

**Proposed**  
State of California  
Air Resources Board

# 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality

## **Resolution 22-21**

**December 15, 2022**

Agenda Item No.: 22-16-1

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, the Legislature enacted the California Global Warming Solutions Act of 2006 (AB 32, Nuñez, Chapter 488, Statutes of 2006; Health and Safety Code section 38500 et seq.), which declares global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California;

Whereas, AB 32 charges CARB with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases (Health and Safety Code section 38510);

Whereas, AB 32 directed CARB to create a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to no greater than 1990 levels by 2020, and maintain and continue reductions in emissions of GHGs beyond 2020;

Whereas, Health and Safety Code section 38561(a) required CARB to prepare and approve a "scoping plan" for achieving the maximum technologically feasible and cost effective GHG emission reductions by 2020;

Whereas, Health and Safety Code section 38652(b) requires CARB, in adopting greenhouse gas regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, to design the regulations in a manner that is equitable and seeks to minimize costs and maximize the total benefits to California; ensure that activities taken to comply with the regulations do not disproportionately impact low-income communities; ensure that activities undertaken pursuant to the regulations complement efforts to achieve and maintain ambient air quality standards and to reduce toxic air contaminant emissions; consider the cost-effectiveness of the regulations; consider overall societal benefits; minimize administrative burden; and minimize leakage;

Whereas, CARB prepared and approved the first AB 32 climate change scoping plan (initial Scoping Plan) in 2008 and reapproved it in 2011;

Whereas, the initial Scoping Plan contains a mix of recommended strategies that combine direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to limit California's GHG emissions to no greater than the 2020 statewide GHG emission limit and initiate the transformations needed to achieve AB 32's long-range climate objectives;

Whereas, Health and Safety Code section 38561(h) requires CARB to update the State's scoping plan for achieving the maximum technologically feasible and cost effective reductions of GHG emissions at least once every five years;

Whereas, CARB prepared and approved the *First Update to the Climate Change Scoping Plan* (2014 Update);

Whereas, the 2014 Update recommended establishing a 2030 mid-term statewide emission reduction target and identified Short-Lived Climate Pollutants (SLCPs) as an important science-based aspect of a comprehensive approach to addressing climate change;

Whereas, in April 2015, Governor Edmund G. Brown, Jr. signed Executive Order B-30-15 that established a greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030;

Whereas, Governor Brown's Executive Order B-30-15 ordered that CARB update the scoping plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent;

Whereas, the Legislature enacted the Clean Energy and Pollution Reduction Act of 2015 (SB 350, De León, Chapter 547, Statutes of 2015), requiring the State to establish GHG reduction planning targets and implement them through Integrated Resource Planning in the electricity sector as a whole and among individual utilities and other electricity providers (collectively known as load serving entities);

Whereas, in Resolution 18-26, the Board resolved that updates to the electricity sector planning target should be considered every five years, in coordination with Scoping Plan updates;

Whereas, SB 350 increased the Renewables Portfolio Standard (RPS) to 50 percent and doubled the energy savings required in electricity and natural gas end uses by 2030;

Whereas, the Legislature enacted Senate Bill 32 (SB 32, Pavley, Chapter 249, Statutes of 2016; Health and Safety Code section 38566), which affirms the importance of addressing climate change by codifying a GHG emissions reductions target of at least 40 percent below 1990 levels by 2030;

Whereas, the Legislature enacted Assembly Bill 197 (AB 197, E. Garcia, Chapter 250, Statutes of 2016), which declares that continuing to reduce greenhouse gas emissions

is critical for protecting all areas of the State, but especially for the State's most disadvantaged communities, as those communities are affected first, and most frequently, by adverse impacts of climate change, including increased frequency of extreme weather events such as drought, heat waves, and flooding;

Whereas, Health and Safety Code section 38562.5 (from AB 197) requires CARB, when adopting rules and regulations to achieve emissions reductions to protect the State's most affected and disadvantaged communities, to consider the social costs of the emissions of GHGs, and prioritize both emission reduction rules and regulations that result in direct emission reductions at large stationary sources of GHG emissions and direct emission reductions from mobile sources; and emission reduction rules and regulations that result in direct emission reductions from sources other than large stationary or mobile sources, while considering cost-effectiveness and minimizing leakage;

Whereas, Health and Safety Code section 38562.7 (from AB 197) directs CARB, in the development of each scoping plan, to identify for each emissions reduction measure:

- The range of projected GHG emissions reductions that result from the measure,
- The range of projected air pollution reductions that result from the measure, and
- The cost-effectiveness, including avoided social costs, of the measure;

Whereas, the Legislature enacted Senate Bill 1383 (SB 1383, Lara, Chapter 395, Statutes of 2016), which requires CARB to develop, adopt, and begin to implement a Short-Lived Climate Pollutant Strategy no later than January 1, 2018, and the Board adopted that Strategy in Resolution 17-9 in March 2017;

Whereas, the Legislature enacted Senate Bill 1386 (SB 1386, Wolk, Chapter 545, Statutes of 2016), which declares it the policy of the State that protection and management of natural and working lands is an important strategy in meeting the State's GHG reduction goals, and requires State agencies to consider protection and management of natural and working lands in establishing policies and grant criteria and in making expenditures;

Whereas, the Legislature enacted Assembly Bill 398 (AB 398, E. Garcia, Chapter 135, Statutes of 2017), which clarifies the use of market-based compliance mechanisms in ensuring that the statewide greenhouse gas emissions are reduced to at least 40 percent below the 1990 level by 2030 and provides direction on program design;

Whereas, AB 398 requires that CARB, no later than January 1, 2018, update the scoping plan to achieve greenhouse gas emission reductions equivalent to at least 40 percent below 1990 levels by 2030;

Whereas, the Legislature enacted Assembly Bill 617 (AB 617, C. Garcia, Chapter 136, Statutes of 2017), which requires CARB, by October 1, 2018, to prepare a statewide strategy to reduce emissions of toxic air contaminants and criteria pollutants in communities affected by a high cumulative exposure burden, and the Board approved the strategy in Resolution 18-33 in September 2018;

Whereas, CARB developed *California's 2017 Climate Change Scoping Plan (2017 Update)* and approved that 2017 Update in Resolution 17-46;

Whereas, the Legislature enacted Senate Bill 100 (SB 100, De León, Chapter 312, Statutes of 2018), which codifies an increase in the RPS to 60 percent by 2030 and establishes a policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of all electricity procured to serve all State agencies by December 31, 2045;

Whereas, Executive Order B-55-18 set a target for statewide carbon neutrality by 2045;

Whereas, Executive Order N-79-20 establishes targets for the transportation sector, in support achievement of carbon neutrality by 2045, that 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035, 100 percent of medium- and heavy-duty vehicles be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks, and 100 percent of off-road vehicles and equipment be zero-emission by 2035 where feasible;

Whereas, Executive Order N-82-20 sets a statewide goal to conserve a least 30 percent of California's land and coastal waters by 2030 and directs CARB to update the target for natural and working lands in support of carbon neutrality as part of the 2022 Scoping Plan Update;

Whereas, the Legislature enacted Senate Bill 27 (SB 27, Skinner, Chapter 237, Statutes of 2021), which requires CARB to establish carbon dioxide removal targets for 2030 and beyond as part of its scoping plan;

Whereas, the Legislature enacted Senate Bill 596 (SB 596, Becker, Chapter 246, Statutes of 2021), which establishes an interim target for the state's cement sector of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035, and requires that CARB develop a comprehensive strategy for the state's cement sector by July 1, 2023, to achieve net-zero emissions of GHGs associated with cement used within the state no later than December 31, 2045;

Whereas, on July 22, 2022, Governor Gavin Newsom sent a letter to the CARB Chair that underscored the urgency to include ambition and action in the final Scoping Plan, and to include additional outcomes in the final Scoping Plan related to electricity generation, buildings, fuels, methane leaks, and carbon dioxide removal and capture;

Whereas, the Legislature enacted Assembly Bill 1279 (AB 1279, Muratsuchi, Chapter 337, Statutes of 2022), which establishes the policy of the State to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative GHG emissions thereafter; to ensure anthropogenic GHG emissions are reduced at least 85 percent below 1990 emission levels by 2045; and directs CARB to work with relevant state agencies to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality; and to identify and implement policies and

strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies;

Whereas, the Legislature enacted Senate Bill 905 (SB 905, Caballero, Chapter 359, Statutes of 2022), which requires that CARB create a Carbon Capture, Removal, Utilization, and Storage (CCUS) Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal projects and technology;

Whereas, the Legislature enacted Senate Bill 1020 (SB 1020, Laird, Chapter 361, Statutes of 2022), which establishes interim targets for renewable and zero-carbon energy retail sales of electricity to California end-use customers of 90 percent in 2035 and 95 percent in 2040, and accelerates the requirement that 100 percent of electricity procured to serve all State agencies come from renewable and zero-carbon resources by 10 years to December 31, 2035;

Whereas, the Legislature enacted Senate Bill 1145 (SB 1145, Laird, Chapter 366, Statutes of 2022), which calls on CARB to create, and maintain on its internet website, a greenhouse gas emissions dashboard that provides updated publicly available information regarding how the state is progressing toward meeting its statewide climate change goals;

Whereas, the Legislature enacted Senate Bill 1137 (SB 1137, Gonzales, Chapter 365, Statutes of 2022), which requires oil and gas production facilities or wells within defined health protection zones to comply with specified health, safety, and environmental requirements including leak detection, and prohibits the development of new oil and gas wells or infrastructure in these defined zones;

Whereas, the Legislature enacted Assembly Bill 1757 (AB 1757, Garcia, Chapter 341, Statutes of 2022), which requires the California Natural Resources Agency, in collaboration with CARB, other state agencies, and an expert advisory committee, by January 1, 2024, to determine a range of targets for natural carbon sequestration and nature-based climate solutions that reduce GHG emissions in 2030, 2038, and 2045;

Whereas, Health and Safety Code section 38561.5(c) (from AB 1757) directs the California Natural Resources Agency and CARB to jointly establish an expert advisory committee that is composed of university researchers, technical assistance providers, practitioners and other experts in the field of climate change and natural and working lands science and management, and Indigenous and environmental justice representatives, to inform and review modeling and analyses for natural and working lands, to advise state agencies on implementation strategies and standardized accounting, and to provide recommendations on addressing barriers to efficient implementation of that section 38561.5;

Whereas, the Legislature enacted Senate Bill 1075 (SB 1075, Skinner, Chapter 363, Statutes of 2022), which requires that CARB prepare an evaluation by June 1, 2024, including an analysis of the life-cycle GHG emissions from various forms of hydrogen production, an analysis of air pollution and other environmental impacts, and policy

recommendations for use of hydrogen in California that promote the reduction of GHGs and short-lived climate pollutants;

Whereas, the Legislature enacted Senate Bill 1206 (SB 1206, Skinner, Chapter 884, Statutes of 2022), which mandates a stepped sales prohibition on newly produced high global warming potential (GWP) hydrofluorocarbons (HFCs) to transition California toward recycled and reclaimed HFCs and directs that CARB develop additional sector-based regulations to increase adoption of very low GWP alternatives;

Whereas, reducing California's GHG emissions to a scientifically recognized level necessary for climate stabilization will require California to keep building on the framework of the initial Scoping Plan, 2014 Update, and 2017 Update by continuing to pursue the maximum technologically feasible and cost-effective actions that will steadily drive down greenhouse gas emissions over the coming decades;

Whereas, the latest science finds that atmospheric concentrations of carbon dioxide have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year, and no later than 2040, the world will exceed 1.5 degrees Celsius warming unless there is drastic action;

Whereas, the latest science finds that atmospheric concentrations of carbon dioxide are dangerously close to reaching 1.5 degrees Celsius warming in the near term, and to avoid climate catastrophe and remain below 1.5 degrees Celsius with limited overshoot of that threshold, global net anthropogenic carbon dioxide emissions need to reach net-zero by 2050, underscoring the urgent need to accelerate GHG emission reductions;

Whereas, in June 2021, CARB organized an interagency virtual three-day public kickoff workshop series to initiate development of the update to the scoping plan to reflect the carbon neutrality target (2022 Scoping Plan Update) and discuss the public process and overall schedule;

Whereas, throughout 2021 and 2022, CARB collaborated with other State agencies and organized over a dozen public workshops, including several co-hosted with other State agencies, and engaged with Tribes, to discuss scenario inputs and assumptions, technical, public health, and economic analysis, and sector specific issues and recommendations;

Whereas, CARB reconvened the Environmental Justice Advisory Committee (EJ Advisory Committee), which met over 30 times between June 2021 and November 2022, and the EJ Advisory Committee has provided formal recommendations on developing the 2022 Scoping Plan Update;

Whereas, members of the EJ Advisory Committee hosted a statewide community engagement workshop and one in the San Joaquin Valley in 2022, and members continued to work with their communities to ground truth their recommendations to inform the development of the 2022 Scoping Plan Update;

Whereas, CARB organized three community listening sessions, hosted by the CARB Chair and Board Members, throughout the State (Bay Area, Central Valley, Southern California) and one virtual listening session in summer 2022 to seek community input on developing the 2022 Scoping Plan Update;

Whereas, CARB held two webinars on tribal land management modeling to help inform the 2022 Scoping Plan Update;

Whereas, CARB organized one virtual tribal listening session, hosted by the CARB Chair, Board Members, and Tribal Liaison in summer 2022 to seek tribal input on developing the 2022 Scoping Plan Update;

Whereas, CARB sent notifications to all tribes requesting notice seeking comment on the environmental documents developed for the 2022 Scoping Plan Update in accordance with the requirements of Assembly Bill 52 (Gatto, Statutes of 2014, Chapter 532);

Whereas, CARB engaged in an outreach campaign and mailed letters to all tribes in California asking for consultation on the 2022 Scoping Plan Update;

Whereas, CARB engaged in government-to-government consultation with eight tribes that requested consultation;

Whereas, in preparing the 2022 Scoping Plan Update, CARB staff collaborated with the Climate Action Team and solicited input and expertise from a range of state agencies to identify and describe the outcomes and actions across the economy and within economic sectors needed for California to achieve carbon neutrality no later than 2045;

Whereas, in preparing the 2022 Scoping Plan Update, CARB staff considered advice and input from the Environmental Justice Advisory Committee, experts in the field of climate change, public stakeholders, and regulated entities;

Whereas, on June 24, 2021, February 24, 2022, March 24, 2022, and June 23 and 24, 2022, CARB staff provided updates on the development of the 2022 Scoping Plan Update to the Board, and the Board provided feedback to CARB staff on development of the 2022 Scoping Plan Update;

Whereas, on May 10, 2022, after considering public comments received, CARB staff prepared, in consultation with State agencies and after considering advice and input from the Environmental Justice Advisory Committee, and circulated for public review the Draft 2022 Scoping Plan Update (Draft Scoping Plan);

Whereas, the Board held joint meetings with the EJ Advisory Committee members on March 10, 2022 and September 1, 2022 to discuss the 2022 Scoping Plan Update, the EJ Advisory Committee recommendations on development of the Scoping Plan, and options for addressing the recommendations;

Whereas, CARB staff coordinated extensively with agencies throughout California government, as well as consulting with stakeholders, academic experts on relevant

topics, representatives and expert analysts associated with affected industries, labor organizations, non-governmental organizations, representatives and expert analysts associated with affected communities, and many other members of the public;

Whereas, after considering public comments received and after considering advice and input from the Environmental Justice Advisory Committee, incorporating direction from Board Members and the Governor, and incorporating Legislative direction, staff released a proposed 2022 Scoping Plan for Achieving Carbon Neutrality (Final Plan) to the public on November 16, 2022;

Whereas, the Final Plan finds that planning on a longer time frame for the new carbon neutrality target means California must accelerate near-term ambition for 2030 in order to be on track to achieve the longer-term AB 1279 target;

Whereas, to assist with planning for climate mitigation and adaptation, the Final Plan includes a unique tool called a Climate Vulnerability Metric to assess community-level economic impacts of a warming climate;

Whereas, the Final Plan frames the outcomes and actions needed in the major economic sectors in the State related to deployment and investments in clean technologies and fuels, and for management of California's natural and working lands, to continue driving down emissions and ensure that the State stays on course to meet its long-term reduction objectives;

Whereas, implementation of the 2022 Scoping Plan Update, including through electricity sector planning processes, is expected to substantially increase the renewable and zero carbon electricity resources and electrical infrastructure available in order to ensure suppliers will meet increased future demand for those resources;

Whereas, the Final Plan finds that all viable tools and an all-of-government approach are needed to reduce emissions to achieve an accelerated 2030 target and AB 1279's long-term objective of reducing California's anthropogenic GHG emissions and achieving net-zero emissions;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, CARB prepared a draft environmental analysis under its certified regulatory program for the proposed Draft 2022 Scoping Plan Update, entitled *Draft Environmental Analysis for the Proposed Draft 2022 Scoping Plan for Achieving Carbon Neutrality* (Draft EA), and circulated it as Appendix B to the Draft 2022 Scoping Plan Update for 45 days from May 10, 2022 through June 24, 2022;



Whereas, on June 23 and continuing to June 24, 2022, the Board held a public hearing on the proposed Draft 2022 Scoping Plan Update and the Draft EA prepared for the proposal;

Whereas, after the end of the Draft EA public review period, CARB identified potential revisions to certain aspects of the Draft 2022 Scoping Plan Update that merited revisions to the project description, and after considering the circumstances of the particular revisions in light of Public Resources Code (PRC) Section 21092.1 and Title 14 California Code of Regulations (CCR) Section 15088.5, prepared a recirculated draft environmental analysis under its certified regulatory program for the proposed 2022 Scoping Plan Update, entitled *Recirculated Draft Environmental Analysis for the Draft 2022 Scoping Plan for Achieving Carbon Neutrality* (Recirculated Draft EA), and circulated it for 45 days from September 9, 2022 through October 24, 2022;

Whereas, the Recirculated Draft EA concluded that implementation of the proposed Draft 2022 Scoping Plan Update has the potential to result in: beneficial impacts to air quality (long-term operational-related) and GHG emissions; less than significant impacts to energy demand, mineral resources, population and housing, public services, and recreation (short-term construction-related); and potentially significant and unavoidable adverse impacts to aesthetics, agriculture and forest resources, air quality (short-term construction-related, long-term operational-related odors), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, recreation (long-term operational-related), transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire;

Whereas, staff reviewed written comments received on the Draft EA and Recirculated Draft EA and prepared written responses to those comments in a document entitled *Response to Comments on the Environmental Analysis Prepared for the 2022 Scoping Plan for Achieving Carbon Neutrality* (Response to EA Comments);

Whereas, on December 12, 2022, staff posted on the CARB webpage the Final EA, which includes minor revisions, and the Response to EA comments;

Whereas, prior to the duly noticed public hearing held on December 15, 2022, staff presented the Final EA and the Response to EA Comments, as released to the public on December 12, 2022, to the Board for consideration; and

Whereas, in consideration of the Final Plan, written comments, and public testimony, the Board finds that:

Implementation of the Final Plan will achieve carbon neutrality by 2045;

Implementation of the Final Plan will reduce GHG emissions from AB 32 GHG Inventory source sectors 48 percent below 1990 levels by 2030, surpassing the statutory minimum reduction target of 40 percent below 1990 levels required by SB 32;

Implementation of the Final Plan will reduce anthropogenic GHG emissions by at least 85 percent below 1990 levels by 2045;

Implementation of the Final Plan will reduce total fossil fuel demand by 86 percent in 2045 and liquid petroleum fuels by 94 percent, relative to 2022 demand, and will achieve Governor Newsom's requested 20 percent clean fuels target for the aviation sector;

Implementation of the Final Plan will reduce GHG emissions from oil and gas extraction by 89 percent and petroleum refining emissions by 85 percent (without CCS) and 94 percent (with CCS) in 2045 from 2022 emission levels, commensurate with the decrease in in-state fuel demand through 2045;

A clean, affordable, and reliable electric grid is critical in supporting decarbonization efforts across sectors, and implementation of the Final Plan will nearly double electricity demand by 2045 and require significant build-out of new renewable and zero-carbon resources, including solar and wind capacity four times that of existing amounts in 2045 and achieving Governor Newsom's goals of 20 gigawatts (GW) of offshore wind and no new fossil gas capacity for reliability;

Implementation of the Final Plan will reduce fossil gas demand from residential and commercial buildings by 91 percent by 2045 and will achieve Governor Newsom's goal of three million climate-ready and climate-friendly buildings by 2030, seven million by 2035, and six million heat pumps deployed by 2030;

The creation of new, expanded, or refined policies, programs, and regulations in every major economic sector in the State will be necessary to support the rapid production and deployment of clean technology and energy, as well as the increased pace and scale of actions on the State's natural and working lands;

California's local and regional governments, tribes, communities, academic institutions, and the private sector are critical partners in meeting the State's GHG emission reduction goals, and strong collaboration and alignment will be necessary to achieve the State's carbon neutrality target and improve its ability to adapt to potential climate change impacts;

Continuing to decrease emissions of short-lived climate pollutants is necessary to slow the near-term rate of global warming and achieve the GHG emission reductions identified in the Final Plan;

The Final Plan prioritizes outcomes and actions that will result in direct GHG reductions at the State's largest stationary sources and mobile sources in a manner consistent with AB 197;

Avoiding GHG emissions from and increasing carbon sequestration in natural and working lands is crucial in the State's long-term climate change strategy;

Achievement of net-zero GHG emissions necessitates use of carbon capture and sequestration (CCS) and carbon dioxide removal technologies (CDR), and given the need to accelerate the development of natural and engineered carbon removal in the State, the Final Plan incorporates Governor Newsom's goal for a 20 million metric ton of carbon dioxide equivalent (MMT $\text{CO}_2\text{e}$ ) carbon removal target in 2030 and 100 MMT $\text{CO}_2\text{e}$  carbon removal target for 2045;

The Final Plan considers protection against emissions leakage; identifies cost-effective and exportable actions to inform regional, national, and international GHG reduction programs; supports federal climate programs; and identifies that successful implementation will depend on a mix of legislative action, regulatory program development, incentives, institutional support, workforce and business development, education and outreach, community engagement, and research and development and deployment;

The Final Plan's ambitious and aggressive approach to decarbonization in every economic sector prioritizes reductions in fossil-based combustion to offer co-benefits, including reductions in other air pollutants that impact community health that will benefit disadvantaged communities, reducing statewide NO $\text{x}$  by over 70 percent by 2045;

The newly developed Climate Vulnerability Metric begins to close the completeness gap on the global social cost of carbon by estimating the cost of climate impacts using the latest science and economic data at the community level;

The authorities and considerations related to the supply and demand of petroleum fuels spans federal, state, and local agencies, and therefore a multi-agency discussion is needed to systematically evaluate and plan for the managed phasedown of oil and gas extraction and petroleum refining in California in an equitable way, considering declining in-state demand and exports of finished fuels; and

Implementation of the Final Plan must address environmental justice and advance equity to address the need for more community-based reductions from programs that target criteria and toxic pollutants to protect the health of residents in disproportionately burdened communities – with AB 617 being a critical part of the State's plan for addressing impacted communities.

Now, therefore, be it resolved that the Board hereby certifies that the Final EA, as released to the public on December 12, 2022, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board whose members reviewed and considered the information therein before taking action to approve the 2022 Scoping Plan for Achieving Carbon Neutrality.

Be it further resolved that in consideration of the Final EA, including the responses to comments on the Draft EA and Recirculated Draft EA, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations set forth in Attachment A to this resolution.

Be it further resolved that the Board hereby directs the Executive Officer to transmit the Notice of Decision to the Secretary of the Natural Resources Agency for posting.

Be it further resolved that the Board hereby approves the 2022 Scoping Plan for Achieving Carbon Neutrality released to the public on November 16, 2022.

Be it further resolved that the Board hereby determines that the Final Plan provides the basis for establishing the revised planning target range for the electricity sector of 30-38 million metric tons of carbon dioxide equivalent (MMTCO<sub>2e</sub>) in 2030 for use in Integrated Resource Plans pursuant to SB 350.

Be it further resolved that the Board hereby determines that expansion of biomass combustion for energy production should not be pursued and opportunities for non-combustion biomass solutions should be prioritized.

Be it further resolved that the Board adopts a carbon stock target for natural and working lands of no more than 4% carbon stock loss by 2045, from 2014 levels, and finds that management to conserve 30 percent of California's natural and working lands and coastal waters by 2030; treat at least 2.3 million acres statewide on an annual basis in forests, shrublands/chaparral, and grasslands; implement climate smart practices for annual and perennial crops on at least 78,000 acres annually, conserving at least 8,000 acres of croplands annually, and increase organic agriculture to 20% of cultivated acres annually by 2045; increase urban forestry investment by 200 percent above historic levels and utilize tree watering that is 30 percent less sensitive to drought; restore 60,000 acres of Delta wetlands; and reduce the rate of sparsely vegetated land conversion to more GHG intensive uses by 50 percent are collectively needed to achieve the carbon stock target by 2045.

Be it further resolved that the Board establishes the carbon dioxide removal targets called for by Health and Safety Code section 39740.2 (SB 27) and Governor Newsom's July 22, 2022 letter of 20 MMTCO<sub>2e</sub> by 2030 and 100 MMTCO<sub>2e</sub> by 2045 as identified in Final Scoping Plan, which incorporate CCUS and carbon dioxide removal from natural and working lands and other engineered forms needed to achieve carbon neutrality.

Be it further resolved that notwithstanding and consistent with Resolution 78-10, the Board hereby delegates the Executive Officer to act on behalf of CARB in the selection and appointment of committee members for the expert advisory committee directed to be established by Health and Safety Code section 38561.5(c) (from AB 1757).

Be it further resolved that the Board hereby directs the Executive Officer to incorporate the Climate Vulnerability Metric (CVM) developed in support of the Final Plan into its work implementing the Final Plan, as well as continue efforts to expand

the CVM to incorporate additional economic climate impacts to improve the identification of disproportionate economic impacts as community-level data becomes available.

Be it further resolved that the Board directs the Executive Officer to coordinate with state agencies to establish and make public metrics across all sectors of the economy to help provide transparency on the state's progress in deploying clean technology at the pace and scale needed to achieve carbon neutrality by 2045 and to meet the requirements of Health and Safety Code section 38560.7 (from SB 1145).

Be it further resolved that the Board directs the Executive Officer to coordinate with local government agencies to ensure alignment of local action to support the state's climate and air quality goals.

Be it further resolved that the Board recognizes the work of the Environmental Justice Advisory Committee in advising the Final Plan and ongoing role in implementing AB32.

Be it therefore resolved, the Board directs the Executive Officer to continue interagency coordination to support research on pesticides and their relationship to greenhouse gases and reducing pesticide use.

Be it further resolved that the Board directs the Executive Officer to work closely with state and local agencies to implement the EJ Advisory Committee recommendations that call for prioritization for residents in low-income communities and communities of color in this transition.

Be it further resolved that the Board directs the Executive Officer to share the EJ Advisory Committee's recommendations with the California Energy Commission, California Public Utilities Commission, and other agencies administering funds to support building decarbonization and to work closely with those agencies as they engage in public processes to further building decarbonization.

Be it further resolved that the Board hereby directs the Executive Officer to design and integrate robust enforcement mechanisms as individual Scoping Plan measures are drafted into regulations and plans.

Resolution 22-21

December 15, 2022

**Identification of Attachments to the Board Resolution**

Attachment A: *Findings and Statement of Overriding Considerations*