

2022 Scoping Plan Consistency Analysis

Appendix FEIR-6

2022 Scoping Plan Consistency Analysis

Introduction

The Scoping Plan is a strategy the California Air Resources Board (CARB) develops and updates at least one every five years, as required by Assembly Bill (AB) 32. It lays out the transformations needed to reduce greenhouse gas (GHG) emissions and reach the State's climate targets. CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) in November 2022 and it is the third update to the original plan that was adopted in 2008. The initial Scoping Plan laid out a path to achieve the AB 32 2020 limit of returning to 1990 levels of GHG emissions, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update assessed progress toward achieving the 2020 limit and made the case for addressing short-lived climate pollutants (SLCPs).² The second update, the 2017 Scoping Plan,³ also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016) target of reducing GHGs by at least 40 percent below 1990 levels by 2030.

The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible and cost-effective path to achieve carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan.⁴ The 2030 target is an

_

¹ CARB. 2008. Climate Change Scoping Plan. ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf.

² CARB. 2014. First Update to the Climate Change Scoping Plan. ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

³ CARB. 2017. California's 2017 Climate Change Scoping Plan. ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf.

CARB, California's 2017 Climate Change Scoping Plan, 2017, ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf.

interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the Natural and Working Lands (NWL) sectors as both sources of emissions and carbon sinks.

The 2022 Scoping Plan Update reflects on existing and recent direction in the Governor's Executive Orders and Statutes. Table 1 on page 3 provides a summary of major climate legislation and executive orders issued since the adoption of the 2017 Scoping Plan.

The 2022 Scoping Plan modeled four separate alternatives that take into account technologically feasible and cost-effective methods for reducing GHG as well as health and economic benefits for the State. The Scoping Plan Scenario was selected as the best choice to achieve California's climate and clean air goals while balancing the legislative direction on prioritizing direct emissions reductions, reducing anthropogenic emissions by at least 85 percent by 2045, being technologically feasible, and being cost effective. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet our GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology. The Scoping Plan Scenario is summarized in Table 2 on page 10. It includes references to relevant statutes and Executive Orders, although it is not comprehensive of all existing new authorities for directing or supporting the actions described.

Table 1 Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan

Bill/Executive Order	Summary
AB 1279 (Muratsuchi, Chapter 337, Statutes of 2022) The California Climate Crisis Act	AB 1279 establishes the policy of the State to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO ₂ removal solutions and carbon capture, utilization, and storage (CCUS) technologies.
	This bill is reflected directly in 2022 Scoping Plan Update.
SB 905 (Caballero, Chapter 359, Statutes of 2022) Carbon Capture, Removal,	SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal (CDR) projects and technology.
Utilization, and Storage Program	The bill requires CARB, on or before January 1, 2025, to adopt regulations creating a unified state permitting application for approval of CCUS and CDR projects. The bill also requires the Secretary of the Natural Resources Agency to publish a framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project.
	The 2022 Scoping Plan Update modeling reflects both CCUS and CDR contributions to achieve carbon neutrality.
SB 846 (Dodd, Chapter 239, Statutes of 2022) Diablo Canyon Powerplant: Extension of Operations	SB 846 extends the Diablo Canyon Power Plant's sunset date by up to five additional years for each of its two units and seeks to make the nuclear power plant eligible for federal loans. The bill requires that the California Public Utilities Commission (CPUC) not include and disallow a load-serving entity from including in their adopted resource plan, the energy, capacity, or any attribute from the Diablo Canyon power plant.
	The 2022 Scoping Plan Update explains the emissions impact of this legislation.
SB 1020 (Laird, Chapter 361, Statutes of 2022) Clean Energy, Jobs, and Affordability Act of 2022	SB 1020 adds interim renewable energy and zero carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040. It accelerates the timeline required to have 100 percent renewable energy and zero carbon energy procured to serve State agencies from the original target year of 2045 to 2035. This bill requires each State agency to individually achieve the 100 percent goal by 2035 with specified requirements. This bill requires the CPUC, California Energy Commission (CEC), and CARB, on or before December 1, 2023, and annually thereafter, to issue a joint reliability progress report that reviews system and local reliability. The bill also modifies the requirement for CARB to hold a portion of its Scoping Plan workshops in regions of the State with the most significant exposure to air pollutants by further specifying that this includes communities with minority populations or low-income communities in areas designated as being in extreme federal non-attainment. The 2022 Scoping Plan Update describes the implications of this legislation
	on emissions.

Table 1 (Continued)

Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan

Bill/Executive Order	Summary
SB 1137 (Gonzales, Chapter 365, Statutes of 2022) Oil & Gas Operations: Location Restrictions: Notice of Intention: Health protection zone: Sensitive receptors	SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data. The 2022 Scoping Plan Update describes the implications of this legislation on emissions.
SB 1075 (Skinner, Chapter 363, Statutes of 2022)	SB 1075 requires CARB, by June 1, 2024, to prepare an evaluation that includes: policy recommendations regarding the use of hydrogen, and
Hydrogen: Green Hydrogen: Emissions of Greenhouse Gases	specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; an analysis of curtailed electricity; an estimate of GHG and emission reductions that could be achieved through deployment of green hydrogen through a variety of scenarios; an analysis of the potential for opportunities to integrate hydrogen production and applications with drinking water supply treatment needs; policy recommendations for regulatory and permitting processes associated with transmitting and distributing hydrogen from production sites to end uses; an analysis of the life-cycle GHG emissions from various forms of hydrogen production; and an analysis of air pollution and other environmental impacts from hydrogen distribution and end uses.
	This bill would inform the production of hydrogen at the scale called for in the 2022 Scoping Plan Update.
AB 1757 (Garcia, Chapter 341, Statutes of 2022)	AB 1757 requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other State agencies, and an expert advisory
California Global Warming Solutions Act of 2006: Climate Goal: Natural and Working Lands	committee, to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support State goals to achieve carbon neutrality and foster climate adaptation and resilience.
	This bill also requires CARB to develop standard methods for State agencies to consistently track GHG emissions and reductions, carbon sequestration, and additional benefits from natural and working lands over time. These methods will account for GHG emissions reductions of CO ₂ , methane, and nitrous oxide related to natural and working lands and the potential impacts of climate change on the ability to reduce GHG emissions and sequester carbon from natural and working lands, where feasible.
	This 2022 Scoping Plan Update describes the next steps and implications of this legislation for the natural and working lands sector.

Table 1 (Continued)
Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan

Bill/Executive Order	Summary
SB 1206 (Skinner, Chapter 884, Statutes of 2022) Hydrofluorocarbon gases: sale or distribution	SB 1206 mandates a stepped sales prohibition on newly produced high-global warming potential (GWP) hydrofluorocarbons (HFCs) to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. Additionally, SB 1206 also requires CARB to develop regulations to increase the adoption of very low-, i.e., GWP < 10, and no-GWP technologies in sectors that currently rely on higher-GWP HFCs.
SB 27) (Skinner, Chapter 237, Statutes of 2021) Carbon Sequestration: State Goals: Natural and Working Lands: Registry of Projects	SB 27 requires CNRA, in coordination with other State agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This bill also requires CARB to establish specified CO ₂ removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the state that drive climate action on natural and working lands and are seeking funding. CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected directly in 2022 Scoping Plan Update as CO ₂ removal
SB 596 (Becker, Chapter	targets for 2030 and 2045 in support of carbon neutrality. SB 596 requires CARB, by July 1, 2023, to develop a comprehensive
246, Statutes of 2021) Greenhouse Gases: Cement Sector: Net- zero Emissions Strategy	strategy for the State's cement sector to achieve net-zero-emissions of GHGs associated with cement used within the state as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must:
	Define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions.
	Evaluate the feasibility of the 2035 interim target (40 percent reduction in GHG intensity) by July 1, 2028.
	Coordinate and consult with other state agencies.
	Prioritize actions that leverage state and federal incentives.
	Evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity.
	The 2022 Scoping Plan Update modeling is designed to achieve these outcomes.
Executive Order N-82-20	Governor Newsom signed Executive Order N-82-20 in October 2020 to combat the climate and biodiversity crises by setting a statewide goal to conserve at least 30 percent of California's land and coastal waters by 2030. The Executive Order also instructed the CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the state's carbon neutrality goal and build climate resilience. In addition to setting a statewide conservation goal, the Executive Order directed CARB to update the target for natural and working lands in support of carbon neutrality as part of this Scoping Plan, and to take into consideration the NWL Climate Smart Strategy.
	Executive Order N-82-20 also calls on the CNRA, in consultation with other

Bill/Executive Order	Summary			
	State agencies, to establish the California Biodiversity Collaborative (Collaborative). The Collaborative shall be made up of governmental partners, California Native American tribes, experts, business and community leaders, and other stakeholders from across the state. State agencies will consult the Collaborative on efforts to:			
	 Establish a baseline assessment of California's biodiversity that but upon existing data and can be updated over time. 			
	Analyze and project the impact of climate change and other stressors in California's biodiversity.			
	• Inventory current biodiversity efforts across all sectors and highlight opportunities for additional action to preserve and enhance biodiversity.			
	CNRA also is tasked with advancing efforts to conserve biodiversity through various actions, such as streamlining the state's process to approve and facilitate projects related to environmental restoration and land management. The California Department of Food and Agriculture (CDFA) is directed to advance efforts to conserve biodiversity through measures such as reinvigorating populations of pollinator insects, which restore biodiversity and improve agricultural production.			
	The Natural and Working Lands Climate Smart Strategy informs 2022 Scoping Plan Update.			
Executive Order N-79-20	Governor Newsom signed Executive Order N-79-20 in September 2020 to establish targets for the transportation sector to support the State in its goal to achieve carbon neutrality by 2045. The targets established in this Executive Order are:			
	• 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035.			
	100 percent of medium- and heavy-duty vehicles will be zero-emission by 2045 for all operations where feasible, and by 2035 for drayage trucks.			
	• 100 percent of off-road vehicles and equipment will be zero-emission by 2035 where feasible.			
	The Executive Order also tasked CARB to develop and propose regulations that require increasing volumes of zero- electric passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above.			
	The 2022 Scoping Plan Update modeling reflects achieving these targets.			
Executive Order N-19-19	Governor Newsom signed Executive Order N-19-19 in September 2019 to direct state government to redouble its efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. This Executive Order instructs the Department of Finance to create a Climate Investment Framework that:			
	 Includes a proactive strategy for the state's pension funds that reflects the increased risks to the economy and physical environment due to climate change. 			

Bill/Executive Order	Summary
	 Provides a timeline and criteria to shift investments to companies and industry sectors with greater growth potential based on their focus of reducing carbon emissions and adapting to the impacts of climate change. Aligns with the fiduciary responsibilities of the California Public Employees' Retirement System, California State Teachers' Retirement System, and the University of California Retirement Program.
	Executive Order N-19-19 directs the State Transportation Agency to leverage more than \$5 billion in annual State transportation spending to help reverse the trend of increased fuel consumption and reduce GHG emissions associated with the transportation sector. It also calls on the Department of General Services to leverage its management and ownership of the state's 19 million square feet in managed buildings, 51,000 vehicles, and other physical assets and goods to minimize state government's carbon footprint. Finally, it tasks CARB with accelerating progress toward California's goal of five million Zero Emission Vehicles (ZEV) sales by 2030 by:
	Developing new criteria for clean vehicle incentive programs to encourage manufacturers to produce clean, affordable cars. Provenience and the produce of the produce
	Proposing new strategies to increase demand in the primary and secondary markets for ZEVs.
	 Considering strengthening existing regulations or adopting new ones to achieve the necessary GHG reductions from within the transportation sector.
	The 2022 Scoping Plan Update modeling reflects efforts to accelerate ZEV deployment.
SB 576 (Umberg, Chapter 374, Statutes of 2019) Coastal Resources: Climate Ready Program and Coastal Climate Change Adaptation, Infrastructure and Readiness Program	Sea level rise, combined with storm-driven waves, poses a direct risk to the state's coastal resources, including public and private real property and infrastructure. Rising marine waters threaten sensitive coastal areas, habitats, the survival of threatened and endangered species, beaches, other recreation areas, and urban waterfronts. SB 576 mandates that the Ocean Protection Council develop and implement a coastal climate adaptation, infrastructure, and readiness program to improve the climate change resiliency of California's coastal communities, infrastructure, and habitat. This bill also instructs the State Coastal Conservancy to administer the Climate Ready Program, which addresses the impacts and potential impacts of climate change on resources within the conservancy's jurisdiction.
	The 2022 Scoping Plan Update describes the effects of sea level rise resulting from climate change
AB 65 (Petrie- Norris, Chapter 347, Statutes of 2019)	This bill requires the State Coastal Conservancy, when it allocates any funding appropriated pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, to
Coastal Protection: Climate Adaption: Project Prioritization: Natural Infrastructure: Local General Plans	prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change. The bill requires the conservancy to provide information to the Office of Planning and Research on any projects funded pursuant to the above provision to be considered for inclusion into the clearinghouse for climate adaption information. The bill authorizes the conservancy to provide technical assistance to coastal communities to

Bill/Executive Order	Summary
	better assist them with their projects that use natural infrastructure.
	The 2022 Scoping Plan Update describes the impacts to coastal communities resulting from sea level rise and adaptation strategies using natural infrastructure.
Executive Order B-55-18	Governor Brown signed Executive Order B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Policies and programs undertaken to achieve this goal shall:
	Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities.
	Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water quality, and native plants and animals.
	This Executive Order also calls for CARB to:
	Develop a framework for implementation and accounting that tracks progress toward this goal.
	Ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.
	The 2022 Scoping Plan Update is designed to achieve carbon neutrality no later than 2045 and the modeling includes technology and fuel transitions to achieve that outcome.
SB 100 (De León, Chapter 312, Statutes of 2018) California Renewables Portfolio Standard Program:	Under SB 100, the CPUC, CEC, and CARB shall use programs under existing laws to achieve 100 percent clean electricity. The statute requires these agencies to issue a joint policy report on SB 100 every four years. The first of these reports was issued in 2021.
emissions of greenhouse gases	The 2022 Scoping Plan Update reflects the SB 100 Core Scenario resource mix with a few minor updates.
AB 2127 (Ting, Chapter 365, Statutes of 2018)	This bill requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure, peeded to support the levels of electric vehicle adoption
Electric Vehicle Charging Infrastructure: Assessment	infrastructure needed to support the levels of electric vehicle adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030 and of reducing emissions of GHGs to 40 percent below 1990 levels by 2030. The bill requires the CEC to regularly seek data and input from stakeholders relating to electric vehicle charging infrastructure.
	This bill supports the deployment of ZEVs as modeled in 2022 Scoping Plan Update.
SB 30 (Lara, Chapter 614, Statutes of 2018) Insurance: Climate Change	This bill requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that, among other things, promote investment in natural infrastructure to reduce the risks of climate change related to catastrophic events, create incentives for investment in natural infrastructure to reduce risks to communities, and provide mitigation incentives for private investment in natural lands to lessen

Bill/Executive Order	Summary	
	exposure and reduce climate risks to public safety, property, utilities, and infrastructure. The bill requires the policies recommended to address specified questions.	
	The 2022 Scoping Plan Update describes the potential for catastrophic events resulting from climate change.	
AB 2061 (Frazier, Chapter 580, Statutes of 2018)	Existing state and federal law sets specified limits on the total gross weight imposed on the highway by a vehicle with any group of two or more	
Near-zero-emission and Zero- emission Vehicles	consecutive axles. Under existing federal law, the maximum gross vehicle weight of that vehicle may not exceed 82,000 pounds. AB 2061 authorizes a near-zero- emission vehicle or a zero-emission vehicle to exceed the weight limits on the power unit by up to 2,000 pounds.	
	This bill supports the deployment of cleaner trucks as modeled in this 2022 Scoping Plan Update.	

Table 2
Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors

Sector	Action	Statutes, Executive Orders, Other Direction, Outcome
GHG Emissions	40 percent below 1990 levels	SB 32: Reduce statewide GHG emissions.
Reductions Relative to the SB 32 Target	by 2030	AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
Smart Growth/Vehicle Miles Traveled (VMT)	VMT per capita reduced 25 percent below 2019 levels by 2030, and 30 percent below	SB 375: Reduce demand for fossil transportation fuels and GHGs, and improve air quality.
	2019 levels by 2045	In response to Board direction and EJ Advisory Committee recommendations.
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs)	100 percent of LDV sales are ZEV by 2035	Executive Order N-79-20: Reduce demand for fossil transportation fuels and GHGs, and improve air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
		2035 target aligns with the EJ Advisory Committee recommendation.
Truck ZEVs	100 percent of medium-duty (MDV)/HDV sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report)	Executive Order N-79-20: Reduce demand for fossil transportation fuels and GHGs, and improve air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
Aviation	20 percent of aviation fuel demand is met by electricity	Reduce demand for petroleum aviation fuel and reduce GHGs.
	(batteries) or hydrogen (fuel cells) in 2045.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
	Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	In response to Governor Newsom's July 2022 letter to CARB Chair Liane Randolph
Ocean-going Vessels (OGV)	2020 OGV At-Berth regulation fully implemented, with most	Reduce demand for petroleum fuels and GHGs, and improve air quality.
	OGVs utilizing shore power by 2027.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
	25 percent of OGVs utilize hydrogen fuel cell electric technology by 2045.	
Port Operations	100 percent of cargo handling equipment is zero-emission by 2037.	Executive Order N-79-20:
		Reduce demand for petroleum fuels and GHGs, and improve air quality.
	100 percent of drayage trucks are zero emission by 2035.	AB 197: direct emissions reductions for

Table 2 (Continued) Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors

Sector	Action	Statutes, Executive Orders, Other Direction, Outcome
		sources covered by the AB 32 Inventory
Freight and Passenger Rail	100 percent of passenger and other locomotive sales are ZEV by 2030. 100 percent of line haul	Reduce GHGs and improve air quality. AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
	locomotive sales are ZEV by 2035.	
	Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	
Petroleum Refining	CCS on majority of operations by 2030, beginning in 2028	Reduce GHGs and improve air quality.
	Production reduced in line with petroleum demand.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
Electricity Generation	Sector GHG target of 38 million metric tons of carbon dioxide equivalent (MMTCO ₂ e) in 2030 and 30 MMTCO ₂ e in 2035 Retail sales load coverage 20 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	SB 350 and SB 100: Reduce GHGs and improve air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
		In response to Governor Newsom's July 2022 letter, Board direction, and Environmental Justice (EJ) Advisory Committee recommendation.
New Residential and Commercial Buildings	All electric appliances beginning 2026 (residential)	Reduce demand for fossil gas and GHGs, and improve ambient and indoor air quality.
	and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
		In response to Governor Newsom's July 2022 letter.
Residential Buildings	80 percent of appliance sales are electric by 2030 and 100 percent of appliance sales are electric by 2035. Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.	Reduce demand for fossil gas and GHGs, and improve ambient and indoor air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
		In response to Governor Newsom's July 2022 letter.

Table 2 (Continued) Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors

Sector	Action	Statutes, Executive Orders, Other Direction, Outcome
Existing Commercial Buildings	80 percent of appliance sales are electric by 2030, and 100 percent of appliance sales	Reduce demand for fossil gas and GHGs, and improve ambient and indoor air quality. AB 197: Direct emissions reductions for
	are electric by 2045.	sources covered by the AB 32 Inventory
	Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	In response to Governor Newsom's July 2022 letter.
Food Products	7.5 percent of energy demand electrified directly and/or	Reduce demand for fossil gas and GHGs, and improve air quality.
	indirectly by 2030; 75 percent by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
Construction Equipment	25 percent of energy demand electrified by 2030 and 75 percent electrified by 2045	Reduce demand for fossil energy and GHGs, and improve air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
Chemicals and Allied Products; Pulp and	Electrify 0 percent of boilers by 2030 and 100 percent of	Reduce demand for fossil energy and GHGs, and improve air quality.
Paper	boilers by 2045. Hydrogen for 25 percent of process heat by 2035 and 100 percent by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
	Electrify 100 percent of other energy demand by 2045.	
Stone, Clay, Glass, and Cement	CCS on 40 percent of operations by 2035 and on all facilities by 2045	SB 596: Reduce demand for fossil energy, process emissions, and GHGs, and improve air quality.
	Process emissions reduced through alternative materials and CCS	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
Other Industrial Manufacturing	0 percent energy demand electrified by 2030 and 50 percent by 2045	Reduce demand for fossil energy and GHGs, and improve air quality.
		AB 197: Direct emissions reductions for sources covered by the AB 32 Inventory
Combined Heat and Power	Facilities retire by 2040.	Reduce demand for fossil energy and GHGs, and improve air quality.
		AB 197: direct emissions reductions for sources covered by the AB 32 Inventory

Table 2 (Continued)
Actions for the Scoping Plan Scenario: AB 32 GHG Inventory Sectors

Sector	Action	Statutes, Executive Orders, Other Direction, Outcome
Agriculture Energy Use	25 percent energy demand electrified by 2030 and	Reduce demand for fossil energy and GHGs, and improve air quality.
	75 percent by 2045	AB 197: direct emissions reductions
Low Carbon Fuels for Transportation	25 percent energy demand electrified by 2030 and	Reduce demand for fossil energy and GHGs, and improve air quality.
	75 percent by 2045	AB 197: direct emissions reductions
Low Carbon Fuels for Buildings and Industry	In 2030s biomethane (renewable natural gas)	Reduce demand for fossil energy and GHGs, and improve air quality.
	blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7 percent energy (~20 percent by volume), ramping up between 2030 and 2040	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory
	In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	
Non-combustion Methane Emissions	Increase landfill and dairy digester methane capture.	SB 1383: Reduce short-lived climate pollutants.
	Some alternative manure management deployed for smaller dairies	
	Moderate adoption of enteric strategies by 2030	
	Divert 75 percent of organic waste from landfills by 2025.	
	Oil and gas fugitive methane emissions reduced 50 percent by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand	
High GWP Potential Emissions	Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions	SB 1383: Reduce short-lived climate pollutants.

Achieving the targets described in the 2022 Scoping Plan Update will require continued commitment to and successful implementation of existing policies and programs and identification of new policy tools and technical solutions to go further, faster. California's Legislature and State agencies will continue to collaborate to achieve the State's

climate, clean air, equity, and broader economic and environmental protection goals. It will be necessary to maintain and strengthen this collaborative effort, and to draw upon the assistance of the federal government, regional and local governments, tribes, communities, academic institutions, and the private sector to achieve the State's near-term and longer-term emission reduction goals and a more equitable future for all Californians. The Scoping Plan acknowledges that the path forward is not dependent on one agency, one state, or even one country. However, the State can lead by engaging Californians and demonstrating how action at the state, regional, and local levels of governments, as well as action at community and individual levels, can contribute to addressing the challenge.

Aligning local jurisdiction action with State-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan Update is critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan Update discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements, and play a critical role in facilitating the rollout of ZEV infrastructure. As a result, local government decisions play a critical role in supporting State-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs and regulations such as the City's Green New Deal and Green Building Code. Each of these is discussed further below.

A summary of the GHG emissions reductions and targets set forth under the 2022 Scoping Plan Update is provided in Table 3 on page 15.

Table 3
Estimated Statewide Greenhouse Gas Emissions Reductions in the 2022 Scoping Plan

Emissions Scenario	GHG Emissions (MMTCO₂e)
2019	
2019 State GHG Emissions	404
2030	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030)	260
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030	52 (16.7%) ^a
2045	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)

 $MMTCO_2e = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.$

Source: CARB, Final 2022 Climate Change Scoping Plan, November 2022.

Thresholds

As provided in Section IV.D., Greenhouse Gas Emissions, of the Draft EIR, the City considers whether the Project is consistent with the following plans:

- AB 32's 2008 Scoping Plan and Subsequent Updates
- SCAG's 2020–2045 RTP/SCS consistent with SB 375
- City of Los Angeles' Green New Deal

The 2022 Scoping Plan Update is a subsequent update of AB 32's 2008 Scoping Plan.

Methodology

Appendix D, Local Actions, of the 2022 Scoping Plan Update includes "recommendations intended to build momentum for local government actions that align with the State's climate goals, with a focus on local GHG reduction strategies (commonly

a 312 - 260 = 52 /312 = 16.7%

referred to as climate action planning) and approval of new land use development projects, including through environmental review under the California Environmental Quality Act (CEQA)." (Page 4 of Appendix D of the 2022 Scoping Plan.)

The State encourages local governments to adopt a CEQA-qualified CAP addressing the three priority areas (transportation electrification, VMT reduction, and building decarbonization). However, as not all jurisdictions have sufficient resources (e.g., political capital, staffing, funding) to do so, jurisdictions that wish to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP should also look to the three priority areas when developing local climate plans, measures, policies, and actions. "By prioritizing climate action in these three priority areas, local governments can address the largest sources of GHGs within their jurisdiction." (Page 9 of Appendix D of the 2022 Scoping Plan.)

The State also recognizes in Appendix D, Local Actions, of the Scoping Plan, that each community or local area has distinctive situations and local jurisdictions must balance the need for housing while demonstrating that a project is in alignment with the State's Climate Goals. Jurisdictions should avoid creating targets that are impossible to meet as a basis to determine significance. Ultimately, targets that make it more difficult to achieve statewide goals by prohibiting or complicating projects that are needed to support the State's climate goals, like infill development, low-income housing or solar arrays, is not consistent with the State's goals. The State also recognizes the lead agencies' discretion to develop evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions.

Consistency Analysis

As discussed above, jurisdictions that want to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP should also look to the three priority areas. To assist local jurisdictions, the 2022 Scoping Plan Update presents a non-exhaustive list of impactful GHG reduction strategies that can be implemented by local governments within the three priority areas (transportation electrification, VMT reduction, and building decarbonization).⁵ A detailed assessment of goals, plans, and policies implemented by the City which would support the GHG reduction strategies in the three priority areas is provided below. In addition, further details are provided regarding the

_

Insert reference to Table 1 of Appendix D 2022 Scoping Plan Update, November 2022.

correlation between these reduction strategies and applicable actions included above in Table 2 on page 10.

Transportation Electrification

The priority GHG reduction strategies for local government climate action related to transportation electrification are discussed below and would support the 2022 Scoping Plan action to have 100 percent of all new passenger vehicles to be zero-emission by 2035 (see Table 2).

Convert local government fleets to zero-emission vehicles (ZEV)

CARB approved the Advanced Clean Cars II rule which codifies Executive Order N-79-20 and requires 100 percent of new cars and light trucks sold in California be zero-emission vehicles by 2035. The State has also adopted AB 2127 which requires the CEC to analyze and examine charging needs to support California's electric vehicles (EVs) in 2030. This report would help decision-makers allocate resources to install new EV chargers where they are needed most.

The City's Green New Deal (Sustainable City pLAn 2019) identifies a number of measures to reduce VMT and associated GHG emissions. Such measures that would support the local reduction strategy include converting all City fleet vehicles to zero emission where technically feasible by 2028. Starting in 2021, all vehicle procurement was required to follow a "zero emission first" policy for City fleets. The Green New Deal also establishes a target to increase the percentage of zero emission vehicles to 25 percent by 2025, 80 percent by 2035 and 100 percent by 2050. In order to achieve this goal, the City would build 20 Fast Charging Plazas throughout the City. The City would also install 28,000 publicly available chargers by 2028 to encourage adoption of ZEVs.

The City's goals of converting the municipal fleet to zero emissions and installation of EV chargers throughout the City would be consistent with the Scoping Plan goals of transitioning to EVs. Although this measure mainly applies to City fleets, the Project would not conflict with these goals by installing EV chargers in at least 10 percent of total proposed parking spaces. Installation of additional EV chargers would encourage adoption of EVs.

 Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans) The State has adopted AB 1236 and AB 970 which requires cities to adopt streamline permitting procedures for EV charging stations. As a result, the City has adopted Ordinance No. 186485 which requires most new construction to designate 30 percent of new parking spaces as capable of supporting future electric vehicle supply equipment (EVSE). This would exceed the CALGreen 2022 requirements of 20 percent of new parking spaces as EV capable. The ordinance also requires new construction to install EVSE at 10 percent of total parking spaces. This requirement also exceeds the CALGreen 2022 requirements of installing EVSE for 25 percent of EV capable parking spaces which is approximately five percent of total parking spaces. Also, Ordinance No. 186485 has the potential to streamline EV permitting requirements within the City.

The City's goals of installing EV chargers throughout the City would be consistent with the Scoping Plan goals of transitioning to EVs. In addition, the Project would comply with Ordinance No. 186485 by providing at least 30% of the total parking spaces required by the Los Angeles Municipal Code (LAMC) to be capable of supporting future EVSE and installing EV chargers in at least 10 percent of total LAMC-required parking spaces, which would exceed the CALGreen 2022 requirement.

VMT Reduction

The priority GHG reduction strategies for local government climate action related to VMT reduction are discussed below and would support the 2022 Scoping Plan action to reduce VMT per capita 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045.

- Reduce or eliminate minimum parking standards in new developments
- Implement parking pricing or transportation demand management pricing strategies

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City's General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016.⁶ The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. While the Mobility Plan 2035 mainly relates to transportation, certain components would serve to reduce VMT and mobile source GHG emissions. One component of the Mobility Plan is a GHG emission tracking program to establish compliance with SB 375,

Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, approved by City Planning Commission on June 23, 2016, and adopted by City Council on September 7, 2016.

AB 32 and the regions Sustainable Community Strategy which is the SCAG 2020–2045 RTP/SCS for the Project location.

The Mobility Plan contains measures and programs related to VMT reduction throughout the City. With regard to parking standards, Mobility Plan Program No. PK.13 would reduce parking requirements for developments near transit (within half a mile) while Program No. PK.3 would allow for individualized parking requirements where businesses can identify parking demand and can reduce on-site parking with TDM strategies. These reduction strategies would serve to reduce minimum parking standards in order to reduce vehicle trips.

The Project would not conflict with the 2022 Scoping Plan action to reduce VMT per capita 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045 because the Project would implement a transportation demand management (TDM) plan pursuant to TR-PDF-1 which reduces parking supply to provide less than required by the LAMC. Other measures within the Project's TDM plan include, but are not limited to, allowing employees to cash-out the monthly value of their parking space and providing bike parking to support alternative modes of transportation. Therefore, the Project would be consistent and not conflict with this reduction strategy to reduce VMT vis-à-vis parking standards.

• Implement Complete Streets policies and investments, consistent with general plan circulation element requirements

The Mobility Plan established a "Complete Streets" planning framework which resulted in the City of Los Angeles Complete Streets Design Guide in 2015 consistent with California's Complete Streets Act of 2008. A supplemental update to the Complete Streets Design Guide was adopted in 2020.

The Complete Streets Design Guide provides a number of measures to increase public access to electric shuttles, car sharing and walking. The Design Guide establishes guidelines for establishing on-street parking for car sharing. In 2015, the City established BlueLA which is a car sharing network. Phase I, completed in 2018, consists of more than 100 electric vehicles with 40 designated on-street stations (200 individual charge points). Phase II of the program expands the program to 300 cars and 100 stations by 2024. The program is committed to servicing disadvantaged communities and people of color in Los Angeles to offer an affordable, zero-emission mode of transportation. In addition, under the Green New Deal, the City would install 28,000 publicly available chargers by 2028 and introduce 135 new electric DASH buses.

This reduction strategy mainly applies to City traffic circulation. However, the Project's TDM plan prepared pursuant to TR-PDF-1 would include pedestrian network

improvements to encourage alternative modes of transportation. Therefore, the Project would not conflict with implementation of Complete Streets policies.

- Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
- Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking
- Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood)
- Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements).

These reduction strategies are supported through implementation of SB 375 which requires integration of planning processes for transportation, land-use and housing and generally encourages jobs/housing proximity, promote transit-oriented development (TOD), and encourages high-density residential/commercial development along transit corridors. To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2045 RTP/SCS, also referred to as Connect SoCal. The 2020–2045 RTP/SCS' "Core Vision" prioritizes the maintenance and management of the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. Section IV.D., Greenhouse Gas Emissions, of the Draft EIR provides a consistency analysis with SCAG's 2020–2045 RTP/SCS.

As discussed above, the City has developed the Complete Streets Design Guide which provides a number of reduction strategies to increase public access to electric shuttles, car sharing and walking. BlueLA consists of more than 100 electric vehicles with 40 designated on-street stations (200 individual charge points) with plans to expand the program to 300 cars and 100 stations by 2024. In addition, under the Green New Deal, the City would install 28,000 publicly available chargers by 2028 and introduce 135 new electric DASH buses.

While these reduction strategies mainly apply to traffic circulation infrastructure within the City, the Project would support these reduction strategies because the Project represents an infill development within an existing urbanized area that would concentrate new development consistent with the overall growth pattern encouraged in the 2020–2045 RTP/SCS. The Project's convenient access to public transit and opportunities for walking

and biking would result in a reduction of vehicle trips, VMT, and GHG emissions. Specifically, the Project Site is located in a transit-rich neighborhood serviced by the Los Angeles County Metropolitan Transit Authority (Metro) and Los Angeles Department of Transportation (LADOT) bus lines. In addition, the Project Site's proximity to a variety of commercial uses and services would encourage employees of the Project Site to walk to nearby destinations to meet their shopping needs, thereby reducing VMT and GHG emissions. Therefore, the Project would be consistent with these reduction strategies.

Building Decarbonization

The priority GHG reduction strategies for local government climate action related to electrification are discussed below and would support the 2022 Scoping Plan actions regarding meeting increased demand for electrification without new fossil gas-fire resources and all electric appliances beginning in 2026 (residential) and 2029 (commercial) (see Table 2 on page 10).

Adopt all-electric new construction reach codes for residential and commercial uses

California's transition away from fossil fuel-based energy sources will bring the Project's GHG emissions associated with building energy use down to zero as the electric supply becomes 100 percent carbon free. California has committed to achieving this goal by 2045 through SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 strengthened the State's Renewables Portfolio Standard (RPS) by requiring that 60 percent of all electricity provided to retail users in California come from renewable sources by 2030 and that 100 percent come from carbon-free sources by 2045. The land use sector will benefit from RPS because the electricity used in buildings will be increasingly carbon-free, but implementation does not depend (directly, at least) on how buildings are designed and built.

The City has adopted Ordinance No. 187714 (All-Electric Ordinance) effective April 1, 2023, which does not allow combustion equipment for most new development. Under the All-Electric Ordinance, equipment typically powered by natural gas such as space heating, water heating, cooking appliances and clothes drying would need to be powered by electricity for new construction. Exceptions are made for commercial restaurants, laboratory, and research and development uses. This ordinance is consistent with 2022 Title 24 goals of encouraging all-electric development which requires new residential uses to be electric-ready (wiring installed for all-electric appliances). In future years, the LADWP will be required to increase the amount of renewable energy in the power mix to comply with SB 100 requirements. The combination of the All-Electric Ordinance and increasing availability of renewable energy will serve to reduce GHG emissions from sources traditionally powered by natural gas.

The Project's application for a building permit was submitted, accepted by the Department of Building and Safety, and permit application fees paid prior to the April 1, 2023, deadline included in LAMC Section 99.05.106.14. Therefore the Project is exempt from the ordinance. Although the Project is not subject to the ordinance, it would not interfere with its implementation. Therefore, the Project would not conflict with the City's All-Electric Ordinance.

 Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers)

This reduction strategy would support the 2022 Scoping Plan action regarding electrification of appliances in existing residential buildings (see Table 2 on page 10). The City and Los Angeles Department of Water and Power (LADWP) has established rebate programs to promote use of energy-efficient products and home upgrades. Under the LADWP's Consumer Rebate Program (CRP), residential customers would receive rebates for energy-efficient upgrades such as Cool Roofs, Energy Star Windows, HVAC upgrades, pool pumps and insulation upgrades. Such upgrades would serve to reduce wasteful energy and water usage and associated GHG emissions.

The Project would not involve retrofit of existing buildings and would be not include any new residential construction. As such, while this electricity reducing strategy would not apply to the Project, the Project would support the reduction in GHG emissions as the Project would implement Project Design Feature GHG-PDF-1 which would design HVAC equipment to have low GHG emission rates and incorporate energy saving technologies and appliances. Therefore, the Project would not impede and, therefore, would not conflict with policies to implement energy efficiency retrofits.