

Cap-and-trade and the Scoping Plan

State law requires the Air Resources Board to update its official strategy for achieving California's climate targets at least once every five years.¹ California has considered the role of the cap-and-trade program in three such Scoping Plans to date (ARB, 2008; ARB, 2013; ARB, 2017; Mastrandrea et al., 2020) and is preparing to commence a regulatory process in early 2021 to develop a fourth effort. This chapter reviews important analytical issues the Board will need to address in its upcoming Scoping Plan process concerning the relationship between the cap-and-trade program and California's broader climate policy portfolio.

The Board has a statutory obligation to establish sufficiently stringent emissions regulations so as to provide confidence that the state will meet its annual climate targets in milestone years. In each of the three previous Scoping Plans, the Board has relied on the cap-and-trade program as a backstop guarantee that the state will meet these targets. To function in this role, the cap-and-trade program must be designed such that the limited supply of compliance instruments will deliver targeted emissions outcomes, such as the statutory statewide limits on annual emissions in 2020 and 2030, no matter the performance or stringency of regulatory and other climate policy measures in the Scoping Plan.²

Cap-and-trade programs do not have to be used in this way. Rather than deliver on annual emissions targets, programs could alternatively be designed to reduce cumulative emissions below a pre-determined threshold over a pre-determined period of time. Alternatively, programs can be designed as "hybrid" systems that include administratively determined price features, such as maximum ceiling prices. Although the California cap-and-trade program was initially designed to ensure the state would meet milestone annual emissions targets, the Board shifted its description of the cap-and-trade program in a 2018 rulemaking that re-affirmed its

¹ Cal. Health & Safety Code § 38561(h).

² Technically, designating a cap-and-trade program as a "hard cap" doesn't provide the guarantee that many policymakers assume must follow. Cap-and-trade programs that feature allowance banking rules, as California's does, effectively set limits on *cumulative* covered emissions. In contrast, statewide policy targets, such as the limits set by AB 32 and SB 32 for 2020 and 2030, respectively, are denominated in terms of *annual* emissions that also include sources not covered by the cap-and-trade program. Thus, a "hard cap" expressed in terms of cumulative covered emissions budgets cannot strictly guarantee that the state achieves a specific annual emissions limit. Translating a cumulative emissions budget into annual statewide emissions outcomes requires assumptions about uncertain variables such as macroeconomic growth, non-covered emissions outside the cap-and-trade program, and allowance banking within the cap-and-trade program. If expectations about any of these variables turn out to be incorrect, changes to future cap-and-trade emissions budgets could be needed to re-calibrate the system and maintain a "hard cap" approach.

minimum floor prices,³ added intermediate price containment points,⁴ and implemented a maximum ceiling price.⁵ The more recent description emphasizes a “steadily increasing carbon price signal” in support of necessary emission reductions (ARB 2018; Cullenward, 2018). Although there is nothing wrong with this description—indeed, we should expect to see steadily increasing carbon prices when annual emissions limits are tightening—the large quantity of permits in the bank raises concerns that the cap-and-trade program will not be up to the task of constraining 2030 emissions below the SB 32 target (Cullenward et al., 2019; Inman et al., 2020).

Economists agree that carbon pricing programs can contribute to climate policy goals, whether structured in terms of prices, quantity limits, or a hybrid policy that combines both features (Goulder and Schein, 2013). Nevertheless, it is important to align California’s cap-and-trade program design with its evolving role in the state’s comprehensive climate policy portfolio. The Air Resources Board has an opportunity in the upcoming Scoping Plan process to align its analytical framework with the market design of the cap-and-trade program and the statutory obligation to limit emissions in 2030 below the 2030 emissions target. Historically, Scoping Plans have described the cap-and-trade program as a “hard cap.” Although this is true in a cumulative sense, the cap-and-trade program is not designed to impose a hard limit on the emissions that occur in any particular year (nor should it be). We believe that additional clarity about the intended function of the cap-and-trade program would be beneficial in the upcoming Scoping Plan process and could be used to help guide any consideration of potential cap-and-trade program reforms.

Recommendation: We urge the Board to focus on consistency between the Scoping Plan analysis, statutory obligations, and the cap-and-trade program’s market design. To achieve consistency, the Board should officially identify the desired role of the cap-and-trade program in California’s overall climate strategy and then review the current market design in light of that preferred direction. Given the “hybrid” design of the current cap-and-trade program, we believe the Board should consider identifying a range of carbon prices that are consistent with the portfolio of strategies adopted in its final Scoping Plan and aligning the cap-and-trade program design to be consistent with its desired carbon price trajectories. Alternatively, if the Board prefers a “hard cap” approach, then it should focus instead on a comprehensive analysis

³ Cal. Code Regs., title 19, § 94911(c).

⁴ Cal. Health & Safety Code § 38562(c)(2)(B); Cal. Code Regs., title 19, § 95913(h).

⁵ Cal. Health & Safety Code § 38562(c)(2)(A); Cal. Code Regs., title 19, § 95915.

of market oversupply conditions and design cap-and-trade program reforms to fully address those concerns.

References

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