AB 398: CALIFORNIA’S CAP-AND-TRADE EXTENSION BILL

Danny Cullenward  JD, PHD
Near Zero & Carnegie Institution for Science
www.ghgpolicy.org/about/

Sunflower Alliance Cap-and-Trade Forum
Oakland, CA  |  September 17, 2017
Figure 6: Framing the Path to 2050

AB 32
2020: back to 1990 levels
(Nuñez / Pavley, 2006)
431 MMtCO$_2$

SB 32
2030: 40% below 1990 levels
(Pavley / Garcia, 2016)
~259 MMtCO$_2$

Exec. Order S-3-05
Exec. Order B-30-15
2050: 80% below 1990 levels
(Gov. Schwarzenegger, 2005)
(Gov. Brown, 2015)
~86 MMtCO$_2$

Source: CARB Updated Scoping Plan (2014)
GHG emissions (million tons CO2e)

Source: ARB GHG Inventory
MY PERSONAL VIEWS

• Market-based climate policies are a great idea in theory.

• Although environmental justice concerns should be front and center in any discussion of climate policy, the solutions that work best for climate are not necessarily the same solutions that work for local air pollution.

• California needs every tool in the toolbox to reach its 2030 climate target, including a well-designed cap-and-trade program.

• AB 398 provides the legal authority for ARB to develop a cap-and-trade program that drives the state’s emission reductions goals and puts a meaningful price on carbon.

• How will ARB implement AB 398 and design its post-2020 market?
WHY WAS INDUSTRY’S VOICE SO LOUD?

Proposition 26 (2010):

• Any change in state statute which results in any taxpayer paying a higher tax must be imposed by an act passed by not less than two-thirds of all members elected to each of the two houses of the Legislature …

• As used in this section, "tax" means any levy, charge, or exaction of any kind imposed by the State, except the following …

—California Constitution Art. XIII A § 3
A GOOD PRIMER ON CAP-AND-TRADE

Legislative Analyst’s Office,
The 2017-18 Budget: Cap-and-Trade (February 2017)

http://www.lao.ca.gov/Publications/Report/3553
Carbon market price ($ per ton CO2)

Source: Cullenward and Coghlan (2016), *Electricity Journal*
KEY MARKET DESIGN ISSUES IN AB 398

- Offsets
- Oversupply
- Price ceiling
- Free allocation to industry
- Preemption of local regulation
- Cost containment
- Independent analysis
CARBON OFFSETS

Entity-level limits:

• 2013–20: 8%
  – All projects can be located in the U.S., Canada, or Mexico.

• 2021–25: 4%
  – With no more than half coming from projects that do not produce local benefits to California air or water quality.

• 2026–30: 6%
  – With no more than half coming from projects that do not produce local benefits to California air or water quality.
CARBON OFFSETS

• At the maximum 8% limit, offsets could deliver all of the reductions ARB expected from cap-and-trade through 2020 and 53% of the total reductions across ARB’s climate policy portfolio.

• In the first compliance period (2013-15), regulated entities submitted offsets equal to 4.4% of their emissions—about half of the maximum limit.

• Dr. Barbara Haya, California’s Carbon Offsets Program – The Offsets Limit Explained, available at http://beci.berkeley.edu/barbara-haya/.
LAO (2017):
“The cap is likely not having much, if any, effect on overall emissions in the first several years of the program.”
Source: Cullenward (2017), Hot air and carbon offsets in California (units: MMtCO2e)
MANAGING OVERSUPPLY

July 3 negotiating text:

• Analyze the reductions necessary to meet the 2030 greenhouse gas emissions reduction goal and the extent to which allowances from 2013 through 2020 exceeds emissions for that period, and reduce 2021 to 2030 annual allowance budgets accordingly.

Final AB 398 text (Cal. H&S Code § 38562(c)(2)(D)):

• Evaluate and address concerns related to overallocation in the state board’s determination of the number of available allowances for years 2021 to 2030, inclusive, as appropriate.

Source: Debra Kahn, E&E ClimateWire (July 10, 2017)
PRICE CONTAINMENT POINTS

• Under AB 398, two-thirds of the ~120 million allowances currently in the Allowance Price Containment Reserve (APCR) will be sent to two “price containment points.”

• Under AB 398, ARB must make these two ~40 million allowance supplies available at future auctions at specified prices.

• Good for cost containment: extra allowances buffer future price increases.
  - These used to be called “speed bumps” in legislative negotiations; that’s a useful name because it describes their function.

• Bad for oversupply: extra allowances allow extra emissions on a 1:1 basis.
The current market has a “soft” price ceiling—the Allowance Price Containment Reserve (APCR)—which is filled with a limited number of allowances from under the cap.

If the APCR is depleted, then prices have no upper limit.

AB 398 requires ARB to set a “hard” price ceiling—a price at which ARB will offer unlimited allowances at a specified price in each auction.

AB 398 provides multiple conflicting factors for ARB to consider in setting a hard price ceiling level. A high price ceiling is (in my view) a good balance of interests, but a low price ceiling won’t deliver the emission reductions California needs. It is very difficult to determine what level is needed.
FREE ALLOCATION TO INDUSTRY

• A significant carbon price can create economic competitiveness issues because only companies subject to the price face higher production costs.

• Higher costs can cause regulated companies to lose market share to outside competitors. The result is emissions “leakage”—emissions go down in the state, but up outside the state (same with jobs and economic growth).

• One approach to managing this problem is a border carbon adjustment, which applies the carbon price to imports to create a level playing field.

• A more common approach is to give free allowances to affected industries. In theory this doesn’t change the carbon price or discourage pollution reductions, but it does protect recipients from competitiveness effects.
FREE ALLOCATION TO INDUSTRY

• ARB classifies industries as facing high, medium, or low leakage risks. High risk firms receive more generous treatment, and vice versa.

• The oil and gas industry is the biggest recipient of free allocation, receiving two-thirds of all free allowances. In 2017, 46% of leakage protection went to refiners, and 21% to oil and gas producers—about 67% total for oil and gas.

• Only one-third of all free allowances given to industry go to manufacturers, agricultural producers, and other “charismatic” trade-exposed industries.

Source: CARB (2017), Public Data on Allowance Allocation
FREE ALLOCATION TO INDUSTRY

• A complex formula determines the level of free allocation each industry receives. One of the terms is an “industry assistance factor”.

• ARB staff had earlier proposed reducing the industry assistance factors over time, but AB 398 requires them to stay at 100% through 2030. This is a big change. For example, ARB staff had proposed reducing the industry assistance factor for refining down to 44% in 2021.

California Health & Safety Code § 38592.5:

• (a) (1) No later than January 1, 2018, the state board shall update the scoping plan … to achieve the greenhouse gas emissions reductions required [for the 2030 target]. The state board shall designate the [cap-and-trade program] as the rule for petroleum refineries and oil and gas production facilities to achieve their greenhouse gas emissions reductions.

• (2) All greenhouse gas rules and regulations adopted by the state board shall be consistent with the updated scoping plan.

Exceptions: methane and fugitive emissions; Advanced Clean Cars; Low Carbon Fuel Standard; Short-Lived Climate Pollutants; sustainable freight.
PREEMPTION – LOCAL REGULATIONS

California Health & Safety Code § 38594:

- A district shall not adopt or implement an emission reduction rule for carbon dioxide from stationary sources that are also subject to a market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562.

Exceptions: measures pursued for “purposes other than to reduce” CO₂ from sources subject to cap-and-trade; measures for landfills, refrigerants, natural gas or methane, VOCs, or U.S. Clean Air Act compliance; implementation of the sustainable communities act (SB 375); CEQA compliance.
COST CONTAINMENT

For industry:

• Offsets
• Price containment points
• Oversupply
• Free allocation
• Electric and natural gas utility rebates

For consumers:

• Electric and natural gas utility rebates
INDEPENDENT ANALYSIS

• Annual reporting from the Legislative Analyst’s Office (LAO).

• A new Independent Emissions Market Advisory Committee, with annual public meetings and annual reporting to ARB and the Legislature:
  – Three appointees from the Governor.
  – One appointee from the Assembly.
  – One appointee from the Senate.
  – Participation from the LAO.
KEY TAKEAWAYS

- AB 398 extends California’s cap-and-trade program. Unlike AB 32, AB 398 requires ARB to implement specific program design features.

- AB 398 lowers carbon offset limits. Nevertheless, offsets could provide a significant share of reductions under the cap-and-trade program.

- The market is oversupplied. ARB has the tools to address this issue.

- ARB continues to rely mostly on regulations to pursue its climate goals. Unfortunately, several of ARB’s programs face serious legal uncertainty under the Trump Administration.

- A well-designed cap-and-trade market will likely be essential in order for California to meet its 2030 goals.
THANKS!

QUESTIONS?

Danny Cullenward  JD, PhD
Near Zero & Carnegie Institution for Science
dcullenward@nearzero.org
www.ghgpolicy.org/about/
Figure II-1. 2030 Target Scoping Plan Reference Scenario

Source: ARB Proposed Scoping Plan (2017)
Figure II-1. 2030 Target Scoping Plan Reference Scenario

Source: ARB Proposed Scoping Plan (2017)
Figure II-2. Proposed Scoping Plan Scenario – Estimated Cumulative GHG Reductions by Measure (2021–2030)

- **Cap and trade**
  - Proposed Scoping Plan Scenario: 191 MMTCO$_2$e
  - Uncertainty Scenario: 342 MMTCO$_2$e

- **SLCP**
  - Proposed Scoping Plan Scenario: 217 MMTCO$_2$e
  - Uncertainty Scenario: 338 MMTCO$_2$e

- **Mobile Sources CFT and Freight**
  - Proposed Scoping Plan Scenario: 67 MMTCO$_2$e
  - Uncertainty Scenario: 54 MMTCO$_2$e

- **Energy efficiency (Res, Com., Ind. Ag. & TCU)**
  - Proposed Scoping Plan Scenario: 88 MMTCO$_2$e
  - Uncertainty Scenario: 30 MMTCO$_2$e

- **50% RPS**
  - Proposed Scoping Plan Scenario: 25 MMTCO$_2$e
  - Uncertainty Scenario: 9 MMTCO$_2$e

- **Refinery (20% reduction)**
  - Proposed Scoping Plan Scenario: 30 MMTCO$_2$e
  - Uncertainty Scenario: 30 MMTCO$_2$e

- **Low Carbon Fuel Standard (18%)**
  - Proposed Scoping Plan Scenario: 9 MMTCO$_2$e
  - Uncertainty Scenario: 9 MMTCO$_2$e

- **Demand response and flexible loads**
  - Proposed Scoping Plan Scenario: 30 MMTCO$_2$e
  - Uncertainty Scenario: 25 MMTCO$_2$e

* Total non Cap-and-Trade Measures