
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2021 - 2022 Regular

Bill No: SB 1391
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SUBJECT: greenhouse gases: market-based compliance mechanisms: linkages to the state

DIGEST: This bill requires the California Air Resources Board (ARB) to, before linking any market-based compliance mechanism (i.e. cap-and-trade) to that of another state, province, or country, to have completed (within the prior three years) a formal regulatory process addressing specific statutory requirements involving allowance supply and offsets, as well as changing the relationship between offsets and the state emissions cap, as specified.

ANALYSIS:

Existing law:

- 1) Establishes the Air Resources Board (ARB) as the air pollution control agency in California and requires ARB, among other things, to control emissions from a wide array of mobile sources and coordinate, encourage, and review the efforts of all levels of government as they affect air quality. (Health and Safety Code (HSC) §39500 et seq.)
- 2) Requires, under the California Global Warming Solutions Act of 2006 (also known as AB 32), ARB to (1) determine the 1990 statewide greenhouse gas (GHG) emissions level and approve a statewide GHG emissions limit that is equivalent to that level to be achieved by 2020; (2) ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by December 31, 2030 (i.e., SB 32); and (3) adopt regulations, until December 31, 2030, that utilize market-based compliance mechanisms to reduce GHG emissions (i.e., the cap-and-trade program). (HSC §38500 et seq.)
- 3) Requires the Governor to make specified findings prior to initiating a linkage of a market-based compliance mechanism to that of another state, including that:

- a) the jurisdiction to be linked to has equivalent (or stricter) requirements on GHG reductions and offsets;
 - b) California still be able to enforce any related statutes against any entity subject to regulation;
 - c) the jurisdiction to be linked to has equivalent or stricter enforcement provisions, and;
 - d) the linkage shall not impose any significant liability on the state or any state agency for any failure associated with the linkage.
- 4) Directs ARB to, under AB 398 (E. Garcia, Chapter 135, Statutes of 2017), make numerous changes related to the state's cap-and-trade program, including but not limited to:
- a) Reauthorizing cap-and-trade through 2030;
 - b) Establishing the Independent Emissions Market Advisory Committee (IEMAC) to report to both ARB and the Joint Legislative Committee on Climate Change Policies on the environmental and economic performance of the cap-and-trade program and other relevant climate policies;
 - c) Establishing the Compliance Offsets Protocol Task Force to provide guidance to ARB in approving new offset protocols, as specified;
 - d) Requiring ARB to ensure all GHG rules and regulations are consistent with the scoping plan; and
 - e) Requiring ARB to include specified price ceilings, price containment points, offset credit compliance limits, and industry assistance factors for allowance allocation in the cap-and-trade program.

This bill:

- 1) Requires the findings issued by the Governor to initiate linkage of a market-based compliance mechanism to be written.
- 2) Prohibits the linkage of a market-based compliance mechanism with any other state, province, or country unless:
 - a) There is a formal regulation to review;
 - b) The above formal regulation is done in public consultation with IEMAC;
 - c) In the event that offsets are used in the market to be linked to, California must then include a provision to automatically reduce the number of emissions allowances it makes available for compliance purposes by the number used for offsets.

Background

- 1) *Implementing AB 32: The California Global Warming Solutions Act of 2006.* In 2006, AB 32 (Núñez and Pavley, Chapter 488, Statutes of 2006) was signed into law, which requires ARB to determine the 1990 statewide GHG emission level and achieve a reduction in GHG emissions to that level by 2020. It also called 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.

The statute also specifies that ARB may include market-based compliance mechanisms. The Legislature defined “market-based compliance mechanism” as either (1) “a system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases”, or (2) “greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.”

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 for the post-2020 cap-and-trade program, most notably (1) requiring the banking of allowances from the current cap-and-trade program into the post-2020 program, (2) requiring ARB to evaluate and address concerns related to the overallocation of available allowances in the program for years 2021 to 2030, and (3) the adoption of a price ceiling in the program, at which point an unlimited number of allowances must be made available for purchase.

- 2) *Cap-and-Trade.* The original cap-and-trade program was recommended by ARB as a central approach to flexibly and iteratively reduce emissions over time. Emission trading systems such as cap-and-trade contribute to economic efficiency by facilitating emission reductions where it is cheapest to achieve them. Polluters who would find it costly to reduce their emission are allowed to buy emission allowances from polluters that can abate at lower costs. In a ‘perfectly’ working market, the costs of reducing an additional unit of emissions would be equalized, and total costs of reaching a given

environmental target would be minimized.

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 set a firm, declining cap on total GHG emissions from sources that make up approximately 80% 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 MTCO₂e) that it emits at the end of a compliance period.

Two main 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 intended to represent a real, verified, permanent, and enforceable emission reduction project from a source outside a capped sector (e.g., a certified carbon-storing forestry project). Under AB 398 (E. Garcia, Chapter 135, Statutes of 2017), the amount of offsets a covered entity may use to comply with cap-and-trade was reduced from 8% of its total emissions to 4% of its total emissions, though this number will rise to 6% in 2026 onward.

Allowances and offsets both have some controversy surrounding their design and implementation in California’s cap-and-trade program.

- 3) *Concerns around allowance supply.* Nearly half of all allowances generated annually are allocated freely to utilities, refineries, and other trade-exposed industries, to prevent them from leaving the state. Moreover, the banking of past years’ allowances to fulfill future compliance obligations can become problematic. According to the most recent estimate from the IEMAC, there are roughly 321 million credits currently banked. This means that in the future, when the cap is lower and therefore fewer new allowances are offered, 321 million tons of CO₂ equivalents could be emitted legally, permitted by those banked credits.

The oversupply and banking of allowances has been an ongoing debate for years. To quote the latest IEMAC report, “The IEMAC has previously addressed questions about allowance banking and “overallocation” pursuant to AB 398 (IEMAC 2018, Chapter 6; IEMAC 2019, Chapter 4). Legislators have also asked CARB and the IEMAC to develop “banking metrics” to track the evolution of the program’s supply-demand balance (IEMAC 2019, Appendices

A and B). CARB Board Resolution 18-51 provided direction to staff to prepare a report describing allowance banking outcomes at the end of the cap-and-trade program's third compliance period (2018–2020) (CARB 2018a, p. 11). To our knowledge CARB has not yet indicated its plans with respect to adopting any potential banking metrics. Meanwhile, the IEMAC illustrated how public reporting data could be used to construct banking metrics (IEMAC 2019, Appendix C) via a methodology that was subsequently peer-reviewed (Cullenward et al. 2019).”

For the sake of comparison, the SB 32 goal for 2030 GHG emissions (and ostensibly the number of allowances planned to be issued that year accordingly) is roughly 260 million tons of CO₂ equivalents. Given that the SB 32 goal is for *annual* emissions in 2030, a glut of banked credits could make achieving that goal challenging, if not impossible, even if *cumulative* volume of emissions were significantly reduced. In its 2017 Scoping Plan, ARB projected that the cap-and-trade program would need to reduce a cumulative 236 million tons of CO₂ equivalents over the period 2021–2030: less than the amount already currently banked today.

- 4) *Concerns around offsets.* Carbon offsets are widely used by individuals, corporations, and governments to mitigate their GHG emissions on the assumption that offsets reflect equivalent climate benefits achieved elsewhere. These climate-equivalence claims depend on offsets providing real and additional climate benefits beyond what would have happened, counterfactually, without the offsets project. In California, according to the latest IEMAC report, offsets constitute a significant source (6.3%) of the supply of compliance instruments in the market, with forest offsets producing about 80% of offset supply to date.

The central idea behind a carbon offset is that it can substitute for GHG emission reductions that an organization would have made on its own. For this to be true, the world must be at least as well off when you use a carbon offset credit as it would have been if you had reduced your own carbon footprint. When people talk about the “quality” of a carbon offset credit, they are referring to the level of confidence one can have that the use of the credit will fulfill this basic principle.

Given the inherent difficulty of proving an impact as compared to something that did not happen, the financial incentives for expert practitioners to advocate for more lenient policies, and the huge diversity of offset-generating projects, it is no wonder the discussions of carbon offsets have been complex and fraught. The stakes are incredibly high as well; if emitting one ton of GHGs is justified

because of an offset, and that offset turns out to not be real, then emissions will continue to rise unabated regardless of the accounting performed.

As part of AB 398 (E. Garcia, Chapter 135, Statutes of 2017), ARB established a Compliance Offsets Protocol Task Force, ostensibly to address concerns surrounding the use of offsets. This Task Force was meant to provide guidance to ARB in establishing new offset protocols for the cap-and-trade program with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions. The Task Force comprised 11 public members representing specified stakeholder groups.

Roughly one month before the final release of the Task Force's report, the members representing environmental advocates and environmental justice advocates both resigned from the Task Force. Brian Nowicke, the designated environmental advocate representative, wrote in his resignation letter, "In my perspective and experience, most of the members of the Task Force either represent organizations that have a vested interest in expanding the use of offsets or have ties to industries and organizations that stand to benefit financially from offsets. The resulting recommendations contradict the interests of the environmental and environmental justice communities who seek to ensure that California's climate policies fulfill their promises of improving public health and maintaining the integrity of emissions reductions."

These recommendations, published by the Task Force in March of 2021 and delivered to Board members, have not yet been presented in a public Board hearing. As such, they have not directly influenced the regulations governing the state's offset protocols, and they are not expected to do so until after the Scoping Plan update is completed at the earliest.

- 5) *Other carbon markets.* California's cap-and-trade system was not the first such system among U.S. states, nor was it the last.

The Regional Greenhouse Gas Initiative (RGGI) was the first mandatory cap-and-trade program in the United States to limit carbon dioxide from the power sector. Eleven states currently participate in RGGI: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey (withdrew in 2012, rejoined in 2020), New York, Rhode Island, Vermont, and Virginia. RGGI was established in 2005 and administered its first auction of carbon dioxide emissions allowances in 2008. The states have set a goal of further reducing emissions 30 percent below 2020 levels by 2030.

Washington, on the other hand, is currently the most recent state to adopt a cap-and-trade program. In 2021, the Washington Legislature passed the Climate Commitment Act (CCA) which establishes a comprehensive program to reduce carbon pollution and achieve the GHG limits set in state law. The program will start Jan. 1, 2023.

In the CCA, the Legislature directed the Department of Ecology to develop rules to implement a cap on carbon emissions, including mechanisms for the sale and tracking of tradable emissions allowances, along with compliance and accountability measures, as well as rules to allow for linking the program with similar programs in other jurisdictions. Many of these mechanisms and rules are modeled off of California's cap-and-trade program.

Notably, the legislation contained language specifying how offsets would affect the cap, and it did so in a way that departed significantly from how California's system works. In setting annual allowance budgets, the Washington Department of Ecology is required to reduce the annual allowance budget by an amount equivalent to offset use. This ensures that Washington will achieve its emission reduction goals, even under a hypothetical worst-case scenario where every single offset used did not correspond to a real emission reduction. Plainly put, Washington errs on the side of playing it safe with offsets and potentially reducing emissions even further than required, instead of potentially exceeding the cap if offsets fail to deliver on promised reductions. This approach was offered in the latest IEMAC report as a possible approach to resolving offset concerns in California.

- 6) *Linking markets.* According to prevailing economic theory, linking markets together should promote trading, smooth financial flows, and lower the overall cost of reducing emissions. Linking cap-and-trade systems provides covered entities with a more cost-effective way to meet their compliance obligations: if the price of allowances in one system is lower than that of another, then participants have an incentive to purchase allowances from the less expensive system until prices are equalized between the two, resulting in net cost savings. In practice, the acts of establishing and implementing a cap-and-trade system are so entwined with the specific economic and political realities of each jurisdiction that bringing those programs together is not as simple as declaring two markets may be traded between.

California's cap-and-trade program is currently linked to only that of Quebec, Canada, but that is not the only linkage the state's program has had. Ontario, Canada was also briefly linked to California and Quebec, though due to changes in political leadership, that province left the linkage shortly after

joining. For comparison, according to Canada-wide GHG emission data from 2019, Quebec's economy-wide emissions are roughly 20% those of California.

The rules governing California's ability to initiate a linkage of market-based compliance programs are dictated by statute. Government code section 12894 requires a state agency (typically, but not necessarily, ARB) to notify the Governor of its intention to link, and the Governor to, in an independent capacity, make four specified findings. Those findings are that the jurisdiction to be linked to has equivalent (or stricter) requirements on GHG reductions and offsets, that California still be able to enforce any related statutes against any entity subject to regulation, that the jurisdiction to be linked to has equivalent or stricter enforcement provisions, and that the linkage shall not impose any significant liability on the state or any state agency for any failure associated with the linkage. These findings are not subject to judicial review, but do consider the advice of the Attorney General and must be submitted to the Legislature.

When then-Governor Jerry Brown made findings for linkage with the Quebec cap-and-trade system in 2013, he directed ARB to take a number of additional steps prior to linkage, including preparing a linkage readiness report. In addition to taking the actions required by the Governor, ARB needed to initiate a full rulemaking process to amend the existing cap-and-trade regulations. In October 2013, the proposed amendments to the Cap-and-Trade Regulation were approved, recognizing instruments from Québec starting on January 1, 2014. The linkage itself was effectuated through this regulation amendment.

Comments

- 1) *Purpose of Bill.* According to the author, "There are critical reports showing that the cap-and-trade program is failing to improve the lives of low-income communities of color. It is important for California to check if our house is in order before linking the state's cap-and-trade program to any other market. We must conduct an evaluation and possible recalibration of its regulatory standards and improve the accounting of carbon offsets. This bill ensures California is achieving the statewide greenhouse emissions limit by addressing concerns over offset credits to make sure we are satisfying Greenhouse Gas reduction goals. The ultimate goal is to ensure we are not shortchanging the climate or our impacted communities."
- 2) *No required reforms without linkage.* The formal regulatory process and change to offset accounting proposed by this bill are *only* triggered if ARB seeks to link a market-based compliance mechanism to that of another

jurisdiction. Were the ARB to seek linkage with another market (say Washington, for example) then the provisions of SB 1391 would come into force.

While a formal regulatory process to address these provisions would require greater time and resources on the part of ARB staff, the requirements for that regulatory process are not unreasonable; three of the requirements are existing statutory requirements that were included in the cap-and-trade reauthorization. Despite those considerations being in AB 398, in practice critics have expressed concern that ARB's responses were inadequate.

The only new policy that SB 1391 would enact—and again, only if ARB sought linkage of a market-based compliance mechanism—is to follow Washington's lead on accounting for offsets under the emissions cap. Unlike California's cap-and-trade program, when an offset is used for compliance in the Washington program, it will reduce the emissions cap accordingly, thereby guaranteeing emissions reductions regardless of offset quality. For example, consider if 1,000 allowances were to be offered economy-wide in a year (representing a cap of 1,000 tons of emissions), Company X needed to account for 100 tons of emissions, and Company X purchased 5 forest offsets as part of fulfilling its compliance obligation. In this scenario, the cap would be adjusted accordingly and only 995 allowances would be available for purchase, instead of the original 1000. In this way, even if all 5 forest offsets were lost (either to fire, mismanagement, or any other eventuality), the program would still meet its goals.

- 3) *Impact on allowance prices.* If the above modification to offsets under cap-and-trade were adopted, it necessarily would reduce the number of allowances available for auction. By limiting the supply, basic economics dictate that the price for an allowance would increase. Predicting the overall impacts on auction revenue and covered entity behavior is beyond the scope of this analysis, however.

Beyond the direct impact on supply, it is possible that further scrutiny upon or possible reforms influencing allowance supply or offset protocols could affect allowance prices as well. However, speculating on changes to the overall cost of compliance caused by any such changes would be challenging and is beyond the scope of this analysis.

- 4) *Cleaning house.* Ultimately, the majority of what SB 1391 requires is for ARB to comply with existing law, and review regulations that are already in place.

It is possible that, upon undergoing a formal regulatory process to assess these concerns, ARB could find the existing cap-and-trade regulations fulfill all requirements and address all concerns without need for any changes. If that is the case, then the state can proceed with linking cap-and-trade with other jurisdictions with added certainty that the program is working as intended.

Conversely, it is possible that upon undergoing a formal regulatory process, ARB could find that changes are required to adequately address concerns and comply with all existing statutory requirements. If that is the case, then even if there were added costs and disruptions associated with reforming the program, at least any issues discovered would be fixed before being exported to other markets.

Either way, the Senate has repeatedly expressed concerns about the features of the state's cap-and-trade program that are included in SB 1391. Given the importance of ensuring the state's cap-and-trade program is truly in order before linking it to another, the committee may wish to consider supporting this measure.

Related/Prior Legislation

SB 775 (Wieckowski, 2017) would have reauthorized cap-and-trade indefinitely with specified modifications, including but not limited to: the removal of offsets from the program, the invalidation of pre-2020 allowances for the post-2020 program, a statutorily set and increasing price floor and ceiling, the elimination of freely-allocated allowances in favor of a broader carbon adjustment, and significant dividends provided to Californian residents. SB 775 did not receive a hearing.

AB 398 (E. Garcia, Chapter 135, Statutes of 2017) reauthorized cap-and-trade until 2030, and made numerous other stipulations, including but not limited to: establishing the IEMAC; establishing the Compliance Offsets Protocol Task Force; requiring ARB to ensure all GHG rules and regulations are consistent with the scoping plan; and requiring ARB to include specified price ceilings, price containment points, offset credit compliance limits, and industry assistance factors for allowance allocation in the cap-and-trade program.

SOURCE: Author

SUPPORT:

None received

OPPOSITION:

None received

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