



# Keys to California's Climate Change Policy

*Cutting emissions and growing the economy*





## Governor Jerry Brown

*"We're in one world. We've got one big problem and we'll all have to work on it. And what's beautiful and exciting about climate change is no one group can solve the problem...we all have to do it. This is a great unifier."*

### California Secretary for Environmental Protection

## Matt Rodriguez

*"Our AB 32 programs are all underway because we cannot wait. Californians are seeing the effects of climate change now in drought, wildfires and rising oceans. We realize we must reach beyond our state and international borders for partners to meet this challenge."*



## Mary D. Nichols

### Chairman of the California Air Resources Board

*"The reason for California's leadership role in the international arena is clear: the current efforts to reduce carbon emissions have moved from the national level to more vigorous advances to states, provinces and cities. These smaller jurisdictions are more nimble, but still large enough to establish meaningful models for the nations to follow."*



*California's cap-and-trade program is a key element of AB 32. It ensures that the state meets its greenhouse gas emissions targets at the lowest possible cost. California held its first carbon allowance auction in November 2012 and facilities began compliance on January 1, 2013.*

### Carbon Allowance Auctions

- Multiple layers of security ensure market integrity
- Sealed bids (visible only to state administrators) are placed electronically, online within a three hour bidding window
- Bids are fulfilled starting highest to lowest bid price. Price at which available allowances are exhausted determines settlement price for all bids
- Auction is evaluated by independent market monitor before results are certified
- Single registration system tracks all allowances, including those in the secondary market

### Offsets

- Offsets must be additional, real, verifiable, quantifiable, enforceable and permanent
- Offset projects must be under state-approved protocols only and verified by state accredited third-party verifiers
- Offsets can be used for no more than eight percent of compliance obligation

### Program Integrity

- Stringent mandatory emissions reporting
- Independent third-party verification of emissions and offsets
- Carbon price maintained through floor price and Cost Containment Reserve
- Multi-level security and follow-up for auction process
- Cradle-to-grave tracking of individual carbon allowances and offsets

## Greenhouse gases and air pollution are linked

Sources of greenhouse gas emissions and air pollution are the same. In many cases, the solutions to both problems are also the same. California is coordinating its approach to dealing with both problems, in order to minimize costs and maximize economic and public health benefits.

### Coordinated Planning Approach

- Simultaneous planning to meet both air quality and greenhouse gas targets:
  - Maximizes efficiency
  - Minimizes investment
  - Streamlines processes
  - Improves public health
- Coordinating with federal and local air quality agencies
- Sustainable Freight Plan (for heavy duty freight transportation) is under development and will be a key element of the coordinated approach

### Links between climate and air pollutants

- In California, transportation accounts for 38 percent of greenhouse gas emissions and is the major source of smog-forming emissions and toxic air pollution
- California has a goal to reduce greenhouse gas emissions from transportation to 80 percent below 1990 levels by 2050
- To meet federal air quality standards, California must also reduce NO<sub>x</sub> emissions (oxides of nitrogen) in many areas by 90 percent below today's levels by 2032
- Particulate matter, including black carbon, is both a toxic air pollutant and potent short-lived greenhouse gas

*California's climate change policies have been developed with significant public and stakeholder input to ensure that they deliver low-cost and real emission reductions, while protecting California businesses and delivering economic and public health benefits.*

## California's Global Warming Solutions Act

The Global Warming Solutions Act (AB 32) was signed into law in 2006. It requires California to reduce greenhouse gas emissions to 1990 levels by 2020. California is on its way to meet its emissions target, while continuing to grow its economy and improve public health. AB 32 includes more than 20 measures to reduce greenhouse gas emissions, including the following key programs:

### Advanced Clean Car Program



- Reduces smog-forming pollutants from new vehicles in 2025 by more than 75 percent from today's levels
- Reduces greenhouse gas emissions from new vehicles in 2025 by about 50 percent below today's average car
- Requires increasing sales of electric and fuel cell vehicles to 15 percent of new vehicles by 2025
- Saves Californians more than \$5 billion annually by 2025 and more than \$10 billion annually by 2030

### Renewables Portfolio Standard



- Requires utilities to provide 33 percent of electricity from renewable sources by 2020

### Low Carbon Fuel Standard



- Requires transportation fuel producers to reduce the carbon intensity of their product 10 percent by 2020, using a full life-cycle evaluation

### Cap & Trade



- Sets annually declining cap on overall greenhouse gas emissions
- Prices greenhouse gas emissions to encourage reductions and stimulate innovation
- Minimizes costs of meeting AB 32 emissions goal

# California's Cap-and-Trade Program

## Accurate reporting is the foundation of success

Stringent, accurate reporting is key to program's success. California required mandatory reporting of all greenhouse gas emissions in 2008 to establish a baseline. All reported emissions are verified by accredited independent verifiers and certified by the state. Failure to report in a complete and timely manner is subject to financial penalty. Reported emissions are posted publicly.

## The Cap

- Sets a hard limit on emissions of greenhouse gases in California
- Declines 2-3 percent each year through 2020
- Covers 85 percent of emissions in California
- Covers 600 facilities (those with emissions >25,000 metric tons of CO<sub>2</sub> per year)
- Natural gas and transportation fuels will be included in 2015

## Program Design

- Free allowances allocated annually, starting at 90 percent and declining through 2020
- Allocation is based in part on production efficiency (benchmarking)
- California auctions remaining allowances (quarterly)
- Reserve (floor) price maintains carbon price
- Cost Containment Reserve keeps compliance costs manageable
- Holding and purchase limits guard against market manipulation

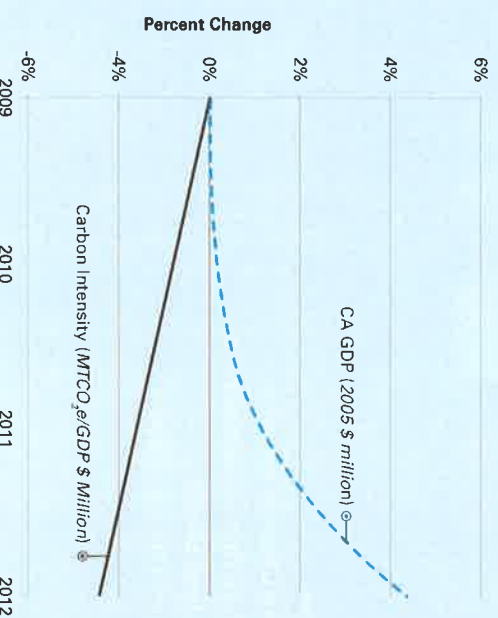
## Progress to Date

Inventory and mandatory reporting data show AB 32 programs are working as outlined in the AB 32 Scoping Plan. The data also shows a decoupling of economic growth from reduced carbon intensity, as well as reduced consumer costs (see figures below)

The first update to the Scoping Plan refines California's focus on the midterm, while building on the foundation of existing programs

- California has cut emissions of the short-lived climate pollutant ambient black carbon by 90 percent since 1960. The Scoping Plan update increases emphasis on such short-lived climate pollutants for more rapid GHG reductions
- California's energy efficiency rules have saved consumers \$74 billion since 1977; the Scoping Plan update provides guidance for integrated energy and efficiency planning which will lead to further consumer savings
- California produces twice as much economic value per kWh of electricity as the rest of the nation, and Californians pay the ninth lowest electric bills
- Today's vehicles are 99 percent cleaner than they were in 1975
- California's cap-and-trade program is now linked with that of Quebec and has provided hundreds of millions of dollars for investment in a low carbon future and environmentally disadvantaged communities
- California High Speed Rail project is designed as the backbone for statewide mass transit electrification

## 2009-2012 CA GDP & Carbon Intensity Trends



'Carbon Intensity,' the amount of carbon pollution related to the State's economy, has fallen steadily over the last three years. California is getting more economic growth for each ton of greenhouse gases emitted overall.

Source: DOF & 2012 GHG Inventory

# California's Approach to Climate Policy

*Reducing greenhouse gas emissions while growing California's economy and improving public health.*

## **AB 32 will leverage the fight against climate change to help**

- Protect human health
- Reduce use of fossil fuels
- Reduce air pollution
- Conserve natural resources
- Promote development and investment in clean industry and jobs
- Develop a growing and sustainable economy
- Create more vibrant cities

California's climate change policies are founded on sound data, stringent reporting requirements, and thorough measures to ensure market integrity and security. Through AB 32, California has developed a thoughtful approach to climate change policy that cuts greenhouse gas emissions and delivers economic and air quality benefits.

For more information,  
visit the ARB Climate Change website:  
[www.arb.ca.gov/cc/cc.htm](http://www.arb.ca.gov/cc/cc.htm) or contact the  
California Air Resources Board  
at [pio@arb.ca.gov](mailto:pio@arb.ca.gov) or (916) 322-2990.