

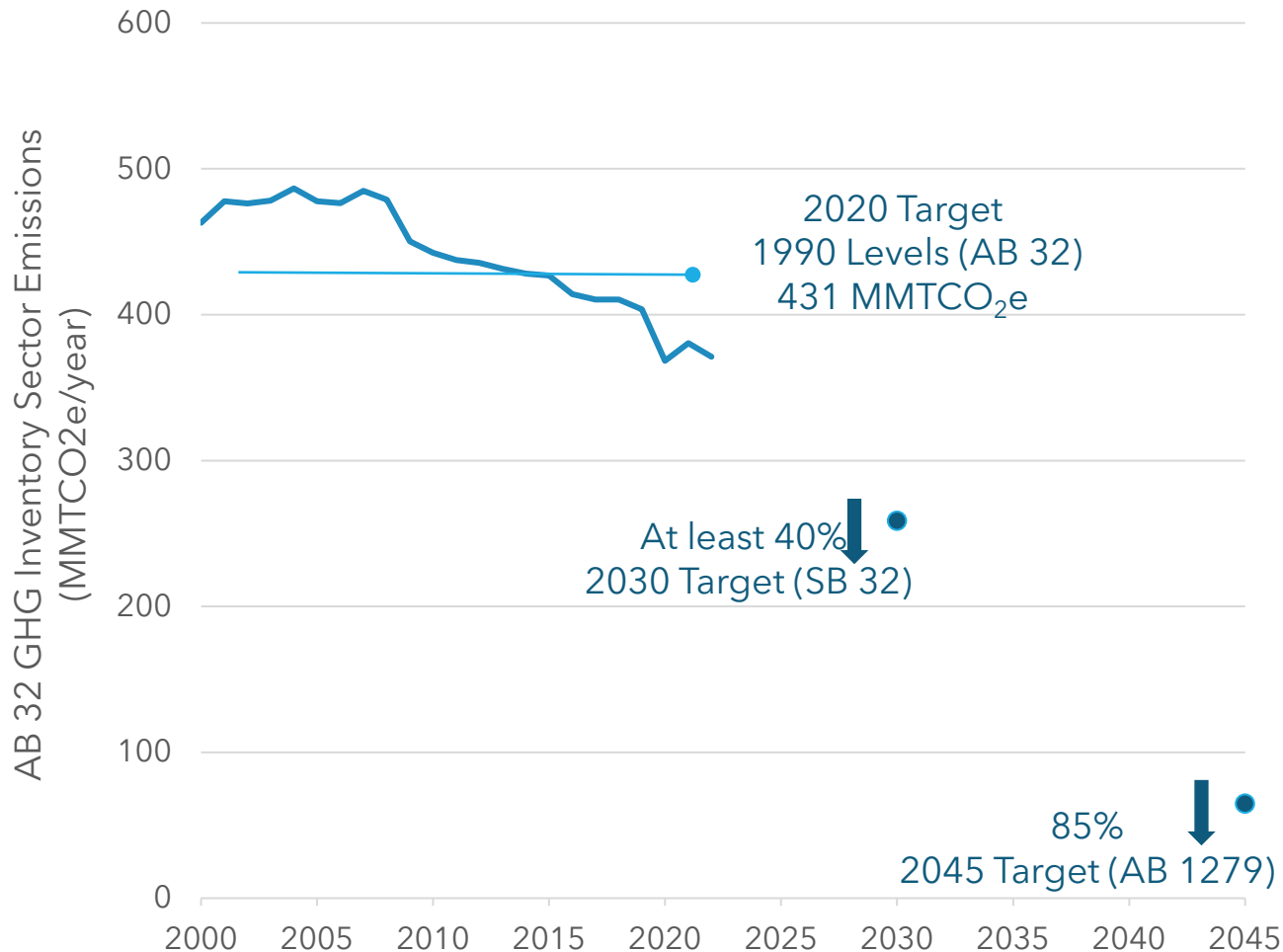
Overview: Cap-and-Trade Program

FEBRUARY 2025



GHG Emissions Reduction Targets

Achieved AB 32 target in 2014 - Portfolio of Policies



ACHIEVING
CARBON
NEUTRALITY
BY **2045**

GHGs included in statute: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), nitrogen trifluoride (NF₃).

Cap-and-Trade Program Quick Facts

4-6X more cost-effective when compared to carbon tax and prescriptive regulations

+12 years of implementation, updated 8 times

Covers 80% of GHG emissions, near 100% compliance

State-wide aggregate cap

~400 regulated businesses
~400 voluntary participants

Linked with Quebec, potential future linkage with Washington

Cap-and-Trade Program Quick Facts, cont.

50 quarterly
auctions

>\$31 billion for the GGRF
for budget
appropriation, >70%
appropriated to benefit
disadvantaged
communities

>\$13B provided for
residential utility
customer protection
in CA Climate Credit

>\$11B to protect CA
jobs & businesses
by reducing cost
impacts

>265 million
compliance offsets
issued

~\$1.5 billion for
tribal offset projects

Cap-and-Trade Program Provides Long-Term Incentive for Economy-Wide Decarbonization & Targets Cheapest Reductions First



Durable Core Design Reflects Statutory Direction

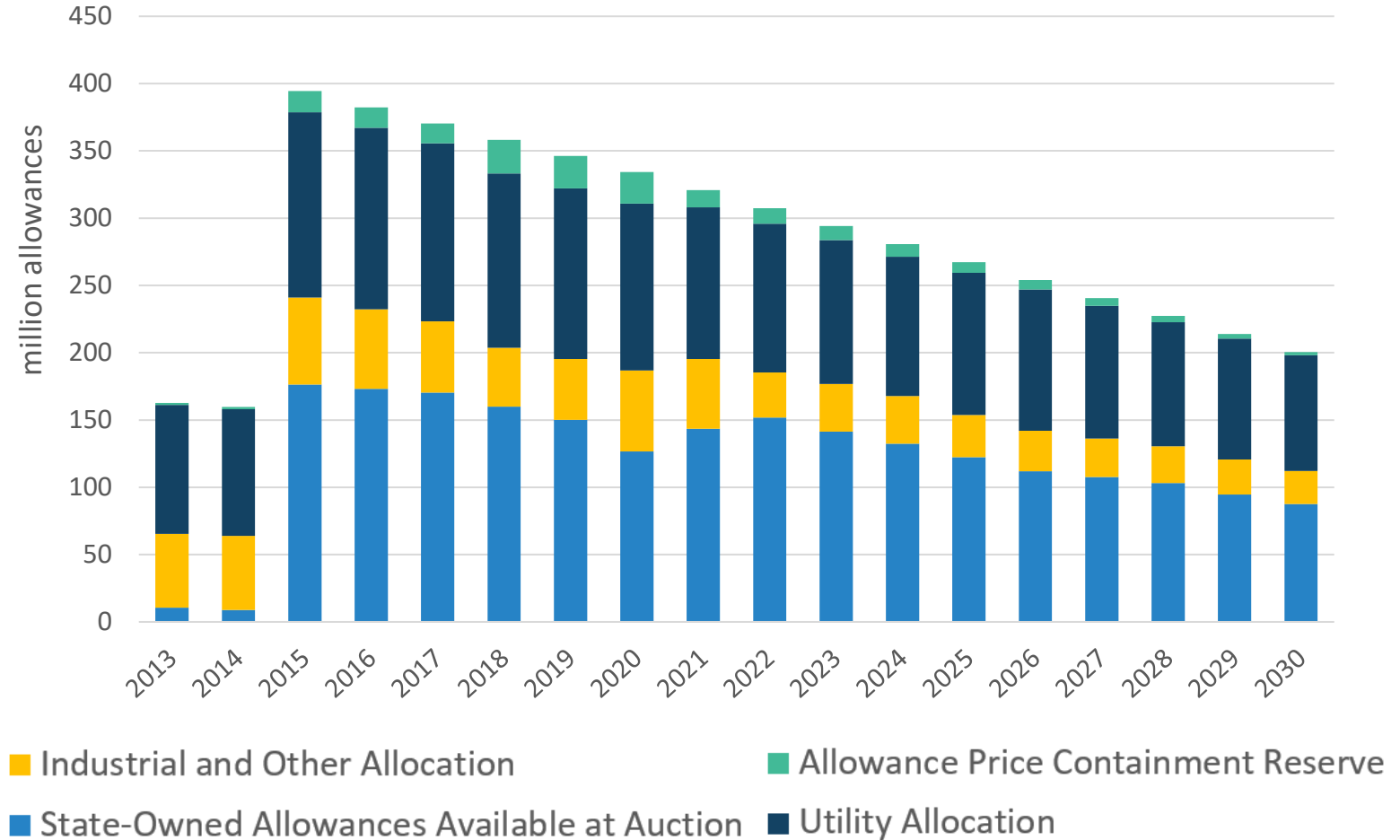


AB 32, SB 32, AB 398, AB 197, AB 1279, among others

- Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.
- Reward early voluntary action to reduce GHGs
- Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.
- Consider cost-effectiveness of these regulations.
- Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.
- Minimize the administrative burden of implementing and complying with these regulations.
- Minimize leakage.
- Technologically feasible.
- Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

Cap-and-Trade Allowance Budget Overview

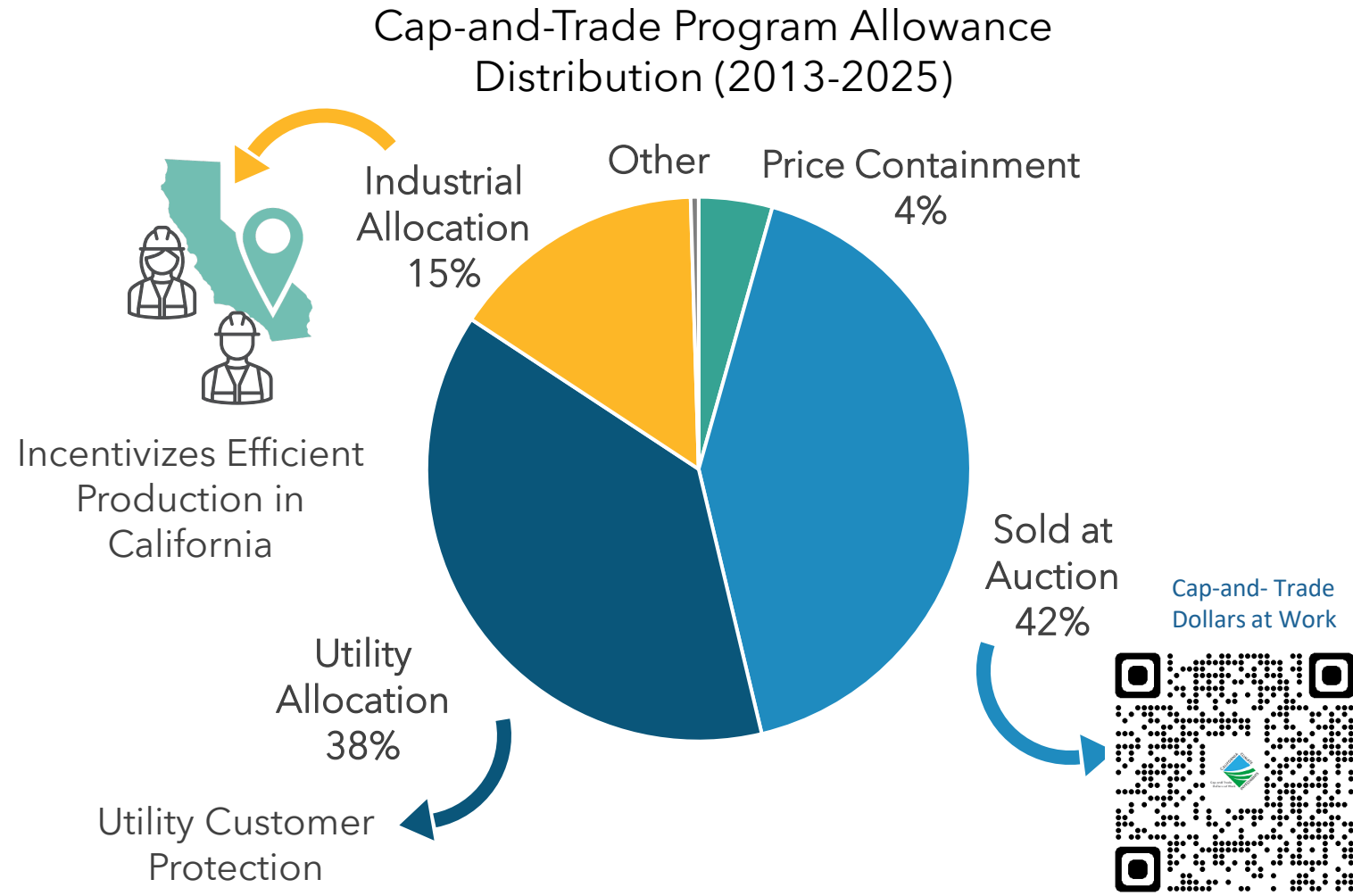
- ~4% annual decrease 2020-2030
- Allowances distributed to market
 - Direct allocation
 - Sale at auction
- Allowance Price Containment Reserve for cost containment to control for price spikes



Cap-and-Trade Allowance Distribution Averages

Allowance value distribution

- Sale at auction funds California Climate Investments and AB 617 efforts
- Free distribution to utilities for customer protection
- Free distribution to protect CA jobs and businesses



Core Design Features

- Banking of allowances to support hedging and cost containment
 - Limited banking to plan ahead for compliance
 - Assessment in 2021 showed a 5% bank of allowances across the Program
- Multi-year compliance periods
 - Smooth out annual variability in production (hydro, economic, etc.)
- Trading
 - Incentivizes companies to reduce emissions and sell allowances, or companies that can't reduce at a certain time can buy allowances to comply
 - Trading rules to prevent market manipulation and price spikes
- Speed bumps and price ceiling to contain costs and allow regulated entities to buy allowances at fixed cost, which also deters price gauging

Core Design Features, cont.

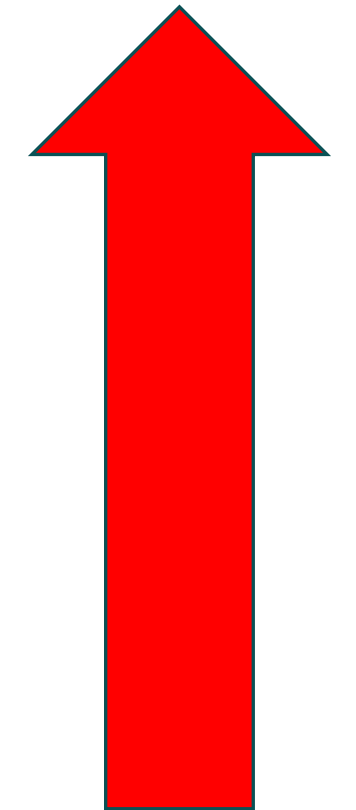
- Free allowances to industry
 - ~60 to 70% of compliance covered by the state to protect CA jobs and businesses, varies by sector
- Small percent of offsets allowed
 - Cost containment feature (~80% below cost of allowance)
 - Program design has been successfully litigated and meets statutory requirements
 - Under the cap since allowances are removed to make space for offsets
 - 4% of current compliance can include offsets, goes to 6% in second half of this decade (half of limit must provide direct benefits to the state)
 - Rigorous annual monitoring, reporting, and third-party verification
 - Private funding of real GHG reductions
 - Periodic updates to protocols to reflect latest science

Design features impact cost-effectiveness

Adjustment of design features must be considered as part of the whole Program and not in isolation

Example

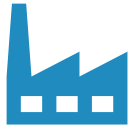
- No free allowances
 - Increases direct compliance costs
- No offsets
 - Removes a cost-containment option
- No trading
 - Removes compliance flexibility
- Annual compliance periods
 - Removes ability to smooth out annual variability
- No banking
 - No hedging for managing compliance costs



Compliance Costs

2022 Scoping Plan Update: Critical Economy-wide Decarbonization Tools

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



Cap-and-Trade covers the largest stationary sources that could adopt carbon capture utilization and storage technologies



Potential carbon dioxide removal (CDR) options as new offset types as the technology scales and costs come down (needs financial tools to scale)



Displace fossil gas with renewable gas or clean hydrogen



Electrification/heat pumps for simple heat needs

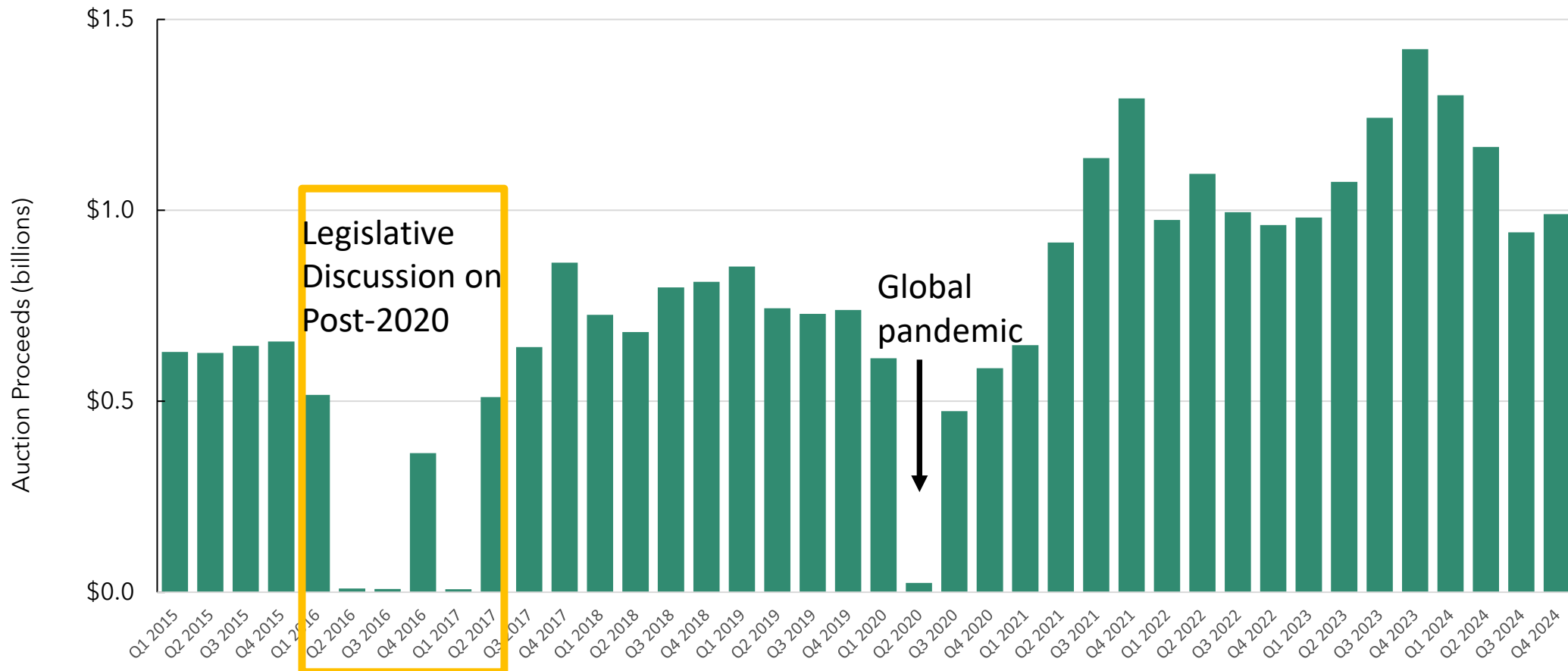
- Fuel cells

Independent Emissions Market Advisory Committee

- Follow-up actions in response to advisory committee recommendations:
 - Two leakage studies \$850K (industry and electricity)
 - Evaluate forest buffer pool contribution (\$250K)
 - [Program Data Dashboard](#)
 - Public workshops to evaluate removing allowances to align with state climate targets
- Other recommendations:
 - Remove offsets: increases compliance costs, removes private funding in real GHG reducing projects
 - Create an emission containment reserve: fundamental design structure change that could increase compliance costs

Policy Certainty is Critical for Private Investment in Clean Technology/Energy and the Program

GGRF Auction Proceeds by Auction Quarter



Additional program evaluations

- 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](#)