

# 2022 Scoping Plan Update

## Kick-off Workshop



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JUNE 8, 2021

# Introductory Comments

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- Secretary Blumenfeld, California Environmental Protection Agency
- Chair Randolph, California Air Resources Board
- Executive Officer Corey, California Air Resources Board
- Environmental Justice Advisory Committee Member

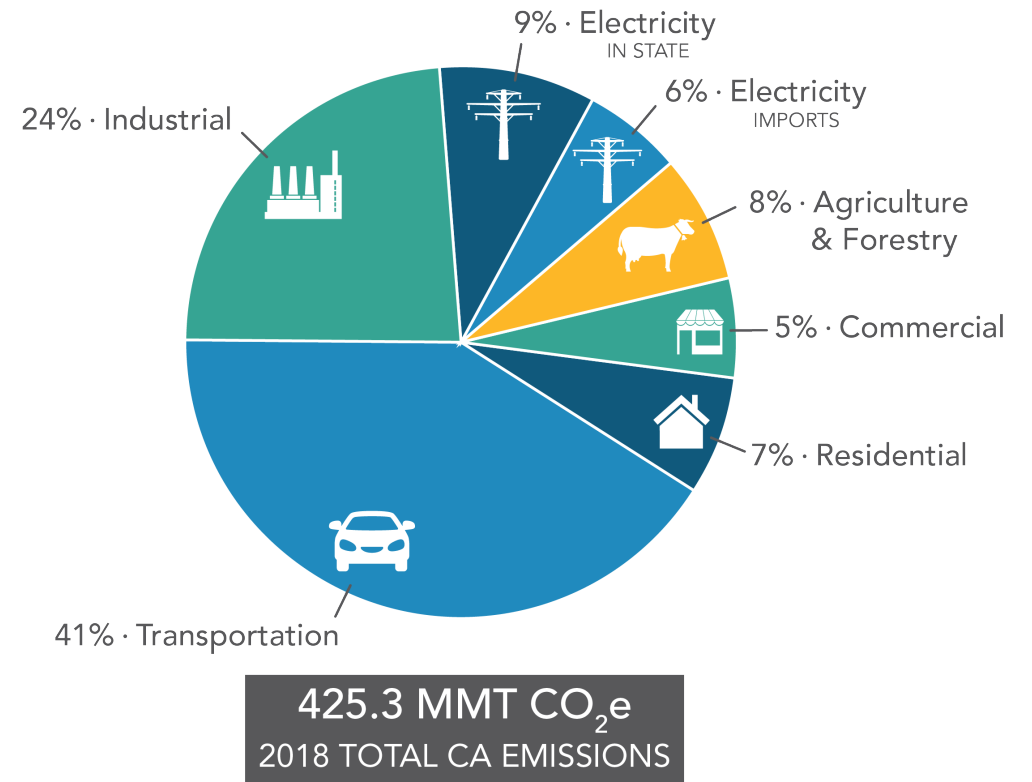
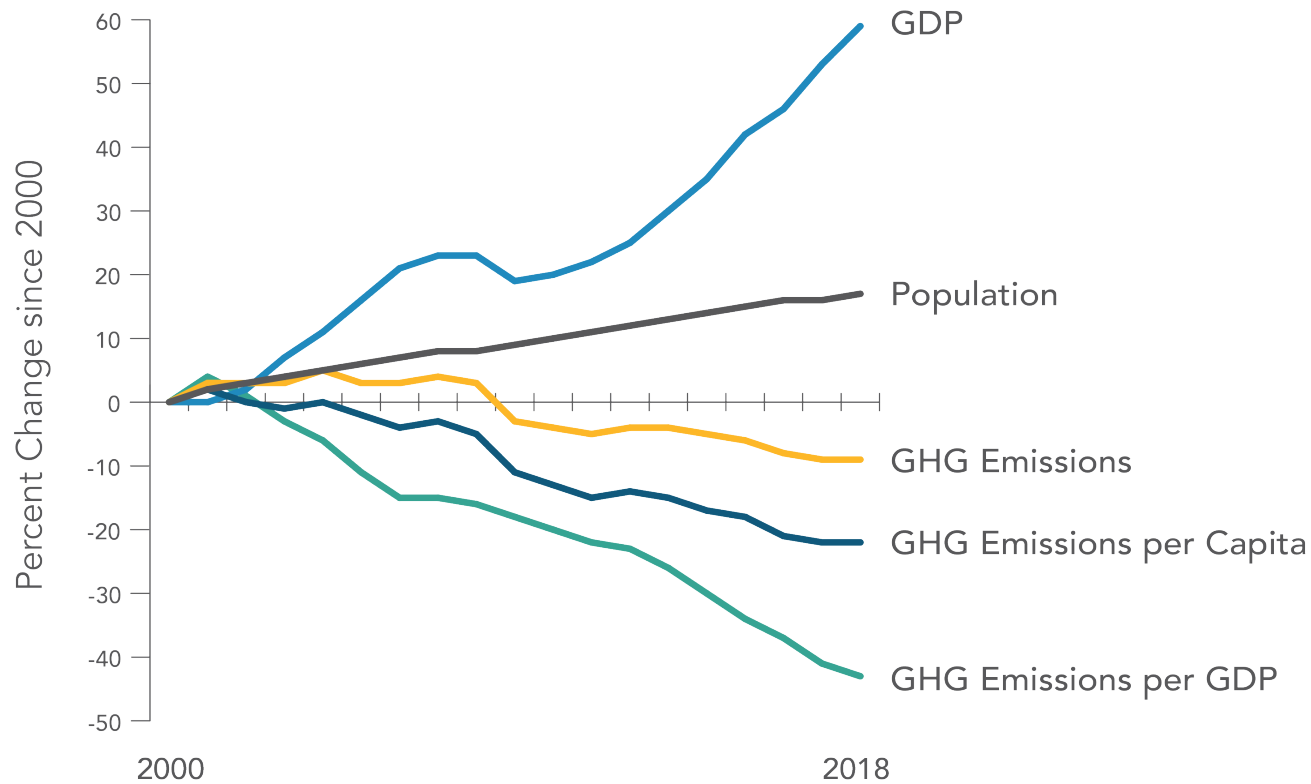
# AB 32 Scoping Plan Process

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# California's Trends



Source: 2020 Edition, California Greenhouse Gas Emission Inventory: 2000-2018

# AB 32 Climate Change Scoping Plan

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- Scoping Plan(s) are action plans to ensure CA meets statewide GHG reduction targets (mandated in AB 32)
  - Scoping Plan(s) rely on 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
- Facilitate sub-national and national collaboration
- Support cost-effective and flexible compliance

# 2017 Scoping Plan Portfolio

*40% below 1990 levels by 2030*

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Double building efficiency



60% renewable power



More clean, renewable fuels



Slash potent "super-pollutants" from dairies, landfills and refrigerants



Cleaner zero or near-zero emission cars, trucks, and buses



Cap emissions from transportation, industry, natural gas, and electricity



Walkable/bikeable communities with transit



Invest in communities to reduce emissions



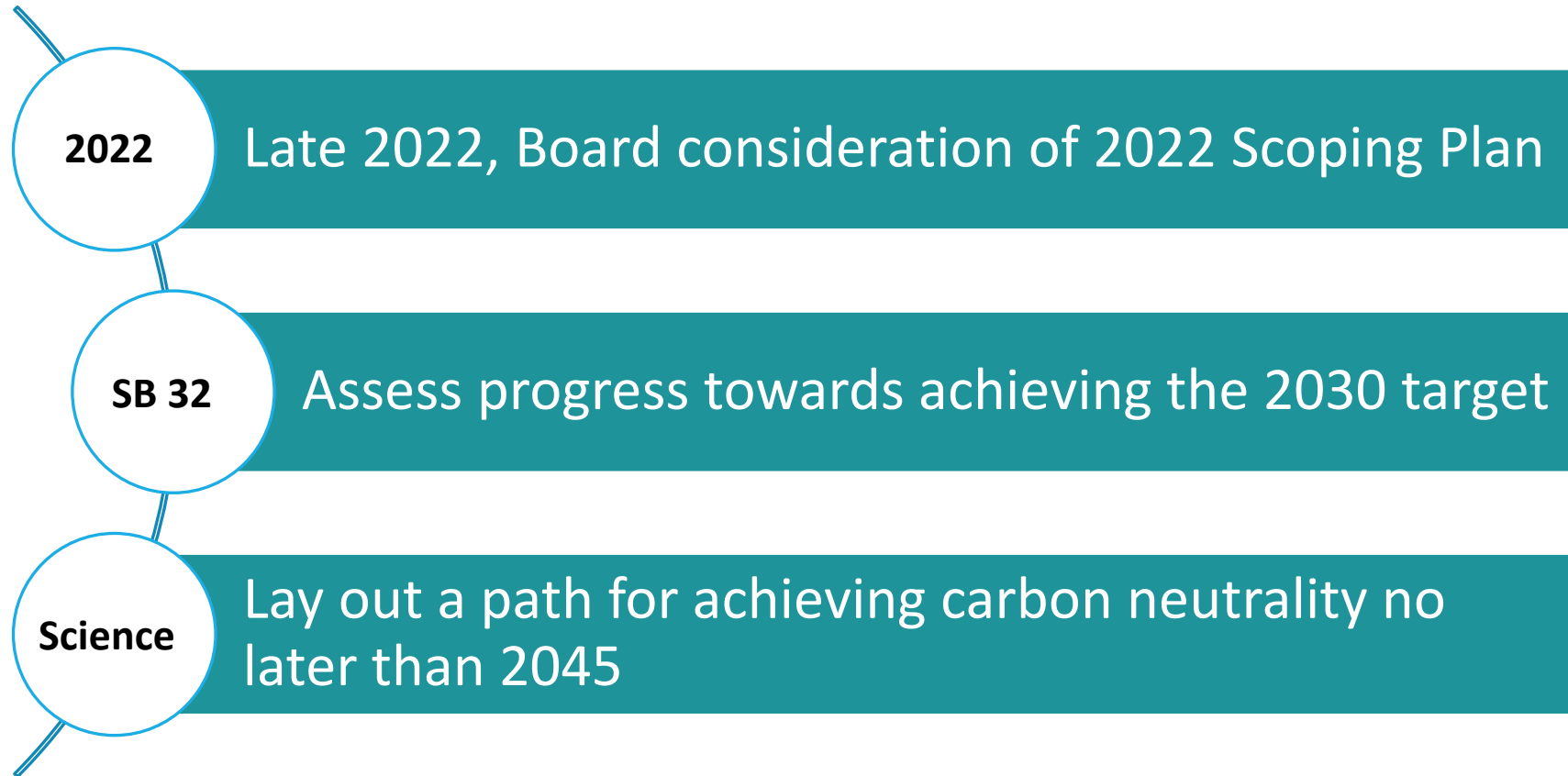
Cleaner freight and goods movement



Protect and manage natural and working lands

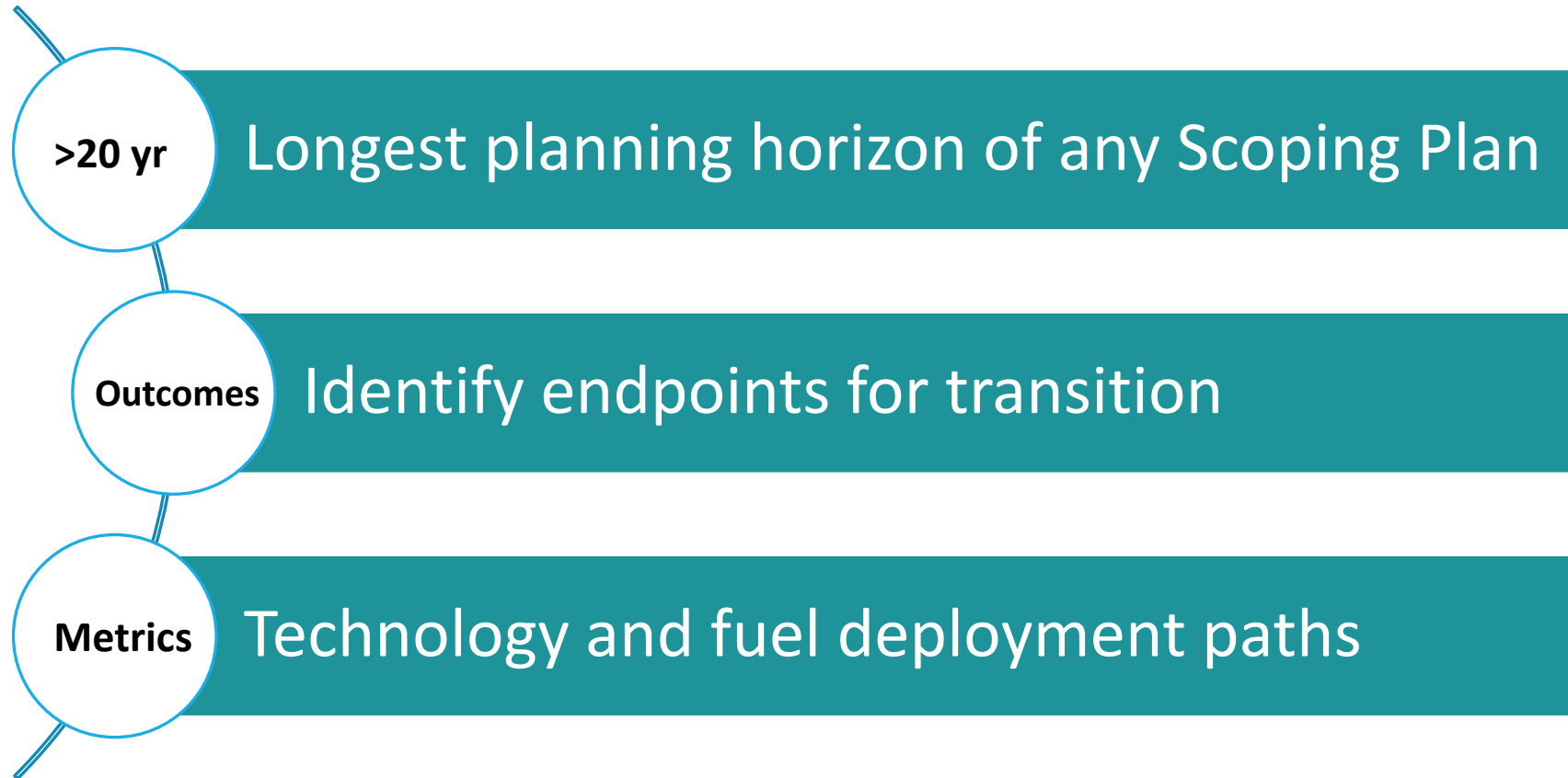
# 2022 Scoping Plan Update: Key Objectives

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# 2022 Scoping Plan Update: Key Objectives, cont.

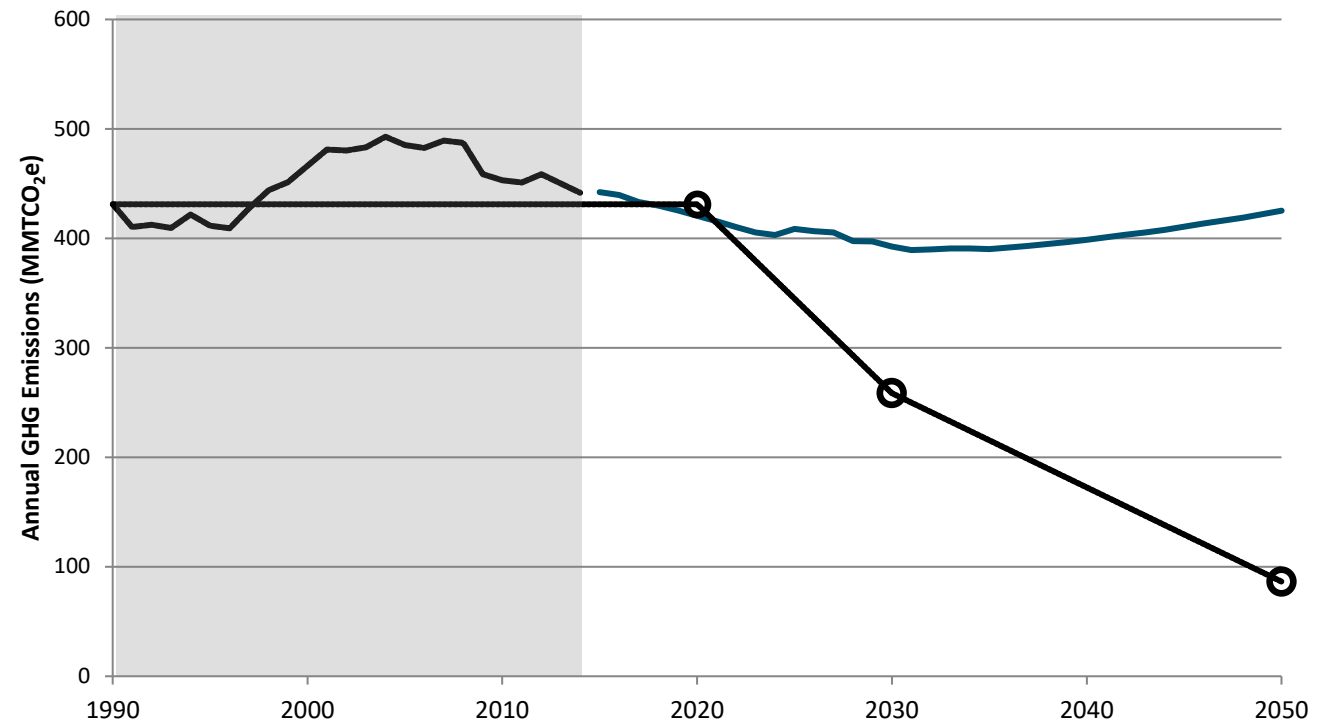
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# GHG Emissions Modeling

- Forecast Reference Scenario out to 2045
  - What happens to GHG emissions if we take no further action
- Design several mitigation scenarios
  - Develop and model different paths to reduce emissions out to 2045



*Illustrative example of Reference Scenario and GHG Mitigation targets*

# Designing Mitigation Scenarios

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- All scenarios must at least:
  - be consistent with existing Legislative Mandates and Executive Orders
  - meet GHG goals
  - work in concert with existing and emerging air quality programs
- Factors weighed in staff proposed scenario for CARB Board consideration:
  - Demonstrate consistency with statutes and EOs
  - Identify trade-offs for balancing several factors including: benefits, costs, minimizing leakage, technological feasibility

# Example Inputs for Modeling

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- Available technology types and deployment rates over a time period
- Fuel type and deployment rates over a time period
- Economic growth
- Population growth
- Energy and fuel costs
- Costs for infrastructure and capital investments
- Any fuel feedstock constraints

# Data from E3 PATHWAYS Model

State-level (aggregate & by sector)

GHGs

Fuel  
Demand

Costs

- Emissions modeling must be completed at least 5 months prior to publication of drafts to allow sufficient time for air quality, health, economic, and other analyses

# Example of 2017 Scenario Comparisons

Draft Estimated Reductions in Health Impacts Due to Emissions Reductions in 2030

	<b>Proposed Scenario</b>	<b>Alt 1- Prescriptive Regulations</b>	<b>Alt 2- Carbon Tax</b>	<b>Alt 3- All Cap-and-Trade</b>	<b>Alt 4- Cap-and-Tax</b>
Mortality	140-170	140-190	140-170	120-150	120-160
Hospitalizations	21-26	21-28	21-26	18-22	19-23
ER Visits	59-73	59-78	59-73	51-63	53-66

# Example of 2017 Scenario Comparisons

Draft Estimated Economic Impacts Due to Emissions Reductions in 2030

	Proposed Plan	Prescriptive Regs Alt. 1	Carbon Tax Alt. 2	All Cap-and- Trade Alt. 3	Cap-and-Tax Alt 4.
California GDP (Billion \$2015)	-\$13.2 to -\$22.5 (-0.4% to -0.6%)	-\$40.0 (-1.2%)	-\$21.3 (-0.6%)	-\$8.3 to -\$17.7 (-0.2% to -0.5%)	-\$67.8 (-2.0%)
Employment (Thousand Jobs)	-67.7 to -104.1 (-0.3% to -0.4%)	-271.6 (-1.2%)	-103.6 (-0.4%)	-34.7 to -74.3 (-0.2% to -0.3%)	-356.3 (-1.5%)
Personal Income (Billion \$2015)	-\$6.4 to -\$4.2 (-0.2% to -0.1%)	-\$27.5 (-0.9%)	-\$2.9 (-0.1%)	-\$3.1 to -\$1.0 (-0.1% to 0.0%)	-\$30.6 (-1.0%)

# Analyses for 2022 Scoping Plan Update

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- Cost per ton of policy (AB 197)
- Social cost of carbon (AB 197)
  - New values expected in coming months
- Estimated air quality benefits (AB 197)
  - Building off of CARB input for SB 100 report
  - New health end points
  - Use health econ valuation to better demonstrate benefits
- Public health
  - Status quo vs Action
- Environmental (CEQA)
- Economic (health, macro, household, jobs)



# Final Scoping Plan

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- Actionable statewide blueprint to align efforts to achieve the state's climate goals
- 2017 Scoping Plan is underpinned by statutes and dozens of individual regulations and actions across state agencies
- Considered and adopted by the CARB Board
- Annual implementation updates to the CARB Board
- Does not go into details in individual program or regulation design
- Does not supplant or create new statutes or regulations



# Post Scoping Plan Update Adoption

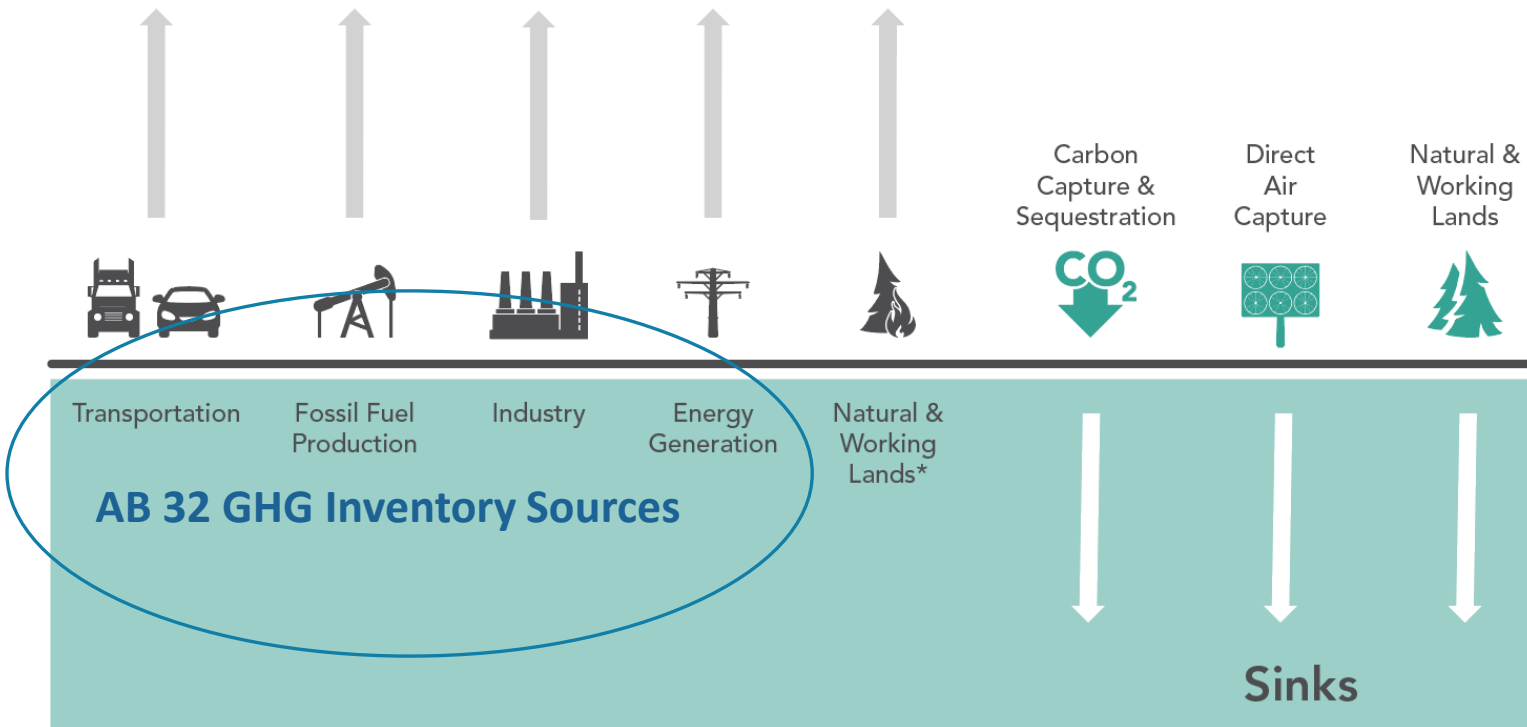
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- Agencies and CARB start to look at their regulations, programs, and policies to align with outcomes identified in the scoping plan
- CARB actions
  - Scoping Plan implementation takes the form dozens of regulations, plans, and policies brought to the Board for consideration and adoption
  - Each has their own detailed public process and more detailed health, economic, and environmental analyses

# Science-based Target: Achieve Carbon Neutrality (CO<sub>2</sub>e) Mid-Century

## Sources equal Sinks

### Sources



- Continue to reduce emissions from sources in AB 32 GHG Inventory
- Reduce emissions and increase sequestration in Natural and Working Lands
- Maximize all sinks with goal of achieving net negative

\*Natural and working land emissions come from wildfires, disease, land and ag management practices, and others

# 2022 Scoping Plan Update Guideposts

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- Key statutes
  - AB 32, SB 32, AB 197, AB 398, SB 350, SB 100, SB 1383, SB 375, AB 617, AB 1504, SB 1386
- Key Executive Orders
  - S-03-05, B-52-18, B-55-18, N-79-20, N-82-20
- EJAC Recommendations
- Public feedback
- Key Reports
  - AB 74 Transportation Carbon Neutrality
  - AB 398 Jobs & Climate Action Plan
  - SB 100 100% Renewable & Zero-Carbon Electricity
  - Achieving Carbon Neutrality for California
  - Forest Carbon Plan and Wildfire and Forest Resilience Action Plan