

3.6 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126 and Appendix F of the CEQA guidelines, which requires that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on considering if the project would result in inefficient, wasteful, and unnecessary consumption of energy.

Energy related to the future corporation yard would include energy directly consumed for space heating and cooling, and electric facilities and lighting at the warehouse and office land uses. Indirect energy consumption would be associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels to power cars and trucks. Energy would also be consumed by equipment and vehicles used during construction of the future corporation yard.

Comments received on the notice of preparation regarding energy included a letter from the Sacramento Municipal Utility District (SMUD) requesting that the EIR consider transmission line encroachment, electrical load needs, energy efficiency and cumulative related to the need for increased electrical delivery.

3.6.1 Regulatory Setting

Federal and State agencies regulate energy consumption through various policies, standards, and programs. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [EPA] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations sets forth energy standards for buildings. Further, the State provides rebates/tax credits for installation of renewable energy systems, and offers the Flex Your Power program promotes conservation in multiple areas.

FEDERAL

Energy Policy and Conservation Act, and Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally-fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. State are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and CAFE standards, the Energy Independence and Security Act of 2007 will build on progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

STATE

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as CEC. The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Plan

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 current plan is the 1997 California Energy Plan. 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 least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces VMT and accommodates pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC; CARB 2003). Further, in response to the CEC's

2003 and 2005 *Integrated Energy Policy Reports*, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2016, the State has reported that 21 percent of electricity is sourced from certified renewable sources.

Senate Bill X1-2: California Renewable Energy Resources Act

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 *Energy Action Plan II*, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. The CEC recently adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other state, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum

consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

Executive Order (EO) S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- ▲ increase environmentally- and economically-sustainable energy production from organic waste;
- ▲ encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- ▲ create jobs and stimulate economic development, especially in rural regions of the state; and
- ▲ reduce fire danger, improve air and water quality, and reduce waste.

As of 2015, 3.2 percent of the total electricity system power in California was derived from biomass.

California Green Building Standards

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2013, CEC updated Title 24 standards with more stringent requirements, effective July 1, 2014. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC *Impact Analysis for California's 2013 Building Energy Efficiency Standards* estimates that the 2013 standards are 23.3 percent more efficient than the previous 2008 standards for residential construction and 21.8 percent more efficient for non-residential construction. In 2016, CEC updated Title 24 standards again, effective January 1, 2017. While the impact analysis of these standards has not yet been released, CEC estimates that the 2016 standards are 28 percent more efficient than 2013 standards for residential construction and are 5 percent more efficient for non-residential construction. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary because of local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in Title 24.

Assembly Bill 32, Climate Change Scoping Plan and Update

In December 2008, CARB adopted its first version of its *Climate Change Scoping Plan*, which contained the main strategies California will implement to achieve the mandate of AB 32 (2006) to reduce statewide GHG emissions to 1990 levels by 2020. In May 2014, CARB released and subsequently adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching the goals of AB 32 (2006) and evaluate the progress made between 2000 and 2012 (CARB 2014). After releasing multiple versions of proposed updates in 2017 CARB adopted the next version titled *California's 2017 Climate Change Scoping Plan (2017 Scoping Plan)* in December of that same year (CARB 2017). The 2017 Scoping Plan indicates that California is on track to achieve the 2020 Statewide GHG target mandated by AB 32 of 2006 (CARB 2017:9). It also

lays out the framework for achieving the mandate of SB 32 of 2016 to reduce Statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017). The 2017 Scoping Plan identifies the GHG reductions needed by each emissions sector.

The 2017 Scoping Plan also identifies how GHGs associated with proposed projects could be evaluated under CEQA (CARB 2017:101-102). Specifically, it states that achieving “no net increase” in GHG emissions is an appropriate overall objective of projects evaluated under CEQA if conformity with an applicable local GHG reduction plan cannot be demonstrated. CARB recognizes that it may not be appropriate or feasible for every development project to mitigate its GHG emissions to zero and that an increase in GHG emissions due to a project may not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change.

Senate Bill 375

SB 375, signed by the Governor in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO’s Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California’s dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The Sacramento Area Council of Governments (SACOG) serves as the MPO for Sacramento, Placer, El Dorado, Yuba, Sutter, and Yolo Counties, excluding those lands located in the Lake Tahoe Basin. The project site is in Sacramento County. SACOG adopted its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) 2035 in 2012, and completed an update adopted on February 18, 2016. SACOG was tasked by CARB to achieve a 9 percent per capita reduction compared to 2012 emissions by 2020 and a 16 percent per capita reduction by 2035, which CARB confirmed the region would achieve by implementing its SCS (CARB 2013). The MTP/SCS forecasted land use development by community types: Center and Corridor Communities, Established Communities, Developing Communities, Rural Residential Communities, and Lands Not Identified for Development in the MTP/SCS Planning Period.

Executive Order B-30-15

On April 20, 2015 Governor Edmund G. Brown Jr. signed Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor’s executive order aligns California’s GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California’s new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California’s GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State’s continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California’s dependency of fossil fuels and making land use development and transportation systems more energy efficient.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

LOCAL

The project site lies within the jurisdictional boundaries of Sacramento County; therefore, the County's policies, as well as Sacramento LAFCo's policies, would apply. Furthermore, if the SOIA and annexation are approved, the project site would be in the jurisdiction of the City of Folsom. Thus, applicable policies of the City of Folsom's General Plan are described below.

Sacramento County General Plan

The following policies of the *Sacramento County 2030 General Plan* (Sacramento County 2011) are applicable to the project:

- ▲ **Policy PF-101:** Route new overhead sub-transmission lines within existing transmission line corridors, along railroad tracks, or major roadways.
- ▲ **Policy EN-16:** Promote the use of passive and active solar systems in new and existing residential, commercial, and institutional buildings as well as the installation of solar swimming pool heaters and solar water and space heating systems.

City of Folsom General Plan

The following policies of the *City of Folsom General Plan* (1993) are applicable to the project:

- ▲ **Policy 22.1:** Continue to implement state energy-efficient standards.
- ▲ **Policy 22.2:** Include energy conservation guidelines as part of the development standards for the specific plan area.

3.6.2 Environmental Setting

PHYSICAL SETTING

Energy Facilities and Services on the Project Site

Electric and natural gas services in the City of Folsom are provided by SMUD and Pacific Gas and Electric (PG&E), respectively. Several power lines and towers run through the property; however, no utilities (e.g., natural gas and electricity) are located on site.

Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Recent trends associated with energy use in California are discussed below.

SMUD receives power from varied sources including hydropower, natural-gas-fired generators, renewable energy such as solar and wind power, and power purchased on the wholesale market. Current peak demand for energy is approximately 3,000 megawatts (MW). By 2050, that peak demand is expected to near 5,000 MW.

Petroleum

Gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet specific formulations required by CARB. Major petroleum refineries in California are concentrated in three counties: Contra Costa County in northern California, Kern County in central California, and Los Angeles County in southern California.

Natural Gas

One third of energy commodities consumed in California is natural gas. The natural gas market continues to evolve and service options expand, but its use falls mainly into four sectors – residential, commercial, industrial, and electric power generation. In addition, natural gas is an alternative to petroleum for use in trucks, buses, and some cars. Alternative transportation-related vehicles are increasing in use by consumers along with the development of a safe, reliable refueling infrastructure (CEC 2016).

In 2014, approximately 35 percent of all natural gas consumed in the State was used to generate electricity. Residential land uses represented approximately 17 percent of California's natural gas consumption with the balance consumed by the industrial, resource extraction, and commercial sectors (EIA 2014).

Electricity and Renewables

Power plants in California meet approximately 68 percent of the in-state electricity demand; hydroelectric power from the Pacific Northwest provides another 12 percent; and power plants in the southwestern U.S. provide another 20 percent (EIA 2014). The contribution of in-state and out-of-state power plants depends upon, among other factors, the precipitation that occurred in the previous year and the corresponding amount of hydroelectric power that is available. SMUD is the primary electricity supplier in the City of Folsom.

California regulations require that electricity consist of 33 percent renewables by 2020 and 50 percent renewables by 2030 for all electricity retailers in the state. As of July 2016, the California electricity system was powered by 21.9 percent renewables, including biomass, geothermal, small hydroelectric, solar, and wind. In-state generation of electricity consisted of 24.5 percent renewables (CEC 2016).

Alternative Fuels

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various Statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- ▲ biodiesel,
- ▲ electricity,
- ▲ ethanol (E-10 and E-85),
- ▲ hydrogen,
- ▲ natural gas (methane in the form of compressed and liquefied natural gas),
- ▲ propane,
- ▲ renewable diesel (including biomass-to-liquid),
- ▲ synthetic fuels, and
- ▲ gas-to-liquid and coal-to-liquid fuels.

California has a growing number of alternative fuel vehicles through the joint efforts of CEC, CARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. As of September 2016, California contained nearly 14,000 alternative fueling stations (Alternative Fuels Data Center [AFDC] 2017).

COMMERCIAL ENERGY USE

Commercial buildings represent just under one-fifth of U.S. energy consumption with office space, retail, and educational facilities representing about half of commercial sector energy consumption. In aggregate, commercial buildings consumed 46 percent of building energy consumption and approximately 19 percent of U.S. energy consumption. In comparison, the residential sector consumed approximately 22 percent of U.S. energy consumption (U.S. Department of Energy [DOE] 2012).

ENERGY USE FOR TRANSPORTATION

Transportation is the second largest energy consumer nationwide, accounting for 27 percent of the total national energy use (DOE 2016). On-road vehicles are estimated to consume approximately 80 percent of California's transportation energy demand, with cars, trucks, and buses accounting for nearly all of the on-road fuel consumption. Petroleum products (gasoline, diesel, jet fuel) account for almost 99 percent of the energy used in California by the transportation sector, with the rest provided by ethanol, natural gas, and electricity (Bureau of Transportation Statistics [BTS] 2015).

On-road vehicles use about 90 percent of the petroleum consumed in California. The California Department of Transportation (Caltrans) projected 782 million gallons of gasoline and diesel were consumed in Sacramento County in 2015, an increase of approximately 88 million gallons of fuel from 2010 levels (Caltrans 2008).

Vehicle Miles Traveled and Gasoline Consumption

According to Caltrans, total gasoline consumption in California is expected to increase 57 percent from 2007 to 2030, and the number of vehicle miles traveled (VMT) is expected to increase 61 percent over the same time (Caltrans 2009). As noted in the Regulatory Setting of this section, several State mandates and efforts, such as SB 375, seek to reduce VMT. Fuel consumption per capita in California decreased by nearly 11 percent from 2008 to 2011 (BTS 2015). Despite the progress in reducing per capita VMT and per capita fuel consumption, the continued projected increases in total fuel consumption and VMT can be attributed to the overall increase in population.

Total gasoline using in California varies from year to year because of a variety of factors such as gas prices, periods of economic growth and decline, and fuel economy of vehicles. Between January 2007 and May 2016, an average of approximately 672 billion gallons of gasoline were purchased in California. During this time, the volume of gasoline purchased ranged from a minimum of approximately 1.1 billion gallons in February 2013 to a maximum of approximately 1.37 billion gallons in August 2007 (California State Board of Equalization 2016).

Energy Used by Private and Commercial Vehicles

Commercial vehicles, generally composed of light-, medium-, and heavy-duty trucks, are typically fueled by diesel or gasoline and are part of the general fleet mix of vehicles present within the Sacramento region transportation system.

Average fuel economy is expected to increase for automobiles and all types of trucks. CAFE Standards required average fuel economy for a vehicle manufacturer's entire fleet of passenger cars and light-duty trucks for each model year. For many years, the standard for passenger automobile was 27.5 miles per gallon (mpg), and the standard for light-duty trucks, a classification that also includes sport utility vehicles (SUVs) under 8,500 pounds, rose to 22.5 mpg for 2008 models. Effective with the 2011 model year, the CAFE standard was revised from a single number to a model-specific formulation based on the size of the vehicle, in square feet (wheelbase times track, or the distance between the axles multiplied by the distance

between the wheels of each axle), referred to as the vehicle’s “footprint.” For 2012, the average CAFE standard for passenger cars is 33.3 mpg, while for light-duty trucks it is 25.4 mpg (Federal Registrar 2010).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth’s temperature. For an analysis of greenhouse gas (GHG) production and the project’s impacts on climate change, refer to Section 3.7, *Greenhouse Gas Emissions and Climate Change*.

3.6.3 Methodology

While approval of the SOIA and annexation, along with changes to land use and zoning designations, would not result in physical changes to the site, approval of the SOIA/annexation would remove barriers to the development of the future corporation yard at this site. Therefore, this analysis considers the potential environmental impacts of the development of the future corporation yard.

Levels of construction- and operation-related energy consumption by the future corporation yard were measured in megawatt-hours of electricity, Therms of natural gas, gallons of gasoline, and gallons of diesel fuel. Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 computer program (CAPCOA 2016). Where project-specific information was not known, CalEEMod default values based on the project’s land uses and location were used.

Table 3.6-1 summarizes the levels of energy consumption for the peak year of construction and total levels of energy consumption. Table 3.6-2 summarizes the levels of energy consumption for the first year of operation during an assumed buildout year of 2050. Operational energy consumption includes electricity and natural gas consumption. Table 3.6-3 summarizes the gasoline and diesel consumption from mobile sources estimated for the future corporation yard in 2050.

Table 3.6-1 Construction Energy Consumption

Year	Diesel (Gallons)	Gasoline (Gallons)
2022	60,227	12,476

Notes: Gasoline gallons include on-road gallons from worker trips. Diesel gallons include off-road equipment and on-road gallons from worker and vendor trips.

Source: Calculations by Ascent Environmental in 2017

Table 3.6-2 Operational Energy Consumption in 2050

Energy Type	Energy Consumption	Units
Electricity	16,324	MWh/year
Natural Gas	43,905	MMBtu/year

Notes: MWh/year = megawatt-hours per year; MMBtu/year = million British thermal units per year.

Source: Calculations by Ascent Environmental in 2017

Table 3.6-3 Gasoline and Diesel Consumption in 2050

Vehicle Category	Gasoline (gal/year)	Diesel (gal/year)
Passenger Vehicles	35,507	343
Trucks	7,809	9,006
Total (All Vehicle Types)	43,316	9,349

Notes: gal/year = gallons per year
Source: Calculations by Ascent Environmental in 2017

THRESHOLDS OF SIGNIFICANCE

The following significance criteria area based on CEQA Guidelines Appendix F (energy), under which implementation of the project would have a potentially significant adverse impact if the project would:

- ▲ result in wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation, as evidenced by a failure to decrease overall per capita energy consumption or decrease reliance on fossil fuels such as coal, natural gas, and oil;
- ▲ fail to incorporate feasible renewable energy or energy efficiency measures into building design, equipment use, transportation, or other project features, or otherwise fail to increase reliance on renewable energy sources; or
- ▲ exceed the available capacities of energy supplies that require the construction of facilities.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, *Project Description*, the project has three potential access options. The evaluation of energy would not be affected by these options. Therefore, this is not discussed further in this section.

IMPACT ANALYSIS

Impact 3.6-1: Wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation.

Development of the future corporation yard would increase electricity and natural gas consumption at the site relative to existing conditions. Thus, this impact would be **potentially significant**.

Appendix F of the State CEQA Guidelines requires the consideration of the energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient and unnecessary” energy usage (Public Resources Code Section 21100, subdivision (b)(3)). Neither the law nor the State CEQA Guidelines establish criteria that define wasteful, inefficient, or unnecessary use. Compliance with California Code of Regulations Title 24 Energy Efficiency Standards would result in energy-efficient buildings. However, compliance with building codes does not adequately address all potential energy impacts during construction and operation of the future corporation yard. For example, energy would be required to transport people and goods to and from the future corporation yard.

Construction-Related Energy

Energy would be required to construct the future corporation yard, operate and maintain construction equipment, and produce and transport construction materials. The one-time energy expenditure required to construct the physical buildings and infrastructure associated with the future corporation yard would be non-recoverable. Most energy consumption would result from operation of construction equipment and vehicle

trips associated with commutes by construction workers and haul trucks supplying materials. An estimated 12,476 gallons of gasoline and 60,227 gallons of diesel would be consumed to enable construction the future corporation yard. The energy needs for constructing the future corporation yard would be temporary and is not anticipated to require additional capacity or increase peak or base period demands for electricity or other forms of energy.

Building Energy

Operation of the future corporation yard would be typical of industrial use requiring electricity and natural gas for lighting, space and water heating, and landscape maintenance activities. Indirect energy use would include wastewater treatment and solid waste removal. The City's corporation yard operations are currently split among multiple sites, and the existing sites cannot meet current and projected City corporation yard requirements. Existing yard operations are housed in older buildings which are poorly configured and inadequately sized for current needs, resulting in many operating inefficiencies. The new corporation yard is necessary for City department needs. However, the future corporation yard would increase electricity and natural gas consumption in the region relative to existing conditions. The future corporation yard would require construction of new utility connections.

The future corporation yard would be required to meet the California Code of Regulations Title 24 standards for energy efficiency that are in effect at the time of construction that will continue to require improved building energy efficiency. Additionally, as required by the City of Folsom General Plan, all new developments are required to continue to implement State energy-efficiency standards.

Transportation Energy

Municipal transportation energy consumption is necessary to serve the City and various department needs. Therefore, fuel consumption associated with vehicle trips generated by the future corporation yard would not be considered inefficient, wasteful, or unnecessary. The future corporation yard would consume 9,349 gallons of diesel per year and 43,316 gallons of gasoline per year.

Fuel use estimates were calculated from the combination of fuel consumption rates and fuel mix by vehicle class from CARB's EMFAC2014 model with overall VMT and mode share by vehicle class modeled for the future corporation yard in CalEEMod (see Section 3.3 *Air Quality*, and Appendix B of this Draft EIR). Federal and State regulations regarding standards for vehicles in California, including the Advanced Clean Cars program and CAFE standards to reduce GHG emission from passenger vehicles and light-duty trucks, are designed to reduce wasteful, unnecessary, and inefficient use of energy for transportation.

Development of the future corporation yard would increase electricity and natural gas consumption at the site relative to existing conditions. Thus, this impact would be **potentially significant**.

Mitigation Measures

Implement Mitigation Measure 3.7-1: Greenhouse gas emission reduction measures.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-1 provided in Section 3.7, *Greenhouse Gas Emissions and Climate Change*, would further improve the energy efficiency of the future corporation yard through construction reductions, site design features, and potential changes to renewable fuels. Implementation of the Mitigation Measure 3.7-1 would improve operational and transportation energy efficiency of the future corporation yard that would ensure that the future corporation yard's energy consumption would not be considered wasteful, inefficient, or unnecessary. Thus, this impact would be reduced to **less than significant**.

Impact 3.6-2: Demand for energy services and facilities.

Electrical and natural gas infrastructure would need to be extended by SMUD and PG&E to meet the energy needs of the development of the future corporation yard. If determined to be necessary, offsite improvements to electrical and natural gas facilities would be the responsibility of the utility and would be analyzed by the utility provider under separate environmental review. Neither LAFCo nor the City of Folsom would have control over the approval, timing, or implementation of any electrical or natural gas facility improvements. Furthermore, the project may result in encroachment onto SMUD's transmission easements. This impact would be **potentially significant**.

Development of the future corporation yard would increase electricity and natural gas consumption and require new utility connections. Several power lines and towers run through the property; however, no utilities (e.g., natural gas and electricity) are located on site.

The Public Utilities Commission obligates SMUD and PG&E to maintain the capacity to provide energy to planned developments. Therefore, SMUD and PG&E would review final development plans once submitted and would determine infrastructure connection specifics at that time. Specific energy demand would be calculated in coordination with SMUD and PG&E to ensure that the future corporation yard is adequately served. If offsite infrastructure is needed, the potential environmental effects of any new or expanded offsite utilities would be considered by the utility provider through separate CEQA review. Potential environmental impacts from construction of offsite infrastructure could include, but not limited to, the following:

- ▲ Aesthetics: temporary and/or permanent alteration of public views from construction of infrastructure improvements.
- ▲ Air Quality: air pollutant and toxic air contaminant emissions from construction activities that exceed thresholds recommended by the Sacramento Metropolitan Air Quality Management District.
- ▲ Archaeological, Historical, and Tribal Cultural Resources: damage or loss of significant cultural resources from construction activities.
- ▲ Biological Resources: loss of habitat and direct impacts to special status plant and animal species.
- ▲ Greenhouse Gases: temporary emission of GHGs during construction.
- ▲ Hazards and Hazardous Materials: potential exposure or release of hazardous materials or contamination during construction.
- ▲ Hydrology and Water Quality: construction-related stormwater quality impacts.
- ▲ Noise: temporary excessive noise levels during construction on sensitive noise receptors.
- ▲ Transportation: temporary disruption of roadways and congestion from construction activities and equipment.

The physical environmental impacts from construction or operation of offsite improvements could remain significant after implementation of mitigation (i.e., significant and unavoidable), or no feasible mitigation may be available to fully reduce impacts to a less-than-significant level as it is unknown at this time what the extent of these impacts may be. However, offsite transmission facilities were considered as part of the FPASP EIR/EIS and generally contemplated that pole-mounted transmission lines would be located along the northern boundary of White Rock Road near the project site. The impacts of construction of these improvements were evaluated in the FPASP EIR/EIS. However, SMUD has not prepared final designs of this alignment to determine whether changes would be required. Further, neither LAFCo nor the City of Folsom would have control over the approval, timing, or implementation of any facility improvements. Furthermore,

the project may result in encroachment onto SMUD's transmission easements. This would be a **potentially significant** impact.

Mitigation Measure 3.6-2: Encroachment within SMUD's transmission easement.

Prior to construction, the City of Folsom will work with SMUD through the connection process, electric service requirements, and encroachment requests for SMUD-owned transmission line easements, including overhead and/or underground transmission and distribution line easements.

Significance after Mitigation

Implementation of Mitigation Measure 3.6-2 would address potential encroachment onto SMUD's transmission easement by obtaining consent through the approval process of encroachment requests. However, the impacts of construction or operation of offsite improvements, if required, could result in significant environmental effects that cannot be determined at this time. Neither LAFCo nor the City of Folsom would have control over the approval, timing, or implementation these improvements. Therefore, the potential impact of constructing new or expanded electrical or natural gas facilities to serve development of the future corporation yard would be **significant and unavoidable**.

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