

# 2022 Scoping Plan Update: Initial Air Quality & Health Impacts and Economic Analyses Results Workshop



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APRIL 20, 2022

# Workshop Agenda

<b>9:00 am</b>	<b>CARB Overview</b>	<b>CARB</b>
<b>9:15 am</b>	<b>Technology and Fuel Costs Assumptions</b>	<b>E3</b>
<b>9:35 am</b>	<b>Initial AB 32 Sources Economic Analysis Modeling Results</b>	<b>Rhodium Group</b>
10:00 am	Environmental Justice Advisory Committee Member Comments	
10:15 am	Public Comments	
<b>11:15 am</b>	<b>Initial AB 32 Sources Air Quality &amp; Health Impacts Modeling Results</b>	<b>U.C. Irvine</b>
<b>11:45 am</b>	<b>Summary of AB 32 Sources Scenarios</b>	<b>CARB</b>
<b>12:00 pm</b>	<b>LUNCH BREAK (30 minutes)</b>	
12:30 pm	Environmental Justice Advisory Committee Member Comments	
12:45 pm	Public Comments	
<b>1:45 pm</b>	<b>Wildfire Emissions &amp; Health Impacts Analysis Initial NWL Economic Analysis Modeling Results</b>	<b>CARB</b>
2:30 pm	Environmental Justice Advisory Committee Member Comments	
2:45 pm	Public Comments	
3:45 pm	Closing Remarks	

# Today's Workshop Objectives

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- Build upon GHG emissions modeling results presented at March 2022 workshop (<https://ww2.arb.ca.gov/resources/documents/2022-scoping-plan-update-initial-modeling-results-workshop>)
- For AB 32 Sources scenarios, share:
  - PATHWAYS cost assumptions, initial macroeconomic analysis results, and initial air quality and health impacts modeling results
- For Natural & Working Lands scenarios, share:
  - Initial wildfire emissions and health impacts analysis results
  - Initial macroeconomic analysis results
- Hear from stakeholders in preparation for May 2022 Draft Scoping Plan release

# Transparency on Oral Comment Process

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- Dedicated time for EJAC Members after the conclusion of presentation
- During general comment period:
  - CARB staff will periodically announce approximate number of hands raised
  - No ceding of time to others
  - Any EJAC Members should use the dedicated time after presentations to make any comments to ensure they are heard
  - Please do not email us directly to ask that we give you priority
- Goal to post agendas for workshops at least 48 hours in advance

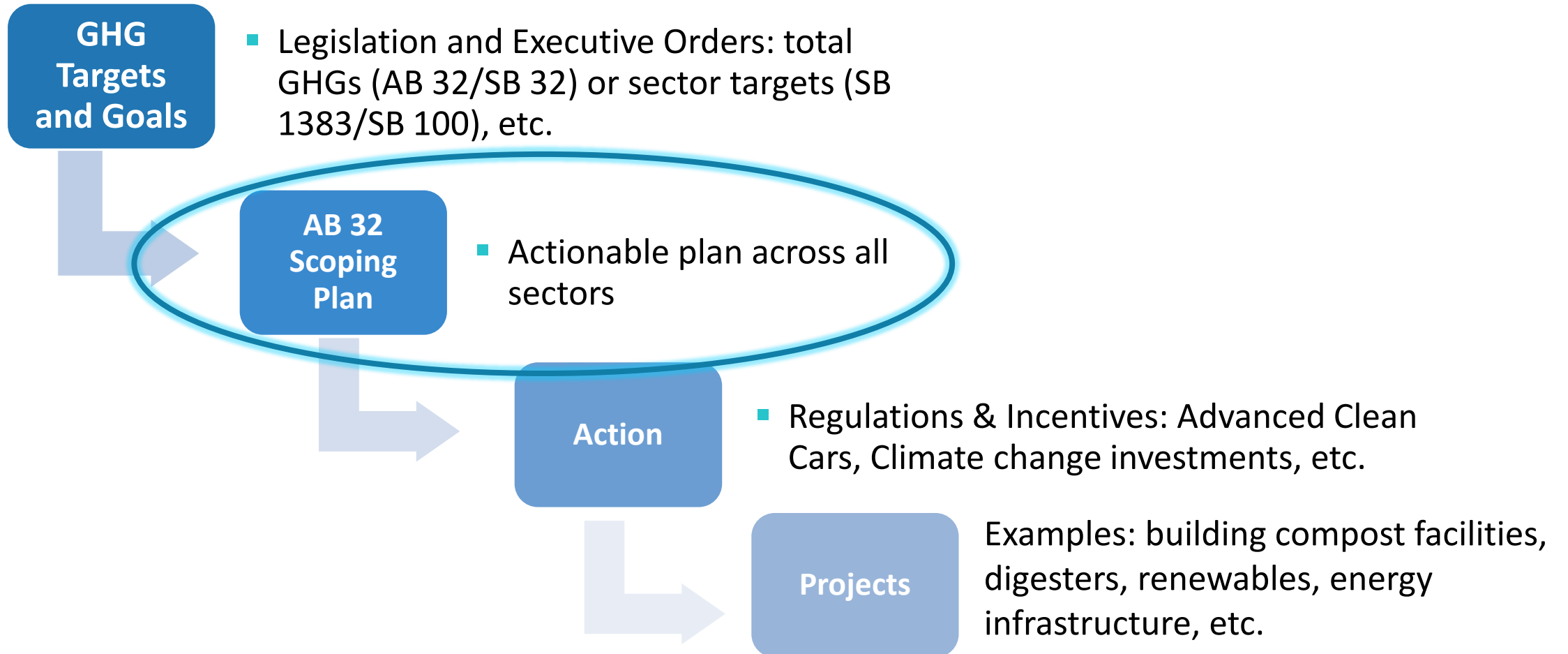
# Public Participation

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- Staff Presentation
- Questions and Feedback
  - Use the “**Raise Hand**” function in the GoToWebinar toolbar, which should be located to the right of your screen as shown by a hand icon
  - When staff call your name, please “**Unmute**” yourself by clicking the red button shown by a microphone icon, and proceed to introduce yourself



# California's Climate Policy Framework



# AB 32 Climate Change Scoping Plan Statutory Requirements

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- Scoping Plan(s) are action plans for CA to meet statewide GHG reduction targets
  - Scoping Plan(s) outline a suite of climate policies to address emissions across all sectors
  - Required to be updated at least every 5 years
  - 2017 SP (most recent) – cost-effective and technologically feasible path to achieve the 2030 target
- Provide direct GHG emissions reductions and air quality benefits
- Minimize emissions “leakage” – increase to non-CA GHG emissions
  - Ensure high-road jobs remain
- Facilitate sub-national and national collaboration
  - Develop exportable programs for partners to adopt
- Support cost-effective and flexible compliance

# What Carbon Neutrality Means

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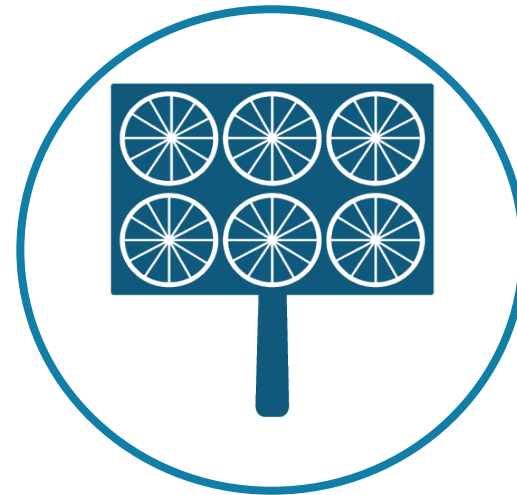
**Continue to reduce  
emissions from  
sources in the AB 32  
GHG Inventory**

**±**



**Emissions and  
sequestration  
from natural and  
working lands**

**-**



**Technological  
Carbon Dioxide  
Removal**

**=**

**Carbon  
Neutral**

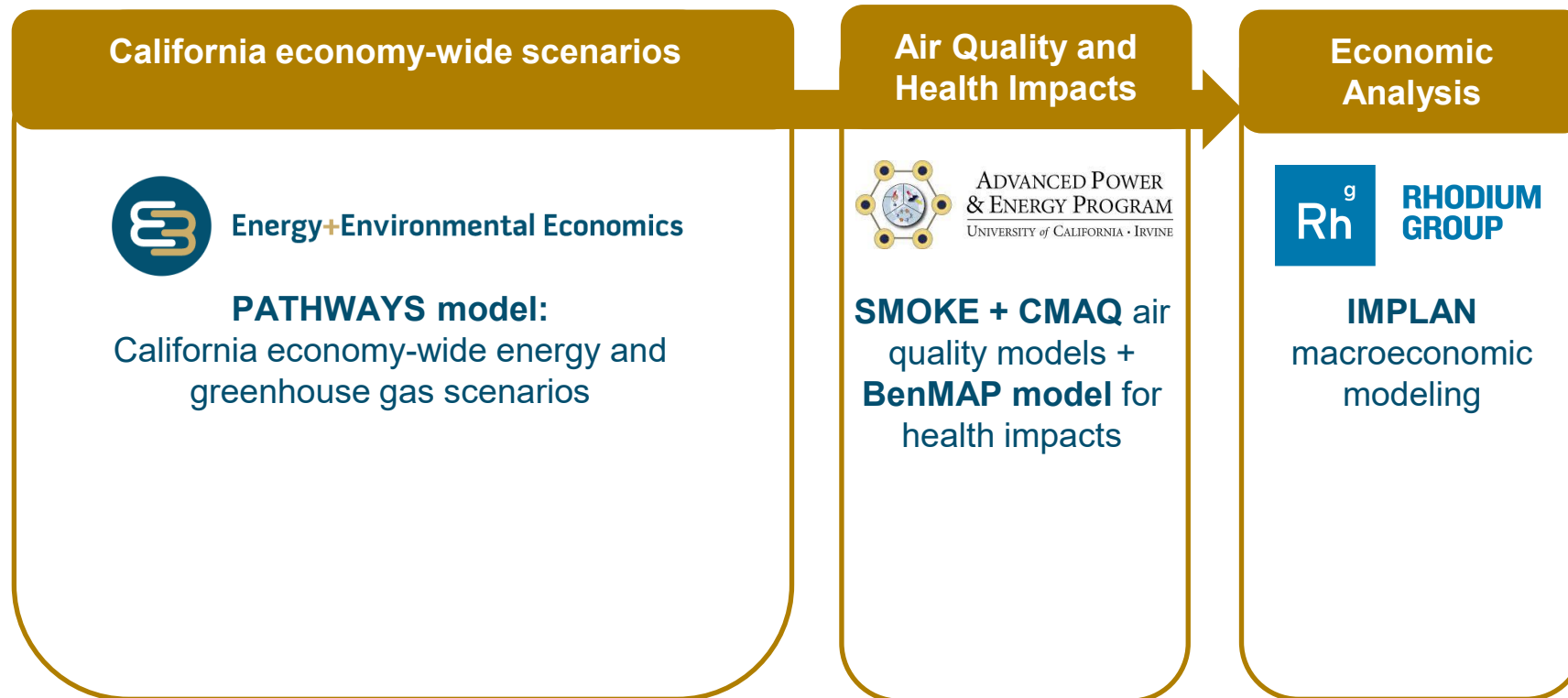


# Analyses for 2022 Scoping Plan Update

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- Cost per ton of policy (AB 197)
- Social cost of carbon (AB 197)
- Estimated air quality benefits (AB 197)
- Public health
- Economic (health, macro, household, jobs)
- Environmental (CEQA)

# Tools for AB 32 Sources Scenario Analyses



Source: E3. California PATHWAYS: A Tool to Examine Long-Term Greenhouse Gas Reduction Scenarios. August 17, 2021.

# Summary of Scenarios

Alternative	Health Benefits 2045 (2021\$)	Cost 2035/2045 (2021\$)	Job Impacts 2035/2045	Description
<b>1: CN by 2035, near complete phase out of combustion</b>	~16 billion	130 billion/59 billion	385,000/190,000	Most health benefit savings Most cost expenditure Most job loss
<b>2: CN by 2035, all tools</b>	~11 billion	106 billion/34 billion	270,000/190,000	Comparable to 3 for health benefit savings Second highest cost expenditure Second highest job loss
<b>3:CN by 2045, broad set of tools, aligns with statutes/EOs</b>	~ 10 billion	18 billion/ 27 billion	80,000/120,000	Comparable to 2 for health benefit savings Lowest cost expenditure Lowest job loss
<b>4: CN by 2045, slower clean tech and energy deployment</b>	~8 billion	23 billion/30 billion	85,000/170,000	Lower health benefit savings than 3 Third highest cost expenditure Third highest job loss

# Scenario Social Cost of Carbon Estimates\*

Alternative	Range of Social Cost of Carbon In 2035 (2021\$)**	Range of Social Cost of Carbon In 2045 (2021\$)**
<b>1: CN by 2035, near complete phase out of combustion</b>	5.9-24.8 billion	4.6-16.3 billion
<b>2: CN by 2035, all tools</b>	3.9-15.4 billion	3.5-11.8 billion
<b>3: CN by 2045, broad set of tools, aligns with statutes/EOs</b>	2.7-11 billion	2.8-9.9 billion
<b>4: CN by 2045, slower clean tech and energy deployment</b>	2.4-9.4 billion	2.2-7.5 billion

\* Values do not capture the full avoided damages. Actual costs of avoided damages are expected to be higher

\*\*Includes SC-CO<sub>2</sub> and SC-CH<sub>4</sub> for emissions reductions in the year specified relative to business-as-usual. Range represents 2.5 to 5% discount rates, using Biden Administration interim values adjusted for inflation.

# Staff Proposed Scoping Plan Scenario

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- Alternative 3: Deploy a broad portfolio of existing and emerging fossil fuel alternatives and align with existing statutes and executive orders
- 2045
  - Allows for longer timeframe for clean technology and energy to scale and costs to come down
  - No before end-of-life retirement of vehicles or appliances
  - Higher uncertainty around a 2035 date for carbon neutrality that relies on successful development and deployment of clean technology and energy, and carbon dioxide removal (permitting, capital costs, consumer adoption)

# Staff Proposed Scoping Plan Scenario, cont.

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- Alternative 3 versus Alternative 4
  - Alternative 3 less costs and job impacts than alternative 4
  - Alternative 3 higher health benefits than alternative 4
  - Alternative 3 achieves 80% reduction below 1990 levels by 2050
  - Alternative 3 aligns with statutes and Executive Orders
- Carbon dioxide removal (CDR) is critical to achieve carbon neutrality across all scenarios
  - Extent of CDR required will depend on successful level of deployment of clean technology and fuels

# Finalizing the Scoping Plan

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- May 2022: Draft Scoping Plan released
- June 2022: Board Meeting on Draft Scoping Plan
- Summer 2022: Refine Draft Scoping Plan
  - Ongoing modeling and stakeholder process
  - Ongoing engagement with the EJ Advisory Committee
- Fall 2022: Release final Scoping Plan
- Late Fall 2022: Board vote on the final Scoping Plan

# Next Steps / Staying Engaged

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- Additional resources

- Workshops, EJ Advisory Committee Meetings, supporting materials, Board Meetings:

[www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan](http://www.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan)