

3.1.2 Energy

This section provides an evaluation of existing energy production/consumption conditions and potential energy use and related impacts from the Project. The following discussion is consistent with and fulfills the intent of CEQA Guidelines and is based on information from the Greenhouse Gas Emissions Technical Report prepared by HELIX (2021e; Appendix K); the California Energy Demand (CED) 2018-2030 Revised Forecast (California Energy Commission [CEC] 2018); and the CEC's Final 2019 Integrated Energy Policy Report (CEC 2020).

3.1.2.1 Existing Conditions

Existing Energy Consumption and Generation

Units of Measure

The units of energy used in this section are the British thermal units (BTU), kilowatt hours* (kWh), therms, and gallons. A BTU is the quantity of heat required to raise the temperature of one pound of water one °F at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050 BTU, and one therm represents 100,000 BTU. One gallon of gasoline/diesel is equivalent to approximately 125,000/139,000 BTU, respectively, taking into account energy consumed in the refining process.

State Energy Overview

Electricity

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers, and community choice aggregators.† As of 2019, in-state generating facilities accounted for about 82 percent of the total electric power produced in California, with the remaining electricity coming from out-of-state imports (U.S. Energy Information Administration 2021). California is the fourth-largest electricity producer in the nation and accounted for about 5 percent of U.S. utility-scale (1-megawatt and larger) electricity net generation in 2019. Renewable resources, including hydropower and small-scale (less than 1-megawatt), customer-sited solar photovoltaic systems, supplied more than half of California's in-state electricity generation, and natural gas-fired power plants provided two-fifths.

* Kilowatt hours is the most commonly used measure of electrical consumption; however, due to the scope of this analysis, gigawatt hours (GWh; equivalent to one million kWh) is also used.

† Community choice aggregation is authorized in California by AB 117 (Chapter 836, Statutes of 2002), which allows cities, counties, and groups of cities and counties to aggregate the electric load of the residents, businesses, and institutions within their jurisdictions to provide them electricity.

On the demand side, Californians consumed 284,060 gigawatt hours (GWh) of electricity in 2017; this is a decrease from the 285,434 GWh demanded in 2016 (CEC 2018). CEC staff forecasts of future electricity demand anticipate that consumption will grow by between 0.99 and 1.59 percent per year from 2017 to 2030, with peak demand forecasts growing by 0.30 to 1.52 percent annually from 2017 to 2030 (CEC 2018).

Natural Gas

Natural gas continues to play an important and varied role in California. Nearly 45 percent of the natural gas burned in California was used for electricity generation, and much of the remainder was consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors (CEC 2021). Natural gas supplies are currently plentiful and relatively inexpensive as a result of technological advances that allow recovery of natural gas from formations such as shale reservoirs that were previously inaccessible. However, potential environmental concerns are causing decision makers to reexamine the development of shale resources and consider tighter regulations, which could affect future natural gas supplies and prices.

Transportation Fuels

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUVs). In 2015, 15.1 billion gallons of gasoline were sold in California (CEC 2021). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2 billion gallons of diesel were sold in California (CEC 2021).

Regional Energy Overview

SANDAG's 2009 Regional Energy Strategy (RES; SANDAG 2009) serves as the energy policy blueprint for the San Diego region through 2050. The RES identifies priority early implementation actions, essential to meeting the region's energy goals:

- Pursue a comprehensive building retrofit program to improve efficiency and install renewable energy systems;
- Create financing programs to pay for projects and improvements that save energy;
- Utilize the SANDAG-SDG&E Local Government Partnership to help local governments identify opportunities and implement energy savings at government facilities and throughout their communities;
- Support land use and transportation planning strategies that reduce energy use and greenhouse gas emissions;
- Support planning of electric charging and alternative fueling infrastructure; and

- Support use of existing unused reclaimed water to decrease the amount of energy needed to meet the water needs of the San Diego region.

The RES identified the main drivers of the strategy, including the state's preferred loading order for meeting new energy needs and global climate change and its policy implications. The California Public Utilities Commission (CPUC) and CEC adopted a preferred loading order to meet the goals for satisfying the state's growing demand for electricity, which would place top priority on increasing energy efficiency and demand response (i.e., temporary reduction or shift in energy use during peak hours), generating new energy from renewable and distributed generation resources, and improvements to clean fossil-fueled generation and infrastructure. Environmental changes caused by climate change are anticipated to have an increasing impact on energy production and peak demand for electricity. Global climate change is discussed in detail in Section 3.1.3, *Greenhouse Gas Emissions*, of this EIR.

In 2014, a technical update of the RES was completed to inform development of San Diego Forward: The Regional Plan. The technical update demonstrated progress toward attaining the RES goals, updated existing conditions and future projections data, and recommended priorities for moving forward.

The major sources of energy in the San Diego region include electricity, natural gas, and petroleum. Electricity and natural gas are primarily provided to the San Diego region, including the Project site, by SDG&E. The SDG&E service area covers 4,100 square miles within San Diego and southern Orange counties. Energy is provided by SDG&E to 3.6 million customers through 1.4 million electric meters and 873,000 natural gas meters (SDG&E 2021). The following discussion outlines consumption rates for these various energy sources in San Diego.

Electricity

The County's electricity consumption over the five-year period of 2015 through 2019 is shown in Table 3.1.2-1, *San Diego County Electricity Consumption 2015-2019*. As shown in Table 3.1.2-1, electricity consumption within the County was relatively consistent between 2015 and 2018 and then decreased in 2019. The CED 2018-2030 Revised Forecast presents three demand scenarios: high, mid, and low. The high demand scenario is characterized by low electricity rates, high population growth, low levels of efficiency, and low self-generation. Inversely, the low demand scenario is characterized by high electricity rates, low population growth, high levels of efficiency, and high self-generation. The mid demand scenario uses assumptions in between the high and low scenarios. The CED 2018-2030 Revised Forecast estimates that annual electricity consumption for the County would reach between 24,000 and 27,000 GWh by 2030, depending on which demand scenario is realized (CEC 2018).

Projections are shown to increase toward the end of the forecast period (2026) as a result of consumption from electric vehicles. By 2030, per capita electricity consumption is projected to range between approximately 7,400 and 8,200 kWh per person (CEC 2018).

Several major generating plants were implemented in the last two decades in San Diego County, including the 90-MW Larkspur Energy Facility in Chula Vista in 2001; the 550-MW Palomar

Power Plant in Escondido in 2006; the 513-MW Otay Mesa Center power plant near the U.S.-Mexico border in 2009; and the 558-MW Carlsbad Energy Center in Carlsbad in 2018.

Natural Gas

The County's gas consumption over the five-year period of 2015 through 2019 is shown in Table 3.1.2-2, *San Diego County Gas Consumption 2015-2019*. As shown in Table 3.1.2-2, gas consumption within the County increased from 2015 to 2016, was relatively consistent from 2016 to 2018, and then increased again in 2019. The majority of natural gas uses are for residential and commercial purposes. Currently, California imports 87 percent of natural gas needs from out of state, while in-state natural gas production is decreasing. Regional gas consumption is expected to increase to 660 MMTh in 2020 and 730 MMTh in 2030 (SANDAG 2009).

Transportation Fuels

As previously mentioned, automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil, which in turn is derived from petroleum. In addition to energy consumption associated with on-road vehicle use, energy is consumed in connection with construction and maintenance of transportation infrastructure. Passenger cars and light-duty trucks are by far the largest consumers of transportation fuel, accounting for approximately 1.6 billion gallons of gasoline and diesel fuel per year (SANDAG 2009).

Based on the CARB EMFAC Emissions Database, the average fuel economy of the 2018 vehicle fleet in the County was estimated as 23 mpg for gasoline and 10 mpg for diesel. Based on the CARB EMFAC2017 vehicle fleet type breakdown for the County, approximately 94 percent of the VMT is from gasoline-powered vehicles and approximately 6 percent is from diesel-powered trucks. The energy consumption rates for gasoline- and diesel-powered vehicles are 5,378 and 14,183 BTU per VMT, respectively. The total automobile and truck-related energy usage in the County in 2018 was approximately 207 trillion BTU per year.

Existing On-site Energy Use

The analysis included in this section is based on the emissions analysis completed for the Project in the *Greenhouse Gas Emissions Technical Report*, including analyses using CalEEMod. Fuel consumption factors per vehicle mile traveled (VMT) were calculated using data from the CARB EMFAC2017 web database for San Diego County. The CalEEMod output files are included along with the *Greenhouse Gas Emissions Technical Report* in Appendix K of this Draft EIR. The spreadsheet print files for calculating energy use are included as Appendix L, *Energy Calculations*, of the Draft EIR.

The Project site is currently developed with two 18-hole golf courses, one of which is not currently active, and an 11,500-SF clubhouse and restaurant. All existing uses of the Project site would be replaced by open space at the conclusion of the Project mining and reclamation activities. Existing sources of energy use associated with the current land use of the Project include: vehicle fuel use associated with customers, employees, and vendors driving to and from the golf course; electricity and natural gas used in operation of the golf course and clubhouse/ restaurant; and electricity required to pump water from on-site wells for golf course irrigation and operation, and clubhouse/restaurant operation.

Regulatory Setting

Energy consumption is a significant source of greenhouse gases (GHGs). Regulations to address energy also address GHGs, resulting in some overlap in the discussions in the following text and Section 3.1.3, *Greenhouse Gas Emissions*. In addition to the federal, state, and local regulations directed at reducing GHG emissions through increased efficiencies presented in Section 3.1.3 (i.e., CAFE Standards; EO S-3-05; EO B-30-15; EO S-01-07; AB 32; AB 1493; SB 97; SB 100; SB 350; SB 375; the CARB Scoping Plan; the SANDAG Regional Plan), energy efficiency regulations that have the potential to influence the Project are discussed below.

Federal Energy Regulations

Energy Independence and Security Act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs were required to consume 60 percent less energy than previous incandescent bulbs; this requirement will effectively phase out the incandescent light bulb.

Corporate Average Fuel Economy Standards

The USEPA and the National Highway Traffic Safety Administration (NHTSA) established the Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. On August 2, 2018, the agencies released a notice of proposed rulemaking—the Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The purpose of the SAFE Vehicles Rule is “to correct the national automobile fuel economy and greenhouse gas emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment.” The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon in 2020 to 50 miles per gallon in 2025. By contrast, the new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdrawal of the waiver previously provided to California for the state’s GHG and zero emissions vehicle (ZEV) programs under section 209 of the CAA.

California Energy Regulations

California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of

a healthy economy. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators.

CEQA Guidelines – Appendix F

CEQA Guidelines Appendix F, Energy Conservation, provides guidance for EIRs regarding potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. In addition, though not described as thresholds for determining the significance of impacts, Appendix F seeks inclusion of information in the EIR addressing the following topics:

- 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/or 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.

Regional Energy Regulations

SDG&E Long Term Procurement Plan

As required by the CPUC, utility companies such as SDG&E must prepare an LTPP to ensure that adequate energy supplies are available to maintain a reserve margin of 15 percent above the estimated energy demand. These plans outline any future energy needs and how those needs can be met. In December 2006, SDG&E filed its LTPP with the CPUC, which included a 10-year energy resource plan that details its expected portfolio of energy resources over the planning horizon of 2007 through 2016. The projections included in the current LTPP were based on the CEC’s CED 2008-2018 Forecast, dated November 2007. The 2016-2026 CEC CED projections are now lower than what was anticipated in 2007.

County of San Diego General Plan

The Conservation and Open Space Element of the County of San Diego General Plan contains goals and policies for energy conservation and sustainable development. Because the Project does not include a residential component or permanent structures, most of the General Plan goals and

policies for energy conservation and sustainable land use development are not directly applicable to the Project. Goals and policies relevant to the Project involve air pollutant and/or GHG reduction, which in turn would reduce energy consumption. Such policies include the following:

- COS-14.4, Sustainable Technology and Projects: Require technologies and projects that contribute to the conservation of resources in a sustainable manner, that are compatible with community character, and that increase the self-sufficiency of individual communities, residents, and businesses.
- COS-14.9, Significant Producers of Air Pollutants: Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.
- COS-14.10, Low-Emission Construction Vehicles and Equipment: Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

3.1.2.2 Analysis of Project Effects and Determination as to Significance

Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

Guideline for the Determination of Significance

The Proposed Project would result in a significant impact if it would:

1. Result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Guideline Source

The County's Guidelines of Significance do not include guidance for the analysis and determination of significance for energy use impacts. Therefore, this analysis uses the guidance provided in Appendix F of the CEQA Guidelines and the sample questions for energy contained in Appendix G of the CEQA Guidelines. The introduction of Appendix F states that "[t]he goal of conserving energy implies the wise and efficient use of energy." Three means of achieving this goal are provided:

1. Decreasing overall per capita energy consumption;
2. Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
3. Increasing reliance on renewable energy sources.

Emphasis in the discussion should be on "avoiding or reducing inefficient, wasteful and unnecessary consumption of energy."

Analysis

Construction Energy Use

Construction activities would require the use of diesel fuel, gasoline, and other fuels. Energy use during construction typically involves the use of motor vehicles for transportation of workers and materials and the use of motorized equipment for direct construction actions such as moving soil and demolishing structures. The estimated combined construction energy that would be used during the proposed improvements to Willow Glen Drive, construction of site access, site preparation, grading, and demolition activities is shown in Table 3.1.2-3, *Construction Energy Use*. As shown in Table 3.1.2-3, total Project construction activities would result in the consumption of approximately 5,462 gallons of diesel fuel and approximately 395 gallons of gasoline. The total construction energy use would be approximately 806 MMBTUs.

Construction activities are not anticipated to result in an inefficient use of energy. Since the use of gasoline and diesel fuel would be a significant portion of construction costs, contractors and mine operators would minimize the use of fuel within the constraints of Project requirements. Construction equipment would be maintained in optimal working order and rated energy efficient and on-site vehicle idling would be minimized to reduce the use of gasoline and diesel. All soil required to construct the level sand processing area and settling ponds would be obtained from sources on the site, and any cut (excess) soil would be stockpiled on-site, minimizing haul truck trips and associated fuel consumption. In addition, during demolition activities, the Project would be required to comply with the County construction and demolition recycling ordinance which requires that 90 percent of inert materials and 70 percent of all other construction materials from a project be recycled.

Due to the short-term nature of the construction activities and the total amount of diesel and gasoline fuel anticipated to be consumed, the Project's consumption of energy (primarily diesel fuel) during construction would not represent a substantial demand on energy resources or result in the need to develop any new, or alter any existing, energy production or distribution facilities. In addition, construction-related energy would not be used in a wasteful, inefficient, or unnecessary manner.

Operational Energy Use

Energy use associated with the Project's 10-year mining operation would occur from on-road vehicle travel, off-road mobile equipment activity, and stationary mining equipment electricity use. On-road vehicles would consist of worker commute vehicles, vendor vehicles, and sand delivery trucks. These vehicles are estimated to consume 126,942 gallons of diesel fuel and 1,370 gallons of gasoline per year, resulting in a total energy usage of 17,751 MMBTU of energy per year.

Off-road mobile equipment would include a dozer for site preparation clearing/grading; loaders and an excavator within the mine pit for material extraction; multiple loaders at the plant/loading area for loading sand product onto haul trucks; an off-road haul truck for material movement within the Project site; a supervisor/maintenance truck; a water truck for dust suppression; and a grader for finish grading. Some of this same equipment, as well as a seeding truck and skid steer loader,

would also be used for ongoing reclamation activities. These pieces of equipment and vehicles are estimated to consume a total of 41,620 gallons of diesel fuel per year, resulting in a total energy usage of 5,764 MMBTU of energy per year.

The Project's stationary mining equipment that would require the use of electricity include the feed hopper, conveyor belts, triple deck screen, blade mill, fine material washer, radial stackers, and water pump, as well as other features to support mining operations, such as the office and control room and security lighting. This equipment is estimated to require 756 megawatt-hours per year of electricity, which is equivalent to 2,580 MMBTU of energy per year.

The Project's overall operational energy is summarized in Table 3.1.2-4, *Operational Energy Use*. As shown in Table 3.1.2-4, the Project's total operational energy use from on-road vehicles, off-road mobile equipment, and stationary mining equipment is estimated to be 26,095 MMBTU per year.

The predominant consumer of energy associated with the Project would be on-road vehicle travel, specifically the aggregate delivery trucks transporting material to the ready-mix concrete batch plants where it would be used. As described in Section 3.1.7, *Transportation/Traffic*, it is anticipated that the local sand supply would replace sand that currently is consistently imported from Mexico and Riverside County. As discussed in greater detail in Section 3.1.3, *Greenhouse Gas Emissions*, the production of PCC-grade sand at the Project site would likely result in a reduction in aggregate imported into the County from elsewhere and its associated VMT, thus reducing mobile-source energy usage at a regional scale and increasing regional efficiencies and regional self-sufficiency. In addition, energy usage during the Project's mining phase would be limited to operations necessary for successful completion of the Project. Therefore, the Project would not consume energy in a wasteful, inefficient, or unnecessary manner, and impacts would be **less than significant**.

Following completion of the Project's mining operations, the site would include new segments of recreational trails. Such on-site passive recreation would not consume energy. While energy would be required for visitor vehicle trips to and from the site, trips would be low in number and of short length, as the proposed trails are anticipated to be used primarily by residents of the immediate area. As such, energy use associated with the reclaimed site would be minimal and impacts would be **less than significant**.

Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Guideline for the Determination of Significance

The Proposed Project would result in a significant impact if it would:

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Guideline Source

The guideline is based on CEQA Guidelines Appendix F.

Analysis

The Project is located within the SDG&E planning area which is covered by the LTPP. As discussed in Section 3.1.2.1, the current LTPP plans for higher levels of demand than have actually occurred. Thus, the Project would not result in an unanticipated increase of energy demand beyond what is already planned for and included in the LTPP.

The Project would be required to comply with state and County energy conservation measures related to construction and operations. The County's 2015-2020 Strategic Energy Plan includes energy efficiency standards for new development, renewable energy generation, water conservation measures, transportation measures to reduce trips and VMT, and waste diversion programs (County 2015). This plan serves as a companion document to the County's General Plan and provides the framework for land-based policy decisions to improve energy efficiency in existing and future development. While many of the regulations regarding energy efficiency, such as those associated with increasing building efficiency and renewable energy generation, are not relevant to the Project, regulations associated with reducing VMT are directly relevant to the Project, as the Project's primary source of energy usage is from the aggregate delivery trucks transporting material. As discussed above and in Chapter 3.1.3, the production of PCC-grade sand at the Project site would likely result in a reduction in aggregate import and associated VMT, thus substantially reducing mobile-source energy usage at a regional scale. The Project's provision of a local source of PCC-grade sand would also directly contribute to County of San Diego General Plan policy COS-14.4, Sustainable Technology and Projects, as the policy encourages projects that "increase the self-sufficiency of individual communities." Therefore, the Project would not conflict with or obstruct a state of local plan for renewable energy or energy efficiency, and impacts would be **less than significant**.

3.1.2.3 *Cumulative Impact Analysis*

Short-term and long-term cumulative development is expected to result in an increase in the demand for energy resources throughout the County. Several County programs and policies and SDG&E initiatives would serve to reduce total energy demand among cumulative projects. Additionally, minimum standards for energy efficiency are outlined in California's Energy Efficiency Standards for Residential and Non-residential Buildings. To exceed these standards, SDG&E as well as state and federal agencies offer incentive programs to encourage developers to exceed Title 24 standards.

The proposed Project's energy usage would be temporary and would not be carried out in a wasteful, inefficient, or unnecessary manner. In addition, the Project would likely result in an overall decrease in energy usage at a regional scale by supplying a local source of PCC-grade aggregate. Upon completion of the Project, the site would be reclaimed to open space and would not contribute to a long-term cumulative energy-related impact. Therefore, the Project's cumulative impacts related to energy usage would be **less than cumulatively considerable**.

3.1.2.4 *Significance of Impacts*

As discussed above, the Project would not result in significant impacts. Therefore, no mitigation is required.

3.1.2.5 Conclusion

Based on the above analysis, the Proposed Project would have less than significant Project-specific or cumulative impacts related to energy.

**Table 3.1.2-1
SAN DIEGO COUNTY ELECTRICITY CONSUMPTION 2015-2019**

Year	Electricity Consumption (GWh)
2015	19,894
2016	19,666
2017	19,667
2018	19,733
2019	19,048

Source: CEC 2016a
GWh = gigawatt hours

**Table 3.1.2-2
SAN DIEGO COUNTY NATURAL GAS CONSUMPTION 2015-2019**

Year	Gas Consumption (millions of therms)
2015	453
2016	473
2017	480
2018	483
2019	534

Source: CEC 2016b

**Table 3.1.2-3
CONSTRUCTION ENERGY USE**

Source	Diesel (gallons)	Gasoline (gallons)	Total Energy (MMBTU)
Off-Road Construction Vehicles	4,958	0	687
On-Road Construction Vehicles	504	395	119
Total¹	5,462	395	806

Source: CalEEMod; CARB EMFAC2017; CARB OFFROAD2017 Orion Database 2017a.

¹ Totals may not sum due to rounding.

MMBTU = million British thermal units per year

**Table 3.1.2-4
OPERATIONAL ENERGY USE**

Source	Diesel (gallons)	Gasoline (gallons)	Electricity (MW-hour/year)	Total Energy (MMBTU/year)
On-Road Operation Vehicles	126,942	1,370	-	17,751
Off-Road Operation Vehicles	41,620	-	-	5,764
Mine Electricity Use	-	-	756	2,580
Total¹	168,562	1,370	756	26,095

Source: CalEEMod; CARB EMFAC2017.

¹ Totals may not sum due to rounding.

MW-hour/year = megawatt-hours per year; MMBTU/year = million British thermal units per year