Chapter XX: No-Trade Zones and Facility-Level Emission Limits

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Throughout the 2022 Scoping Plan process, the Environmental Justice Advisory Committee (EJAC) has made many substantive recommendations. This chapter will address one of the recommendations that pertains to the cap-and-trade program specifically. Additional recommendations are considered in Chapter xx on market reform.

EJAC has recommended limiting the compliance flexibility afforded by California's GHG cap-and-trade program. The ability of regulated firms to buy and sell GHG allowances has many advantages with respect to cost effectiveness. However, this flexibility leaves open the possibility that GHG emissions, and associated local pollution, will continue unabated in disadvantaged communities. Herein lies a potential tradeoff between ensuring that the market can deploy the most cost-effective coordination of GHG abatement, and ensuring that California's most vulnerable communities are among the beneficiaries of environmental quality improvements.

One way to negotiate this tradeoff is to limit the extent to which GHG emissions in impacted communities can be accounted for using GHG allowances. Along these lines, EJAC has proposed to designate so-called "no-trade zones" in impacted communities. Specifically:

> *Facilities in or directly adjacent to disadvantaged communities as defined by Health & Safety Code Section 39711 should be restricted from using allowances to demonstrate compliance. Instead, they should be subject to regulations requiring direct emissions reductions equivalent to the declining caps applicable to the overall program (e.g., 3% per year). This would protect the most impacted communities from excessive exposure to co-pollutants. A proportional number of allowances should subsequently be removed from circulation to avoid further exacerbating existing oversupply issues.*

This chapter begins to explore how this concept could be implemented in practice. We note that implementing trading limits would involve several important design decisions with implications for both potential benefits and costs.

Background

California's cap-and-trade program is designed to coordinate cost-effective reductions in a "global" pollutant: greenhouse gas emissions (GHGs). It was not designed to regulate criteria pollutants or toxic air contaminants, which are local, health-harming pollutants. That said, there are local co-benefits at stake. When emissions of local and global pollutants are positively correlated, the location of GHG emissions reductions can have significant local health consequences. In other words, geographic targeting of GHG emission reductions could be justified for local health reasons. The cap-and-trade program isn't designed to and cannot solve every environmental problem, but it could be tailored to achieve multiple benefits in a targeted way.

Under a cap-and-trade program, an emissions cap is set by the regulator and a corresponding number of GHG allowances are allocated to sources that fall under the cap. To remain in compliance, covered sources must hold allowances equal to their emissions. The ability to freely trade allowances between sources helps to allocate the abatement responsibility to those sources with the lowest abatement costs. Relatively high-cost sources will purchase permits to cover any uncontrolled GHG emissions. Limiting the abatement/compliance flexibility that cap and trade affords can increase the costs of meeting GHG abatement targets. These cost increases should be weighed against the local benefits that constraints on trading could confer.

Geographic restrictions

Some communities in California are disproportionately exposed to environmental hazards such as air pollution. The primary reason to limit allowance trading is to guarantee that the sources located in disproportionately impacted communities are among those that reduce their GHG emissions and associated local pollution. Because the primary concern of the EJAC appears to be geographic distribution of emissions and reductions thereof, this chapter will focus on geographic restrictions on trading. Alternatively, trading restrictions could be imposed on the basis of sector rather than location (i.e., refineries may not purchase allowances). But sectoral limits would be less effective at targeting specific local environmental concerns.

To implement spatially defined limits on allowance trading, the California Air Resources Board (CARB) would need to determine which facilities in which areas would be subject to these limitations. Any methodology for determining which geographies and facilities are subject to trading limitations needs to be clear, transparent, minimize administrative burden, and above all seeks to maximize benefits in communities disproportionately burdened by pollution.
One approach would focus on the most overburdened census tracts based on CalEnviroScreen, given the precedent for using this tool to target investments in disadvantaged communities. CARB would need to determine if the trading restrictions within those census tracts apply to all covered facilities or only those who are not reducing their greenhouse gas emissions.

Trading limits

Once the geographic and facility scope of trading limitations has been established, CARB must determine the nature of the trading limits. One approach would prohibit any buying or selling of permits within restricted areas. This would effectively subject facilities in these areas to prescriptive, source-specific GHG emissions limits.

Alternatively, facilities could be prohibited from buying allowances, but permitted to sell permits. One important benefit of imposing limits on buying but not selling is that this preserves the economic incentive to reduce emissions below the facility-specific cap that the trading limit effectively imposes. In short, facilities retain the incentive to “over-comply” with their source-specific limits.

Source-specific limits

Under a GHG cap-and-trade program with no trading restrictions, the regulator must only define the aggregate GHG cap. How these permitted emissions are ultimately allocated across

sources is determined by the market. The introduction of trading restrictions requires a regulatory determination of the level of emissions permitted at affected sources.

These source-specific caps could be determined via source-specific permit allocations. Allowances could be freely allocated to facilities in line with their specific limit. This approach would mimic a “command and control” system. Under this model, in addition to a significant decrease in compliance flexibility there would likely be decreased revenue for the Greenhouse Gas Reduction Fund.

Alternatively, facilities could be required to purchase all of their allowances at auction. This would effectively impose a “cap and tax” system which raises more revenues than a command-and-control system, but also raises concerns about emissions and economic leakage.

Alternatively, allowances could be distributed using the current “hybrid” approach of Output-Based Allocation (OBA) and auctioning. While there could be future adjustments to the variables within the OBA methodology (i.e., a tighter emissions cap or adjustments to leakage risk factors), this overall approach has served to limit the risk of industrial leakage in California while maintaining the incentive for emission reductions overall. Facilities would *not* be able to purchase any allowances at auction or on the secondary market beyond their facility-specific cap.

Additional design questions

There are many additional design details that would need to be determined through a regulatory process at CARB to enforce facility-specific emission limits within a no- or restricted-trade zone. These include the role of offsets under a facility-specific limit, rules governing the use of banked allowances, and specific considerations for facilities currently required to consign their directly-allocated allowances to auction for the benefit of their ratepayers.

Offsets provide a level of cost-containment and compliance flexibility for entities covered by the cap-and-trade program. Offsets generally represent emission reductions that take place in a location *other than* where the covered facility is located. While this is appropriate from a global climate perspective, if the purpose of employing facility-specific emission limits and trading restrictions is to ensure emission reductions at a specific location, then the use of offsets is inherently incompatible with this approach. If limited offset use were still allowed for cost containment by facilities subject to specific limits, the amount of allowances they are allowed to obtain should be reduced accordingly to ensure the source-specific limit isn’t inflated. This would in turn blunt some of the cost containment benefits of offsets.

Banked allowances present a more complicated situation with respect to facility-specific limits. Presumably, some facilities that could be subject to a facility-specific emissions limit currently have allowances “banked”, or saved, for future use or sale. On the one hand, allowing sources to use banked allowances creates a degree of compliance flexibility that may be incompatible with the desire to limit the quantity of emissions permitted in specific communities. On the other hand, eliminating the current bank of allowances would be inherently unfair to facilities who have invested in allowances under the existing set of program rules. These are questions CARB would need to address in a regulatory proceeding to establish trading restrictions and facility-specific emission limits. One pathway could be for CARB to identify the volume of banked allowances held by facilities subject to a proposed facility-specific limit and adjust their future

limit accordingly. This would maintain the goal of achieving reductions from specific sources in no- or restricted-trade zones in line with the economy-wide declining cap, while also preserving (and perhaps even enhancing) the investment entities have made in allowances. Another option could be requiring the consignment of banked allowances to the auction with revenue returned to the entity that held the bank originally.

Utilities with facilities in zones that would be subject to a facility-level emissions limit may have more specific considerations that CARB should take up in a regulatory proceeding. Broadly however, while facilities may be subject to a source-specific limit, their allocation could generally follow the same methodology as currently applied, even while remaining below the source-specific limit. If the restrictions on trading still allowed facilities to sell allowances, then there would be no inherent barrier to continuing the approach of consigning allowances to auction for the benefit of ratepayers.

Recommendations

EJAC has been elevating important concerns about the future allocation of air quality benefits under the cap-and-trade program. Trading restrictions that could address these concerns merit a public discussion. This chapter is intended as a point of departure for that discussion.

We have described some design options and we have identified some trade-offs that must be considered in pursuing facility-specific emission limits and/or permit trading restrictions. IEMAC recommends that CARB study these questions closely and include a proposal for consideration in the forthcoming 2023 cap-and-trade informal or regulatory rule-making process.