Proposed Final 2022 Scoping Plan

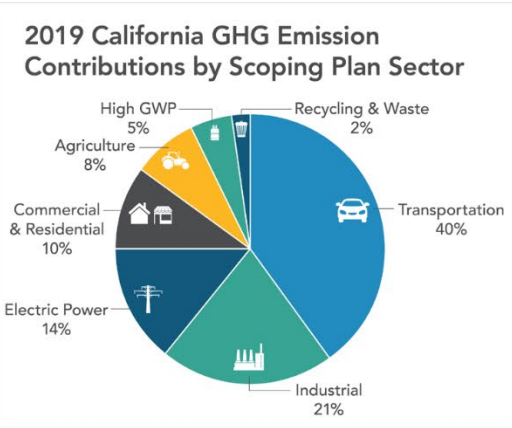
NOVEMBER 29, 2022

CALIFORNIA
AIR RESOURCES BOARD

California's Climate Policy Framework

GHG Targets & Goals

Legislation & Executive Orders: Total GHGs (AB 32/SB 32) or sector targets (SB 1383/SB 100), etc.

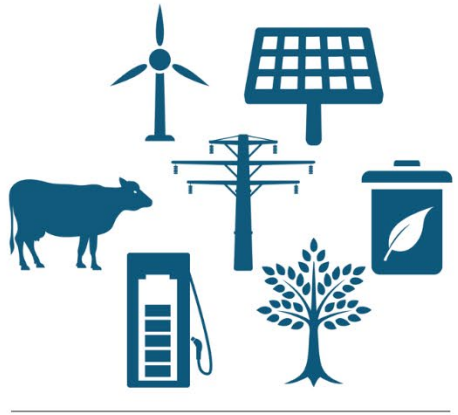


Scoping Plan

Actionable plan across all sectors

Action

Regulations & Incentives: Advanced Clean Cars, climate change investments, etc.



Projects

Examples: Zero-emission trucks, energy infrastructure and renewables, compost facilities, digesters, etc.

Key Legislation

AB 32: 2020 target and Calls for a Scoping Plan at least every 5-years

SB 32: 2030 target

SB 1383: Short-lived climate pollutant targets for 2030

AB 197: Specific analyses for the Scoping Plan

AB 1279: 2045 carbon neutrality target , anthropogenic emissions to be reduced by 85% by 2045

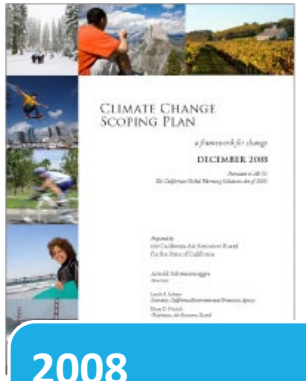
SB 905: Establishes a Carbon Capture, Removal, Utilization and Storage Program

AB 1757: Requires setting of natural and working lands sequestration targets

SB 1020: Establishes interim clean electricity targets and interim targets

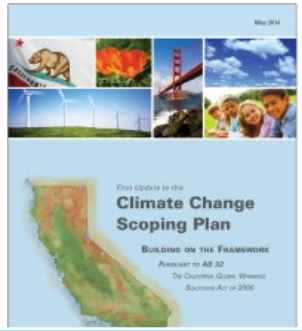
SB 1137: Oil and gas setbacks of 3200 feet

AB 32 Scoping Plan(s)



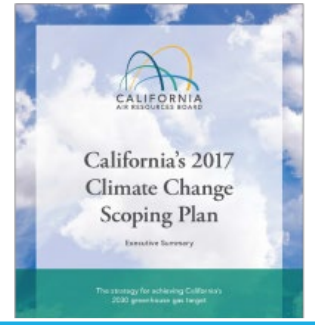
2008

- **Path to 2020 –AB 32 Sectors return to 1990 levels**



2014

- **Assess path to 2020**
- **Focus on SLCPS – latest science**



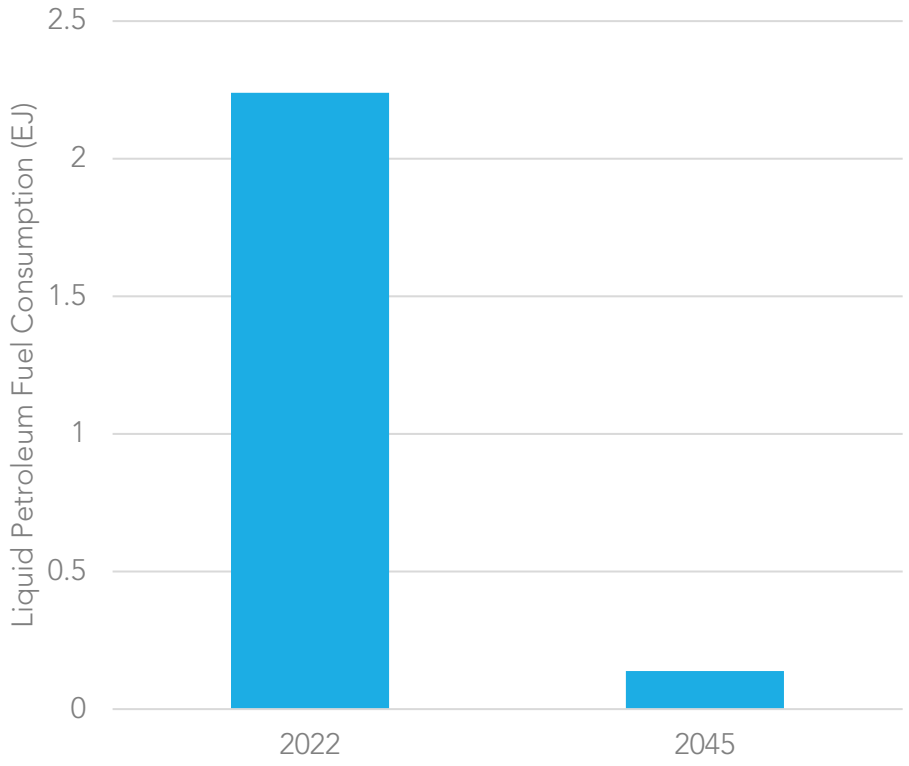
2017

- **Assess path to 2020**
- **Path to 2030 –AB 32 Sectors to 40% below 1990**

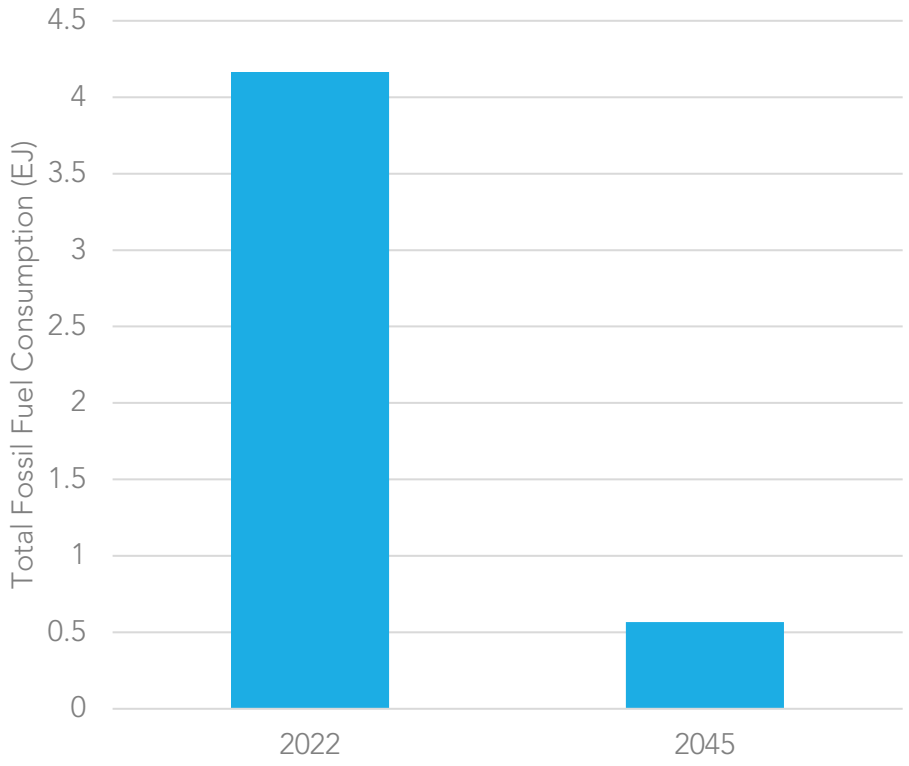
- 2022 Scoping Plan
  - Assess path to 2030
  - Carbon neutrality and 85% reduction in anthropogenic emissions by 2045
  - Integrate emissions from natural and working lands

Dramatic Reductions in Fossil Fuel Demand

94% reduction in liquid petroleum

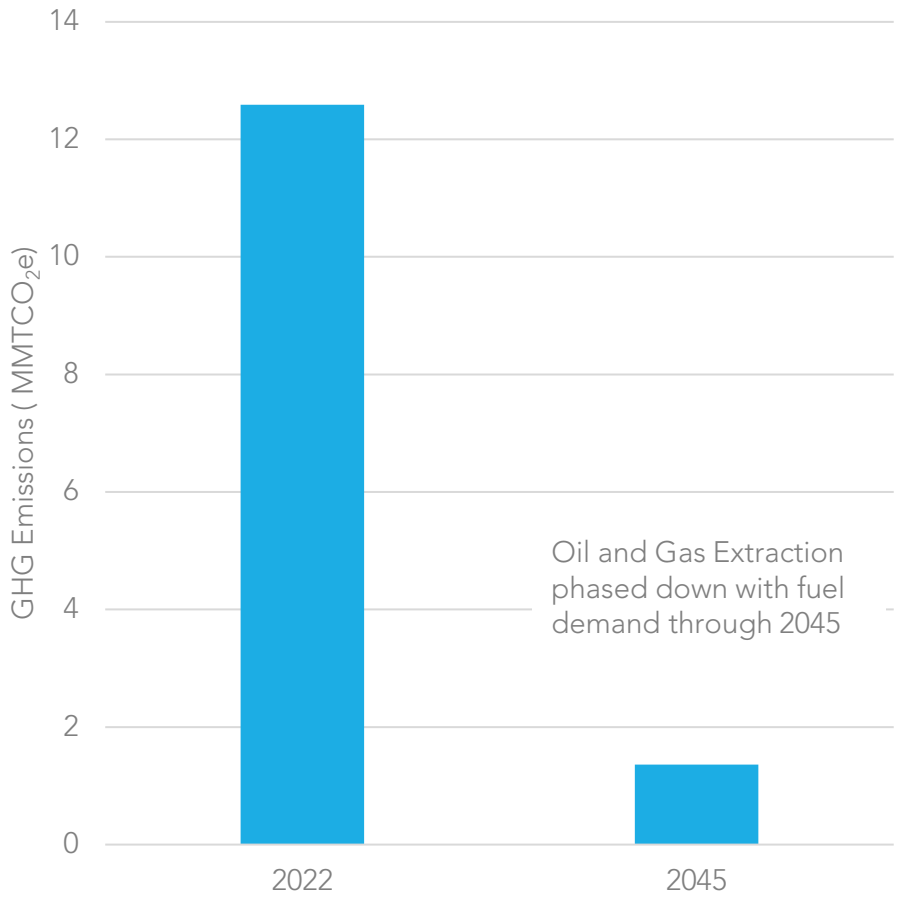


86% reduction in total fossil fuel



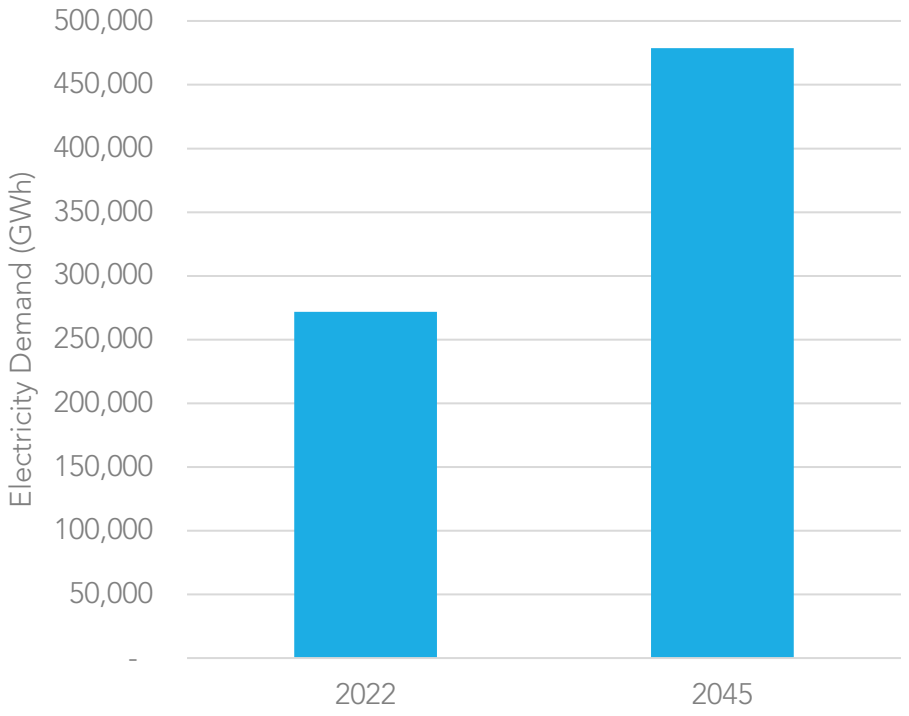
In 2045 relative to 2022

89% Reduction of GHGs in Oil & Gas Extraction

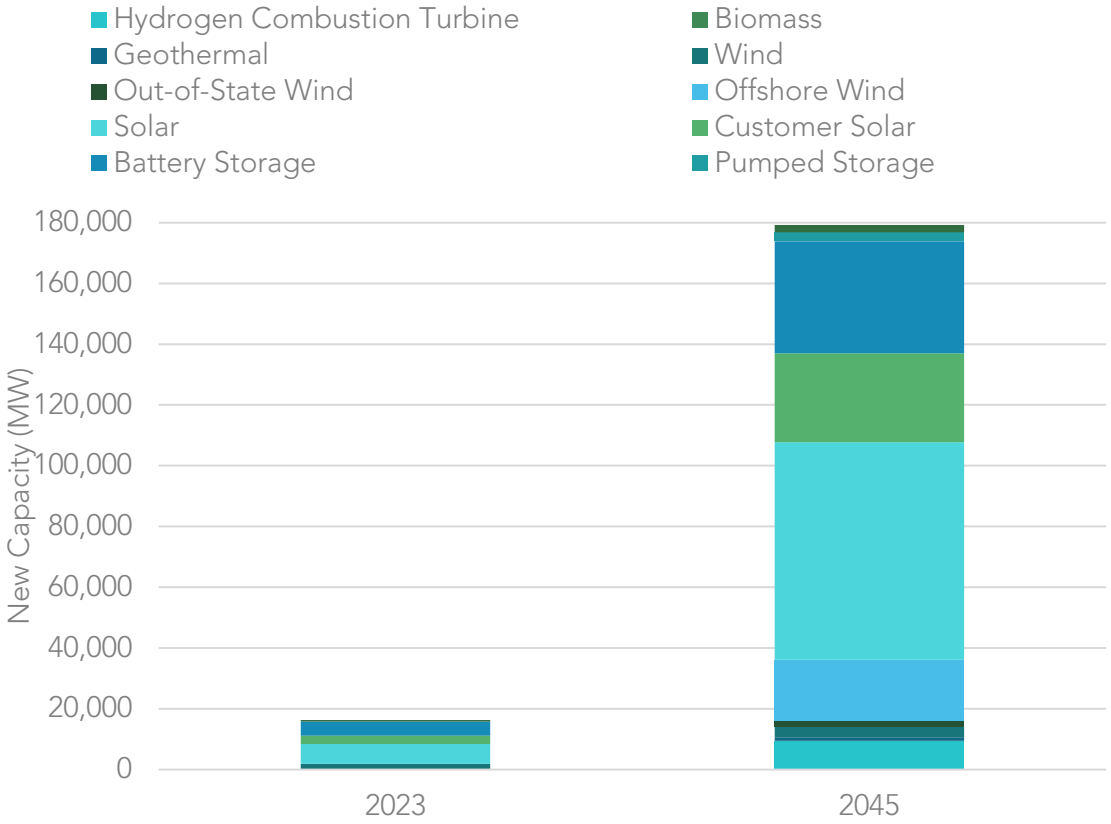


Building a Clean, Affordable, Reliable Grid

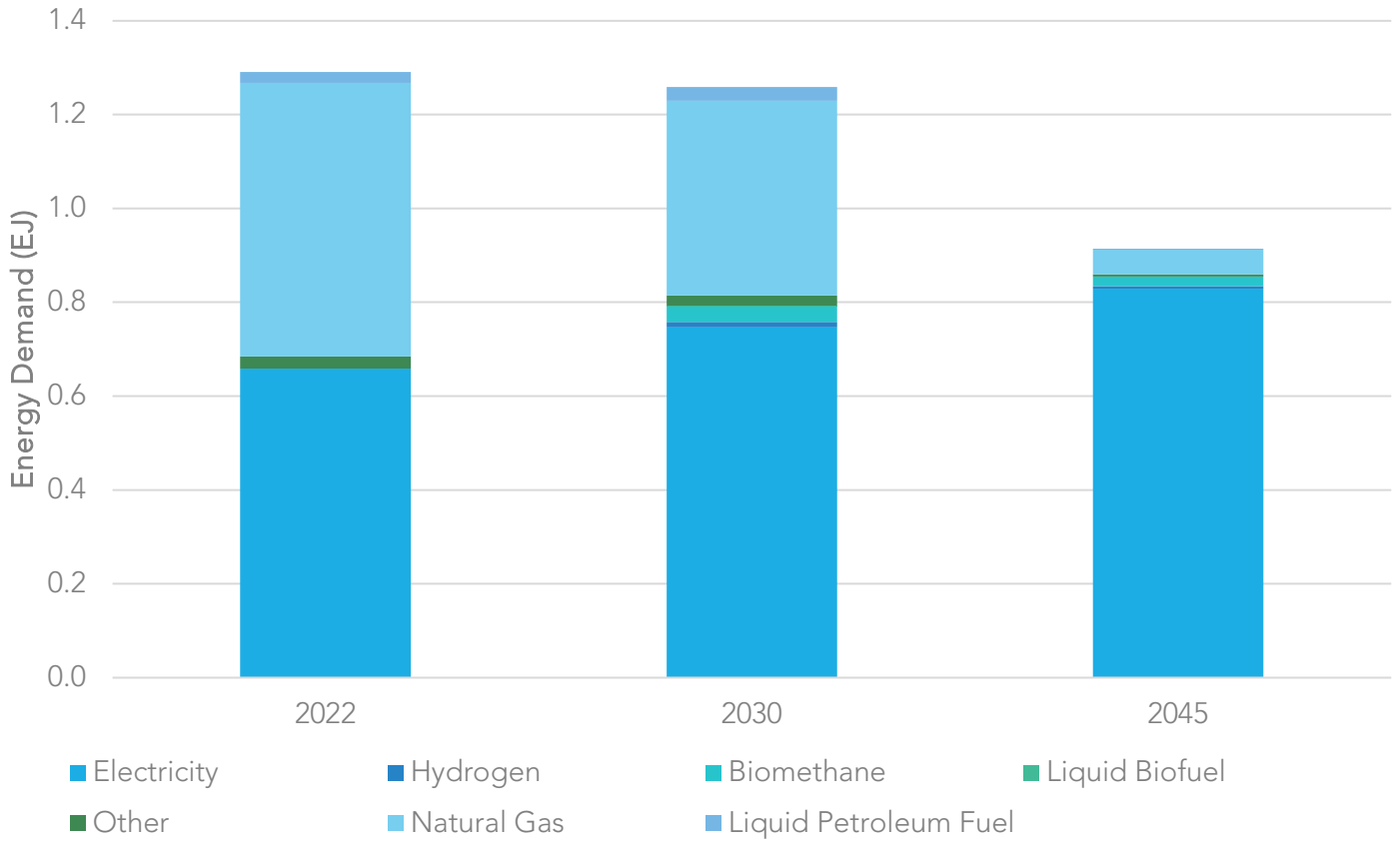
2x existing electricity generation



4x existing wind and solar new capacity in 2045



Decarbonizing Buildings



- 90% reduction in fossil gas demand by 2045
- Improve outdoor and indoor air quality
- 3 million all-electric buildings by 2030, 7 million by 2035
- 6 million heat pumps by 2030

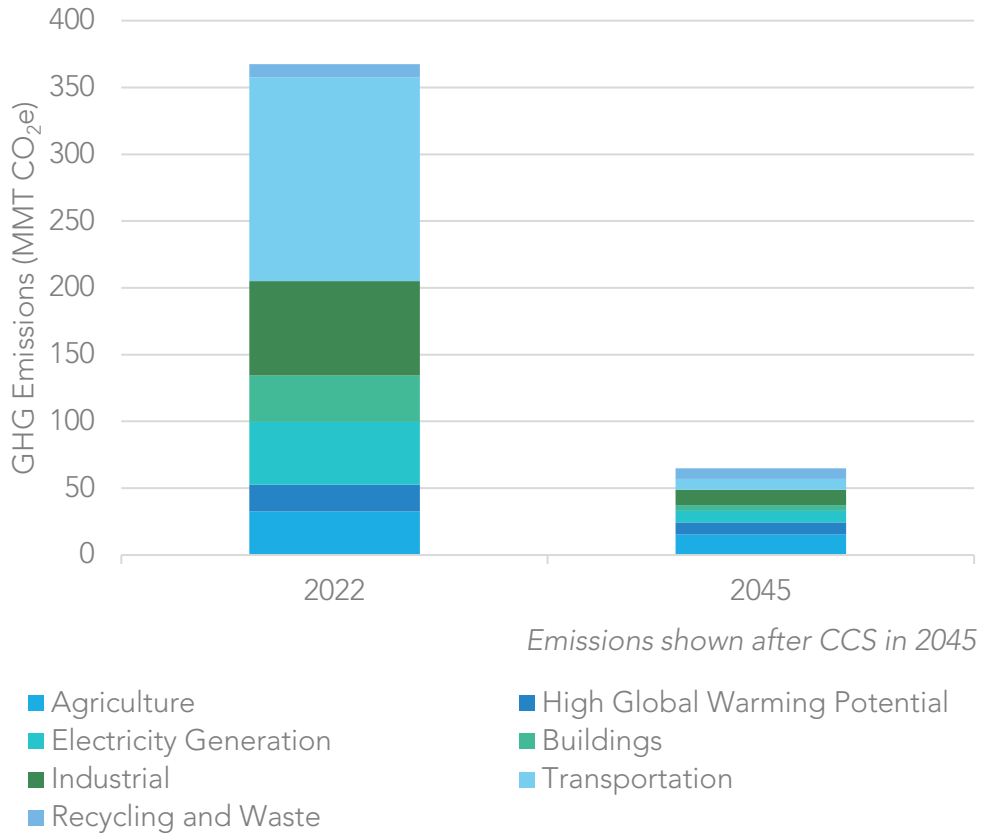
In 2045 relative to 2022

The Decade of Action
Target 2030: 48% Reduction below 1990

- Accelerate pace of building clean energy infrastructure and clean technology deployment to achieve the 2030 target and be on track for carbon neutrality:
  - Permitting for new and transitioning for clean energy production
  - Transmission infrastructure
  - Consumer adoption
  - Access to raw materials
  - Action across all sectors

Anthropogenic GHGs Target 2045: 85% Reduction below 1990

- Some emissions remain in the AB 32 Sectors
- Need carbon dioxide removal to compensate for residual emissions to achieve carbon neutrality



Role and Scaling of Carbon Removal

AB 32 Inventory Sectors: Significantly reduced, but some emissions remain

NWL a source modest source

Need carbon removal to compensate for AB 32 and NWL sectors

- **Role of CDR is reduced if:**
  - We reduce the emissions from the AB 32 Sectors faster
  - NWL is able to become a sink

NWL and the Scoping Plan

Healthy trees, plants, and soils can support our greenhouse gas reduction goals in two primary ways:

1. Serving as carbon sinks through sequestration.
2. Avoiding releases of emissions from their substantial existing carbon stocks.

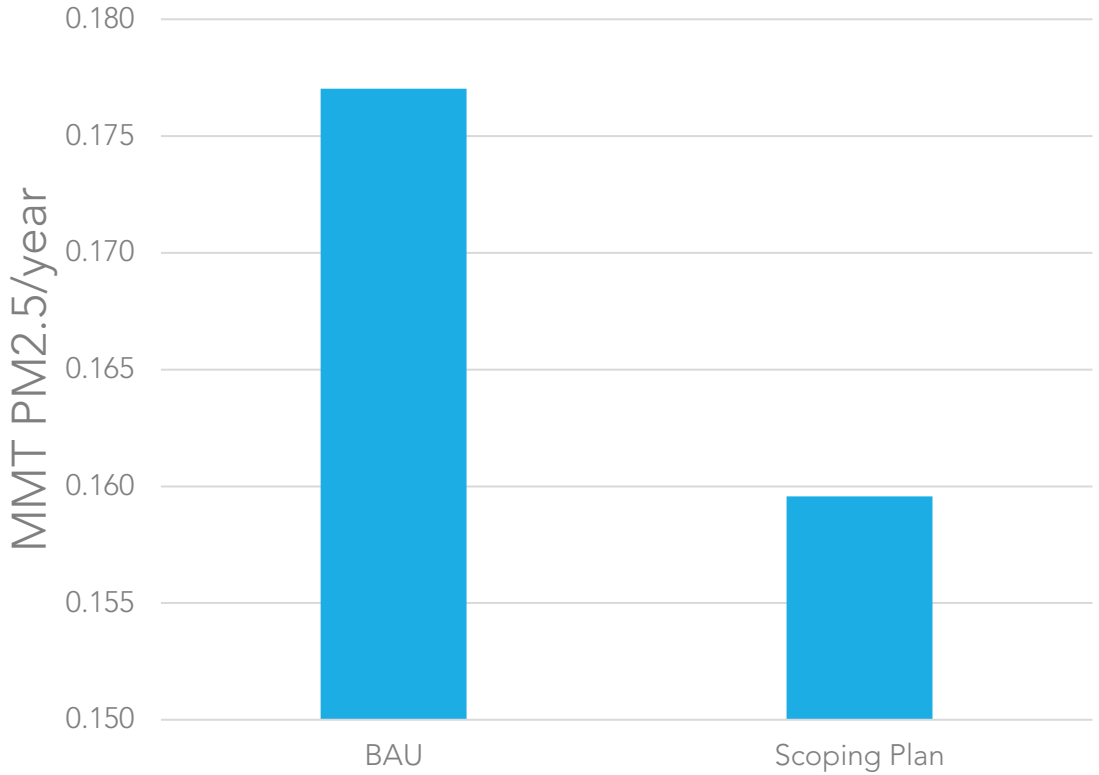
We are not focusing on maximizing carbon across all landscape types.

Return to healthy forests where catastrophic wildfires are no longer the norm.

We are focusing on supporting carbon management that fosters ecosystem health, resilience and many other ecosystem services.

Catastrophic Wildfire Reduction Air Quality Benefits

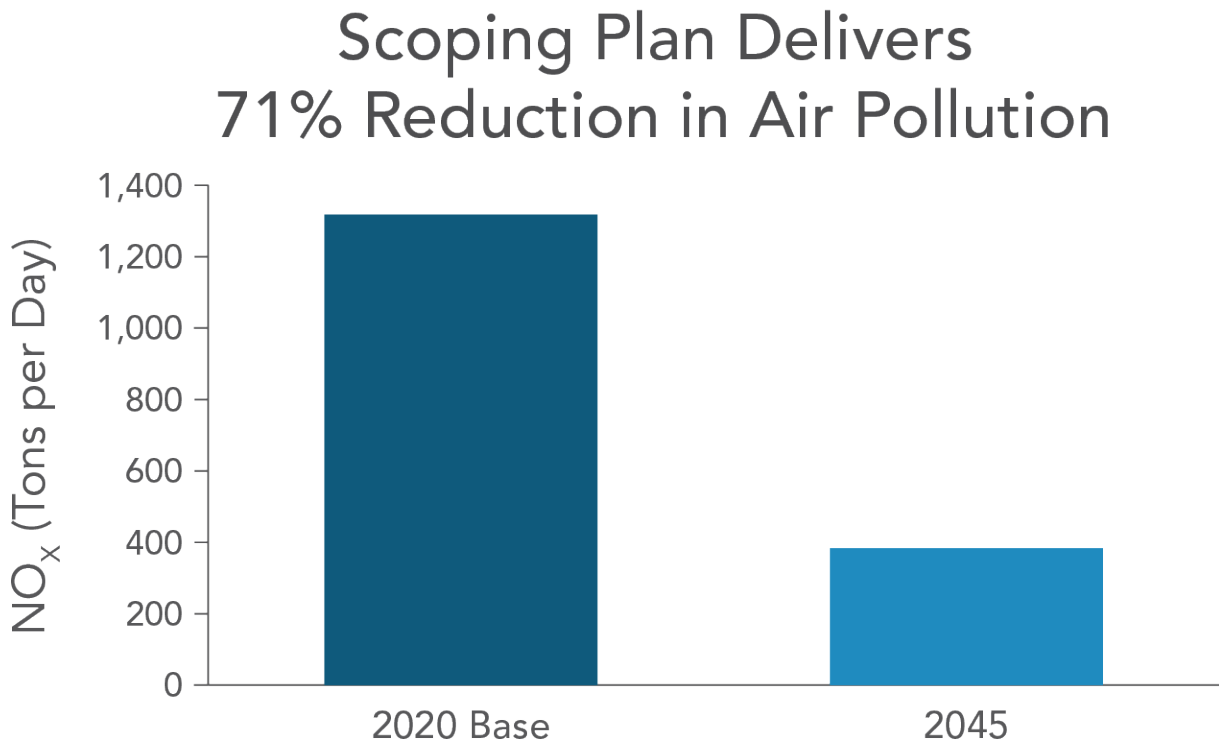
10% reductions in PM2.5 each year



$3.1 Billion in Health Cost Savings from Drop in Wildfire Smoke Pollution

Significant Reductions in Harmful Air Pollution

Drastic reductions in fossil fuel combustion will provide health benefits to overly burdened communities located adjacent to freeways and stationary sources



Uplifting Equity

- Over 5 dozen EJ Advisory Committee Recommendations included in the Plan
- Community Vulnerability Metric (CVM)
  - Not all communities face same impacts from climate change
  - Not all communities are equal in resiliency
  - CVM identifies additional social costs of carbon at census tract level experienced due to disparate climate impacts (heat, drought, etc.)
- Multi-agency discussion to systematically evaluate and plan for a transition for the demand and supply reduction of petroleum fuels that is equitable

Health and Economic Metrics

Social cost of carbon (avoided economic damages) of **$6.5 to 23.9 billion** in 2045

Health cost savings of **~$200 billion** in 2045

California economy and jobs grow through 2045

Proposed Scoping Plan has negligible impact on both

*Reference economy and jobs indicate continued growth from now through 2045

Unprecedented Support for Action

- IBank (CA)
- Inflation Reduction Act
- Infrastructure Investment and Jobs Act

Local Action to Support State Goals

- Decisions over land use and VMT reduction strategies
  - Transit and sustainable communities
- Permitting for to support implementation of actions in the Scoping Plan
- Building codes
- Supporting vehicle charging infrastructure

8,000 avoided deaths
from increasing Active Transportation*

*Calculated by the Healthy Mobility Options Tool, active transportation (including walking, rolling, cycling, and taking public transit) from the California Transportation Plan 2050 compared to business as usual for 2050.

Multi-State Agency Effort

List is not exhaustive