies for buildings, industry, and transportation. Senate Bill 1389 (Chapter 568, Statutes of 2002) requires CEC to prepare a biennial integrated energy policy report assessing major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. The report is also intended to provide policy recommendations to conserve resources, protect the environment, and ensure reliable, secure, and diverse energy supplies. The *2013 Integrated Energy Policy Report*, the most recent report required under Senate Bill 1389, was released to the public in February 2013.

### Assembly Bill 2076, Reducing Dependence on Petroleum

Assembly Bill (AB) 2076 (passed in 2000) directs CEC and the California Air Resources Board to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than 2003 demand by 2020.

### California Green Building Standards Code and Title 24

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CALGreen [California Code of Regulations, Title 24, Part 11]). CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure.

CALGreen requires the installation of energy- and water-efficient indoor infrastructure for all new projects. CEC recently adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in CALGreen Part 11. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction. Part 11 also establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The standards require windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

## Santa Clara Valley Transportation Authority Sustainability Program

VTA's Sustainability Program outlines VTA's commitment to conserve natural resources, reduce greenhouse gas (GHG) emissions, prevent pollution, and increase renewable energy generation. The program contributes to energy reductions through solar power projects, energy efficiency retrofits, high-efficiency lighting, and smart operating practices, such as turning off auxiliary power systems when light rail vehicles are parked. This program would apply to areas outside the BART stations, system facilities, and guideway and include VTA facilities such as the transit centers, parking, and landscaping.

## San Francisco Bay Area Rapid Transit District Sustainability Policy

BART's Sustainability Policy outlines feasible practices to preserve the environment of the San Francisco Bay Area. With respect to energy resources, BART has outlined a goal to incorporate proven sustainable materials, methods, and technologies into BART's Facilities Standard to increase life-cycle value including reduction of energy and resource use, and to enhance the health and comfort of BART employees and customers (Bay Area Rapid Transit n.d.).

## City of San Jose 2040 General Plan Policies

The City of San Jose's *Envision San Jose 2040 General Plan* (Chapter 3, *Environmental Leadership*) provides the following specific goals related to energy. The general plan identifies several policies and actions for each goal (City of San Jose 2011).

- Goal MS-14: Reduce Consumption and Increase Efficiency: Reduce per capita energy consumption by at least 50 percent below 2008 levels by 2022 and maintain or reduce net aggregate energy consumption levels equivalent to the 2022 level through 2040 (five policies; three actions).
- Goal MS-15: Renewable Energy: Receive 100 percent of electrical power from clean renewable sources (e.g., solar, wind, hydrogen) by 2022 and, to the greatest degree feasible, increase generation of clean, renewable energy within the city to meet its own energy consumption needs (six policies; three actions).
- Goal MS-16: Energy Security: Provide access to clean, renewable, and reliable energy for all San Jose residents and businesses (three policies; three actions).

## City of Santa Clara 2010–2035 General Plan Policies

The *City of Santa Clara 2010–2035 General Plan* (Chapter 5, *Goals and Policies*) provides the following specific goals related to energy. Thirteen policies are identified in the general plan to support implementation of the goals (City of Santa Clara 2010).

- Goal 5.10.3-G1: Energy supply and distribution maximizes the use of renewable resources.
- Goal 5.10.3-G2: Implementation of energy conservation measures to reduce consumption.
- Goal 5.10.3-G3: Adequate energy service to residents, businesses, and municipal operations.

# 6.7.3 CEQA Methods of Analysis

## 6.7.3.1 Construction

Construction-related energy use (i.e., fuel consumption) was calculated by converting GHG emissions estimated by the project's air quality analysts using the rate of carbon dioxide ($CO_2$) emitted per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (Climate Registry 2015). The estimated fuel consumption was converted to British thermal unit (BTU) equivalents using the factors summarized in Table 4.7-2, in Chapter 4, Section 4.7. As discussed in Section 4.7.3.2, *Calculation Approach*, BTUs are expressed at two levels: in terms of the direct energy content of electricity and fuels consumed (or saved), as well as the total energy content of each energy unit. The former is the specific energy available at the point of use while the latter also includes the energy required to generate or refine and transmit or transport the energy unit to the final point of use.

Materials manufacturing would also consume energy, although information on the intensity and quantity of fuel used during manufacturing is currently unknown and beyond the scope of project-level environmental analyses. An analysis of energy associated with materials manufacturing is considered speculative and is not presented in this Draft SEIS/SEIR. This analysis focuses on energy associated with physical construction of the project (i.e., fuel consumed by heavy-duty equipment and vehicles).

## 6.7.3.2 Operation

Please refer to Chapter 4, Section 4.7.3.2, for a discussion of the calculation methods for operational energy consumption associated with the BART Extension Alternative. The energy analysis for operation of the BART Extension with TOJD Alternative considers the following sources of energy consumption.

- BART Extension: electricity consumed by vehicle propulsion and at stations and related facilities.

- Vehicular fuel: gasoline and diesel consumed by automobiles and trucks.
- Power, heating, and cooking: electricity and natural gas consumed by residential and commercial land uses in the transit-oriented joint development (TOJD).

Improvements in transit opportunities would facilitate removal of single-occupancy vehicles from the transportation network. Construction of the TOJD would offset a portion of this benefit as a result of increased vehicle travel consistent with population and employment growth. Regional vehicle miles traveled (VMT) with and without the BART Extension with TOJD under 2015 Existing, 2025 Opening Year, and 2035 Forecast Year conditions were obtained from the project's air quality analysts and are summarized in Table 6.7-1 (Hosseini pers. comm.). The VMT estimates were converted to BTU equivalents using the factors summarized in Table 4.7-2 and vehicle fuel economy data obtained from the California Air Resources Board's EMFAC2014 model.[1]

**Table 6.7-1: Annual Regional Vehicle Miles Traveled (million) for the BART Extension**

| | 2015 Existing | | 2025 Opening Year | | 2035 Forecast Year | |
|---|---|---|---|---|---|---|
| **Mode[a]** | **No Build** | **With BART Extension** | **No Build** | **With BART Extension** | **No Build** | **With BART Extension** |
| Automobile | 18,057 | 18,019 | 19,075 | 19,045 | 20,663 | 20,632 |
| Medium Truck | 480 | 481 | 555 | 557 | 672 | 675 |
| Heavy Truck | 404 | 405 | 438 | 439 | 484 | 486 |
| Total | 18,941 | 18,905 | 20,068 | 20,040 | 21,819 | 21,792 |
| *Change from No Build* | | *-36 (-0.2%)* | | *-28 (-0.1%)* | | *-27 (-0.1%)* |

Source: Hosseini pers. comm.

[a] Implementation of the BART Extension with TOJD Alternative would not have a measurable effect on regional bus activity (Van den Hout pers. comm.). Accordingly, VMT from regional buses are not included in the VMT analysis for the BART Extension with TOJD.

Operational electricity and natural gas consumption at the TOJD was drawn from the CalEEMod modeling performed to support the GHG analysis (see Section 6.9, *Greenhouse Gas Emissions*). CalEEMod outputs for natural gas consumption are provided in BTU; outputs for electricity consumption, which are provided in kilowatt-hours, were converted to BTU equivalents using the factors summarized in Table 4.7-2.

## 6.7.4 CEQA Thresholds of Significance

Determinations of the project's potential impacts are based on the following criteria, which are in State CEQA Guidelines Appendix F.

[1] Refer to footnote 1 in Chapter 4, Section 4.7, *Energy*, for automobile fuel economy data. Weighted fuel economy factors for medium trucks (EMFAC vehicle categories of LHD1, LHD2, and MDV) under 2015 Existing, 2025 Opening Year, and 2035 Forecast Year conditions are 14.3, 18.7, and 23.2 miles per gallon, respectively. Fuel economy factors for heavy trucks (EMFAC vehicle categories of MH, MHDT, and HHDT) are 6.4, 6.9, and 7.1.

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak- and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The State CEQA Guidelines recommend that the discussion of applicable energy impacts focuses on whether the project would result in the wasteful, inefficient, or unnecessary consumption of energy, because this may constitute an unavoidable adverse effect on energy resources. Efficiency projects that incorporate conservation measures to avoid wasteful energy usage facilitate long-term energy planning and avoid the need for unplanned or additional energy capacity. Accordingly, based on the criteria outlined in the CEQA Guidelines Appendix F, the project would cause significant impacts related to energy if it would lead to a wasteful, inefficient, and unnecessary usage of direct or indirect energy. As discussed in Section 6.7.2, *Regulatory Setting*, energy legislation, policies, and standards adopted by California and local governments were enacted and promulgated for the purpose of reducing wasteful and inefficient use of energy. Therefore, for the purposes of this analysis, *wasteful* and *inefficient* are defined as circumstances in which the project would conflict with applicable state or local energy legislation, policies, and standards. Accordingly, if the project conflicts with legislation, policies, or standards designed to avoid wasteful and inefficient energy usage, it would result in a significant impact related to energy resources and conservation.

## 6.7.5 Environmental Consequences

This section identifies the impacts related to energy under CEQA.

### 6.7.5.1 No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed transportation improvements (see Chapter 2, Section 2.2.1, *NEPA No Build Alternative*, for a list of these projects) and other land development projects planned by the Cities of San Jose and Santa Clara.

The No Build Alternative projects could result in effects on energy usage typically associated with transit, highway, bicycle, and pedestrian facilities and roadway projects, as well as land development projects. The transportation projects completed under the No Build Alternative would be consistent with local policies that encourage alternative transportation and energy conservation, but would not be as supportive of regional plans to promote BART and TOJD. Because BART is a more energy-efficient form of transportation than personal automobiles are, the No Build Alternative would have greater energy use than the BART Extension Alternative or the BART Extension with TOJD Alternative.

All individual projects planned under the No Build Alternative would undergo separate environmental review to identify effects on energy. Review would include an analysis of impacts and identification of mitigation measures to reduce potential impacts.

## 6.7.5.2 BART Extension Alternative

**Impact BART Extension ENG-1: Result in the inefficient, wasteful, or unnecessary consumption of energy**

### Construction

Construction of the BART Extension would consume gasoline and diesel through operation of heavy-duty construction equipment and vehicles. Twin-Bore and Single-Bore Options for tunnels have been proposed as construction alternatives. Energy usage during construction of either option, although short term, would encompass a period of approximately 8 years. Based on the GHG assessment (refer to Chapter 4, Section 4.9, *Greenhouse Gas Emissions*), energy use associated with BART Extension construction was calculated and estimated to result in the one-time consumption of 625,667 and 632,929 million direct BTU and 765,076 million total BTU for the Twin-Bore and Single-Bore Options, respectively. Impacts would be *less than significant*, and no mitigation is required.

### Operations

BART Extension energy consumption for 2015 Existing, 2025 Opening Year, and 2035 Forecast Year conditions is summarized in Table 4.7-3 in Chapter 4, Section 4.7, *Energy*. There would be an increase in electricity associated with BART vehicle propulsion and station operations, but there would also be a reduction in vehicular fuel use through the removal of passenger trips from the transportation network. As shown in Table 4.7-3, the reduction in vehicular fuel use would offset increases in BART electricity consumption, resulting in a net energy reduction. Vehicular fuel savings would be a regional energy benefit.

BART's Policy Framework for Sustainability includes a goal to "Apply sustainable techniques and procedures into BART's maintenance projects and operations in a cost-effective manner." Energy conservation is an important aspect of this goal. For example, variable speed escalators that stop and restart or that operate at a low-speed mode will be evaluated for implementation to reduce off-peak energy consumption as they are being done on VTA's BART Silicon Valley Berryessa Extension Project.

Although the BART Extension would increase electricity consumption over existing conditions, VTA's Sustainability Program green strategies would help conserve energy. For example, light-emitting diode (LED) fixtures, photosensor-driven lighting, and dimming controls could be applied to the campus areas to minimize artificial lighting during daylight hours and reduce power during off-peak periods. Photovoltaic solar panels may also be incorporated, which would minimize purchased power and demand on Pacific Gas & Electric Company (PG&E) loads. These strategies are consistent with state and local energy plans and policies to reduce energy consumption, and would ensure that energy use is not wasteful or inefficient. The BART Extension would also facilitate implementation of the Metropolitan Transportation Commission's (MTC) *Plan Bay Area* by promoting regional transit and reductions in single-occupancy vehicle use. *Plan Bay Area* is a long-range integrated transportation and land-use strategy through 2040 for the San Francisco Bay Area.

Accordingly, because the BART Extension would incorporate energy conservation measures and VTA would implement strategies consistent with state and local energy plans and policies, operation of the BART Extension would not lead to a wasteful, inefficient, and unnecessary usage of direct energy. Impacts would be *less than significant*, and no mitigation is required.

**Impact BART Extension ENG-2: Require substantial local or regional energy supplies**

As discussed in Chapter 4, Section 4.7.4.2, BART would procure and PG&E would distribute electricity to the BART Extension through 115-kilovolt alternating current lines. Electricity consumption would be highest during peak-periods (3 p.m. to 7 p.m.) and would be on the order of 11 megawatts, which is approximately 0.018 percent of historic (2011) peak demand (California Energy Commission 2015). The degree to which VTA is able to conserve energy and generate renewable power through implementation of the strategies described above will dictate the BART facilities' demand on PG&E's system.

Natural gas consumption, which would be supplied by PG&E, would be highest during peak-periods (3 p.m. to 7 p.m.), with demand greatest during the winter months. The degree to which VTA is able to utilize natural gas conservation would dictate its dependency on PG&E and have a direct effect on supply from PG&E.

PG&E uses local and regional development plans to forecast and plan for the energy needs of its service territory. This dynamic process is subject to regulatory oversight by the Public Utilities Commission (PUC), where every 2 years in Long Term Procurement Plan proceedings, the PUC assesses the system and local resource needs of the state's three investor-owned utilities over a 10-year horizon. The PUC establishes upfront standards for utility procurement activities and cost recovery by reviewing and approving proposed procurement plans prior to their implementation. Integral to this process is the utility demand forecast, which is subject to review by CEC. As part of this process, BART's 20-year load forecast, which includes extension loads, is submitted to PG&E for long-term planning. To ensure consistency with approved plans, the PUC conducts annual Energy Resource

Recovery Account proceedings in which energy forecasts are refined based on existing procurement. This continual planning process ensures that local utilities will accommodate the current and planned energy requirements for a region. Consequently, it is anticipated that the BART facilities would have a *less-than-significant* impact on local and regional energy supplies and peak loads. No mitigation is required.

### 6.7.5.3 BART Extension with TOJD Alternative

**Impact BART Extension + TOJD ENG-1: Result in the inefficient, wasteful, or unnecessary consumption of energy**

#### Construction

Similar to construction of the BART Extension Alternative, construction of the BART Extension with TOJD Alternative would consume gasoline and diesel through operation of heavy-duty construction equipment and vehicles. Energy usage during construction, although short term, would encompass a period of approximately 8 years. Based on the GHG assessment (refer to Chapter 4, Section 4.9, *Greenhouse Gas Emissions*), energy use associated with BART Extension construction was calculated and estimated to result in the one-time consumption of 625,667 and 632,929 million direct BTU and 765,076 million total BTU for the Twin-Bore and Single-Bore Options, respectively.

Based on the GHG assessment (refer to Chapter 4, Section 4.9, *Greenhouse Gas Emissions*), energy use associated with construction of the BART Extension with TOJD Alternative was calculated and estimated to result in the one-time consumption of 706,214 and 713,476 million direct BTU and 863,113 million total BTU for the Twin-Bore and Single-Bore Options respectively.[2]

VTA's adopted Sustainability Program requires projects to "incorporate sustainability and green building principles and practices in the planning, design, construction, and operation of new VTA facilities." As discussed in Chapter 2, Section 2.2.2.2, VTA would, to the extent feasible, use recycled and regionally or locally available materials, as well as reuse soils onsite or elsewhere along the alignment. These strategies would reduce hauling requirements and associated on-road fuel consumption, and ensure that the BART Extension with TOJD Alternative would not result in substantial waste or inefficient use of energy. Therefore, impacts on energy resources would be *less than significant*. No mitigation is required.

#### Operation

BART Extension energy consumption for 2015 Existing, 2025 Opening Year, and 2035 Forecast Year conditions is summarized in Table 4.7-4 in Chapter 4, Section 4.7, *Energy*. There would be an increase in electricity associated with BART vehicle propulsion and

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[2] Construction BTU calculated based on a conversion of kilograms of $CO_2$ per gallon of fuel consumed equaling 10.20648 kilograms (kg) $CO_2$ per gallon for diesel and 8.7775 kg $CO_2$ per gallon for gasoline from the Climate Registry (2015), with a direct BTUs per gallon rate of 127,464 for diesel and 116,090 for gasoline.

station operations, but there would also be a reduction in vehicular fuel use through the removal of passenger trips from the transportation network. As shown in Table 4.7-4, the reduction in vehicular fuel use would offset increases in BART electricity consumption, resulting in a net energy reduction. Vehicular fuel savings would be a regional energy benefit.

Variable speed escalators that stop and restart or that operate at a low-speed mode could also be installed to reduce off-peak energy consumption as is being done on VTA's BART Silicon Valley Berryessa Extension Project.

Although the BART Extension with TOJD Alternative would increase electricity consumption over existing conditions, VTA's Sustainability Program green strategies would help conserve energy. For example, LED fixtures, photosensor-driven lighting, and dimming controls could be applied to the campus areas to minimize artificial lighting during daylight hours and reduce power during off-peak periods. Photovoltaic solar panels may also be incorporated, which would minimize purchased power and demand on PG&E loads. These strategies are consistent with state and local energy plans and policies to reduce energy consumption, and would ensure that energy use is not wasteful or inefficient. The BART Extension with TOJD Alternative would also facilitate implementation of the MTC's *Plan Bay Area* by promoting regional transit and reductions in single occupancy vehicle use.

Accordingly, because the BART Extension with TOJD Alternative would incorporate energy conservation measures and VTA would implement strategies consistent with state and local energy plans and policies, operation of the BART Extension with TOJD Alternative would not lead to a wasteful, inefficient, and unnecessary usage of direct energy.

Energy consumption of the BART Extension with TOJD Alternative under 2015 Existing, 2025 Opening Year, and 2035 Forecast Year conditions is summarized in Table 6.7-2. The BART Extension with TOJD Alternative would increase electricity associated with BART vehicle propulsion and station operations, but would reduce vehicular fuel use through the removal of passenger trips from the transportation network. However, lighting, heating, and cooking at the TOJD would consume electricity and natural gas. Resident, employee, and visitor trips would also use gasoline and diesel, as would delivery and vendor trucks.

**Table 6.7-2: Annual Direct and Total Energy Use for the BART Extension with TOJD Alternative (Million BTU)**

| Condition and Source | Direct Energy[a] | Total Energy[b] |
|---|---|---|
| **2015 Existing** | | |
| BART Electricity | 6,388 | 14,696 |
| TOJD Utilities | 274,598 | 596,810 |
| Change in Vehicular Fuel Use(increased ridership + TOJD traffic) | -145,967 | -173,227 |
| *Overall Net Change in Energy Consumption (Existing Plus BART Extension with TOJD vs. No Build)* | *135,018* | *438,552* |
| **2025 Opening Year** | | |
| BART Electricity | 6,388 | 14,969 |
| TOJD Utilities | 274,598 | 596,810 |
| Change in Vehicular Fuel Use(increased ridership + TOJD traffic) | -68,855 | -81,205 |
| *Overall Net Change in Energy Consumption (Opening Plus BART Extension with TOJD vs. No Build)* | *212,131* | *530,575* |
| **2035 Forecast Year** | | |
| BART Electricity | 6,388 | 14,969 |
| TOJD Utilities | 274,598 | 596,810 |
| Change in Vehicular Fuel Use (increased ridership + TOJD traffic) | -40,590 | -47,174 |
| *Overall Net Change in Energy Consumption ( Plus BART Extension with TOJD vs. No Build)* | *240,396* | *564,605* |

[a] Direct energy includes energy required at the point of use.
[b] Total energy includes the energy required to generate/refine and transmit/transport the energy unit to the final point of use.

As shown in Table 6.7-2, increased BART ridership would reduce vehicular fuel consumption through the removal of single-occupancy vehicle trips. This reduction would be sufficient to offset new vehicle trips generated by the TOJD, resulting in a regional vehicular fuel benefit. However, despite this reduction in vehicular fuel use, overall energy consumption for the BART Extension with TOJD Alternative would increase, relative to existing and No Build conditions. This increase is primarily the result of electricity and natural gas consumption by the TOJD.

While the TOJD would increase electricity and natural gas, the BART Extension with TOJD Alternative would incorporate VTA's Sustainability Program green strategies, which would help conserve energy. The TOJD would also be constructed consistent with the conservation requirements of the CALGreen Code and Title 24 standards. As shown in Table 6.7-3, per-service population (persons + employment) energy consumption (electricity and natural gas) associated with the TOJD would be below the average Santa Clara County per-service population BTU. Therefore, the TOJD would result in more efficient and lower consumption of energy resources (on a per-service population) than existing development.

**Table 6.7-3: TOJD Per-Service Population Energy Consumption Compared with Santa Clara County Average**

| Source | Million BTU[a] | Service Population | Million BTU/ Service Population |
|---|---|---|---|
| TOJD | 274,598 | 10,841 | 25 |
| Santa Clara County (2010) | 100,070,268 | 3,144,980[b] | 32 |

Notes:
[a] Direct energy consumption of electricity and natural gas
[b] Based on the U.S. Census Bureau, 2006–2010 American Community Survey and Bay Area Census (MTC-ABAG n.d.)
BTU = British thermal unit

The BART Extension with TOJD Alternative would facilitate implementation of MTC's *Plan Bay Area* and long-term sustainable land use strategy. The BART Extension with TOJD Alternative would increase transit opportunities and provide an alternative to single-occupancy vehicle trips. The TOJD would promote mobility and connectivity through mixed-use design, as well as configure development with higher densities and site design policies to minimize automobile use. This is consistent with AB 2076, which strives to reduce dependency on petroleum demand. Residential and commercial land uses associated with the TOJD would also be constructed consistent with Title 24. Accordingly, because the BART Extension with TOJD Alternative would be consistent with state and local energy policies enacted to reduce energy consumption, and the TOJD would result in lower per-service population energy consumption than the current Santa Clara County average, the BART Extension with TOJD Alternative would not result in a wasteful, inefficient, and unnecessary usage of energy. This impact would be *less than significant*. No mitigation is required.

**Impact BART Extension + TOJD ENG-2: Require substantial local or regional energy supplies**

As discussed in Chapter 4, Section 4.7.4.2, BART would procure and PG&E would distribute electricity to the BART Extension through 115-kilovolt alternating current lines. Electricity consumption would be highest during peak periods (3:00 to 7:00 p.m.) and would be on the order of 11 megawatts, which is approximately 0.018 percent of historic (2011) peak demand (California Energy Commission 2015). The degree to which VTA is able to conserve energy and generate renewable power through implementation of the strategies described above will dictate the BART Extension with TOJD Alternative's demand on PG&E's system.

PG&E would also distribute electricity and natural gas to the TOJD. Electricity and natural gas consumption would also be highest during peak periods (3:00 to 7:00 p.m.), with electricity demand greatest during the summer months and natural gas demand greatest during the winter months. The degree to which VTA is able to conserve energy and generate renewable power through implementation of the strategies described above would dictate its demand on PG&E's system.

PG&E uses local and regional development plans to forecast and plan for the energy needs of its service territory. This dynamic process is subject to regulatory oversight by the PUC, where every 2 years in Long Term Procurement Plan proceedings, the PUC assesses the system and local resource needs of the state's three investor-owned utilities over a 10-year horizon. The PUC establishes upfront standards for utility procurement activities and cost recovery by reviewing and approving proposed procurement plans prior to their implementation. Integral to this process is the utility demand forecast, which is subject to review by CEC. As part of this process, BART's 20-year load forecast, which includes extension loads, is submitted to PG&E for long-term planning. To ensure consistency with approved plans, the PUC conducts annual Energy Resource Recovery Account proceedings in which energy forecasts are refined based on existing procurement. This continual planning process ensures that local utilities will accommodate the current and planned energy requirements for a region. Consequently, it is anticipated that the BART Extension with TOJD Alternative would have a *less-than-significant* impact on local and regional energy supplies and peak loads. No mitigation is required.

## 6.7.6 CEQA Conclusion

Implementation of the CALGreen Code, Title 24 standards, and VTA's Sustainability Program green strategies would ensure that the BART Extension Alternative and the BART Extension with TOJD Alternative are consistent with state and local energy plans and policies to reduce energy consumption. Peak energy demand would not impede PG&E's ability to meet regional loads, and ongoing utility and system planning processes would be employed to accommodate increases in future energy consumption. Accordingly, the BART Extension Alternative and the BART Extension with TOJD Alternative would have a *less-than-significant* impact under CEQA. No mitigation is required.