In the face of rock-bottom prices in the CDM offset markets, some governments are looking for ways to use public funds to continue to create incentives to extend the CDM’s success in directly incentivizing private sector investment in emission reductions. These governments do not want to simply buy up cheap credits from existing projects, they want to encourage new projects that will generate credits in the future. This raises a question: How can governments create incentives that maximize the achievement of those emission reductions for a given amount of public funds? That is, how can they identify projects that are lowest cost, up to their spending limit?

There are many specific ways governments could procure and retire emission reductions. Because there is an objective measure (CERs) of the delivered outcome, the most cost-effective mechanism could be an “auctioned put option,” where a public sector fund auctions contracts that give the holder the right—but not the obligation—to sell CERs back to the fund at a fixed “strike” price. Project participants pay up front for the put option, and make money when they sell CERs back to the fund when the project is completed. The strike price in the put options is set at a relatively generous level that should easily encourage more than enough projects. Competition in the auction then encourages firms to bid as high as possible, while still making a profit. This helps to achieve the government’s goal of finding the lowest cost opportunities: Money received in the up-front auction can be plowed back into more CER purchases in the future. In theory, the public sector only pays the true marginal abatement cost, which is the difference between the option premium and the strike price.

To date, however, most governments have instead used a “reverse” or procurement auction. In a reverse auction, firms pay nothing up front and instead bid on what they want to be paid when they deliver their credits. Like the auctioned put option, competition encourages firms to bid based on their costs—in this case, bidding as low as possible while still making a profit. Such approaches have been used to fund voluntary emission reductions in the U.K. and clean energy projects in California. There is a potential challenge with reverse auctions, however. While the programs only pay for delivered reductions, how does the fund ensure that winning bidders perform the promised emission reductions and do not quit when and if the task becomes more difficult? One response is to ensure only serious bidders participate. Some auctions actively screen potential participants and/or require them to put up a security deposit that, for the winning bidders, is then held until the reductions are delivered. Even among serious bidders with a deposit at stake, changing circumstances can lead bidders to renege. Meanwhile, for funders, a program that is careful about achieving the best price for delivered reductions, but fails to spend the acquired funds, might be nearly as problematic as a one that is less careful about the achieved results.

How does an auctioned put option address the performance issue? First, without requiring more funds, the auctioned put option creates a larger incentive to deliver emission reductions. The put option design requires a sufficiently generous sell price to make participants want to pay for the contract. This more generous sell price, ultimately funded by their own payments, raises the stakes for them to then deliver. Second, this more generous sell price also facilitates trading when a winning bidder decides to quit. By design, there is an audience of losing project developers who, while unwilling to pay as much as the lowest winning bid for the put options, are willing to pay more than zero. In contrast, a reverse auction just pays the marginal abatement cost. Losing bidders have higher abatement costs and would have to be paid to take the contracts coming out of a reverse auction. The most appealing feature of the put option, however, may be the upside for the project developers. A reverse auction requires delivery at the contracted price, regardless of market developments. If the CER market rebounds and market prices exceed the reverse auction contract price, the public fund benefits by having locked in a below-market price. A put option, in contrast, allows the project developer to sell into the market rather than delivering reductions to the fund—hence the word “option.” Here, the developer benefits when market prices rise.

However it is structured, a program that provides a performance guarantee to classes of desirable, would-be CDM projects could be particularly effective in the current regime of low market prices. It can also be an appealing alternative to traditional public grants and loans that currently force the taxpayer to take project risk. As it turns out, spending public money this way could prove beneficial for project developers and for governments.