

# Cap-and-Trade Program

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MAY 2024



# California's Climate Policy Portfolio

## *Mix of Regulations, Incentives, and Carbon Pricing*

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- **Economy-wide carbon price funding further GHG reductions:** Cap-and-Trade
- **Reduce carbon-intensity of transportation fuels:** Low Carbon Fuel Standard
- **Renewable energy requirements for utilities:** Renewables Portfolio Standard
- **Zero-emission new vehicle sale targets:** Advanced Clean Cars, Advanced Clean Trucks
- **Building energy efficiency and electrification:** Energy Code and Green Building Standards
- **Reduce short-lived climate pollutants:** Oil and Gas, HFC, and Landfill Methane Regulations
- Develop **State Strategies** for natural and working lands, cement decarbonization, carbon-capture and sequestration, and low-carbon hydrogen development
- Leverage **funding and investments** provided through the Cap-and-Trade funded Greenhouse Gas Reduction Fund, state General Fund, federal Bipartisan Infrastructure Bill, and Inflation Reduction Act

# Cap-and-Trade supports transition to a decarbonized economy

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Economy-wide carbon price incentivizes clean tech investments

Program design rewards efficient in-state production of goods

Coverage of all electricity supports decarbonization across the economy

\$27.0B provided to California Climate Investments

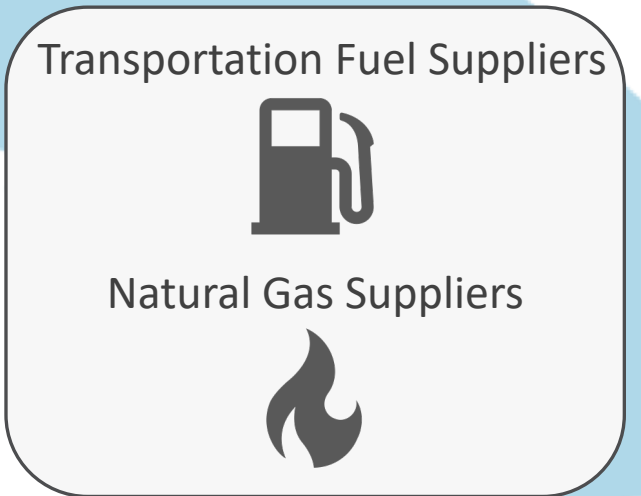
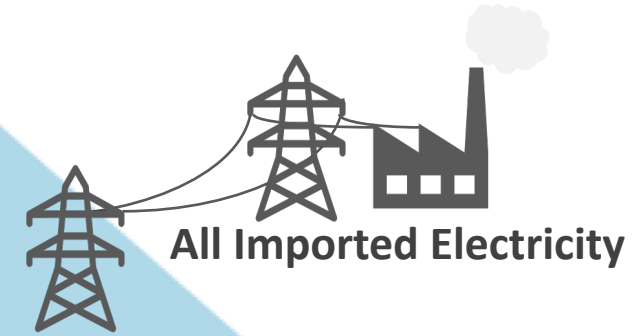
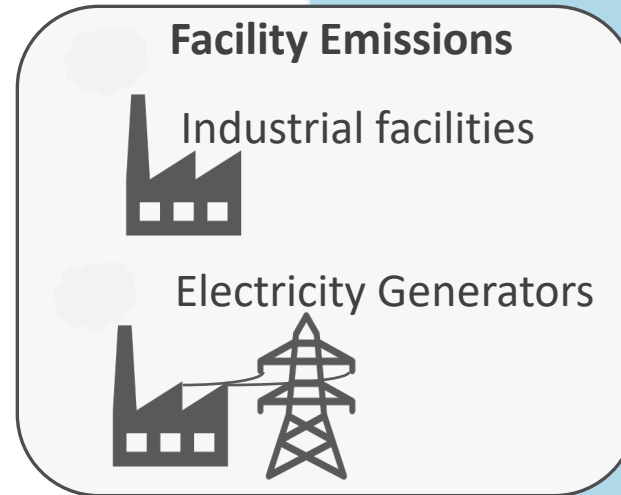
\$10.7B provided for residential utility customer protection

GHG emissions declining while economy is growing

# Cap-and-Trade Covers GHG Emissions Across California Economy

Complements sector-specific programs by placing an economy-wide, declining cap on statewide GHG emissions

Covers over 400 total facilities, including industry; electricity generators and importers; and suppliers of gasoline, diesel, and natural gas



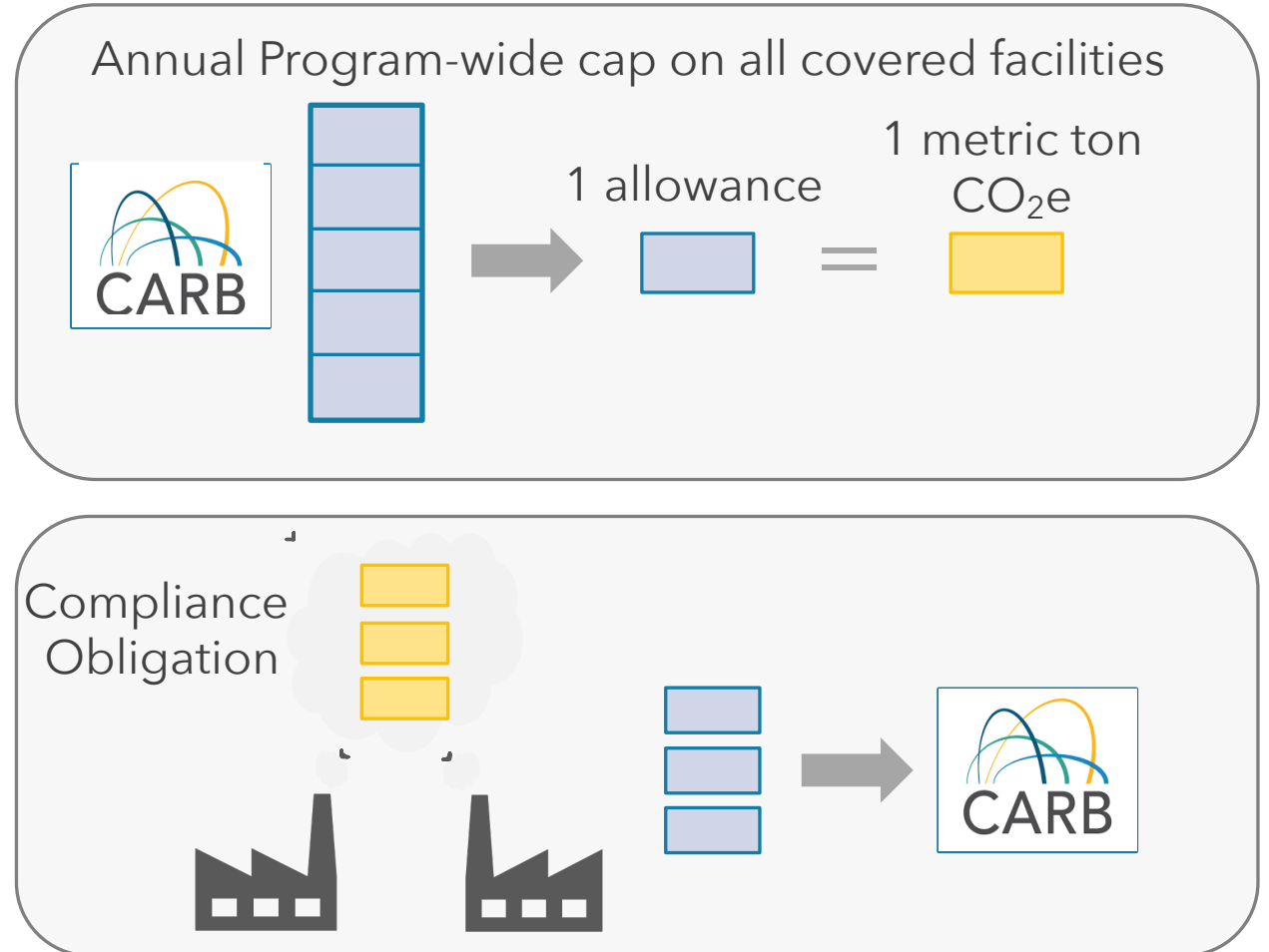
# Program Cap Set According to State's GHG Goals

One allowance equals one metric ton of carbon dioxide equivalent

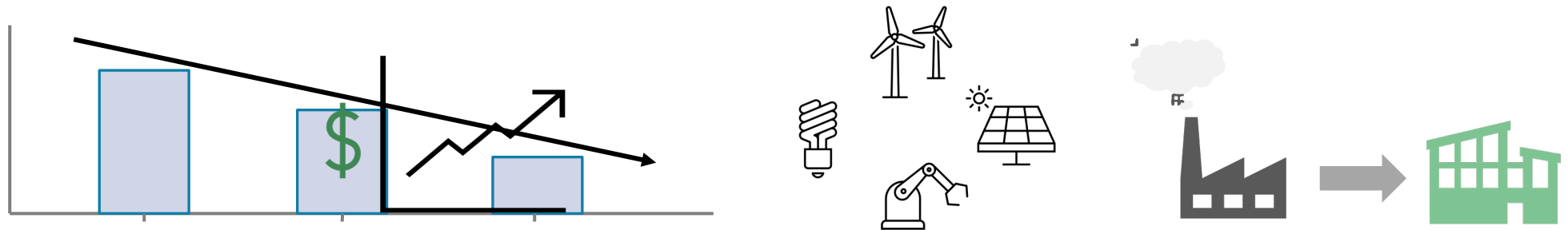
Covered entities must acquire and surrender allowances, from the aggregate cap, in an amount equal to the GHG emissions from all their covered facilities

A covered entity may be responsible for multiple facilities

No individual facility caps are established by the Program

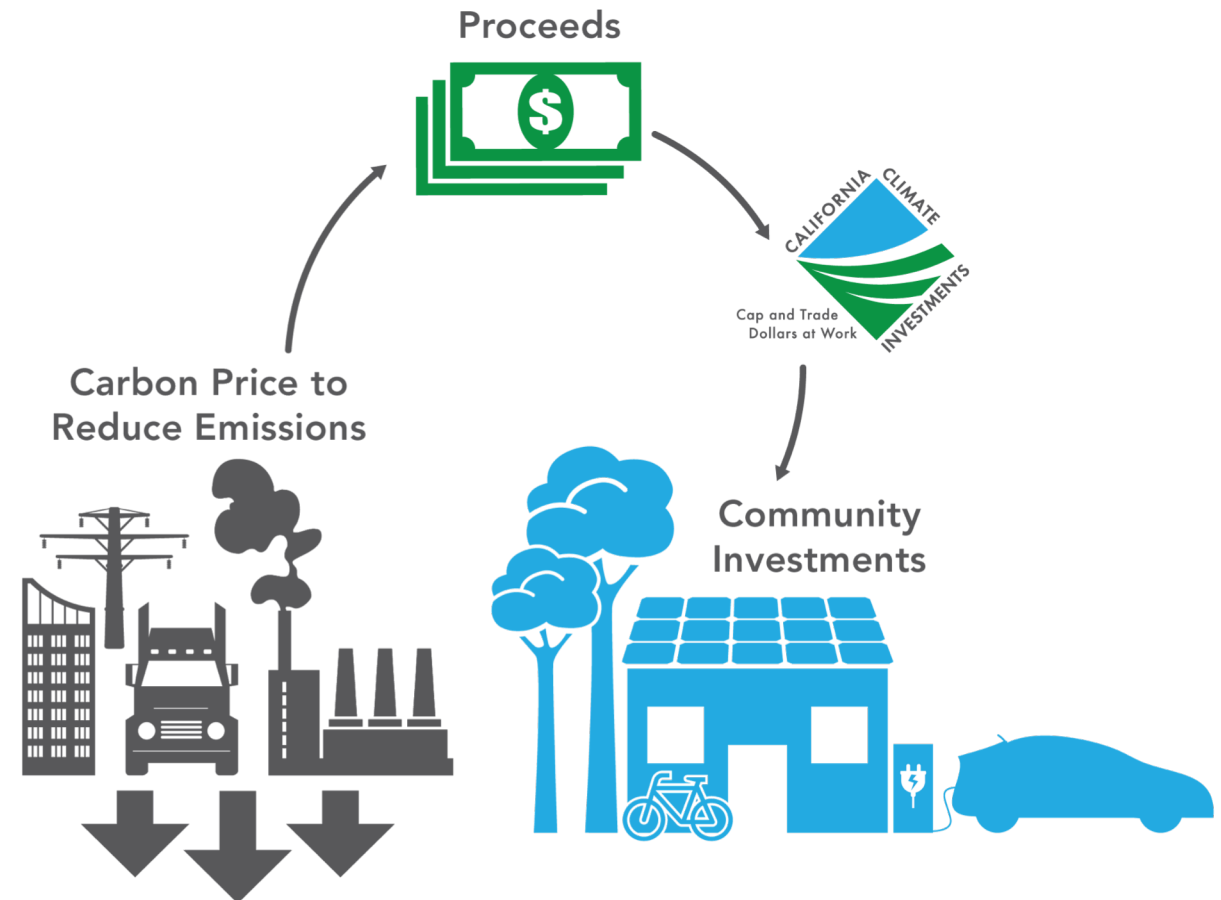


# Cap-and-Trade Program Provides Long-Term Incentive for Economy-Wide Decarbonization



# Cap-and-Trade Provides Critical Funding for Communities

- Auction of State allowances solely fund California Climate Investments and funds AB 617 Community Air Protection Program
- \$27.0B raised; \$11.0B implemented (through November 2023)
- Over 76% implemented benefiting priority populations
- Projects will reduce 109 million metric tons CO<sub>2</sub>e, 106 thousand tons of criteria air pollutants



# California Climate Investments programs benefit Californians

\$11.0 billion implemented through November 30, 2023

## Cumulative Achievements



**109,154,082** estimated metric tons of CO<sub>2</sub> equivalents reduced



**76%** of funding benefiting priority populations



**578,568** individual projects implemented



**1,248** transit agency projects, adding or expanding transit



**12,606** affordable housing units under contract



**420,215** rebates issued for zero-emission and plug-in hybrid vehicles



**221,918** urban trees



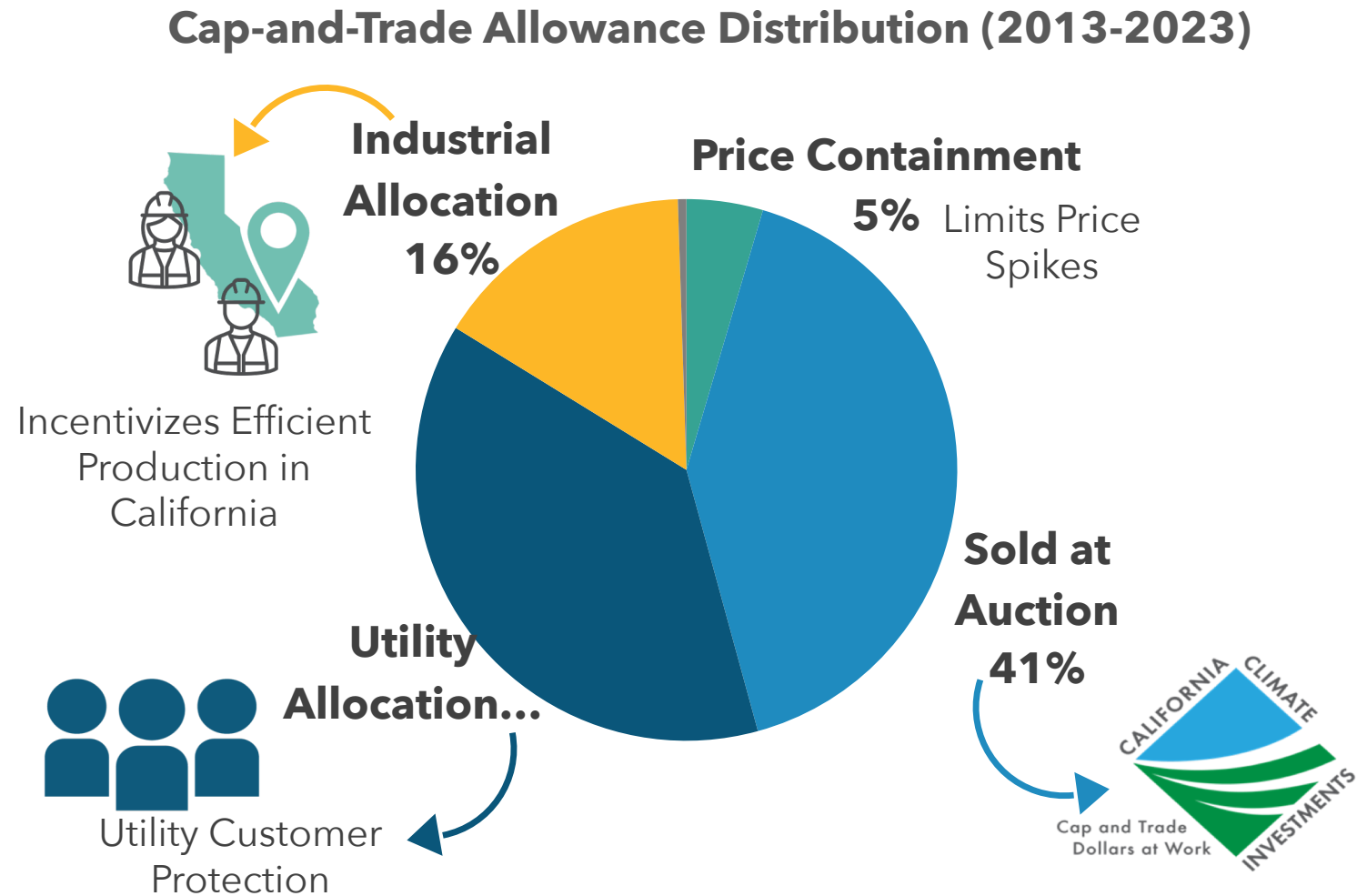
**983,095** acres of land restoration or conservation



# Cap-and-Trade Allowance Distribution

## Allowance value distribution

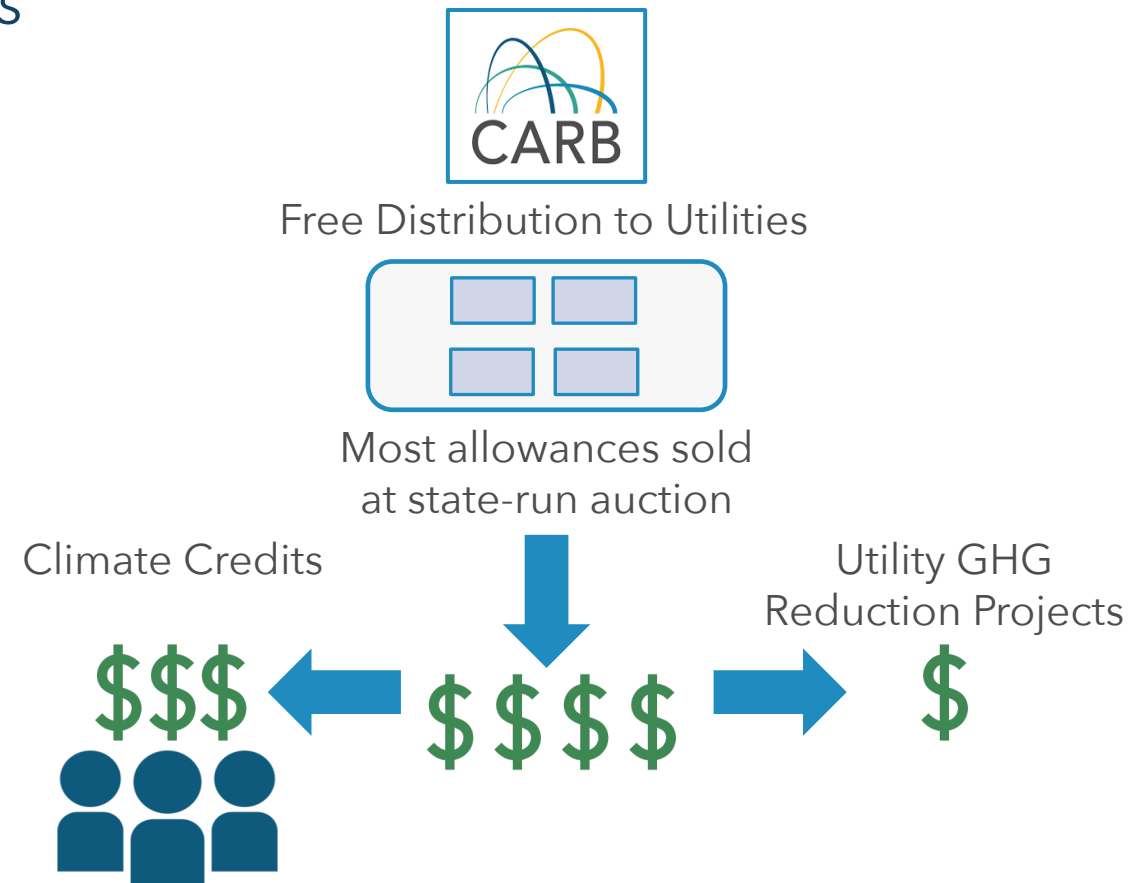
- Sale at auction funds California Climate Investments and AB 617 implementation
- Free distribution to utilities for customer protection
- Free distribution to industry to support efficient production in California



# Utility Customer Protection

*CARB provides allowances to electricity and natural gas utilities for the protection and benefit of their customers*

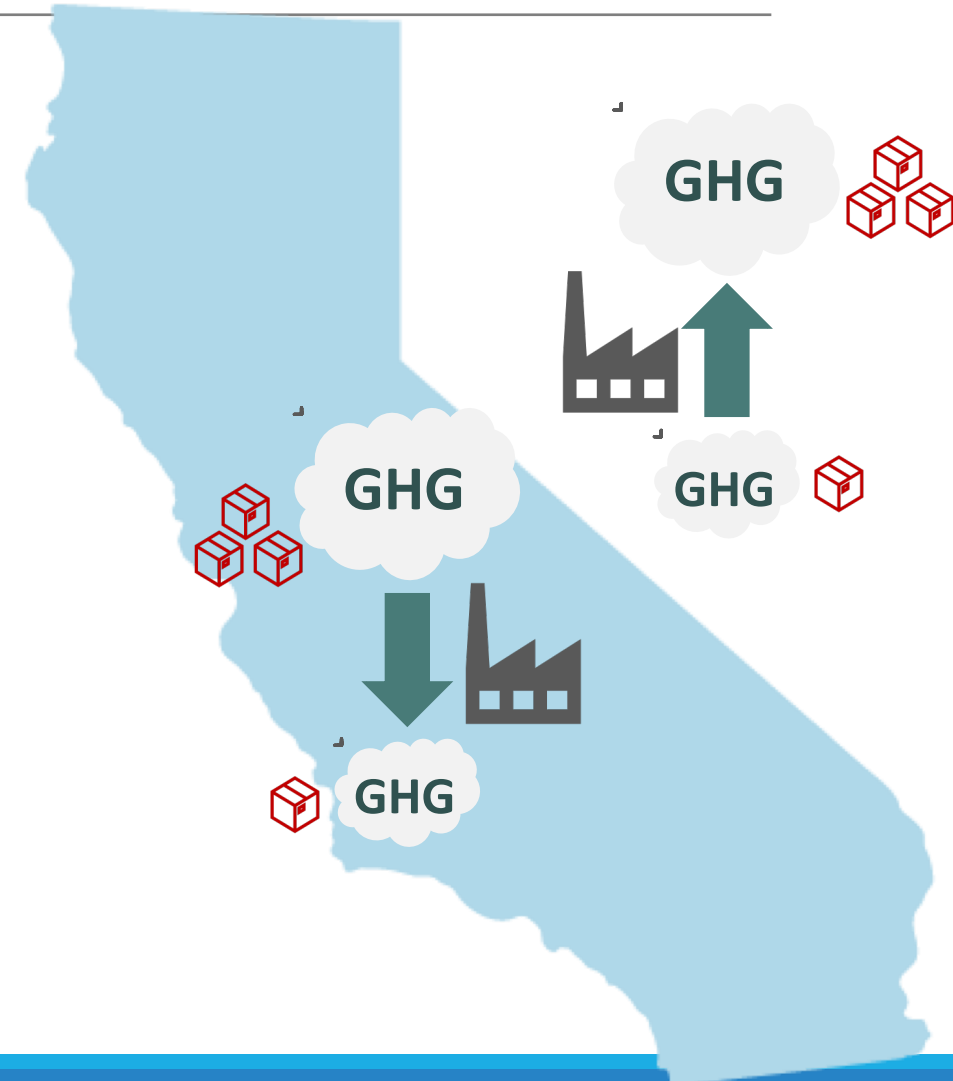
- Most utility allowances are sold at auctions with most proceeds returned to residential customers as automatic flat Climate Credits that reduce bills one or twice per year
- Flat Climate Credits are an essential tool for protecting residential customers from the costs of the Program while maintaining the carbon price signal
- Through 2023, **\$10.7B returned as residential Climate Credit**



# Industrial Distribution Incentivizes Maintaining Clean Production in California

*Per Legislative direction Cap-and-Trade Program is designed to support efficient production in California*

- Shift of businesses or production to out-of-state could result in decrease in GHG emissions in-state with a corresponding increase in out-of-state emissions
- Risk addressed by allowance distribution to industrial entities
- Incentives maintaining low-carbon production, businesses, and jobs in California



# Connection to Local Air Quality

- Climate change programs fall under a different legal framework than local air pollutant measures
- To meet federal air quality standards and reduce local air pollutants:
  - CARB adopts regulations on mobile sources additional to federal regulation
  - Local air districts set pollution regulations and permitting requirements for stationary facilities additional to federal regulations
- **CARB has the authority to regulate all sources of GHG emissions**

*Legal framework for local air pollutant measures*

Mobile Sources



Stationary Sources



# Context for Current Cap-and-Trade Program Updates

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- New legislative targets for 85% emissions GHG reductions and carbon neutrality by 2045
- CARB's 2022 Scoping Plan identified the need for a more ambitious GHG emissions trajectory to support carbon neutrality by 2045
- Updated GHG Emission Inventory
- CARB is considering more stringent allowance budgets to accelerate GHG reductions in support of State goals
- Also considering other Program updates to reflect additional legislation, Executive Orders, State climate policies, and implementation needs

# Potential Updated 2021-2030 Caps

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## Scenario Description

- 40% by 2030
  - Adjusted for GHG Emission Inventory updates
- 48% by 2030
  - 2022 Scoping Plan Update highlighted accelerated 2030 target
- 55% by 2030
  - With 6 years until 2030, this represents an upper bound

Scenario	Estimated Total 2021-2030 Allowances	Estimated Allowances Removal
<b>Current Regulation</b>	<b>~2,605</b>	--
40% by 2030	~2,490	115
<b>48% by 2030</b>	<b>~2,340</b>	<b>265</b>
55% by 2030	~2,215	390

# Standardized Regulatory Impact Assessment (SRIA) Overview

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- Released April 9, 2024
- Not formal staff proposal
- Early economic evaluation of potential changes to the Program
  - Prepared using best information available
  - May not reflect precise real-world potential impact
- One of many steps CARB must take prior to updating the Regulation

## SRIA estimated benefits relative to baseline (2025-2046)

	Proposed Scenarios	Alternative 1	Alternative 2
2030 GHG Reduction Target (compared to 1990 levels)	48%	40%	55%
GHG Emissions reductions (MMTCO <sub>2</sub> e)	981	626	1,313
NOx reductions (short tons)	312,000	137,000	373,000
PM 2.5 reductions (short tons)	52,000	31,000	67,000

# EJAC Recommendations from Community Meetings

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EJAC proposed the following Program amendments:

- Eliminate free allowances;
- Eliminate offsets; and
- Restrict trading in priority environmental justice communities.

The SRIA includes qualitative discussion on important considerations in evaluating these recommendations (pages 17-21)

- Any potential changes must be considered in the context of:
  - A more stringent proposed Program (cap decline is 6%-11% per year during 2025-2030 across the Proposed Scenarios in the SRIA)
  - Statutory direction such as minimizing leakage and maximizing cost-effectiveness



# Additional program evaluations

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- Cap-and-Trade FAQ & Local Air Pollution  
<https://ww2.arb.ca.gov/resources/documents/faq-cap-and-trade-program>
- Allowance Supply Evaluation  
[BR 18-51 Cap-and-Trade Allowance Report](#)
- Recent Forest Offset Program Review  
[nc-CARBslides20221130.pdf](#)
- Cap-and-Trade Website  
[Cap-and-Trade Program | California Air Resources Board](#)

# Process for Updating the Cap-and-Trade Program

## Context for Cap-and-Trade Program Updates

- Dec 2022 - Board Approved 2022 Scoping Plan Update
- Updated AB 32 GHG Emission Inventory
- Implementation needs and ongoing experience

New executive orders, legislative direction, and Board direction to lay out path to carbon neutrality

## Cap-and-Trade Pre-Rulemaking

- Informal Workshops
- Evaluate Cap-and-Trade and economy-wide trends
  - Identify regulatory concepts
  - Discuss alignment with latest Scoping Plan
  - Solicit public input

Public workshops to develop concepts aligned with State goals

## Cap-and-Trade Formal Rulemaking

- SRIA Released
- Issue Notice of Proposed Rulemaking\*
  - Draft regulatory text
  - Initial Staff Report
  - Environmental and economic analyses
- 45-day comment period
- Potential additional amendments and 15-day comment period
- Adoption by CARB at Board Hearing
- Final Staff Report with comment response
- Office of Administrative Law review
- Implementation begins

Formal process with specific timelines

\* By law, CARB has one year to complete the final rule once initial proposal is published

# Cap-and-Trade HIGHLIGHTS

Cap-and-Trade was launched in 2012 to reduce greenhouse gas emissions. It places a long-term steadily increasing price on climate pollution.

## HOW IT WORKS



Statewide cap limits total climate pollution



Emitters reduce climate pollution or pay increasing prices



Climate pollution emissions drop over time

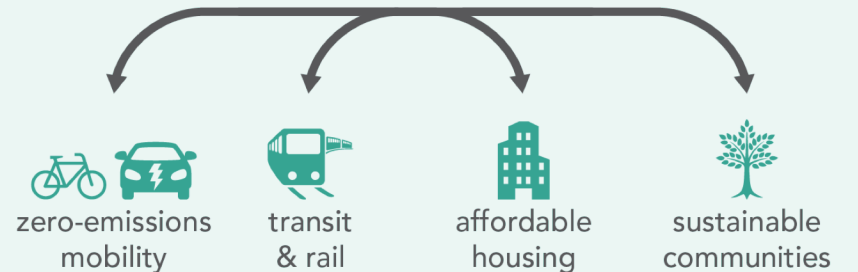
## BENEFITS

### GHG reductions

- ✓ 2020 GHG reduction targets achieved early
- ✓ Climate pollution down 14% below 1990 levels
- ✓ Spurred innovation and clean technology deployment

### OVER \$43 BILLION invested in communities

\$27 billion supports programs to improve air quality in overburdened communities



Over \$16 billion to benefit utility customers, including \$10.7 billion in credits on utility bills

## WHAT'S NEXT

CARB is making stringency updates to align program with new GHG emissions reductions target of 85% by 2045.

