JOINT LEGISLATIVE COMMITTEE ON CLIMATE CHANGE POLICIES

ASSEMBLYMEMBER EDUARDO GARCIA, CHAIR
SENATOR HENRY STERN, VICE CHAIR

INFORMATIONAL HEARING:

CAP AND TRADE
MAY 24, 2018
9:30-11:30AM
STATE CAPITOL ROOM 437

BACKGROUND ON CAP AND TRADE

The Global Warming Solutions Act of 2006 (AB 32, Núñez/Pavley) authorized the State Air Resources Board (ARB) to utilize market-based compliance mechanisms to meet the 2020 target. ARB identified cap and trade as that mechanism in the first Scoping Plan in 2008, and completed the regulatory process to establish the program in 2010.

Under the current Cap-and-Trade Program, covered sectors are given a limit on how much they can pollute (the "cap"). An "allowance" is the amount of permissible pollution from covered entities. One allowance is one metric ton of carbon dioxide equivalent. ARB issues allowances equal to the cap, and decreases the supply of allowances by 3% annually. ARB allocates free allowances to entities in sectors that need to prevent leakage, assistance with transition, or to manage consumer costs. Covered entities are allowed to buy additional credits through quarterly, ARB-managed auctions. The first auction occurred on November 14, 2012. The proceeds from those auctions are deposited into the Greenhouse Gas Reduction Fund. As of August 2017 the Legislature has appropriated $6.1 billion from the state's Greenhouse Gas Reduction Fund.

ARB pulls out a small amount of allowances under the cap into the "Allowance Price Containment Reserve" (APCR) as a cost containment mechanism when allowance prices are high or are expected to be high in the future. Increasing the supply of allowances available for sale will reduce the cost of each allowance to participating entities. A price floor, otherwise known as the Auction Reserve Price, is the minimum price that can be paid for an allowance at ARB's quarterly auctions. ARB's price floor at the first auction in November 2012 began at $10 per metric ton. The price floor is increased 5% each year (plus inflation). The current price floor is $14.53 per metric ton.

Covered entities can also trade allowances though a secondary market outside of ARB's auction or bank allowances to protect against shortages or higher prices in the future. There are limits to how many allowances a covered or voluntary entity can bank for future use. Covered entities can also purchase offset credits to be used for up to 8% of their compliance obligation. An offset credit, like an allowance, represents one metric ton of carbon dioxide equivalent. Offsets are generated by emissions-reducing or carbon-sequestering activities not covered by the Cap-and-Trade Program. Revenue for offsets goes toward the eligible projects, and is not a part of the Greenhouse Gas Reduction Fund.

IMPLEMENTATION OF AB 398

AB 398 (E. Garcia, 2017) authorized ARB to continue the Cap-and-Trade Program until 2030 with several key changes to the way the program operates post-2020:

- Establish a price ceiling and two price containment points
- Evaluate and address concerns related to overallocation of allowances in the market
- Require no less than half of all offset credits surrendered to deliver "direct environmental benefit" and lower the percentage of the entire compliance obligation that can be met with offset credits to 4% between 2021-2025 and 6% between 2026-2030
- Increase industry assistance factors
- Establish allowance banking rules
- Establish the Compliance Offsets Protocol Task Force
- Finalize the 2030 Target Scoping Plan by January 1, 2018

AB 398 further directed the California Environmental Protection Agency to convene an Independent Emissions Market Advisory Committee to report on the environmental and economic performance of the regulation and other relevant climate policies.

ARB adopted the 2030 Target Scoping Plan on December 14, 2017. The Plan identified that 236 million metric tons of carbon dioxide equivalent (MMTCO2e) of the cumulative reductions needed to achieve the 2030 target would come from the Cap-and-Trade Program. Analyzed another way, the Cap-and-Trade Program will account for 46.5% or 60 MMTCO2e of the annual reductions needed in 2030 to reach the mandate established by SB 32 (Pavley, 2016) – the most reductions California has put on the program since it was established.

ARB has conducted nine public workshops on the post-2020 program since 2016, recently releasing a preliminary discussion draft and two other discussion documents detailing staff considerations for AB 398 implementation.[1] While several issues have been covered in those documents and workshop discussions, this hearing will focus on potential allowance oversupply and defining "direct environmental benefit" related to offset usage post-2020.

ALLOWANCE OVERSUPPLY

When ARB developed the first cap and trade regulation in 2010, staff and stakeholders engaged in a robust discussion about setting the cap to ensure an appropriate level of market stringency. Referenced in Appendix E: Setting the Program Emissions Cap,[2] ARB staff outlined their final approach to striking the right balance between setting the cap too high (resulting in low costs and potentially insufficient emissions reductions) and setting the cap too low (resulting in higher costs for compliance). High costs after 2020 are designed to be contained within California's program by two price containment points and a price ceiling pursuant to AB 398, making the discussion about revisions to the cap for the 2030 target a distinct policy discussion about market stringency and the ability of California to meet our ambitious climate targets.

[1] California Air Resources Board, "Cap-and-Trade Regulation Public Meetings," available at https://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm

[2] California Air Resources Board, "Appendix E: Setting the Program Emissions Cap," available at https://www.arb.ca.gov/regact/2010/capandtrade10/capv3appe.pdf

In 2010, ARB staff used mandated reporting data to calculate historic emissions trends from covered sectors, and then projected that historical trend forward to establish the business as usual scenario. The staff analysis referenced the over-allocation issue in the European Union's emissions trading scheme, citing the lack of accurate emissions data as a key reason the covered emissions were overestimated and too many allowances were issued in that program. As ARB stated in their 2010 analysis:

> *In 2007. ARB put in place a mandatory reporting program to provide accurate greenhouse gas emissions data for the sources that will be covered in the first compliance period of the cap-and-trade program. The data gathered through this program will help ensure that the over-allocation issue is not repeated in the California context.*[3]

In 2018, however, staff is using the PATHWAYS model to estimate covered emissions by subtracting the projected emissions of the known commitments from the business as usual scenario for 2021-2030. External analysis replicated the process ARB used in 2010 and found that the business as usual estimate ARB is currently using is approximately 34.8 MMT higher each year than the mandated reporting data would indicate; that annual difference could result in 277 MMT cumulatively between 2021 and 2030.[4]

Further analysis from ARB assumes that the current rate of offset usage (approximately 4% of the compliance obligation) continues until 2030 and that the price containment points and price ceiling are not reached (thus not releasing the additional allowances reserved for those mechanisms). Through that analysis, ARB concludes that – even with a potential 150 MMT allowances in oversupply, which is a conservative estimate when compared to the conclusions of external groups – that the program would achieve its share of the 2030 target. Corrections to ARB's estimate of covered emissions described above, however, show that the program may not achieve the 236 MMT of cumulative emissions reductions called for in the 2030 Target Scoping Plan. Further, no staff analysis has been done on what impacts the combined use of those price containment mechanisms, banking, projected allowance oversupply, and offset credits could have on the annual target set in SB 32.

Table 1: Correction to ARB's Cumulative Overallocation Analysis, 2021-2030

	Case A (MMT)	Case B (MMT)
Covered emissions without Program (ARB projection)	3,054	3,054
Correction to covered emissions estimate (Near Zero projection)	-277	-277
Corrected covered emissions without Program	**2,777**	**2,777**
Post-2020 allowances (without reserve – ARB projection)	2,532	2,532
Unused allowances at end of 2020 (ARB projection)	0	150
Offset credit usage (ARB projection)	96	103
Total compliance instruments (ARB projection)	2,628	2,785
Cumulative reductions from Cap-and-Trade Program	**149**	**-8**

Source: http://www.nearzero.org/wp/2018/05/07/ready-fire-aim-arbs-overallocation-report-misses-its-target/

AB 398, at Health and Safety Code Section 38562(c)(2)(D), requires ARB to "evaluate and address concerns related to over-allocation" of allowances. A number of groups – including Energy Innovation,[5]

[3] California Air Resources Board, "Appendix E: Setting the Program Emissions Cap," available at https://www.arb.ca.gov/regact/2010/capandtrade10/capv3appe.pdf; quote from page E-8

[4] Near Zero, "Ready, fire, aim: ARB's overallocation report misses its target," available at http://www.nearzero.org/wp/2018/05/07/ready-fire-aim-arbs-overallocation-report-misses-its-target/

[5] Energy Innovation, "Oversupply Grows in the Western Climate Initiative Carbon Market: An adjustment for current oversupply is needed to ensure the program will achieve its 2030 target," available at http://energyinnovation.org/wp-content/uploads/2018/02/WCI-oversupply-grows-February-update.pdf

the independent Environmental Commissioner of Ontario,[6] and the Legislative Analyst's Office[7] – have concluded that the issue of allowance oversupply is significant and should be addressed.

While ARB has stated that removing allowances or lowering the cap to account for additional allowances would penalize entities who did more than was necessary to reduce emissions by raising the costs of compliance, other carbon markets adjust the cap in their programs to account for banked allowances. The Regional Greenhouse Gas Initiative (RGGI) covering Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont includes two interim adjustments to the program's cap to account for banked allowances accumulated in the first and second compliance periods.[8] The European Union's emissions trading scheme is also proposing to adjust the number of allowances available at auction in an effort to address market imbalance.[9] Further, while California is on track to reach the 2020 emissions target established per AB 32, reductions so far are largely believed to be attributed to the economic decline that started in 2008 and on decarbonizing efforts in the electricity sector – not necessarily to actions related to compliance with the Cap-and-Trade Program.

DEFINING "DIRECT ENVIRONMENTAL BENEFIT"

There are currently six categories of offsets: Ozone Depleting Substances Projects (ODS), Livestock Projects, U.S. Forest Projects, Urban Forest Projects, Mine Methane Capture Projects (MMC), and Rice Cultivation Projects. All eligible offsets projects must be implemented to the standards of Board-approved protocols with annual reporting and third-party verification. ARB does not set prices for offsets or sell them directly; all offset pricing and trading is done through bilateral contracts between regulated entities.

Table 2: ARB Offsets Credits Issued (as of May 9, 2018)

Project Type	ODS	Livestock	U.S. Forest	Urban Forest	MMC	Rice Cultivation
Compliance	10,349,937	2,916,061	72,240,465	--	2,203,737	--
Early Action	6,336,710	1,695,029	13,276,494	--	2,879,684	--

Source: https://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm

AB 398, at Health and Safety Code Section 38562(c)(2)(E), requires that no more than half of the offsets used in the post-2020 period come from projects that do not create a direct environmental benefit in California. The statute defined "direct environmental benefits" as "the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of any pollutant that could have an adverse impact on waters of the state." AB 398 further directed ARB to work with the Compliance Offsets Protocol Task Force to develop approaches to increase offset projects in the state.

In their most recent documents, ARB is proposing that any project in the state automatically qualify as a direct environmental benefit, regardless of whether there is a benefit outside of reductions in greenhouse gases. For projects located outside of the state, ARB staff is proposing to allow project developers to propose their own criteria and standards to justify if a direct environmental benefit exists; ARB staff has

[6] Environmental Commissioner of Ontario, "Ontario's Climate Act: From Plan to Progress," available at https://eco.on.ca/reports/2017-from-plan-to-progress/

[7] Legislative Analyst's Office, "Cap-and-Trade Extension: Issues for Legislative Oversight," available at http://lao.ca.gov/Publications/Report/3719

[8] The Regional Greenhouse Gas Initiative, more information available at https://www.rggi.org/program-overview-and-design/elements

[9] European Union Emissions Trading System, "Market Stability Reserve," more information available at https://ec.europa.eu/clima/policies/ets/reform_en

not proposed any limits to this process and have not ruled out the possibility that an offset project might claim to establish a direct environmental benefit solely based on the greenhouse gas reductions it generates onsite. Offset projects do not generate net greenhouse gas reductions because project-level gains are zeroed out when regulated companies use the associated offset credits to increase their own emissions, resulting in no direct environmental benefit outside of potential air quality or water quality impacts.

Materials posted for the April 26, 2018 workshop showed that ARB staff was considering allowing all offset credits issued before the passage of AB 398 to be considered as direct environmental benefits. This proposal is in response to some stakeholder concerns that investments in credits that they planned to use for compliance after 2020 might not be able to be used to the extent that was anticipated. However, until AB 398 was signed into law ARB did not have authority to carry forward the Cap-and-Trade Program to 2030, so any private investments in offset credits were made without direction from ARB or the Legislature. Previously issued credits that do not earn a direct environmental benefit certification once the regulation is finalized can still be used for compliance purposes in the program, but compliance entities may have to secure additional credits that meet the definition of direct environmental benefit to meet the requirements of AB 398.

DISCUSSION QUESTIONS

ARB plans to bring the 2021-2030 regulation before the Board before the end of the year. This hearing is an opportunity to understand what key questions ARB and stakeholders are working to answer regarding allowance oversupply and "direct environmental benefit," and to discuss potential considerations to inform the regulatory process as it progresses. Since this is an ongoing regulatory process ARB will not be able to commit to any outcomes in the final regulation at this time.

Potential questions for the panel:

a) What evidence exists that the Cap-and-Trade Program has reduced emissions to date? Has ARB studied the impact the "Great Recession of 2008" had on statewide emissions?
b) What is ARB's current thinking on the potential oversupply of allowances in the market? How many allowances are in circulation right now? What external studies has ARB consulted in the staff analysis of this issue? Why does the current cap setting analysis differ from the analyses done in 2010?
c) What are your thoughts on defining "direct environmental benefit" for offsets? How can the state account for the compliance credits issued when determining any additional "benefit" to California communities? How should pre-2021 offsets be processed into this new system?