Climate Leadership in Action

Pilot Auction Facility
for Methane and Climate Mitigation

At a Glance

- The Pilot Auction Facility (PAF) is an innovative climate finance model developed by the World Bank Group to stimulate investment in projects that reduce greenhouse gas emissions while maximizing the impact of public funds and leveraging private sector financing.
- The PAF is a results-based payment mechanism that will set a floor price for future carbon credits in the form of a tradable put option, which will be competitively allocated via an auction.
- The PAF is backed by several government donors and has a capitalization target of $100 million.
- In a first phase, the PAF will support projects that cut methane emissions at landfill, animal waste, and wastewater sites that have been hit by low carbon prices.

THE CHALLENGE

Limiting the average global temperature rise to below 2°C is a prerequisite to avoiding dangerous climate change. Urgent action is needed to not only reduce greenhouse gas emissions, but to help countries build resilience and prepare for a world of dramatic climate and weather extremes.

Mobilizing finance for climate action is a priority, but public resources are not sufficient. In the energy sector alone, the additional investment required consistent with a 2°C scenario is estimated to be $910 billion per year during 2010-2050. With limited public resources there is a need to ensure they achieve maximum impact and leverage private investments. But the collapse of carbon prices has removed the important incentive which encouraged the private sector to invest in clean technology projects, and consequently many projects that reduce greenhouse gas emissions are at risk of being decommissioned.

Targeting methane emission reductions. Methane, a by-product of a range of industrial and agricultural processes—mainly waste and fossil-fuel extraction--is a highly potent greenhouse gas with a global warming potential 25 times that of carbon dioxide. Methane actions alone are responsible for approximately half of the potential of 0.4-0.5°C in avoided global warming by 2050. Implementation of technically feasible and cost-effective methane reduction measures would not only slow the rate of climate change over the next decades but also contribute to improvements in local air quality and food security. Additionally, captured methane can be burned for cooking or electricity generation, contributing to increased access to clean energy.

Commercial technologies are available. Technologies that reduce methane emissions are relatively inexpensive and had been used more widely as the carbon market developed. But with the dramatic plunge in carbon prices since 2011, carbon revenues are not sufficient to make those projects viable. As a result, about 1,200 methane-reduction projects have been identified in 2012 as dormant or incomplete. Most of the projects are located in Brazil, China, India, Indonesia, Malaysia, Mexico and Thailand. The additional revenue required to unlock these investments is often small. The methane sectors studied could deliver as much as emission reductions of 8,200 million tons of carbon dioxide in developing countries by 2020 at less than $10 per ton in incremental cost financing.

Moving Forward

With the PAF, the World Bank Group has developed an innovative, pay-for-performance mechanism which uses auctions to allocate scarce public funds and attract private sector investment to projects that reduce methane emissions, taking advantage of the Clean Development Mechanism (CDM) infrastructure already in place for implementation.

The key objective of the PAF is to demonstrate a new, cost-effective climate finance mechanism that incentivizes private sector investment and action in climate change in developing countries by providing a guaranteed floor price on carbon reduction credits. The guaranteed floor price would be delivered through the auctioning of put options supported by donor funding.

The nature of the put option means that the facility's resources will only be disbursed after the emission reductions have been independently verified, making the PAF a "pay for performance" facility. The put options will be embedded into puttable bonds issued by the World Bank. The World Bank's obligation under the bonds will be backed by the PAF. Under the terms of the bond, the bondholders will have the right, but not the obligation, to sell the emission reductions achieved by the underlying projects to the PAF at a pre-agreed price, the put option "strike" price.

The optionality allows put option owners to benefit if carbon prices in international markets rise above the strike price. In this case, the PAF will have achieved its objective (to stimulate private sector investment in mitigation) at no cost to it. If prices fall, the put option owner has the right to sell the carbon credits to PAF at the strike price. Either way, the price guarantee has provided the private investors the financial incentive to fund projects.

The competitive nature of the auction used to allocate the put options reveals the minimum price required by the private sector to make such investments, therefore maximizing the impact of public funds and achieving the highest volume of climate benefits per dollar. Additionally, the PAF will disburse its resources only against independently verified emission reductions, using existing carbon auditing standards such as the CDM or voluntary standards such as the Verified Carbon Standard or Climate Action Reserve. This pay-for-performance feature is attractive for governments facing expanding funding needs and scrutiny on achievements. The combination of an auction process and payments based on performance maximizes value for public money.

In its first phase, the PAF will support projects that cut methane emissions at landfill, animal waste, and wastewater sites. The facility will deliver quick impact by initially targeting the 1,200 methane reducing projects which are at risk of decommissioning due to the low price of carbon credits. The facility has a strong potential for replication and quick scaling up, in methane or other sectors.

Examples of Leadership

The World Bank Group is taking the leadership on piloting innovative climate finance solutions that maximize the impact of public funds and leverage private sector financing by putting a price on carbon at a time when carbon markets have collapsed. Due to low price on carbon, green investments by the private sector in developing countries have slowed down. The PAF aims to stimulate such investments by revealing a price on carbon through auctions, and providing a "floor" price on carbon which is guaranteed by the facility.

References and suggested reading

Brice Quesnel. 2014. "Reducing Methane with Innovative Finance."
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