Pilot Auction Facility for Methane and Climate Change Mitigation

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Overview of the Pilot Auction Facility
Pilot Auction Facility

Challenge:
- 2010: Carbon credit prices collapsed, stranding methane abatement projects

Opportunity:
Methane Finance Study Group:
- 1,200 new methane mitigation projects were initiated, but not implemented, under carbon offset standards in developing countries, representing at least 850 Mt of CO2e in emission reductions over the period 2013 – 2020
- Abatement possible at < $10/tCO2e

Goal:
- Incentivize cost-effective private sector action to achieve methane abatement through a result-based finance mechanism

PAF formation:
- Germany, Sweden, Switzerland, and the United States, contributed $53 million in total resources to pilot climate auctions
The Challenge

- Efficient allocation of public funds to leverage private sector climate investments
- Public funders want to incentivize private sector climate activities
  - Concerns include:
    - Identifying the minimum level of subsidy needed by companies
    - Minimizing the administrative burden of selecting mitigation activities
    - Allocating climate funds to unlock and leverage private investment
    - Paying only for real results
- Companies make climate investments if they have a favorable risk-return profile
  - Concerns include:
    - Uncertain revenues and return on investments
    - Perceived high costs of action
    - Opaque, bureaucratic processes for securing public funds
Why Auctions?

- Price volatility and discovery
- Information asymmetry
- Efficient allocation of public resources
- Competition and transparency
What does the PAF Sell?

- The PAF offers “put options” to guarantee a price floor for future climate results.
- The options offer the right, but not the obligation, to deliver climate results to the facility at a guaranteed future price.
- Bidders compete on the price at which they are willing to deliver eligible results to the facility in the future.
- The bidders that offer to deliver eligible results at the lowest cost win the auction.
How are companies paid for results?

- Option owners are only paid for independently verified results according to eligibility criteria established before the auction.
- Auction winners purchase put options by paying an “option premium” price.
- The options are tradable; if an option owner cannot deliver eligible results, it can sell its options to another person/company.
How do climate auctions work?

- A new approach, piloted by the World Bank, focuses climate funders on the ends and the private sector on the means.

**INTERNATIONAL DONORS / NATIONAL FUNDS**
Capitalize the auction facility, committing to pay a fixed price for a standardized climate result.

**AUCTION FACILITY**
Hosts auctions in which companies (financiers, project developers, project owners, etc.) compete to receive a share of the funding. Private companies bid in the auction on contracts to deliver climate results in the future. Auction winners pay a premium to receive guarantee contracts.

**AUCTION WINNER**
Winners generate or source climate results and deliver them to the facility. Third-party EHS audit and verification are required.

**Option 1**
Sell result (emission reduction) to the CARBON MARKET at the MARKET PRICE if market price exceeds guaranteed price.

**Option 2**
Sell emission reduction to the AUCTION FACILITY at the GUARANTEED PRICE if no market exists or market price less than guaranteed price. Results must meet eligibility criteria established before the auction.

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The Challenge | The Mechanism | PAF in Action | The Future
Step-by-Step Process

**Pre-Auction**
- Contributors
- Fund Facility
- Set Criteria
- Publicize Auction

**Example: Bidder Perspective**
- Apply
- Qualify for Auction
- Auction
- Purchase Contracts
- Source ERs
- Audits
- Deliver Credits
- Payout 1
- Payouts 2 - 4 (or 5)

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PAF Auction Results

Auction 1: Methane (July 2015)

Auction 2: Methane (May 2016)

Auction 3: Nitrous Oxide (January 2017)


$4m            $12.5m          $12.5m         $12.5m        $12.5m  $54m

The Problem | The Mechanism | PAF in Action | The Future
## PAF Auction Results

Results of the pilot phase demonstrate low-cost mitigation potential

<table>
<thead>
<tr>
<th></th>
<th>Auction 1 July 2015</th>
<th>Auction 2 May 2016</th>
<th>Auction 3 January 2017</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strike Price</strong></td>
<td>$2.40</td>
<td>$3.50</td>
<td>$2.10</td>
<td>$2.10</td>
</tr>
<tr>
<td>($/tCO₂e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Premium Price</strong></td>
<td>$0.30</td>
<td>$1.41</td>
<td>$0.30</td>
<td>$0.30</td>
</tr>
<tr>
<td>($/tCO₂e)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Net Benefit</strong></td>
<td>$2.10</td>
<td>$2.09</td>
<td>$1.80</td>
<td>$1.80</td>
</tr>
<tr>
<td>($/tCO₂e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reductions</strong></td>
<td>8.7</td>
<td>5.7</td>
<td>6.2</td>
<td>20.6</td>
</tr>
<tr>
<td>(million tCO₂e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Climate Finance Allocated</strong></td>
<td>$20.9</td>
<td>$20.0</td>
<td>$13.0</td>
<td>$53.9</td>
</tr>
<tr>
<td>(USD million)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Premium Funds Raised</strong></td>
<td>$2.6</td>
<td>$8.0</td>
<td>$1.9</td>
<td>$12.5</td>
</tr>
<tr>
<td>(USD million)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>$25.0</td>
<td>$20.0</td>
<td>$13.0</td>
<td>$55.0</td>
</tr>
<tr>
<td>(USD million)</td>
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</tbody>
</table>
Pilot Auction Facility Impact

- **Impact**
  - To date, $24.2 million of climate finance has been paid to companies for verified eligible emission reductions
  - 9.1 million tCO2e
  - Supported landfill gas-to-energy in Brazil, Chile, India, Malaysia, Mexico, Thailand, and Uruguay; wastewater treatment & biogas utilization in Thailand; and nitrous oxide abatement in Egypt

- **Risk sharing & leverage**

  ![Image of dollar bills with text](image)

  80% climate finance  20% private sector funds

- **Independent evaluation (2019)**
  - Auctions are a viable mechanism to allocate scarce funding for climate change mitigation and have potential for broad applicability
  - Positive findings about WBG’s role in delivering the auctions and bonds
Climate Auction Model

Price guarantee for climate assets in the form of tradable options contracts

Auctions determine price of guarantee + Results-based climate assets third-party verified + Risk sharing firms pay upfront for price guarantee =

MAXIMUM CLIMATE IMPACT PER DOLLAR OF PUBLIC RESOURCES
Opportunities for Replication and Scale

- **Nitric Acid Climate Auctions Program**
  - Collaboration with Nitric Acid Climate Action Group
  - Focused on abatement of nitrous oxide from nitric acid production
  - Eligible countries TBD by political commitments by governments that agree to continue abatement of N2O from nitric acid production post-2024
  - Risk sharing & leverage

- **Energy efficient green buildings**
  - Climate assets beyond CO2e: certification standards including Excellence in Design for Greater Efficiencies, LEED, etc.
  - Current study focusing on affordable housing in Indonesia

- **Assisting countries to meet or raise ambition of Paris targets**
  - Climate auctions on the national or sub-national level
Pilot Auction Facility: Fourth Auction Plans
Pilot Auction Facility: Fourth Auction

- **Focus**
  - Methane emissions from landfill, wastewater treatment, and animal waste

- **Eligibility Criteria**
  - Carbon credits will be generated under the Clean Development Mechanism, Gold Standard, or Verified Carbon Standard
  - Methodologies are listed on the PAF website
  - Eligible countries for host projects are listed on the PAF website
  - Emission reductions will be generated in 2020, between the time of the auction and December 31, 2020
  - Credits must originate from a project with a passing Environmental, Health, Safety & Social audit report

- **Auction Timeline**
  - Auction date: Q1 calendar year 2020
  - Payments in 2021

- **Auction Budget**
  - At least USD $6 million
Auction Format

- Auction participants will bid on the option’s “Strike Price,” which is the payment (i.e., reward) bidders receive in exchange for ERs on a future date.
- The PAF will use a reverse descending clock auction where the option’s premium (i.e., upfront cost) is fixed and bidders bid down the strike price.

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The Problem | The Mechanism | PAF in Action | The Future
Pilot Auction Facility: Application Process

- **Request bidder application package**
  - Participation Agreement
  - Integrity due diligence Questionnaire
  - Option draft final terms
  - Auction rules

- **Qualify to become a bidder in the auction**
  - Submit bidder application package
  - Pay refundable deposit ($0.30 per ER)
  - Pass integrity due diligence screening
  - Attend auction training

- **Auction day**
  - Prepare bidding strategy (including proxy bids)
  - At each round, bid on a quantity of ERs (in tons) in response to the going price (in $ per ER)
  - Bids can only be kept at the same level or lowered as the auction progresses
Pilot Auction Facility: After the auction

- **Successful bidders**
  - Bid deposit is applied towards the premium price to purchase the contract
  - Successful bidders take hold of the option (Through Citibank)
  - Name of winners is published on the PAF website
  - Generate or source eligible Emission Reductions (Or trade options)
  - Obtain passing EHS audit report from a CDM DOE
  - Transfer eligible ERs to the Verification Agent during the redemption period (Sep-Nov 2021)
  - Receive payment for eligible ERs (Nov 2021)

- **Unsuccessful bidders**
  - Bid deposit is refunded (In US$)
  - Can still purchase options by directly contacting auction winners
  - Can provide eligible credits to auction winners
Next Steps

▪ **Request bidder application package**
  ▪ Expected December 2019
  ▪ www.pilotauctionfacility.org

▪ **Updates on PAF Website**
  ▪ Eligibility criteria
  ▪ Auction parameters

▪ **Upcoming Events**
  ▪ Paris: November 19, 2019
  ▪ London: November 20, 2019
  ▪ Zurich: November 21, 2019
  ▪ Webinars: November 19, 26 (English & Spanish); December 12

▪ **Contacts**
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  ▪ Stephanie Rogers
  ▪ Tanguy de Bienassis
Thank you for attending!

We are happy to answer your questions:

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