

4.2 ENERGY

This section evaluates energy impacts that would result from implementing the proposed Amendment.

4.2.1 EXISTING CONDITIONS

The existing conditions included in Section 4.6, *Energy*, of the approved Plan PEIR are consistent with this evaluation and have not materially changed since the preparation of the approved Plan PEIR.

4.2.2 REGULATORY SETTING

The regulatory setting in Section 4.6 of the approved Plan PEIR included relevant federal, State, regional, and local regulations. The regulatory setting included in Section 4.6 of the approved Plan PEIR is consistent with this evaluation and has not materially changed since the preparation of the approved Plan PEIR, except for the following updates.

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Fuel Economy Standards

The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (EPA) set the Corporate Average Fuel Economy (CAFE) standards to improve the average fuel economy of and reduce greenhouse gas (GHG) emissions generated by cars and light duty trucks. During the previous administration, NHTSA and EPA had amended the fuel efficiency standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). NHTSA and EPA had also issued a regulation revoking California's Clean Air Act waiver, which had allowed the State to set its own emissions standards, asserting that the waiver was preempted by federal law (SAFE Rule Part One, 84 *Federal Registers* 51310, September 27 2019). On December 21, 2021, the NHTSA published its CAFE Preemption rule, which finalizes its repeal of the SAFE Vehicles Rule Part One. NHTSA's 2021 rule thus reopens pathways for State and local fuel economy laws (NHTSA 2021).

SAFE Rule Part Two was finalized on March 31, 2020, and went into effect on June 29, 2020. The SAFE Rule Part Two updates the national fuel economy standards for light duty vehicles from 54 miles per gallon to 40 miles per gallon in future years. Following preparation and approval of the approved Plan PEIR, EPA rescinded SAFE Rule Part One on March 9, 2022, and reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and zero-emission vehicle (ZEV) sales mandate. With the same action, EPA also withdrew the SAFE Rule 1 interpretation of the CAA that would prohibit other states from adopting the California GHG emission standards. As a result, other states may now choose to adopt and enforce California's GHG emission standards in lieu of federal standards, consistent with Section 177 of the Clean Air Act.

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

State Agency GHG Reduction Plans and Strategies

California's 2022 Climate Change Scoping Plan

Pursuant to AB 1279, the California Air Resources Board (CARB) updated the 2017 Scoping Plan to address implementation of GHG reduction strategies to meet the 2045 reduction target. The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) was approved in December 2022. The Scoping Plan Scenario achieves the AB 1279 target of 85 percent below 1990 levels by 2045 and identifies a need to accelerate the 2030 target to 48 percent below 1990 levels. The plan builds upon GHG reduction measures of the previous scoping plans and includes additional measures to capture and store atmospheric carbon through the State's natural and working lands and by using a variety of mechanical approaches. By incorporating GHG emission reduction and carbon capture methods, the 2022 Scoping Plan identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 (CARB 2022a). Appendix D of the 2022 Scoping Plan includes recommendations for local government actions to help the State meet AB 1279's GHG reduction targets.

Legislative GHG Reduction Targets

AB 1279, Health and Safety Code Section 38562.2

On September 16, 2022, AB 1279 codified the State's 2045 GHG emissions target expressed under Executive Order (EO) B-55-18. The bill establishes a State policy for California to achieve net zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045 and to achieve and maintain net negative GHG emissions from then on. It also mandates an 85 percent reduction in statewide anthropogenic (human-made) GHG emissions (from 1990 levels) by 2045. AB 1279 recognizes that meeting these targets requires direct GHG emission reductions and removal of carbon dioxide (CO₂) from the atmosphere, as well as a nearly complete transition from fossil fuels. As such, the bill directs CARB to work with relevant State agencies to ensure scoping plan updates include measures that put California on a trajectory to achieve these targets. It also tasks CARB with implementing strategies that facilitate CO₂ removal solutions and carbon capture, utilization, and storage technologies.

Fuel Economy Standards

Advanced Clean Cars II

In August 2022, CARB members voted to approve the Advanced Clean Cars II proposal, which will dramatically reduce emissions from passenger cars for model years 2026 through 2035. This requires an increasing proportion of new vehicles to be ZEVs, with the goal of 100 percent ZEVs for new vehicles sold by 2035 (CARB 2022b).

Building Efficiency

California Building Energy Efficiency Standards

The energy consumption of new residential and nonresidential buildings in California is regulated by the Building Energy Efficiency Standards (California Energy Code). The California Energy Commission (CEC) updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The 2019 California Energy Code was replaced by the 2022 standards, effective January 1, 2023. The 2022 California Energy Code establishes "electric-ready" requirements for new homes, expands solar photovoltaic (PV) and battery storage requirements, strengthens ventilation standards, and encourages electric heat pumps. The CEC estimates that over the next 30 years, the 2022 standards will reduce 10 million metric tons of CO₂ equivalent emissions (ACE Resources 2022).

California Green Building Standards Code

California has adopted the Green Building Standards Code (CALGreen) (24 California Code of Regulations 11), which identifies aggressive energy efficiency standards for new residential and nonresidential buildings that are continuously updated every few years. The most recent update was the 2022 Building Energy Efficiency Standards, which were adopted in July 2022 and took effect on January 1, 2023. Future standards are expected to result in zero net energy for newly constructed commercial buildings. CALGreen requirements are complementary with the California Energy Code discussed above.

REGIONAL AND LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

There are no new or updated regional or local laws, regulations, plans, or policies that pertain to energy applicable to the proposed Amendment.

4.2.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines provides criteria for determining the significance of a project's environmental impacts in the form of Initial Study checklist questions. This SEIR uses the same significance criteria as in the approved Plan PEIR, which were based on the Appendix G checklist questions for energy. Therefore, implementation of the proposed Amendment would have a significant energy impact if it would:

- EN-1** Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy during project construction or operations.
- EN-2** Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.2.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

- EN-1** **RESULT IN A POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY DURING PROJECT CONSTRUCTION OR OPERATIONS**

ANALYSIS METHODOLOGY

This section discusses the construction and operation impacts related to energy from regional growth and land use change, and planned transportation network improvements outlined in the approved Plan in comparison to the approved Plan as revised by the proposed Amendment.

In the approved Plan PEIR, the determination of whether transportation projects and land use changes would result in wasteful or unnecessary energy consumption was based on whether the approved Plan would result in a decrease in per capita energy consumption. Consistent with Appendix F of the CEQA Guidelines, a per capita analysis was appropriate for the approved Plan, as that analysis would determine whether the energy use under the approved Plan was more efficient relative to the 2016 baseline year. The analysis combined electricity (gigawatt hours [GWh]), natural gas (million therms), on-road vehicle fuel consumption (million gallons), and construction equipment diesel consumption (million gallons) into a common unit of energy usage (trillion British thermal units [BTU]). Energy consumption from all operational sources was quantified using

industry standard emission and conversion factors. A full list of assumptions and energy calculations can be found in Appendix F to the approved Plan PEIR.

For this SEIR, the regional gasoline and diesel consumption associated with the proposed Amendment was calculated. The energy use associated with gasoline and diesel consumption was then calculated and added to the electricity, natural gas, rail, and construction energy that had been calculated for the approved Plan PEIR. Table 4.2-1 summarizes the total and per capita energy use under the proposed Amendment for 2016, 2025, 2035, and 2050. Table 4.2-2 summarizes the change in total and per capita energy use under the proposed Amendment when compared to the approved Plan.

IMPACT ANALYSIS

2025, 2035, and 2050

The proposed Amendment would not change land use or anticipated growth within the region or introduce new transportation network or facility improvements from what was analyzed in the approved Plan PEIR. Because there would be no new construction associated with the proposed Amendment, energy use during construction would remain unchanged from the findings in the approved Plan PEIR.

The proposed Amendment removes the regional road usage charge. As discussed in Section 4.5, *Transportation*, of this SEIR, this modification would result in a slight increase in vehicle miles traveled (VMT) than what was identified in the approved Plan PEIR. As a result of the increased VMT, energy use related to on-road vehicle gasoline and diesel during operations would increase by 4 trillion BTU in 2025, 4 trillion BTU in 2035, and 3 trillion BTU in 2050. However, consistent with the approved Plan PEIR, the proposed Amendment would not result in an increase in overall per capita energy consumption, or otherwise use energy in an inefficient, wasteful, or unnecessary manner, because per capita energy use would still decrease between 2016 and each horizon year (2025, 2035, and 2050).

Conclusion

No New or Substantially More Severe Significant Impacts in Comparison to the Approved Plan PEIR: The approved Plan PEIR identified a less-than-significant impact related to wasteful, inefficient, or unnecessary consumption of energy from implementation of the approved Plan (EN-1) because per capita energy use would decrease from 2016 to all horizon years (2025, 2035, 2050). As discussed above, no new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result due to the proposed Amendment. Therefore, the conclusion for the proposed Amendment during all horizon years (2025, 2035, 2050) would be unchanged from what was identified in the approved Plan PEIR and would remain less than significant.

**Table 4.2-1
Total and per Capita Energy Use Under the Proposed Amendment: 2016 and 2025, 2035, 2050**

Category	2016 (Baseline)		2025		2035		2050	
	Energy Use	Trillion BTU	Energy Use	Trillion BTU	Energy Use	Trillion BTU	Energy Use	Trillion BTU
Regional Growth and Land Use Change	--	123	--	123	--	126	--	129
Electricity (GWh)	18,842	64	17,475	60	18,078	62	18,191	62
Natural Gas (million therms)	585	58	629	63	648	65	671	67
Transportation Network Improvements and Programs	--	172	--	136	--	115	--	112
Vehicles, Gasoline (million gallons)	1,268	152	955	115	777	93	747	90
Vehicles, Diesel (million gallons)	133	18	137	19	139	19	142	20
Rail, Diesel (million gallons)	11	1	17	2	19	3	20	3
Total Construction (million gallons)	20	3	24	3	29	4	34	5
Total Energy Use	--	298	--	262	--	245	--	246
Per Capita Energy Use (metric million BTU/person)	91		75		68		66	
Total Energy Use, Percent Change 2016 to Plan Year	--		-12%		-18%		-17%	
Per Capita Energy Use, Percent Change 2016 to Plan Year	--		-17%		-25%		-27%	

Source: Appendix F of the approved Plan PEIR; Appendix D of this SEIR

Notes:

2016 population = 3,287,280; 2025 population = 3,470,848; 2035 population = 3,620,348; 2050 population = 3,746,073.

Numbers are rounded, and may not add up to the stated totals.

1 GWh = 3,412,141,632.81 BTU; 1 therm = 99,976 BTU; 1 gallon, gasoline = 120,286 BTU; 1 gallon, diesel = 137,381 BTU.

Table 4.2-2
Change in per Capita and Total Energy Under the Proposed Amendment: 2016 and 2025, 2035, 2050

Category	2016 (Baseline)		2025		2035		2050	
	Energy Use	Trillion BTU	Energy Use	Trillion BTU	Energy Use	Trillion BTU	Energy Use	Trillion BTU
Regional Growth and Land Use Change	--	0	--	1	--	0	--	0
Electricity (GWh)		0		0		0		0
Natural Gas (million therms)		-1		0		0		0
Transportation Network Improvements and Programs	--	5	--	4	--	4	--	3
Vehicles, Gasoline (million gallons)		4		3		3		3
Vehicles, Diesel (million gallons)		1		1		1		0
Rail, Diesel (million gallons)		0		0		0		0
Total Construction (million gallons)		0		0		0		0
Total Energy Use	--	6	--	4	--	4	--	3
Per Capita Energy Use (metric million BTU/person)	2		1		1		1	

Source: Appendix F of the approved Plan PEIR; Appendix D of this SEIR

Exacerbation of Climate Change Effects

The proposed Amendment would not exacerbate climate change effects on inefficient energy use. While the proposed Amendment would result in a slightly higher per capita energy use than what was included in the approved Plan due to the removal of the regional road usage charge, it would still achieve an overall decrease in per capita energy use from 2016 to each horizon year (2025, 2035, 2050). The proposed Amendment would not stimulate population and housing growth and therefore would not exacerbate the increased demand for energy caused by climate change.

EN-2 CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY

ANALYSIS METHODOLOGY

This analysis evaluates whether implementation of the proposed Amendment would obstruct State and local renewable energy and energy efficiency plans, regulations, and policies, discussed in Section 4.2.2, *Regulatory Setting*, above and in Section 4.6, *Energy*, of the approved Plan PEIR. The applicable State and local plans that address renewable energy and energy efficiency are the Warren-Alquist Act, Requirements for In-Use Off-Road Diesel-Fueled Fleets, Advanced Clean Cars regulations, the Low Carbon Fuel Standard (LCFS), CALGreen, the California Energy Code, SB 100, local Climate Action Plans (CAPs), the 2022 Scoping Plan, and applicable sections of general plans. The proposed Amendment is required to comply with these State and local plans and regulations, all of which are aimed at increasing energy efficiency and renewable energy development. The discussion below further examines consistency with adopted plans and policies related to energy conservation.

IMPACT ANALYSIS

2025, 2035, 2045, and 2050

The approved Plan PEIR concluded that implementation of the approved Plan's regional growth and land use changes would not conflict with or obstruct State or local plans for increasing energy efficiency and renewable energy, including the California Energy Code, SB 100, local CAPs, and applicable sections of local general plans. The proposed Amendment would not change anticipated growth or land use within the region, and therefore the impact conclusion would remain unchanged from the approved Plan PEIR.

The approved Plan PEIR also concluded that implementation of the approved Plan's transportation network improvements and programs would not conflict with or obstruct State and local plans for increasing energy efficiency, including the Warren-Alquist Act, the Requirements for In-Use Off-Road Diesel-Fueled Fleets, and Advanced Clean Cars regulations. The proposed Amendment would not introduce new transportation network or facility improvements from what was analyzed in the approved Plan PEIR. The proposed Amendment would remove the regional road usage charge, which, as discussed in the impact analysis for EN-1, would increase energy use from on-road gasoline and diesel vehicles during operations.

The Warren-Alquist Act established a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy. As explained in the impact analysis for EN-1, the proposed Amendment would not result in wasteful, inefficient, or unnecessary use of energy and therefore would be consistent with the Warren-Alquist Act policies. In addition, off-road equipment with diesel engines of 25 horsepower or larger are regulated by CARB for purposes of emissions reductions under the Requirements for In-Use Off-Road Diesel-Fueled Fleets. These regulations require operators to limit idling during operation and to upgrade older equipment with modern

engines, which additionally provides benefits for the reduction of fuel consumption. On-road vehicle fuel consumption would be propelled by compliance with the Advanced Clean Cars regulations, which would increasingly limit the use of nonrenewable fuel sources by requiring vehicle manufacturers to produce an increasing number of ZEVs.

Implementation of the proposed Amendment would also not conflict with or obstruct State or local plans for increasing renewable energy, including the LCFS and local general plans and CAPs. The LCFS is designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduces petroleum dependency and encourages the use of cleaner low-carbon transportation fuels (e.g., hydrogen, electricity, biofuels). In addition, City and County policies determined in their general plans and CAPs to improve the region's electric vehicle (EV) infrastructure, which would continue to apply with implementation of the approved Plan and would remain unchanged with the proposed Amendment.

Conclusion

No New or Substantially More Severe Significant Impacts in Comparison to the Approved Plan PEIR: The approved Plan PEIR identified a less-than-significant impact related to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency (EN-2). As discussed above, no new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result due to the proposed Amendment. Therefore, the conclusion for the proposed Amendment during all horizon years (2025, 2035, 2045, and 2050) would be unchanged from what was identified in the approved Plan PEIR and would remain less than significant.

Exacerbation of Climate Change Effects

Consistent with the analysis and findings of the approved Plan PEIR, the proposed Amendment would not exacerbate climate change effects that would conflict with or obstruct a State or regional plan related to the increased use of renewable energy or energy efficiency.