



Highlights of [GAO-10-377](#), a report to the Chairman, Senate Committee on Finance, U.S. Senate

Why GAO Did This Study

Congress is considering proposals for market-based programs to limit greenhouse gas emissions. Many proposals involve creating a cap-and-trade program, in which an overall emissions cap is set and entities covered by the program must hold tradable permits—or “allowances”—to cover their emissions. According to the Congressional Budget Office (CBO), the value of these allowances could total \$300 billion annually by 2020. The government could either sell the allowances, give them away for free, or some combination of the two.

Some existing cap-and-trade programs have experience selling allowances. For example, member states participating in the European Union’s (EU) Emissions Trading Scheme (ETS) have sold up to about 9 percent of their allowances, and the amount of auctioning is expected to increase significantly starting in 2013. In the United States, the 10 northeastern states participating in the Regional Greenhouse Gas Initiative (RGGI) have auctioned about 87 percent of their allowances.

This report is part of GAO’s response to a request to review climate change policy options. This report describes the implications of different methods for selling allowances, given available information and the experiences of selected programs. GAO reviewed relevant literature and interviewed program officials from the EU and RGGI, economists, and other researchers. This report contains no recommendations.

View [GAO-10-377](#) or [key components](#). For more information, contact John B. Stephenson at (202) 512-3841 or stephensonj@gao.gov.

CLIMATE CHANGE

Observations on Options for Selling Emissions Allowances in a Cap-and-Trade Program

What GAO Found

The method of selling emissions allowances can have significant implications for a cap-and-trade program’s outcomes, and therefore, it is important that the method be chosen based on well-defined goals. Goals often cited by program officials and economists include: maintaining simplicity and transparency, maximizing participation, promoting economic efficiency, generating a price that reflects the marginal cost of reducing emissions, avoiding market manipulation, raising revenues, and minimizing administrative costs. According to program officials, it is important to identify goals prior to choosing a sales method, as tradeoffs may exist. Some goals may also be interrelated—for example, a simple and transparent design may boost participation and reduce the risk of market manipulation.

Once goals are identified, policymakers face a number of choices regarding the design of a sales mechanism. Existing programs have used different mechanisms to sell allowances, including direct sales through exchanges and auctions. EU officials described exchange-based sales as effective and easy to implement, although they and other economists questioned whether this approach would be suitable for selling a high volume of allowances. Program officials also reported that auctions, the more commonly used sales mechanism in the EU and RGGI, effectively distributed allowances to program participants. However, some economists noted that auctions are not “one size fits all,” and should be designed to take into account market characteristics, such as the number of potential buyers.

Using auctions to sell allowances would entail a number of other design choices. For example, policymakers could decide to utilize existing auction infrastructure, such as that used in exchanges or government auctions, or develop a new platform. Choices must also be made regarding the auction format and other design elements.

- **Auction format:** The auction format determines, among other things, the price that winning bidders pay for allowances and the number of bidding rounds. To date, ETS and RGGI auctions have used a single round format in which each participant that bids above a certain price receives allowances at that price. Program officials expressed general satisfaction with this format, and economists noted that its relative simplicity may encourage participation. However, some economists also recommended that policymakers consider other formats as well, such as multiple-round auctions, given that experience with large-scale allowance auctions has been limited to date.
- **Other auction design elements:** Apart from the auction format, other elements may affect outcomes, including: participation requirements, the frequency and timing of auctions, measures that establish lower or upper limits on allowance prices, and rules governing auction monitoring and the reporting of results.