

ALLOWANCE ALLOCATION 101



International Carbon
Action Partnership

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Under an emissions trading system (ETS), the government imposes a limit (the 'cap') on the maximum level of CO₂ equivalent (CO₂e) emissions allowed in one or more sectors of the economy. The regulator then issues a number of tradable allowances, matching the level of the cap, with each allowance representing the right to emit one tonne of CO₂e. Companies in the regulated sectors need to hold one allowance for every tonne of emissions they release. They may either receive or buy the allowances and can subsequently trade them with other companies. How governments decide to allocate allowances to the companies is a fundamental design feature of an ETS.

There are two basic options for allocating allowances: free allocation (at no cost to the recipient) or by way of sale, often by auction. Because allowances have an economic value, the allocation process is governed by rules to ensure their fair distribution. A simple, transparent, and credible process facilitates this often politically contentious part of operating a trading scheme.

Reasons for free allocation¹

The free allocation of allowances can help to compensate operating companies for their previous investments in carbon intensive infrastructure and processes, smoothing the transition into an ETS. Free allocation is typically also be used to protect companies from the potential loss of competitiveness and the risk of carbon leakage (ie, the risk that production, investment, and emissions could relocate to areas with weaker or no climate regulations), which would harm the local economy and produce no genuine emissions reductions.

Even when companies are allocated allowances for free, they still have an incentive to invest in low-carbon technology. If they reduce their emissions, they can sell the extra allowances, whereas if they increase their emissions, they will face the extra costs of acquiring additional allowances. The strength of this incentive is determined by the method of free allocation.

Free allocation based on historical emissions (grandparenting)

Under grandparenting, companies receive free allowances based on their historical emissions from a specified period. This has the advantage of being relatively simple with moderate data requirements, which can make this method attractive in the early years of an ETS. However, it may reduce the need to trade in early years due to the generous levels of allocation and can penalise companies that invest in emission reductions early on, as these reductions may effectively lower their 'historical emissions baseline' and cause them to receive fewer allowances. Given its drawbacks, grandparenting tends to be a transitional approach while building the capacity for benchmark-based free allocation.

Free allocation based on benchmarks

Under benchmark-based free allocation, companies receive free allowances depending on a set of performance standards, or benchmarks, based on the emissions intensity of a product or across a sector. Benchmarks may address fairness concerns and reward early action. However, this requires high quality data and a thorough understanding of (often complex) industrial processes. A common method of benchmarking is to establish fixed performance standards for certain products or sectors. Benchmarks may be fixed at the average performance level, at the best practice level, or a value in between (eg, the average of the top 10% best performers).

Free allocation based on output

Another method of benchmarking is to update allocation according to the actual output of the company or installation in a compliance period rather than in consideration of a fixed historical level of output. This provides stronger protection against carbon leakage risk and rewards early action. However, this can come at the cost of diminished incentives to find ways to reduce emissions. Like fixed historical based allocation, getting the benchmark correct can be challenging, and maintaining the cap requires additional provisions, as the required levels of allocations are not known in advance.²

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Reasons for selling allowances in an auction

The alternative to free allocation is selling allowances in an auction. Under auctioning, policymakers can create a source of revenue using a method that minimises the chance of market distortion and lobbying for preferential treatment. Auctioning is a simple and efficient way to get allowances to those who value them most. It also rewards early action, as those that have already undertaken significant reductions will face lower costs of compliance. Conducting frequent auctions helps provide transparency and a steady price signal. More frequent auctioning means that the quantity for sale at each individual auction is reduced, thereby decreasing the risk of manipulation by any one participant. Auctioning can also help compensate low-income consumers and communities by making use of auction revenues.

How auctions work

Auctions are generally conducted either via static “blind” or “sealed bid” auctions, where all bidders bid once and pay the same price; or by dynamic “ascending clock” auctions where each bidder pays closer to what they are willing to pay as revealed through multiple rounds. These processes and variations thereof foster transparent discovery of allowance prices based on demand. Auction design and participation rules may further help prevent manipulation through collusive behaviour and limit the market power of single large buyers. The design may also include methods to provide further control over the price level, such as fixed price sales or price limits. A hard price floor requires government purchases of allowances to support a minimum price, whereas a hard price ceiling requires the government to hold a portion of allowances out of regular circulation and introduce them during periods of high demand at high fixed prices.

Distributing allowances in practice

Allocation methods vary across ETS jurisdictions and sectors depending on their circumstances. Auctioning is often used for the power sector, while free allocation has been granted to those industrial sectors deemed at risk of carbon leakage. Typically, auctioning is limited in the early phases of an ETS, but its share tends to grow as the system matures. At least some level of auctioning is considered important to support an active carbon market.

Additional resources

- <https://icapcarbonaction.com/en/allocation>
- <https://icapcarbonaction.com/en/publications/icap-ets-briefs>
- <https://icapcarbonaction.com/en/publications/emissions-trading-practice-handbook-design-and-implementation-2nd-edition>

1. [ICAP Briefs \(icapcarbonaction.com\)](https://icapcarbonaction.com)
2. Step 5, distribute allowances at [ets-handbook-2020_finalweb.pdf \(icapcarbonaction.com\)](#)

