

This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the greenhouse gas (GHG), climate change, and energy conservation impacts in this section focuses on the proposed Specific Plan's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed project. Disclosure and discussion of the Specific Plan's estimated energy usage and greenhouse gas emissions are provided.

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the San Joaquin Air Pollution Control District (SJVPACD) (July 15, 2019), and Cathy Caples (August 1, 2019). Each of the comments related to this topic are addressed within this section. Full comments received are included in **Appendix A**.

### 3.7.1 ENVIRONMENTAL SETTING

#### GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

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Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and ozone (O<sub>3</sub>). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern,

respectively. California produced 440 million gross metric tons of carbon dioxide equivalents (MMTCO<sub>2</sub>e) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

### EFFECTS OF GLOBAL CLIMATE CHANGE

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The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21<sup>st</sup> century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

## Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

## Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

### **Agriculture**

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

### **Forests and Landscapes**

Global warming is expected to alter the distribution and character of natural vegetation through decreases in precipitation, thereby resulting in a possible increased risk of large wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

### **Rising Sea Levels**

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with

saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

## ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity generated from renewable resources by 2020, 60 percent by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under AB 100).

Overall, in 2018, California's per capita energy usage was ranked fourth-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles, results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

### Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and limited nuclear generation resources with a plan to increase renewables and the elimination of nuclear power in 2025. In 2018, about 28% of the electricity supply comes from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by renewable energy including hydro and wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2020a). In 2016, approximately 50 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 25 percent of the State's utility-scale net electricity generation came from non-hydroelectric renewable technologies, such as solar, wind, geothermal, and biomass. Another 14 percent of the State's utility-scale net electricity generation came from hydroelectric generation, and nuclear energy powered an additional 11 percent. The amount of electricity generated from coal negligible (approximately 0.2 percent) (U.S. EIA, 2020a). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was

246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2018, electricity consumption in Fresno County was 7,651 GWh (California Energy Commission, 2018).

## **Oil**

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the State's transportation energy needs.

## **Natural Gas/Propane**

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California (California Public Utilities Commission, 2021). In 2018, California gas utilities were estimated to deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions (California Public Utilities Commission, 2021). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the Fresno County area, including the City of Fresno. In 2018, natural gas consumption in Fresno County was 347 million therms (California Energy Commission, 2018).

## **3.7.2 REGULATORY SETTING**

### **FEDERAL**

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#### **Clean Air Act**

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

On April 2, 2007, in the court case of *Massachusetts et al. vs. the USEPA et al.* (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the federal Clean Air Act (42 USC §§ 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and California Air Resources Board (CARB), the United States Environmental Protection Agency (USEPA) developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

### **Energy Policy and Conservation Act**

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

### **Energy Policy Act of 1992 (EPAct)**

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 included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States 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 was signed into law on August 8, 2005. Generally, the act provides for 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 a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

### **Federal Climate Change Policy**

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

### **Mandatory Greenhouse Gas Reporting Rule**

On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO<sub>2</sub> per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

## **STATE**

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The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions all across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing



CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB “Scoping Plans” intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

### **Statutes Setting Statewide GHG Reduction Targets**

#### **ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)**

In September 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Saf. Code, § 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

#### **SENATE BILL 32**

Effective January 1, 2017, SB 32 (Stats. 2016, ch. 249) added a new section 38566 to the Health and Safety Code. It provides that “[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by the year 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger’s 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Saf. Code, § 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In April 2015, Governor Brown issued another Executive Order, B-30-15, which created a “new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below

1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050.” SB 32 codified this target.

In September 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to “achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter.” The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. In the 2015 legislative session, the Legislature passed Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) (discussed in more detail below). This legislation added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that “[t]he Legislature finds and declares [that] ... [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification.” Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, ... and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

### **Statute Setting Target for the Use of Renewable Energy for the Generation of Electricity**

#### **CALIFORNIA RENEWABLES PORTFOLIO STANDARD**

In September 2002, the Legislature enacted Senate Bill 1078 (Stats. 2002, ch. 516), which established the Renewables Portfolio Standard program, requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. (See Pub. Utilities Code, § 399.11 et seq. [subsequently amended].) The legislation set a target by which 20 percent of the State’s electricity would be generated by renewable sources. (Pub. Utility Code, § 399.11, subd (a) [subsequently amended].) As described in the Legislative Counsel’s Digest, Senate Bill 1078 required “[e]ach electrical corporation ... to increase its total procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet an annual target, the electrical corporation would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall, if funds are made available as described. An electrical

corporation with at least 20 percent of retail sales procured from eligible renewable energy resources in any year would not be required to increase its procurement in the following year.”

In September 2006, the Legislature enacted Senate Bill 107 (Stats. 2006, ch. 464), which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. (Pub. Utility Code, § 399.11, subd (a) [subsequently amended].)

In April 2011, the Legislature, in a special session, enacted Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1), which set even more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State’s electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, § 399.11 et seq. [subsequently amended].)

In 2015, the Legislature enacted Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) (discussed above). It increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, § 399.11, subd (a); see also § 399.30, subd. (c)(2).) Of equal significance, Senate Bill 350 also embodies a policy encouraging a substantial increase in the use of electric vehicles. As noted earlier, Section 740.12(b) of the Public Utilities Code now states that the PUC, in consultation with CARB and the CEC, must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, ... and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

In March 2012, Governor Brown had issued an Executive Order, B-16-12, which embodied a similar vision of a future in which zero-emission vehicles (ZEV) will play a big part in helping the State meet its GHG reduction targets. Executive Order B-16-12 directed the State government to accelerate the market for in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be “ZEV ready”;
- By 2020, the State will have established adequate infrastructure to support 1 million ZEVs in California;
- By 2025, there will be 1.5 million ZEVs on the road in California; and
- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

In 2018, the Legislature enacted, and the Governor signed, Senate Bill 100 (Stats. 2018, ch. 312), which revise the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy

resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

In summary, California has set a statutory goal of requiring that, by the year 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity intended to sufficiently allow the mass conversion of the statewide vehicle fleet from petroleum-fueled vehicles to electrical vehicles and/or other ZEVs. By 2045, all electricity must come from renewable resources and other carbon-free resources. Former Governor Brown had an even more ambitious goal for the State of achieving carbon neutrality as soon as possible and by no later than 2045. The Legislature is thus looking to California drivers to buy electric cars, powered by green energy, to help the State meet its aggressive statutory goal, created by SB 32, of reducing statewide GHG emissions by 2030 to 40 percent below 1990 levels. Another key prong to this strategy is to make petroleum-based fuels less carbon-intensive. A number of statutes in recent years have addressed that strategy. These are discussed immediately below.

### **Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels**

#### **ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS**

In July 2002, the Legislature enacted Assembly Bill 1493 (“Pavley Bill”) (Stats. 2002, ch. 200), which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health & Saf. Code, § 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the “Pavley standards.” In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are commonly known as the “Pavley II standards.” (See California Code of Regulations, Title 13, §§ 1900, 1961, and 1961.1 et seq.)

In January 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, §§ 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

### **Electric Car Mandate**

The transportation sector, including all passenger cars and light trucks, heavy-duty trucks, off-road vehicles, and the fuels needed to power them, is responsible for more than half of California's greenhouse gas emissions. In 2020, Governor Newsom issued an Executive Order, N-79-20, which calls for the elimination of new internal combustion passenger vehicles by 2035. Existing vehicles that run on fossil fuel would be allowed to keep operating. The executive order will not prevent Californians from owning gasoline-powered cars or selling them on the used car market.

### **Innovative Clean Transit Rules for Public Transportation**

The Innovative Clean Transit Regulation is the first of its kind to support these programs. It was adopted in December 2018 to replace the Fleet Rule for Transit Agencies. The regulation requires all public transit agencies to gradually transition to a 100-percent zero-emission bus fleet and encourages them to provide innovative first and last-mile connectivity and improved mobility for transit riders.

Through the deployment of zero-emission technologies, the ICT regulation will provide significant benefits across the state, including:

- Reduce NOx and GHG emissions for all Californians, especially transit-dependent and disadvantaged communities. The majority of these benefits will be in the State's most populated and impacted areas where transit buses are most prevalent
- Increase penetration of the first wave of zero-emission heavy-duty technologies into applications that are well suited to their use to further achieve emission reduction benefits
- Save energy and reduce dependency on petroleum and other fossil fuels
- Expand zero-emission vehicle industry to bring high quality green jobs to local communities and trained workforce to California
- Provide other societal benefits by encouraging improved mobility and connectivity with zero-emission transportation modes and reduced growth in light-duty vehicle miles traveled.

### **Cap and Trade Program**

On October 20, 2011, in a related action, CARB adopted the final cap-and-trade program for California. (See California Code of Regulations, Title 17, §§ 95801-96022.) The California cap-and-trade program has created a market-based system with an overall emissions limit for affected sectors. The program is intended to regulate more than 85 percent of California's emissions and staggers compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012); (2) fuel combustion and transportation (2015).

According to 2012 guidance published by CARB, "[t]he Cap-and-Trade Program will reduce GHG emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions

while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The statewide cap for GHG emissions from major sources, which is measured in metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e), will commence in 2013 and decline over time, achieving GHG emission reductions throughout the program's duration. Each covered entity will be required to surrender one permit to emit (the majority of which will be allowances, entities are also allowed to use a limited number of CARB offset credits) for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits."

The guidance goes on to say that "[s]tarting in 2012, major GHG-emitting sources, such as electricity generation (including imports), and large stationary sources (e.g., refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants) that emit more than 25,000 MTCO<sub>2</sub>e per year will have to comply with the Cap-and-Trade Program. The program expands in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels, and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase." In early April 2017, the Third District Court of Appeal upheld the lawfulness of the cap-and-trade program as a "fee" rather than a "tax." (See *California Chamber of Commerce et al. v. State Air Resources Board et al.* (2017) 10 Cal.App.5th 604.)

In early 2017, the Legislature enacted, and the Governor signed, AB 398 (Stats. 2017, ch. 135), which extended the life of the existing Cap and Trade Program through December 2030.

### **Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives**

#### **CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)**

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for the years 2020 and 2035. Each of California's metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed which demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

### **Climate Change Scoping Plans**

#### **AB 32 SCOPING PLAN**

In December 2008, CARB adopted the Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons

(MMT) CO<sub>2</sub>e, or approximately 22 percent from the State's projected 2020 emission level of 545 MMT of CO<sub>2</sub>e under a business-as-usual scenario. This is a reduction of 47 MMT CO<sub>2</sub>e, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 MMT CO<sub>2</sub>e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008. The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State GHG inventory. CARB estimates the largest reductions in GHG emissions would be by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (26.1 MMT CO<sub>2</sub>e);
- the Low Carbon Fuel Standard (15.0 MMT CO<sub>2</sub>e);
- energy efficiency measures in buildings and appliances (11.9 MMT CO<sub>2</sub>e); and
- renewable portfolio and electricity standards for electricity production (23.4 MMT CO<sub>2</sub>e).

In 2011, CARB adopted a cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period. Enforceable compliance obligations started in 2013. The program applies to facilities that comprise 85 percent of the State's GHG emissions.

With regard to land use planning, the Scoping Plan expects that reductions of approximately 3.0 MMT CO<sub>2</sub>e will be achieved through implementation of Senate Bill (SB) 375, which is discussed further below.

#### 2014 SCOPING PLAN UPDATE

In response to comments on the 2008 Scoping Plan, and AB 32's requirement to update the Scoping Plan every five years, CARB revised and reapproved the Scoping Plan, and prepared the First Update to the 2008 Scoping Plan in 2014 (2014 Scoping Plan). The 2014 Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 MMT of CO<sub>2</sub>e emissions, or approximately 16 percent, from the State's projected 2020 emission level of 507 MMT of CO<sub>2</sub>e under the business-as-usual scenario defined in the 2014 Scoping Plan. The 2014 Scoping Plan also includes a breakdown of the amount of GHG reductions CARB recommends for each emissions sector of the State's GHG inventory. Several strategies to reduce GHG emissions are included: the Low Carbon Fuel Standard, the Pavley Rule, the ACC program, the Renewable Portfolio Standard, and the Sustainable Communities Strategy.

#### 2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provides additional direction for developing the scoping plan. In response to these two pieces of legislation, CARB adopted an updated Scoping Plan in December 2017. The document represents a second update to the scoping plan to reflect the 2030 target of reducing statewide GHG emissions by 40

percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) –
  - Estimated 85% of passenger vehicles will be ZEV and Plug-in Hybrid Electric Vehicles (PHEV) by 2045;
  - Estimated 77% of heavy-duty fleet will be ZEV by 2045.
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

### **Building Code Requirements Intended to Reduce GHG Emissions**

#### **CALIFORNIA ENERGY CODE**

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.



- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2019 Title 24 standards. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. The California Energy Commission updates the standards every three years. The 2019 Title 24 standards include the requirement by the California Public Utilities Commission (CPUC) Energy Efficiency Strategic Plan for net zero energy consumption for new residential development starting in 2020 and will ultimately incorporate requirements for net zero in new non-residential development by 2030.

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

#### CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE)

In 2008, the California Building Standards Commission (CBSC) adopted Part 11 of CCR Title 24, titled the California Green Building Standards Code (CALGreen Code) which became effective on August 1, 2009 as a voluntary code. The 2010 CALGreen Code was the first mandatory edition, took effect on January 1, 2011, and is now a part of the CBSC 3-year update cycle. The 2019 CALGreen Code standards became effective on January 1, 2020. The CALGreen Code establishes mandatory measures for residential and non-residential building construction and encourages sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

### **CEQA Direction**

In 2008, the Schwarzenegger administration, through the Office of Planning and Research (OPR), issued Guidance regarding assessing significance of GHGs in California Environmental Quality Act (CEQA) documents; that Guidance stated that the adoption of appropriate significance thresholds was a matter of discretion for the lead agency. The OPR Guidance states:

“[T]he global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked the CARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis.”

#### **Determine Significance**

- When assessing a project’s GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project’s impacts are significant.
- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact,” individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).
- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project.

The OPR Guidance did not require Executive Order S-3-05 (by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels) to be used as a significance threshold under CEQA. Rather, OPR recognized that,

until the CARB establishes a statewide standard, selecting an appropriate threshold was within the discretion of the lead agency.

In 2010, the California Natural Resources Agency added section 15064.4 to the CEQA Guidelines, providing new legal requirements for how agencies should address GHG-related impacts in their CEQA documents. As amended in early 2019, section 15064.4 provides as follows:

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

- (1) Quantify greenhouse gas emissions resulting from a project; and/or
- (2) Rely on a qualitative analysis or performance-based standards.

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the

agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Section 15126.4, subdivision (c), provides guidance on how to formulate mitigation measures addressing GHG-related impacts:

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases;
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

## California Supreme Court Decisions

### THE "NEWHALL RANCH" CASE

On November 30, 2015, the California Supreme Court released its opinion on *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (hereafter referred to as the Newhall Ranch Case).

Because of the importance of the Supreme Court as the top body within the California Judiciary, and because of the relative lack of judicial guidance regarding how GHG issues should be addressed in CEQA documents, the opinion provides very important legal guidance to agencies charged with preparing EIRs.

The case involved a challenge to an EIR prepared by the California Department of Fish and Wildlife (CDFW) for the Newhall Ranch development project in Los Angeles County, which consists of approximately 20,000 dwelling units as well as commercial and business uses, schools, golf courses, parks and other community facilities in the City of Santa Clarita.

In relation to GHG analysis, the Newhall Ranch Case illustrates the difficulty of complying with statewide GHG reduction targets at the local level using CEQA to determine whether an individual project's GHG emissions will create a significant environmental impact triggering an EIR, mitigation, and/or statement of overriding consideration. The EIR utilized compliance with AB 32's GHG reduction goals as a threshold of significance and modelled its analysis on the CARB's business-as-usual (BAU) emissions projections from the 2008 Scoping Plan. The EIR quantified the project's annual emissions at buildout and projected emissions in 2020 under a BAU scenario, in which no additional regulatory actions were taken to reduce emissions. Since the Scoping Plan determined a reduction of 29 percent from BAU was needed to meet AB 32's 2020 reduction goal, the EIR concluded that the project would have a less-than-significant impact because the project's annual GHG emissions were projected to be 31 percent below its BAU estimate.

The Supreme Court concluded that the threshold of significance used by the EIR was permissible; however, the BAU analysis lacked substantial evidence to demonstrate that the required percentage reduction from BAU is the same for an individual project as for the entire State. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the Supreme Court determined that the EIR's GHG analysis was not sufficient to support the conclusion that GHG impacts would be less than significant.

In addition, the Supreme Court provided the following guidance regarding potential alternative approaches to GHG impact assessment at the project level for lead agencies:

1. The lead agency determination of what level of GHG emission reduction from business-as-usual projection that a new land development at the proposed location would need to achieve to comply with statewide goals upon examination of data behind the Scoping Plan's business-as-usual emission projections. The lead agency must provide substantial evidence and account for the disconnect between the Scoping Plan, which dealt with the State as a whole, and an analysis of an individual project's land use emissions (the same issues with CEQA compliance addressed in this case);
2. The lead agency may use a project's compliance with performance based standards – such as high building energy efficiency – adopted to fulfill a statewide plan to reduce or mitigate GHG emissions to assess consistency with AB 32 to the extent that the project features comply with or exceed the regulation (See Guidelines Section 15064.4(a)(2), (b)(3); see also

Guidelines Section 15064(h)(3)). A significance analysis would then need to account for the additional GHG emissions – such as transportation emissions – beyond the regulated activity. Transportation emissions are in part a function of the location, size, and density or intensity of a project, and thus can be affected by local governments’ land use decision making. Additionally, the lead agency may use a programmatic effort including a general plan, long range development plan, or a separate plan to reduce GHG emissions (such as a Climate Action Plan or a SB 375 metropolitan regional transportation impact Sustainable Communities Strategy) that accounts for specific geographical GHG emission reductions to streamline or tier project level CEQA analysis pursuant to Guidelines 15183.5(a)-(b) for land use and Public Resources Code Section 21155.2 and 21159.28 and Guidelines Section 15183.5(c) for transportation.

3. The lead agency may rely on existing numerical thresholds of significance for GHG emissions (such as the Bay Area Air Quality Management District’s proposed threshold of significance of 1,100 MT CO<sub>2</sub>E in annual emission for CEQA GHG emission analysis on new land use projects). The use of a numerical value provides what is “normally” considered significant but does not relieve a lead agency from independently determining the significance of the impact for the individual project (See Guidelines Section 15064.7).

### THE SANDAG CASE

In *Cleveland National Forest Foundation v. San Diego Association of Governments* (2017) 3 Cal.5th 497 (*SANDAG*), the Supreme Court addressed the extent to which, if any, an EIR for a Regional Transportation Plan (RTP) with a Sustainable Communities Strategy (SCS) must address the proposed project’s consistency with the 2050 target set forth in Executive Order S-03-05 (i.e., 80 percent below 1990 levels). The Court held that SANDAG did not abuse its discretion by failing to treat the 2050 GHG emissions target as a threshold of significance. The Court cautioned, however, that its decision applies narrowly to the facts of the case and that the analysis in the challenged EIR should not be used as an example for other lead agencies to follow going forward. Notably, the RTP itself covered a planning period that extended all the way to 2050.

The Court acknowledged the parties’ agreement that “the Executive Order lacks the force of a legal mandate binding on SANDAG[.]” (*Id.* at p. 513.) This conclusion was consistent with the Court’s earlier decision in *Professional Engineers in California Government v. Schwarzenegger* (2010) 50 Cal.4th 989, 1015, which held the Governor had acted in excess of his executive authority in ordering the furloughing of State employees as a money-saving strategy. In that earlier case, which is not mentioned in the *SANDAG* decision, the Court held that the decision to furlough employees was legislative in character, and thus could only be ordered by the Legislature, and not the Governor, who, under the State constitution, may only exercise executive authority. In *SANDAG*, the Court thus impliedly recognized that Governors do not have authority to set statewide legislative policy, particularly for decades into the future. Even so, however, the Court noted, and did not question, the parties’ agreement that “the Executive Order’s 2050 emissions reduction target is grounded in sound science.” (3 Cal.5th at p. 513.) Indeed, the Court emphasized that, although “the Executive Order ‘is not an adopted GHG reduction plan’ and that ‘there is no legal requirement to use it as a

threshold of significance,” the 2050 goal nevertheless “expresses the pace and magnitude of reduction efforts that the scientific community believes necessary to stabilize the climate.

This scientific information has important value to policymakers and citizens in considering the emission impacts of a project like SANDAG's regional transportation plan.” (*Id.* at p. 515.) Towards the end of the decision, the Court even referred to “the state’s 2050 climate goals” as though the 2050 target from E.O. S-03-05 had some sort of standing under California law. (*Id.* at p. 519.) The Court seemed to reason that, because the Legislature had enacted both AB 32 and SB 32, which followed the downward GHG emissions trajectory recommended in the Executive Order, the Legislature, at some point, was also likely to adopt the 2050 target as well: “SB 32 ... reaffirms California's commitment to being on the forefront of the dramatic greenhouse gas emission reductions needed to stabilize the global climate.” (*Id.* at p. 519.) Finally, the Court explained that “planning agencies like SANDAG must ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes.” (*Ibid.*)

In sum, the Court recognized that the Executive Order did not carry the force of law, but nevertheless considered it to be part of “state climate policy” because the Legislature, in enacting both AB 32 and SB 32, seems to be following both the IPCC recommendations for reducing GHG emissions worldwide and evolving science. Nothing in the decision, however, suggests that all projects, regardless of their buildout period, must address the 2050 target or treat it as a significance threshold.

## LOCAL

### Fresno General Plan

The Fresno General Plan includes the following objectives and policies that pertain directly to air quality, greenhouse gases, and energy.

#### URBAN FORM, LAND USE AND DESIGN ELEMENT

**Objective UF-1:** Emphasize the opportunity for a diversity of districts, neighborhoods, and housing types.

**Policy UF-1-c: Identifiable City Structure.** Focus integrated and ongoing planning efforts to achieve an identifiable city structure, comprised of a concentration of buildings, people, and pedestrian-oriented activity in Downtown; along a small number of prominent east-west and north-south transit-oriented, mixed-use corridors with distinctive and strategically located Activity Centers; and in existing and new neighborhoods augmented with parks and connected by multi-purpose trails and tree lined bike lanes and streets.

**Policy UF-1-e: Unique Neighborhoods.** Promote and protect unique neighborhoods and mixed use areas throughout Fresno that respect and support various ethnic, cultural and historic enclaves; provide a range of housing options, including furthering affordable housing opportunities; and convey a unique character and lifestyle attractive to Fresnoans.

Support unique areas through more specific planning processes that directly engage community members in creative and innovative design efforts.

**Objective UF-12:** Locate roughly one-half of future residential development in infill areas – defined as being within the City on December 31, 2012 – including the Downtown core area and surrounding neighborhoods, mixed-use centers and transit-oriented development along major BRT corridors, and other non-corridor infill areas, and vacant land.

**Policy UF-12-a:** BRT Corridors. Design land uses and integrate development site plans along BRT corridors, with transit-oriented development that supports transit ridership and convenient pedestrian access to bus stops and BRT station stops.

**Policy UF-12-b:** Activity Centers. Mixed-use designated areas along BRT and/or transit corridors are appropriate for more intensive concentrations of urban uses. Typical uses could include commercial areas; employment centers; schools; compact residential development; religious institutions; parks; and other gathering points where residents may interact, work, and obtain goods and services in the same place.

**Policy UF-12-d:** Appropriate Mixed-Use. Facilitate the development of vertical and horizontal mixed-uses to blend residential, commercial, and public land uses on one site or adjacent sites. Ensure land use compatibility between mixed-use districts in Activity Centers and the surrounding residential neighborhoods.

**Policy UF-12-e:** Access to Activity Centers. Promote adoptions and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.

**Policy UF-12-f:** Mixed-Use in Activity Centers. Update the Development Code to include use regulations and standards to allow for mixed-uses and shared parking facilities, including multi-story and underground parking facilities, within Activity Centers.

**Objective UF-14:** Create an urban form that facilitates multi-modal connectivity.

**Policy UF-14-a:** Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.

**Policy UF-14-b:** Local Street Connectivity. Design local roadways to connect throughout neighborhoods and large private developments with adjacent major streets and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.

**Objective LU-2:** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.



**Policy LU-2-a:** Infill Development and Redevelopment. Promote development of vacant, underdeveloped, and redevelopable land uses within the City Limit where urban services are available considering the establishment and implementation of supportive regulations and programs.

**Policy LU-2-b:** Infill Development for Affordable Housing. Consider a priority infill incentive program for residential infill development of existing vacant lots and underutilized sites within the City as a strategy to help to meet the affordable housing needs of the community.

**Policy LU-3-c:** Zoning for High Density on Major BRT Corridors. Consider the adoption of supportive zoning regulations for compact development along BRT corridors leading to the Downtown Core that will not diminish the long-term growth and development potential for Downtown.

**Policy LU-5-f:** High Density Residential Uses. Promote high-density residential uses to support Activity Centers and BRT Corridors, affordable housing and walkable access to transit stops.

**Policy LU-6-d:** Neighborhood and Community Commercial Center Design. Plan for neighborhood mixed use and community commercial uses to implement the Urban Form concepts of the General Plan, promote the stability and identity of neighborhood and community shopping areas, and allow efficient access without compromising the operational effectiveness of the street system.

- Neighborhoods will be anchored by community commercial centers with a mix of uses that meet the area's needs and create a sense of place.
- Community commercial centers will be located within Activity Centers.

**Policy LU-6-f:** Auto-Oriented Commercial Uses. Direct highway-oriented and auto-serving commercial uses to locations that are compatible with the Urban Form policies of the General Plan. Ensure adequate buffering measures for adjacent residential uses noise, glare, odors, and dust.

**Policy LU-8-b:** Access to Public Facilities. Ensure that major public facilities and institutions have adequate multi-modal access and can be easily reached by public transit.

#### RESOURCE CONSERVATION AND RESILIENCY ELEMENT

**Objective RC-4:** In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with State and federal air quality standards for criteria pollutants.

**Policy RC-4-a:** Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile

sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.

**Policy RC-4-b:** Conditions of Approval. Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.

**Policy RC-4-c:** Evaluate Impacts with Models. Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.

**Policy RC-4-d:** Forward Information. Forward information regarding proposed General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals that require air quality evaluation, and amendments to development regulations to the SJVAPCD for their review of potential air quality and health impacts.

**Policy RC-4-e:** Support Employer-Based Efforts. Support and promote employer implementation of staggered work hours and employee incentives to use carpools, public transit and other measures to reduce vehicular use and traffic congestion.

**Policy RC-4-f:** Municipal Operations and Fleet Actions. Continue to control and reduce air pollution emissions from vehicles owned by the City operations and municipal operations and facilities by undertaking the following:

- Expand the use of alternative fuel, electric, and hybrid vehicles in City fleets.
- Create preventive maintenance schedules that will ensure efficient engine operation.
- Include air conditioning recycling and charging stations in the City vehicle maintenance facilities, to reduce freon gases being released into the atmosphere and electrostatic filtering systems in City maintenance shops, when feasible or when required by health regulations.
- Use satellite corporation yards for decentralized storage and vehicle maintenance.
- Convert City-owned emergency backup generators to natural gas fuels whenever possible, and
- Create an advanced energy storage system.

**Policy RC-4-g:** FAX Actions. Continue efforts to improve Fresno Area Express (FAX) bus transit system technical performance, reduce emission levels, streamline system operations, and implement BRT where supportive land uses are proposed by Figure LU-1: Land Use Diagram.

**Policy RC-4-h:** Airport Actions. Support Airport efforts to develop and maintain programs and policies to support City, State and Federal efforts to achieve and maintain air quality standards.

**Policy RC-4-j:** All Departments. Continue to develop and implement in all City departments, operational policies to reduce air pollution.

**Policy RC-4-k:** Electric Charging. Develop standards to facilitate electric charging infrastructure in both new and existing public and private buildings, in order to accommodate these vehicles as the technology becomes widespread.

**Policy RC-8-j:** Alternative Fuel Network. Support the development of a network of integrated charging and alternate fuel station for both public and private vehicles, and if feasible, open up municipal stations to the public as part of network development.

#### HEALTHY COMMUNITIES ELEMENT

**Objective HC-3:** Create healthy, safe, and affordable housing.

**Policy HC-3-d:** Green Standards for Affordable Housing. Provide appropriate incentives for affordable housing providers, agencies, non-profit and market rate developers to use LEED and CalGreen Tier 1 or Tier 2 standards or third party equivalents.

**Policy HC-3-f:** New Drive-Through Facilities. Include in the Development Code design review to reduce vehicle emissions resulting from queued idling vehicles at drive-through facilities in proximity to residential neighborhoods.

#### MOBILITY AND TRANSPORTATION ELEMENT

**Objective MT-1:** Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

**Policy MT-1-f:** Match Travel Demand with Transportation Facilities. Designate the types and intensities of land uses at locations such that related travel demands can be accommodated by a variety of viable transportation modes and support Complete Neighborhoods while avoiding the rerouting of excessive or incompatible traffic through local residential streets.

**Policy MT-1-g:** Complete Streets Concept Implementation. Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals.

**Policy MT-1-m:** Standards for Planned Bus Rapid Transit Corridors and Activity Centers. Independent of the Traffic Impact Zones identified in MT-2-I and Figure MT-4, strive to maintain the following vehicle LOS standards on major roadway segments and intersections along Bus Rapid Transit Corridors and in Activity Centers:

- LOS E or better at all times, including peak travel times, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.

- Accept LOS F conditions in Activity Centers and Bus Rapid Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project. In accepting LOS F conditions, the City Traffic Engineer may request limited analyses of operational issues at locations near Activity Centers and along Bus Rapid Transit Corridors, such as queuing or left-turn movements.
- Give priority to maintaining pedestrian service first, followed by transit service and then by vehicle LOS, where conflicts between objectives for service capacity between different transportation modes occur.
- Identify pedestrian-priority and transit-priority streets where these modes would have priority in order to apply a multi-modal priority system, as part of the General Plan implementation.

**Policy MT-2-b:** Reduce Vehicle Miles Traveled and Trips. Partner with major employers and other responsible agencies, such the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.

**Policy MT-2-c:** Reduce VMT through Infill Development. Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportations corridors in order to reduce citywide vehicle miles travelled (VMT).

**Policy MT-2-g:** Transportation Demand Management and Transportation System Management. Pursue implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.

**Objective MT-4:** Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.

**Policy MT-4-b:** Bikeway Improvements. Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.

**Policy MT-4-d:** Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers.

**Policy MT-5-a:** Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes.

**Policy MT-5-b:** Sidewalk Requirements. Assure adequate access for pedestrians and people with disabilities in new residential developments per adopted City policies, consistent with the California Building Code and the Americans with Disabilities Act.

**Policy MT-8-c:** New Development Facilitating Transit. Continue to review development proposals in transportation corridors to ensure they are designed to facilitate transit. Coordinate all projects that have residential or employment densities suitable for transit services, so they are located along existing or planned transit corridors or that otherwise have the potential for transit orientation to FAX, and consider FAX's comments in decision-making.

### City of Fresno GHG Reduction Plan

The City of Fresno adopted its first GHG Reduction Plan (GHG Plan) in December 2014. The GHG Plan established a target of reducing per capita GHG emissions in the city by 21.7 percent below 2020 business-as-usual (BAU) levels by 2020 and includes GHG reduction measures designed to achieve the reduction target. The GHG Plan is considered a "Qualified Plan," according to CEQA Guidelines §15183.5.2.

It should be noted that, since adoption of the GHG Plan, two significant regulations/decisions have been established. First, on September 28, 2016, Governor Brown signed Senate Bill (SB) 32 into law that sets a Statewide goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. Additionally, on November 30, 2015, the California Supreme Court published its decision on the Newhall Ranch Specific Plan invalidating the Environmental Impact Report (EIR) for a variety of reasons, including the use of 29 percent below business-as-usual (BAU) as a threshold to determine significance of GHG emissions under CEQA without any supporting evidence.

The City of Fresno recently released an updated version of the GHG Plan (the GHG Plan Update) for public comment along with the City's Recirculated Draft General Plan Program (PEIR), to ensure conformity with the mandates of California Supreme Court in the Newhall Ranch case and the State of California's latest GHG regulations. The final version of the GHG Plan Update was adopted on September 30, 2021.

The GHG Plan Update re-evaluates the City's GHG reduction targets and existing reduction strategies from the 2014 GHG Plan. New goals and supporting measures are proposed to reflect and ensure compliance with changes in the local and State policies and regulations such as SB 32 and California's 2017 Climate Change Scoping Plan. The City's GHG inventory, based on the most recent data available for the year 2016 is evaluated and the future growth in emissions for the BAU and adjusted BAU (ABAU) scenarios (the ABAU scenario takes into account the State policies) for the years 2020, 2030, and 2035 are projected. The 2020 and 2030 forecast years in the GHG Plan Update are

## 3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

consistent with the goals identified in Assembly Bill (AB) 32 and SB 32, which identify Statewide GHG reduction targets by 2020 and 2030. The 2035 forecast year correspond to the City's General Plan horizon year and will allow the City to develop long-term strategies to continue GHG reductions.

The GHG inventory for the City of Fresno in the updated GHG Plan is summarized in Table 3.7-1. Table 3.7-2 provides the City's Adjusted Business-as-Usual (ABAU) Emissions forecast, and Table 3.7-3 provides the State-Aligned GHG Emissions Reduction Targets by Year.

**TABLE 3.7-1: CITY OF FRESNO GREENHOUSE GAS EMISSIONS INVENTORY FOR 2016 AND BUSINESS-AS-USUAL (BAU) PROJECTIONS**

EMISSIONS SECTOR	2016	2020	2030	2035
Transportation	1,520,052	1,594,888	1,798,498	1,909,852
Commercial Energy	524,838	557,142	627,373	657,379
Residential Energy	479,371	514,053	579,546	603,951
Fugitive Emissions	270,130	288,573	335,316	357,008
Solid Waste	119,167	127,303	147,923	157,493
Industrial Energy	10,055	10,506	11,528	12,035
Agriculture Energy	20	20	20	20
<b>Total</b>	<b>2,923,633</b>	<b>3,092,486</b>	<b>3,500,204</b>	<b>3,697,738</b>

NOTE: TOTALS MAY NOT ADD UP DUE TO ROUNDING.

SOURCE: LSA ASSOCIATES, 2021

**TABLE 3.7-2: CITY OF FRESNO ADJUSTED BUSINESS-AS-USUAL (ABAU) GREENHOUSE GAS EMISSIONS**

EMISSIONS SECTOR	2016	2020	2030	2035
Transportation	1,520,052	1,170,329	1,131,034	1,072,955
Commercial Energy	524,838	355,121	290,950	255,226
Residential Energy	479,371	324,760	190,210	124,904
Fugitive Emissions	270,130	144,287	167,658	178,504
Solid Waste	119,167	127,303	147,923	157,493
Industrial Energy	10,055	10,506	11,528	12,035
Agriculture Energy	20	20	20	20
<b>Total</b>	<b>2,923,633</b>	<b>2,132,326</b>	<b>1,939,325</b>	<b>1,801,137</b>

NOTE: TOTALS MAY NOT ADD UP DUE TO ROUNDING.

SOURCE: LSA ASSOCIATES, 2021

**TABLE 3.7-3: CITY OF FRESNO STATE-ALIGNED GHG EMISSION REDUCTION TARGETS BY YEAR**

EMISSIONS SECTOR	2016	2020	2030	2035
BAU Emissions (MT CO <sub>2</sub> e)	2,923,633	3,092,486	3,500,204	3,697,738
Adjusted BAU Emissions (MT CO <sub>2</sub> e)	2,923,633	2,132,326	1,939,325	1,801,137
State-Aligned Target (Percent change from 1990)	-	0	-40	-50
State-Aligned Target (Percent change from 2010)	-	-15	-49	-58
State-Aligned Emissions Goal (MT CO <sub>2</sub> e)	-	3,183,348	1,910,009	1,591,674
Reductions from Adjusted BAU needed to meet the State-Aligned Target (MT CO <sub>2</sub> e)	-	Target Met	29,316	209,463

NOTE: TOTALS MAY NOT ADD UP DUE TO ROUNDING.

SOURCE: LSA ASSOCIATES, 2021

### 3.7.3 IMPACTS AND MITIGATION MEASURES

#### GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Specific Plan would do any of the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan).

The City of Fresno developed its first GHG Plan in 2014. More recently, the City of Fresno released an updated version of the GHG Plan (the GHG Plan Update) for public comment along with the City's Recirculated Draft General Plan EIR. The GHG Plan Update was adopted on September 30, 2021. This document will ensure conformity with the mandates of California Supreme Court in the Newhall Ranch case and the State of California's latest GHG regulations. The GHG Plan Update re-evaluates the City's GHG reduction targets and existing reduction strategies from the 2014 GHG Plan. The City's GHG inventory, based on the most recent data available for the year 2016 is evaluated and the future growth in emissions for the BAU and adjusted BAU (ABAU) scenarios (the ABAU scenario takes into account the State policies) for the years 2020, 2030, and 2035 are projected. The 2020 and 2030 forecast years are consistent with the goals identified in Assembly Bill (AB) 32 and SB 32, which identify Statewide GHG reduction targets by 2020 and 2030. The 2035 forecast year corresponds to the City's General Plan horizon year and will allow the City to develop long-term strategies to continue GHG reductions. Therefore, the proposed project is evaluated in comparison with the existing GHG Plan as well as with the forthcoming GHG Plan Update (where applicable).

#### THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the Specific Plan would do the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to determine whether or not the proposed Specific Plan would result in a significant impact on energy use, this EIR includes an analysis of proposed Specific Plan energy use, as provided under *Impacts and Mitigation Measures* below.

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## IMPACTS AND MITIGATION MEASURES

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### **Impact 3.7-1: Specific Plan implementation could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant with Mitigation)**

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO<sub>2</sub> and other GHG pollutants, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), from mobile sources and utility usage.

The short-term construction-related and long-term operational GHG emissions associated with future buildout of the Plan Area allowed under the proposed Specific Plan were estimated using the California Emission Estimator Model (CalEEMod)<sup>TM</sup> (v.2016.3.2). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO<sub>2</sub> equivalent units of measure (i.e., MT CO<sub>2</sub>e), based on the global warming potential of the individual pollutants.

#### SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated unmitigated GHG emissions associated with construction of the proposed project are summarized in Table 3.7-4. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on the anticipated buildout year, the proposed project is assumed to commence construction in 2021 and finish in 2035. It should be noted that this schedule is an approximation and may change over time. A regularized construction schedule was utilized for modelling purposes for the sake of simplicity.



**TABLE 3.7-4: CONSTRUCTION GHG EMISSIONS (UNMITIGATED AVERAGE MT CO<sub>2</sub>E/YEAR)**

YEAR	BIO- CO <sub>2</sub>	NON-BIO- CO <sub>2</sub>	TOTAL CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> E
2020	0	101,058	101,058	9	0	101,272
2021	0	143,582	143,582	12	0	144,053
2022	0	150,529	150,529	12	0	150,819
2023	0	145,922	145,922	8	0	146,126
2024	0	143,930	143,930	8	0	144,133
2025	0	140,375	140,375	8	0	140,576
2026	0	138,019	138,019	8	0	138,218
2027	0	135,633	135,633	8	0	135,829
2028	0	133,051	133,051	8	0	133,243
2029	0	131,733	131,733	8	0	131,922
2030	0	130,187	130,187	7	0	130,371
2031	0	128,822	128,822	7	0	129,003
2032	0	128,168	128,168	7	0	128,348
2033	0	126,226	126,226	7	0	126,401
2034	0	125,418	125,418	7	0	125,591
2035	0	8,077	8,077	0	0	8,080

SOURCES: CAL EEMOD (V.2016.3.2)

## OPERATIONAL GHG EMISSIONS

Estimated GHG emissions associated with the proposed project is summarized in Table 3.7-5, below.

**TABLE 3.7-5: OPERATIONAL GHG EMISSIONS (UNMITIGATED METRIC TONS/YEAR)**

CATEGORY	BIO-CO <sub>2</sub>	NBIO-CO <sub>2</sub>	TOTAL CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> E
Area	0	53,549	53,549	2	1	53,877
Energy	0	365,420	365,420	14	4	367,057
Mobile	0	1,536,405	1,536,405	112	0	1,539,212
Waste	23,325	0	23,325	1,378	0	57,787
Water	2,846	20,087	22,933	293	7	32,377
<b>Total</b>	<b>26,171</b>	<b>1,975,461</b>	<b>2,001,632</b>	<b>1,799</b>	<b>12</b>	<b>2,050,310</b>

SOURCES: CAL EEMOD (V.2016.3.2)

The significance thresholds for GHG emissions should be related to compliance with AB 32 and SB 32, and the City of Fresno, as lead agency, has chosen to evaluate the project's conformity with the City's GHG Reduction Plan Update to determine consistency with this CEQA impact. The rationale for using this threshold is outlined in the previous subsection, entitled "Thresholds of Significance".

As stated under the previous subsection, entitled "Thresholds of Significance", the GHG Plan is considered a "Qualified Plan," according to CEQA Guidelines §15183.5.2. The GHG Plan Update is also considered a "Qualified Plan," according to CEQA Guidelines §15183.5.2. Project consistency with the GHG Plan Update ensures conformity with the mandates of California Supreme Court in the Newhall Ranch case and the State of California's latest GHG regulations.

The GHG Plan Update re-evaluates the City's GHG reduction targets and existing reduction strategies from the 2014 GHG Plan. New goals and supporting measures are included to reflect and ensure compliance with changes in the local and State policies and regulations such as SB 32 and California's 2017 Climate Change Scoping Plan. The City's GHG inventory, based on the most recent data available for the year 2016 is evaluated and the future growth in emissions for the BAU and adjusted BAU (ABAU) scenarios (the ABAU scenario takes into account the State policies) for the years 2020,

2030, and 2035 are projected. The 2020 and 2030 forecast years are consistent with the goals identified in Assembly Bill (AB) 32 and SB 32, which identify Statewide GHG reduction targets by 2020 and 2030. The 2035 forecast year correspond to the City's General Plan horizon year and will allow the City to develop long-term strategies to continue GHG reductions.

This GHG Plan Update provides a description of General Plan policies that support a reduction in GHGs from all sources within the City's ability to control or influence. These strategies enhance the effectiveness of State strategies by ensuring that the city is developed in ways that minimize emissions. In order to reach the long-term reduction targets, the City would also need to implement local reduction measures. These measures encourage Vehicle Miles Traveled (VMT) reductions through mixed use and infill development, transportation demand management, development and penetration of electric vehicles (EVs), energy efficiency enhancement and conservation, water conservation, and increased waste diversion and recycling strategies. Public education and outreach would play a crucial role in educating stakeholders about the importance of implementing these measures.

Analysis of GHG emissions and potential climate change impacts for new development is required under CEQA. The GHG Plan Update provides strategies and guidelines for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. A GHG Reduction Plan Consistency Checklist (Checklist) is presented to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

Finally, the GHG Plan Update in itself is not enough to meet the reduction goals without a commitment to implementation and recurring monitoring. The GHG Plan Update identifies the process for implementing and monitoring the GHG reduction strategies. Through successful implementation of this GHG Plan Update, the City will demonstrate the potential economic, social, and environmental benefits of reducing GHG emissions and providing environmental stewardship within the community.

### CONCLUSION

Short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change. Additionally, the implementation of the mitigation measures presented in *Section 3.2: Air Quality* of this EIR would further reduce the overall annual GHG emissions associated with the proposed project. Lastly, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The project would be consistent with the current version of the City GHG Reduction Plan, which is considered a "Qualified Plan," according to CEQA Guidelines §15183.5, thereby allowing for streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. Moreover, the project would be required to be consistent with the adopted version of the GHG Plan Update, including with

its Project Consistency Checklist, as described by Mitigation Measure 3.7-1, below. The GHG Plan Update would also be considered a “Qualified Plan,” according to CEQA Guidelines §15183.5.

Therefore, with implementation of Mitigation Measure 3.7-1, the proposed project would not generate GHG emissions, directly and indirectly, that would have a significant impact on the environment. The mitigation measure below would reduce this impact to ***less than significant***.

#### MITIGATION MEASURE(S)

***Mitigation Measure 3.7-1:*** Prior to the City’s approval of the project (i.e. the Specific Plan) as well as individual development projects within the Specific Plan Area, the Director of the City Planning and Development Department, or designee, shall confirm that the Specific Plan and each individual development project is consistent with the 2021 GHG Reduction Plan Update, and shall implement all measures deemed applicable to the Specific Plan and each individual development project through the GHG Reduction Plan Update-Project Consistency Checklist (Appendix B of the GHG Reduction Plan Update).

#### **Impact 3.7-2: Specific Plan implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant)**

The CEQA Guidelines requires consideration of the potentially significant 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]). According to the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed project would be considered “wasteful, inefficient, and unnecessary” if it were to violate State and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The proposed project is a large-scale Specific Plan, and incorporates residential, commercial, public/institutional, and open space uses. The amount of energy used by the proposed project during operation would directly correlate with the number, size, and type of project buildings, the energy efficiency of associated building equipment and appliances, and outdoor lighting, and energy use associated with other on-site buildings and activities. Other project energy uses include fuel used by vehicle trips generated during project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by project maintenance activities during project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed project, for the unmitigated and mitigated scenarios, as provided by

applicable modelling software (i.e. CalEEMod v2016.3.2 and the CARB EMFAC2017). Additional assumptions and calculations are provided within **Appendix B** of this EIR.

### ELECTRICITY AND NATURAL GAS

Electricity and natural gas used by the proposed project would be used primarily to generate energy for on-site buildings, lighting, and water pumping, treatment, and conveyance. As shown in the following tables, “Energy” is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the “Energy” category in buildout year 2035 is 367,057 MT CO<sub>2</sub>e. The following discussion includes a more detailed breakdown of energy consumption in terms of natural gas and electricity consumption. The proposed project would consider effective ways to encourage alternative energy use throughout the Specific Plan Area, as described by mitigation measure provided in *Section 3.2: Air Quality* of this EIR.

**Natural Gas:** Unmitigated natural gas energy consumption for Year 2035 is estimated to be 1,904,254,144 kBTU (as provided by the CalEEMod results). See **Appendix B** of this EIR for further detail.

**Electricity:** Unmitigated electricity energy consumption for Year 2035 is estimated to be 907,952,145 kWh (as provided by the CalEEMod results). See **Appendix B** of this EIR for further detail.

### ON-ROAD VEHICLES (OPERATION)

The proposed project would generate vehicle trips during its operational phase. A description of project operational on-road mobile energy usage is provided below.

According to the VMT Analysis prepared for the proposed project (Kittelson & Associates, 2020), and as described in more detail in *Section 3.14: Transportation and Circulation* of this EIR, the project would generate approximately 991,667 ADT. In order to calculate operational on-road vehicle energy usage and emissions, De Novo Planning Group used fleet mix data from the CalEEMod (v2016.3.2) output for the proposed project, Year 2035 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2017, weighted average MPG factors for gasoline and diesel were derived. Therefore, upon full buildout, the proposed project would generate operational vehicle trips that would use a total of approximately 75,063,072 gallons of gasoline and 25,808,784 gallons of diesel per day, or 27,398,021,200 gallons of gasoline and 9,420,206,008 gallons of diesel per year.

### ON-ROAD VEHICLES (CONSTRUCTION)

The proposed project would also generate on-road vehicle trips during project construction (from construction workers and vendors travelling to and from the Plan Area). De Novo Planning Group estimated the vehicle fuel consumed during these trips based the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2035 gasoline and diesel MPG factors provided by EMFAC2017 (year 2035 factors were used to represent the buildout year). For the sake of simplicity, it was assumed that all construction worker

light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel). Table 3.7-6 describes gasoline and diesel fuel consumed during each construction phase (in aggregate).

As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed project would occur during the building construction phase. There is no feasible mitigation available that would reduce on-road mobile vehicle GHG emissions generated by the project construction activities (requiring the use of electric construction vehicles was deemed infeasible, given price and availability concerns). The Plan Area is relatively flat, so no hauling was assumed for grading. Additionally, hauling for demolition activities were assumed to be minimal. See **Appendix B** of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

**TABLE 3.7-6: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE**

CONSTRUCTION PHASE	# OF DAYS	TOTAL DAILY WORKER TRIPS <sup>(A)</sup>	TOTAL DAILY VENDOR TRIPS <sup>(A)</sup>	TOTAL HAULER WORKER TRIPS <sup>(A)</sup>	TOTAL GALLONS OF GASOLINE FUEL <sup>(B)</sup>	TOTAL GALLONS OF DIESEL FUEL <sup>(B)</sup>
Demolition	20	15	0	0	89	123,433
Site Preparation	65	18	0	0	455	0
Grading	65	20	0	0	505	0
Underground Utilities	65	30	0	0	525	0
Paving	85	6	0	0	495	0
Building Construction	3,833	65,164	24,601	0	4,853,381	6,397,974
Architectural Coating	3,656	13,033	0	0	925,867	0
<b>Total</b>	<b>7,789</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>5,781,317</b>	<b>6,521,407</b>

NOTE: <sup>(A)</sup> PROVIDED BY CALEEMOD OUTPUT. <sup>(B)</sup> SEE APPENDIX B OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD (v.2016.3.2); EMFAC2017.

#### OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the proposed project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO<sub>2</sub> emissions expected to be generated by the proposed project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed project would use a total of approximately 31,752 gallons of diesel fuel for off-road construction vehicles. Detailed calculations are provided in **Appendix B** of this EIR.

#### OTHER

The proposed project could also use other sources of energy not identified here. Examples of other energy sources include alternative and/or renewable energy (such as solar PV) and/or on-site

stationary sources (such as on-site diesel generators) for electricity generation. However, these sources of energy are not planned at this time.

#### CONCLUSION

The proposed project would use energy resources for the operation of project buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel) generated by the proposed project, and from off-road construction activities associated with the proposed project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved more than a 33% mix of renewable energy resources by 2020, and is required to achieve a 60% mix of renewable energy resources by 2030. Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards (“part 6”), would be applicable to the proposed project. These regulations would require the proposed project buildings to achieve a high level of energy efficiency. For example, part 6 of the latest Title 24 building energy efficiency standards would require improvements for attics, walls, water heating, and lighting, as compared with the previous version of these standards. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

Furthermore, as described previously, the implementation of the mitigation measures provided in *Section 3.2: Air Quality* of this Draft EIR would reduce project energy usage (including from electricity, natural gas, and on-road vehicle gasoline and diesel sources). Overall, the incorporation of mitigation measures would ensure that the proposed project would avoid and reduce inefficient, wasteful, and unnecessary consumption of energy. The proposed project would comply with all existing energy standards, including those established by the City of Fresno, the Air District (i.e. SJVAPCD) and the State of California, and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the threshold as described by the *CEQA Guidelines*. This is a ***less than significant*** impact.

**Impact 3.7-3: Specific Plan implementation would not generate a cumulative impact on climate change from increased project-related greenhouse gas emissions. (Less than Significant and Less than Cumulatively Considerable)**

As the California Supreme Court has emphasized, all CEQA analyses of the environmental effects of GHG emissions are inherently cumulative in character. “[B]ecause of the global scale of climate change, any one project's contribution is unlikely to be significant by itself. With respect to climate change, an individual project's emissions will most likely not have any appreciable impact on the global problem by itself, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the project's incremental addition of greenhouse gases is ‘cumulatively considerable’ in light of the global problem, and thus significant.” (*Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 219, quoting (Crockett, *Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World* (July 2011) 4 Golden Gate U. Env'tl. L.J. 203, 207–208.) Thus, the analysis below considers the entire planet as a backdrop while focusing on whether the proposed project's incremental contribution to worldwide GHG emissions is cumulatively considerable.

In California, there has been extensive legislation passed with the goal of reducing GHG emissions. The legislative goals are as follows: 1) 1990 levels by 2020 and 2) 40% below 1990 levels by 2030. An additional goal -- 80% below the 1990 levels by the year 2050 -- was set by Governor Schwarzenegger through Executive Order S-03-05. An even more ambitious goal of achieving carbon neutrality “as soon as possible, and no later than 2045,” was set by Governor Brown through Executive Order B-55-18. To achieve these legislative and executive goals, the CARB has developed regional GHG emission reduction targets for the automobile and light truck sectors (the largest single source of GHG emissions) for 2020 and 2040. The regional GHG emission reduction targets for each region in California were established by the CARB.

As described in Impact 3.7-2, implementation of the Specific Plan is consistent with the current version of the City GHG Reduction Plan, which is considered a “Qualified Plan,” according to CEQA Guidelines §15183.5. Additionally, as required by Mitigation Measure 3.7-1, the City will be required to demonstrate that Specific Plan is consistent with the 2021 GHG Plan Update, thereby allowing for streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. Therefore, the proposed project would not generate GHG emissions, directly and indirectly, that would have a significant impact on the environment. Moreover, the Specific Plan incorporates goals and policies that emphasize compact, walkable communities, and where incorporated into the design of the proposed project, would help minimize GHG emissions generated by the proposed project. Further, the proposed project would be required to implement mitigation measures that are intended to reduce GHG emissions to the maximum extent feasible. The State of California continues to implement measures that are intended to reduce emissions on a State-wide scale (i.e. vehicle fuel efficiency standards in fleets, low carbon fuels, etc.) that are consistent with AB 32 and SB 32. These types of statewide measures will benefit the proposed project (and city as a whole) in the long-term

as they come into effect; however, the City does not have the jurisdiction to create far-reaching (i.e. statewide) measures to reduce GHG emissions. On a project-by-project case, the City of Fresno evaluates a project and the potential to impose project-specific mitigation, which has been done through this GHG analysis. For these reasons, implementation of the Specific Plan would have a ***less than significant*** and less than ***cumulatively considerable contribution*** impact to GHGs.