

COMMITTEE ON
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BUDGET SUBCOMMITTEE
NO. 2 ON RESOURCES,
ENVIRONMENTAL
PROTECTION, ENERGY AND
TRANSPORTATION

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CALIFORNIA STATE SENATE

Bob Wieckowski, Chair

**JOINT OVERSIGHT HEARING OF THE
SENATE ENVIRONMENTAL QUALITY COMMITTEE
AND
SENATE BUDGET SUBCOMMITTEE NO. 2 ON RESOURCES,
ENVIRONMENTAL PROTECTION, ENERGY AND TRANSPORTATION**

Wednesday, January 17, 2018
California State Capitol, Room 3191
9:30 a.m.

**California's Cap-and-Trade Program:
The Air Resources Board's 2017 Scoping Plan**

BACKGROUND INFORMATION

Introduction

In 2006, AB 32 (Núñez and Pavley, Chapter 488, Statutes of 2006) was signed into law, which requires the Air Resources Board (ARB) to determine the 1990 statewide greenhouse gas (GHG) emission level and achieve a reduction in GHG emissions to that level by 2020. In addition to calling on ARB to inventory GHGs in California (including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons,

perfluorocarbons, and sulfur hexafluoride) and approve the aforementioned statewide GHG emissions limit, AB 32 also requires ARB to (1) implement regulations that achieve the maximum technologically feasible and cost-effective reduction of GHG emissions, (2) identify and adopt regulations for discrete early-action measures, and (3) prepare and approve a scoping plan, to be updated at least once every five years, to achieve the maximum technologically feasible and cost-effective reduction of GHG emissions. Due to a variety of factors, most importantly being the great recession that started in 2008, California will achieve the goals of AB 32 in advance of the 2020 deadline.

In 2016, the Legislature approved, and the Governor signed, SB 32 (Pavley, Chapter 249, Statutes of 2016), which requires ARB to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by December 31, 2030. This new goal is known as the SB 32 target.

The following year, AB 398 (E. Garcia, Chapter 135, Statutes of 2017) was enacted to extend the authority of ARB to implement a cap-and-trade program to reduce GHG emissions throughout the state. AB 398 specified a variety of requirements on the post-2020 cap-and-trade program, most notable are (1) requiring the banking of allowances from the current cap-and-trade program into the post-2020 program, (2) specifying industry assistance factors for the post-2020 program, and (3) **requiring that all GHG rules and regulations adopted by ARB must be consistent with the updated scoping plan.**

2017 Scoping Plan Update

The initial scoping plan prepared pursuant to AB 32 was approved by ARB on December 12, 2008. Public Resources Code §38561 also requires the scoping plan to be updated at least once every five years and the initial scoping plan was updated and approved on May 22, 2014.

AB 398 required ARB to subsequently prepare another update to the scoping plan by January 1, 2018. This update was approved by ARB on December 14, 2017.

Low Carbon Fuels Standard

The scoping plan must achieve “the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions.” There are aspects of the 2017 Scoping Plan, however, that arguably do not meet this requirement. For example, groups like NextGen California have argued that the Low Carbon Fuels Standard, which reduces the Carbon Intensity (CI) of fuels in California, has an “excessively conservative” target of an 18% reduction in CI. According to NextGen, ARB has not provided evidence that a higher CI target is unattainable and “a higher price would send a strong market signal to incentivize innovative clean technology and maximize the climate, air quality and economic development benefits to California.”

Allowances and Banking

There is also no discussion of the oversupply and banking of allowances in the cap-and-trade program in the 2017 Scoping Plan. The Brattle Group, CalCarbonInfo, and other analysts agree that supply of allowances has significantly exceeded demand and will likely continue to do so past 2020. The Legislative Analyst’s Office recently published a report that finds “since entities can use banked allowances from earlier years to comply in later years ... banking creates a risk of not achieving [the SB 32 target].” Chris Busch from Energy Innovation recently published a report that found the oversupply of allowances in the program will allow covered entities to forego 26% of WCI¹-wide emissions reductions in the lowest possible scenario of allowance oversupply. In the highest possible scenario of allowance oversupply, that number increases to 45%. This would seem to contradict the requirement that the scoping plan achieve the maximum technologically feasible and cost-effective reductions in GHG emissions by allowing under-compliance with the SB 32 target through an oversupply of allowances in the cap-and-trade program.

¹ The Western Climate Initiative (WCI) is a non-profit corporation formed to provide administrative and technical services to support the implementation of state and provincial GHG emissions trading programs. Currently the WCI includes the State of California and the Canadian provinces of Quebec and Ontario.

Industry Assistance Factors

Given that the 2017 Scoping Plan fails to pursue maximal GHG emissions reductions, it is notable that ARB has proposed to adjust the industry assistance factors for the third compliance period of the current cap-and-trade program (i.e., pre-2020). It is important to note that while AB 398 specified the industry assistance factors ARB must use post-2020, the legislation gave no statutory direction to ARB to adjust those factors pre-2020 and doing so would forego even more GHG emissions reductions. This means that GHG emissions reductions ARB determined to be technologically feasible and cost-effective, and would minimize leakage, are now being sacrificed. This could unnecessarily make progress toward the SB 32 target further out of reach.

Future Action Assumptions in the 2017 Scoping Plan

The 2017 Scoping Plan contains assumptions about Legislative action, both policy and fiscal, as well as technological advances. For example, the 2017 Scoping Plan assumes that cap-and-trade auction revenues will be deposited into the Greenhouse Gas Reduction Fund (GGRF) and will be used to further the purposes of AB 32 and facilitate reduction of GHG emissions. However, neither ARB nor the current Legislature can predict or bind the spending decisions and priorities of a future Legislature and a future Legislature may choose to spend cap-and-trade auction revenues in a way that is not outlined in their scoping plans.

Indeed, there is significant legal question as to whether the cap-and-trade revenues in the 2020-2030 timeframe are bound by the same spending requirements as the current cap-and-trade program revenue. In order to ensure compliance with the SB 32 target, ARB should have contingency plans if those investments are not made, and possibly should not rely on such assumptions in their scoping plans at all.

On the policy level, grid regionalization² could deliver GHG emissions reductions benefits, but achieving grid regionalization is another assumption in the 2017

² Grid regionalization refers to combining the energy markets of several western states. Doing so could allow excess solar energy produced during the day in California to be exported out of state, or

Scoping Plan that requires action by the Legislatures and Governors of several states. What makes this assumption even more suspect is that all indications are that other states are unwilling to partner with California due to, among other things, ideological differences over climate change policies and the impacts those policies have on the energy sector.

It is seemingly an overly ambitious assumption in the 2017 Scoping Plan that there will be more than a 45% decrease in fossil fuel demand for transportation by 2030. *If these, and other, assumptions in ARB's current and future scoping plans do not come to pass, where does that leave the state in its progress toward the SB 32 target?*

Perhaps equally as important to answer is what, if any, retrospective analyses on previous scoping plans ARB has done to determine where the modeling and assumptions in those plans have not been accurate, where programs in those plans have under- or over-performed on GHG emissions reductions, and where there may be any systematic biases or patterns where such forecasts turned out to be incorrect. Without this knowledge, the state is in jeopardy of not achieving the SB 32 target.

Why California Puts a Price on Carbon

Unpriced carbon dioxide, and other greenhouse gas, emissions are what economists call an “externality,” meaning GHGs are a side effect or consequence of an industrial or commercial activity that affects other parties without this being reflected in the cost of the goods or services involved. A price on GHG emissions forces the true cost of the emissions (whether in regard to climate change, public health, etc.) to be realized by the industry and the consumer creating the climate pollution.

One quantification for the externality of carbon dioxide emissions is the Social Cost of Carbon (SCC). The SCC is a price tag for the long-term damage done by a ton of carbon dioxide emissions in a given year. This dollar figure also includes the value of damages avoided for emission reductions.

excess wind energy produced at night in Wyoming to be shipped into California, potentially reducing the need for fossil-fuel-based energy.

The SCC is meant to be a comprehensive estimate of climate change damages and includes changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning. However, there is no consensus yet on what should be accounted for in the SCC.

Despite this, under the previous administration, the federal Environmental Protection Agency (EPA) and other federal agencies have made estimates for the SCC that they use to determine the climate impacts of rulemakings.

Estimates for the SCC increase over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater climatic change, and because the gross domestic product (GDP) is growing over time and many damage categories are modeled as proportional to gross GDP.

Below are SCC estimates previously published by the federal EPA. The discount rate in the columns can be thought of as the interest rate for the cost of the impacts from carbon dioxide. There is a lack of consensus in the scientific community on the appropriate discount rate, which changes the SCC greatly.

Discount Rate and SCC			
Year	5%	3%	2.5%
2015	\$11	\$36	\$56
2020	\$12	\$42	\$62
2025	\$14	\$46	\$68
2030	\$16	\$50	\$73
2035	\$18	\$55	\$78
2040	\$21	\$60	\$84
2045	\$23	\$64	\$89
2050	\$26	\$69	\$95

The federal EPA does not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages, and because the science incorporated into these models naturally lags behind the most recent research.

Of note, the SCC is not necessarily an appropriate dollar figure to use for the cost of other GHGs, such as methane and nitrous oxide.

In addition to the SCC, the 2017 Scoping Plan discusses, as required by AB 398, the Social Cost of methane, minimum auction prices, and the cost to achieve the SB 32 target. Extending the cap-and-trade program was recommended in the initial scoping plan as the most cost-effective strategy to achieving the SB 32 target.

Cap-and-Trade

The original cap-and-trade program was recommended in the initial scoping plan as a central approach to flexibly and iteratively reduce emissions over time. Pursuant to legal authority under AB 32, ARB adopted cap-and-trade regulations and those regulations were approved on December 13, 2011.

Beginning on January 1, 2013, the cap-and-trade regulation sets a firm, declining cap on total GHG emissions from sources that make up approximately 85% of all statewide GHG emissions. Sources included under the cap are termed “covered entities.” The cap is enforced by requiring each covered entity to surrender one “compliance instrument” for every emissions unit (i.e., metric ton of carbon dioxide equivalent or MTCO_{2e}) that it emits at the end of a compliance period.

Over time, the cap declines, resulting in GHG emission reductions. Two forms of compliance instruments are used: allowances and offsets. Allowances are generated by the state in an amount equal to the cap and may be “banked” (i.e., allowing current allowances to be used for future compliance). An offset is a credit for a real, verified, permanent, and enforceable emission reduction project from a source outside a capped sector (e.g., a certified carbon-storing forestry project). Some fraction of allowances are allocated freely to covered entities, a small portion is set aside as part of an allowance price-containment reserve, and the rest is auctioned off quarterly.

Offsets and freely allocated allowances have been controversial and have been criticized for reducing the effectiveness of the cap-and-trade mechanism in achieving AB 32 goals. While covered entities have argued that all of the allowances should be

free, others have argued that emitters should be required to pay for polluting California's air and the global climate.

Offsets, such as carbon sequestration in trees, reduce the cost of compliance, which may reduce the effectiveness of cap-and-trade. Although offsets are capped and must meet the condition of additionality (i.e., a reduction is only additional if it would not have occurred without the financial incentive provided by the offset credit), critics often cite that the carbon sequestered in trees is not permanently sequestered and can be easily released in forest fires, so reforestation is an invalid application of additionality.

Use of Cap-and-Trade Auction Revenue

Since November 2012, ARB has conducted eight California-only and 13 joint California-Québec cap-and-trade auctions. To date, \$6.45 billion has been generated by the cap-and-trade auctions and deposited into the GGRF.

State law specifies that the auction revenues must be used to facilitate the achievement of measurable GHG emissions reductions and outlines various categories of allowable expenditures. Statute further requires the Department of Finance, in consultation with ARB and any other relevant state agency, to develop a three-year investment plan for the auction proceeds, which are deposited in the GGRF. ARB is required to develop guidance for administering agencies on reporting and quantifying methodologies for programs and projects funded through the GGRF to ensure the investments further the regulatory purposes of AB 32.

Proceeds from cap-and-trade auctions provide an opportunity for the state to invest in projects that help California achieve its climate goals and provide benefits to disadvantaged communities. Several bills in 2012, one in 2014, and one in 2016 provide legislative direction for the expenditure of auction proceeds including SB 535 (de León, Chapter 830, Statutes of 2012), AB 1532 (J. Pérez, Chapter 807, Statutes of 2012), SB 1018 (Committee on Budget and Fiscal Review, Chapter 39, Statutes of 2012), SB 862 (Committee on Budget and Fiscal Review, Chapter 36, Statutes of 2014), and AB 1550 (Gomez, Chapter 369, Statutes of 2016).

These statutes also require a state agency, prior to expending any money appropriated to it by the Legislature from the fund, to prepare a description of 1) proposed expenditures, 2) how they will further the regulatory purposes of AB 32, 3) how they will achieve specified GHG emission reductions, 4) how the agency considered other objectives of that act, and 5) how the agency will document expenditure results.

Legal Consideration of Cap-and-Trade Auction Revenue

Regulatory fees established prior to 2010 (due to Proposition 26) are subject to the *Sinclair Paint* test, which helps determine whether a levy is a fee or a tax.

Sinclair Paint Co. v. State Board of Equalization, 15 Cal. 4th 866 (1997) considered the legitimacy of a fee levied to support the implementation of the Childhood Lead Poisoning Prevention Act, which provided evaluation, screening, and medical follow-up services to children at risk of lead poisoning. The program was entirely supported by fees imposed on former and current manufacturers of lead or products containing lead, based on the manufacturers “market share” responsibility for the contamination. The California Supreme Court in *Sinclair Paint* found that a levy is a legitimate fee as long as the revenue of the levy does not exceed the costs of the regulatory activity and the levy is not imposed for an unrelated revenue purpose, and the levy allocated to the payer bears a fair or reasonable relationship to the payer’s burdens on or benefits from the regulatory activity.

The *Sinclair Paint* test is a two-part test: 1) nexus and 2) proportionality. The *Sinclair Paint* test nexus component, which is derived from the case above, requires that a clear nexus must exist between an activity for which a fee is used and the adverse effects related to the activity on which that fee is levied. The *Sinclair Paint* test proportionality component, also derived from the case above, requires those burdened with a fee proportionally benefit from the fee.

The 2012-13 Budget analysis of cap-and-trade auction revenue by the Legislative Analyst’s Office (LAO) noted that, based on an opinion from the Office of Legislative Counsel, the auction revenues should be considered “mitigation” fee revenues, subject to the *Sinclair Paint* test. The LAO concluded, based on the opinion, that in order for their use to be valid as mitigation fees, revenues from the

cap-and-trade auction must be used to mitigate GHG emissions or the harms caused by GHG emissions.

In 2012, the California Chamber of Commerce filed a lawsuit against ARB claiming that cap-and-trade auction revenues constitute illegal tax revenue. In November 2013, a Sacramento Superior Court ruling declined to hold the auction a tax, concluding that it is more akin to a regulatory fee.

In February of 2014, the plaintiffs filed an appeal with the 3rd District Court of Appeal in Sacramento. Arguments were heard before the appellate court in January of 2017. On April 6, 2017, the appellate court issued a ruling that again declined to hold that the cap-and-trade auctions are a tax.

3rd District Court of Appeal Ruling

The appellate court ruled that ARB did not exceed its authority in creating the cap-and-trade program, stating that “the Legislature gave broad discretion to the Board to design a distribution system, and a system including the auction of some allowances did not exceed the scope of legislative delegation. Further, the Legislature later ratified the auction system by specifying how to use the proceeds derived therefrom.”

The appellate court also stated clearly “that the auction sales do not equate to a tax” explaining that “the hallmarks of a tax are: 1) that it is compulsory; and 2) that the payor receives nothing of particular value for payment of the tax, that is, the payor receives nothing of specific value for the tax itself. Contrary to plaintiffs’ view, the purchase of allowances is a voluntary decision driven by business judgments as to whether it is more beneficial to the company to make the purchase than to reduce emissions ... these twin aspects of the auction system, voluntary participation and purchase of a specific thing of value, preclude a finding that the auction system has the hallmarks of a tax.”

Going further than the superior court, the appellate court also found that “the purchase of emissions allowances, whether directly from the Board at auction or on the secondary market, is a business driven decision, not a governmentally compelled decision [and] unlike any other tax ... the purchase of an emissions allowance

conveys a valuable property interest—the privilege to pollute California’s air—that may be freely sold or traded on the secondary market.”

As a result, the appellate court found that “the *Sinclair Paint* test is not applicable [to the cap-and-trade program], because the auction system is unlike other governmental charges that may raise the “tax or fee” question resolved thereby. The system is the voluntary purchase of a valuable commodity and not a tax under any test.”

Effect of AB 398 on Cap-and-Trade Auction Revenue

On July 25, 2017, Governor Brown signed AB 398 (E. Garcia, Chapter 135, Statutes of 2017), which, among other things, extended authorization for ARB to utilize the cap-and-trade program to reduce GHG emissions after December 31, 2020.

There have been questions about whether or not AB 398, which was passed by a two-thirds vote in the Legislature, had any impact on the current cap-and-trade program set to expire December 31, 2020, and the revenues it generates. In the formal opinion of Legislative Counsel, AB 398 did not immediately change the character of cap-and-trade revenue.

Specifically, Legislative Counsel has determined that the revenues generated through December 31, 2020 by the current cap-and-trade program continue to be subject to a trust and, therefore, must continue to be appropriated in a manner that is reasonably related to GHG emissions reductions through December 31, 2020.

What is noteworthy is that Legislative Counsel has not come to the same determination regarding the revenue generated by the cap-and-trade program post-2020, meaning the nature of GGRF moneys could potentially change in the coming decade.

Conclusion

Given the uncertainty of the legal requirements on the cap-and-trade auction revenue and the lofty assumptions that are required in order to predict 10-13 years into the

future, a question arises as to the usefulness and accountability of the scoping plan as it currently exists in statute and is prepared by ARB.

The Paris Agreement offers an example of how accountability can work when dealing with ambitious plans. In a process called the “global stocktake,” every five years (two years after plans are submitted) the signatories to the agreement account for what they have achieved so far, and what must still be done, to achieve the goals of the Paris Agreement. Doing so provides countries with a factual basis for strengthening their actions on climate change.

Having an independent, retrospective analysis on previous scoping plans is a key step to determining where the modeling and assumptions in those plans have not been accurate, where programs in those plans have under- or over-performed on GHG emissions reductions, and where there may be any systematic biases or patterns where such forecasts turned out to be incorrect. Without this knowledge, the state is in jeopardy of not achieving the SB 32 target.

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