

Allowance Supply (Burtraw and Cullenward)

Outcomes in the allowance market are one reflection of California's multifaceted efforts to address climate change. About 75 percent (320 million metric tons CO₂e) of total greenhouse gas emissions in the state (425 MMT) are covered by the cap-and-trade program. Generally, these are emissions associated with combustion of fossil fuels. The balance between the supply of emissions allowances (and other compliance instruments, e.g. offsets) and demand for allowances from sources covered by the program drives allowance market prices.

The demand for allowances has been and remains challenging to predict. Several uncertain factors affect allowance demand including overall economic activity, investments in energy efficiency, companion regulatory programs that reduce emissions such as SB 100 and vehicle emissions standards, the opportunity to bank allowances for future use, and uncertainty about future regulations including the possibility of linking the program with carbon markets in other jurisdictions. Importantly, in 2020 the global pandemic has affected energy use and emissions. The long-term implications are not yet clear. Some of these new patterns might be transient, while others could prove persistent.

The cap-and-trade program already includes design features that anticipate some of this uncertainty. For example, the program reduces allowance supply if the market price falls to the price floor and increases supply if the price rises to levels that trigger the availability of various allowance reserves. In between the price floor and price containment points, however, the allowance supply does not adjust to changes in demand. Over this range of prices, emissions reductions stimulated by local jurisdictions and businesses and companion regulatory programs do not lead to a reduction in allowance supply. Prices have been at the low end of this range, in part due to the state achieving its 2020 emissions goals several years early as well as the influence of the pandemic. Low emissions have enabled the accumulation of a large bank of emissions allowances that has kept market prices at or near the price floor. Some of this bank is already held in private accounts; other supplies are held in public accounts that could re-enter the market if prices rise. Both types of banked allowances add to the issuance and auction of new allowances from each annual program "cap," making greater emissions possible in the future despite declining program caps.

In its 2018 and 2019 reports, this Committee discussed methods to assess the supply of allowances in circulation (including banked allowances) and framed questions about how the program's cumulative emissions cap could contribute to California's long-run emissions reduction goals. In the near future the Board will have significant new information that will help address some of these questions. Notably, the cap-and-trade program's third compliance period ends in December 2020 and will lead to a compliance event in November 2021, at which point the Air Resources Board will be able to comprehensively account for market-wide allowance holdings on an empirical basis.

As part of the Scoping Plan process that will begin in early 2021, the Air Resources Board also has an opportunity to align the future issuance of new allowances with the allowance supplies already available in private and public banks. Alignment matters because allowances currently in private and public accounts enable emissions in excess of the annual issuance of new allowances. The Board should consider future allowance supplies with the expectation that privately held allowances will re-enter the market and publicly held allowances will do so if prices reach levels that access the allowance reserves. To achieve ambitious emissions reduction goals, the annual issuance of new allowances could be

adjusted to better align the total supply of emissions allowances in circulation (including banked allowances) with the state's goals.

In its 2019 report, this Committee described approaches to potential changes in allowance supply that might be used to strengthen the emissions market, which would improve the cost effectiveness of overall climate policy. One approach to strengthening the market, for example, would be to reduce the cumulative emissions cap by reducing the issuance of new allowances. Another approach would be to raise the price floor to a level that might reduce the sale of new allowances. The Board could also increase the price-responsiveness of allowance supply by adding one or more price steps above the price floor: this would create a price staircase, with varying quantities of allowances sold at different prices in the auction.

Recommendation. The Scoping Plan process offers an opportunity to position the cap-and-trade program to make an increasing contribution to achieving the state's emissions reduction goals. An adjustment to allowance supply is likely to be necessary for the cap-and-trade program to play that role. If the Board chooses to make a change to allowance supplies, several issues should be considered explicitly:

- Reductions in allowance supplies would be expected to increase the market price, which would also be expected to increase auction revenues available to the Greenhouse Gas Reduction Fund. The increased availability and stability of GGRF revenue contributes to achieving program goals.
- An increase in the allowance price would create one-time profits for parties that currently hold emissions allowances in private banks. Many of these allowances were initially distributed for free. The distributional effects of these profits can and should be anticipated.
- Reducing allowance supply would require further consideration of how free allocation is implemented. If the Board decides to reduce allowance supply, should free allocation be affected similarly? Should all types of free allocation be affected proportionally, or should reductions be based on another principle?
- The carbon market interacts with many companion policies. The upcoming Scoping Plan process provides an opportunity to examine the role of companion policies and how they interact with cap and trade, and to signal more clearly the Board's expectations about emissions reductions achieved by cap and trade.