

## 2.6 Energy

	Potentially Significant Impact	Less-than-Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 2.6.1 Environmental Setting

#### 2.6.1.1 Existing Conditions

Energy resources include electricity, natural gas, and other fuels. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. Energy production and energy use both result in the depletion of nonrenewable resources, such as oil, natural gas, and coal, and the emission of pollutants.

With a relatively mild Mediterranean climate and strict energy-efficiency conservation requirements, California has lower energy consumption rates than other parts of the country. According to the U.S. Energy Information Administration (U.S. EIA), California’s per capita energy consumption ranked 48<sup>th</sup> in the nation as of 2018 (U.S. EIA 2019). California has among the lowest annual electrical consumption rates per person of any State; its industrial uses consume 5.6 percent of the energy consumed nationwide (U.S. EIA 2020a). According to the U.S. EIA, natural gas consumption in California totaled approximately 2,154.03 billion cubic feet in 2019. Commercial uses consumed approximately 12 percent of this total, followed by residential uses (22 percent) and industrial uses (36 percent), among others (U.S. EIA 2020b). According to the California Energy Commission (CEC), total system electric generation for California in 2019 (the most recent year for which data are available) was approximately 277,704 gigawatt hours. California’s non-carbon-dioxide-emitting electric generation categories, including nuclear, hydroelectric, and renewable generation, accounted for more than 57 percent of total in-state generation for 2019. California’s in-state electric generation was approximately 200,475 gigawatt hours (CEC 2020a).

Pacific Gas and Electric (PG&E) provides electricity and natural gas service to the vast majority of Northern California, including Oakland and the Project site. PG&E’s service extends from Eureka to Bakersfield (north to south) and from the Sierra Nevada to the Pacific Ocean (east to west). PG&E purchases gas power from a variety of sources, including other utility companies. PG&E obtains its energy supplies from power plants and natural gas fields in Northern California. PG&E operates a grid distribution system that channels all power produced at the various generation sources into one large energy pool for distribution throughout the service territory. PG&E provides all the natural gas and electric infrastructure in Alameda County and Oakland. However, East Bay Community Energy (EBCE) provides electricity to customers in Alameda County, using PG&E infrastructure, unless individuals choose to opt out of the program, at which point, the default electricity provider is PG&E. The Port of Oakland provides electricity to parts of the Oakland Seaport, including the railroad tracks that run parallel to Frontage Road underneath West Grand Avenue. There is a small area along West Grand Avenue where the Port of

Oakland's utility service area overlaps with the project footprint, but the project would not affect the Port of Oakland's ability to provide electricity to the Oakland Seaport. EBCE is Alameda County's official electricity provider and, therefore, provides electricity to Oakland. EBCE's power comes from a mix of sources, including solar, wind, geothermal, biomass, biowaste, and hydroelectric generation resources. EBCE delivers power to its customers via existing PG&E infrastructure.<sup>6</sup> EBCE allows customers to choose between three different electricity product operations: Bright Choice, which contains at least 38 percent renewable resources and 47 percent carbon-free resources as electricity resources; Brilliant 100, which is at least 40 percent renewable resources and 60 percent carbon-free resources as electricity sources; and Renewable 100, which contains 100 percent renewable resources as electricity sources (EBCE 2020a). In Alameda County, a total of 384 million therms of natural gas were consumed in 2019 (the most recent year for which data are available). In 2019, natural gas in Alameda County was consumed primarily by the residential sector (57 percent), followed by the non-residential sector (43 percent) (CEC n.d.). In 2019, Alameda County consumed a total of 10,684 million kilowatts of electricity. In the county, electricity was consumed primarily by the non-residential sector (71 percent), followed by the residential sector (29 percent) (CEC n.d.).

The Project area currently comprises paved roadways; therefore, the existing energy demand in the Project area is minimal because the energy demand generated by the streetlights along the roadways is less energy than that required to power a building.

## 2.6.1.2 Regulatory Setting

### State

#### Renewable Energy Standards

In 2002, California established its Renewables Portfolio Standard (RPS), with the goal of increasing the percentage of renewable energy in the State's electricity mix. Specifically, renewable energy would account for 20 percent of retail sales by 2010. In 2006, this goal was codified in Senate Bill (SB) 107. Under the provisions of SB 107, investor-owned utilities were required to generate 20 percent of their retail electricity from qualified renewable energy technologies by the end of 2010. In 2008, Executive Order (EO) S-14-08 was signed into law, requiring retail sellers of electricity to derive 33 percent of their energy from renewable sources by 2020.

#### Senate Bill 350 (2015), Chapter 547, Clean Energy and Pollution Reduction Act of 2015

SB 350 (DeLeon), also known as the Clean Energy and Pollution Reduction Act of 2015, was approved by California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions require the following by 2030: 1) to achieve an RPS<sup>7</sup> of 50 percent and 2) to double statewide energy efficiency savings in natural gas and electricity end uses. To help meet these provisions, the Clean Energy and Pollution Reduction Act of 2015 requires large utilities to develop and submit integrated resource plans that detail how they will reduce GHG emissions and increase the use of clean energy resources while meeting customer needs.

<sup>6</sup> EBCE charges each of its customers an electric delivery charge for maintenance of PG&E's wires, infrastructure, and delivery of electricity to customers.

<sup>7</sup> The RPS is one of California's key programs for promoting renewable energy use in the State. The program establishes continuous procurement of renewable energy requirements for load-serving entities with the State of California (California Energy Commission 2020b).

### **SB 100—The 100 Percent Clean Energy Act of 2018**

SB 100 builds on SB 350, the Clean Energy and Pollution Reduction Act of 2015, which required the following by 2030: (1) an RPS of 50 percent and (2) a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. SB 100 increases the 2030 RPS target set in SB 350 to 60 percent and requires an RPS of 100 percent by 2045.

## **Regional and Local**

### ***PG&E Integrated Resource Plan***

PG&E adopted its *2018 Integrated Resource Plan (IRP)* on August 1, 2018 to provide guidance for serving the electricity and natural gas needs of the residents and businesses within the PG&E service area while fulfilling regulatory requirements (PG&E 2018). The IRP contains the following objectives that are relevant to the Project:

- **Clean Energy:** In 2017, PG&E delivered nearly 80 percent of its electricity from GHG-free resources and 33 percent of its electricity from RPS-eligible renewable resources, such as solar, wind, geothermal, biomass, and small hydroelectric projects;
- **Reliability:** PG&E's IRP analysis includes an evaluation of PG&E's contribution to system and local reliability, in compliance with the California Public Utilities Commission's resource adequacy requirements; and
- **Affordability:** PG&E's IRP analysis selects resources to meet the State's clean energy and reliability goals and provides a system average rate forecast in compliance with the California Public Utilities Commission's requirements for investor-owned utilities.

### ***EBCE Integrated Resource Plan***

EBCE adopted its 2020 IRP on September 1, 2020 (EBCE 2020b). The IRP provides guidance for serving the electricity and natural gas needs of residents and businesses within the EBCE service area while fulfilling regulatory requirements. The EBCE IRP does not have specific goals or policies; rather, it lays out measures for achieving EBCE's overarching goal of achieving 60 percent RPS-eligible renewable energy by 2030.

### **City of Oakland General Plan Open Space, Conservation, and Recreation Element**

The City of Oakland General Plan OSCAR Element (City of Oakland 1996) includes the following policies relevant to energy resources and efficiency:

- **Policy CO-13: Energy Resources.** To manage Oakland's energy resources as efficiently as possible, reduce consumption of non-renewable resources, and develop energy resources which reduce dependency on fossil fuels.
- **Policy CO-13.1: Reliable Energy Network.** Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.
- **Policy CO-13.2: Energy Efficiency.** Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.

- **Policy CO-13.3: Construction Methods and Materials.** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

### City of Oakland Equitable Climate Action Plan

The Oakland Equitable Climate Action Plan (ECAP) was adopted by the City Council on December 4, 2012, to reduce citywide GHG emissions, consistent with the reduction goals of Assembly Bill (AB) 32. The purpose of the Oakland ECAP is to identify and prioritize actions the City can take to reduce energy consumption as well as GHG emissions associated with Oakland. The ECAP outlines a 10-year plan, including 150 actions to achieve the established goal of reducing GHG emissions by 36 percent, when comparing 2020 levels with 2005 levels, as well as improving energy efficiency and reducing energy consumption. Relevant priority actions (PA) include PA 17, Improve Energy Performance of New City Facilities, and PA 34, Accelerate Completion of Bicycle and Pedestrian Plans.

## 2.6.2 Discussion of Potential Impacts

- a. **This Project would have a less-than-significant impact on the consumption of energy resources during Project construction and operation.**

### Construction

Natural gas is not typically used during construction. Electric service to the Project area would be provided to meet the needs of Project construction, as required by the California Public Utilities Commission, which obligates PG&E to provide service to existing and potential customers. Project construction would require excavation, grading, and new pavement, which would consume energy; therefore, construction activities for the Project would result in a temporary increase in demand for electricity. The Project would consume approximately 22,303 kilowatt hours of electricity, approximately 22,214 gallons of diesel fuel, and 13,925 gallons of gasoline over the entire approximately two-year construction period.<sup>8</sup> However, this would be considered a small, temporary increase in energy demand during construction. This is because construction activities would occur over an approximately two-year period, electricity would be used to power an onsite construction trailer at a rate of 38 kilowatt hours per day, and energy in the form of gasoline and diesel would be used to power construction equipment, approximately 12,046 gallons of fuel per year. Therefore, the Project would not result in inefficient, wasteful, or unnecessary consumption of energy resources during construction. This impact would be less than significant.

### Operation

The Project would not use natural gas during operation. However, electricity demand generated by operation of the Project would include electricity consumption associated with other aspects of the path and parking lot (e.g., lighting). Based on the Project's energy consumption rates provided by the Project's engineering consultant, the Project would consume approximately 73,000 kilowatt hours of electricity per year at buildout. In addition, vehicles, traveling to and from the parking lot, which would not be anticipated to be operational for ten or more years, require gasoline or diesel fuel. Approximately 1,046 gallons of diesel fuel and 113,944 gallons of gasoline would be used annually for vehicles traveling to and from the parking lot during normal operations. These energy quantities are derived from the Project's estimation of GHG emissions. As explained in Section 2.8, *Greenhouse Gas Emissions*, actual fuel quantities would most likely be lower than projected because the Project would become operational in a

<sup>8</sup> As indicated in Section 2.3, construction would occur for approximately two years but within three calendar years.

later year than originally forecast (2023); thus, the overall vehicle fleet would be more fuel efficient than in 2019 due to regulations becoming increasingly stringent over time. In addition, the GHG emissions (and thus fuel quantities) do not account for any reduction in vehicle miles traveled that would occur from bicycle trips displacing motor vehicle trips. The fuel quantities presented here do not account for any current or future motor vehicle trip reductions that would occur as a result of the increase in bicycle and pedestrian connectivity that the Project would facilitate. Furthermore, the Project would use low-level lighting with LED lights along the paths. The lighting design could further reduce Project-related energy consumption. Therefore, although the Project would result in an increase in energy consumption compared with existing conditions, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy resources during operation due to incorporation of energy-efficient design features and the use of alternative modes of transportation. This impact would be less than significant.

**b. This Project would have a less-than-significant impact and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.**

As discussed above, the Project would include energy-efficiency components that would support implementation of applicable plans related to renewable energy or energy efficiency, such as energy-efficient LED lighting. The Project would also include various design features to reduce stormwater runoff and water consumption through the incorporation of biotreatment areas. As discussed in Sections 2.3, *Air Quality*, and 2.8, *Greenhouse Gas Emissions*, the Project would be consistent with applicable plans related to renewable energy or energy efficiency. Specifically, the Project would be consistent with the City's *Energy and Climate Action Plan*, *Bay Area 2010 Climate Action Plan*, *Assembly Bill 32 Scoping Plan*, and *Senate Bill 100* as well as PG&E's and EBCE's IRPs. Accordingly, the Project would not impede implementation of any of these plans. Therefore, the Project would not conflict with or obstruct implementation of a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

### **2.6.3 Mitigation Measures**

No mitigation measures are required.