Pilot Auction Facility: Exploring Opportunities for going beyond the Piloting Phase

Results-Based Climate Finance Dialogue

2 June 2016, Paris

Sandra Greiner, Szymon Mikolajczyk, Tobias Hunzai, Catherine Sachweh, Maarten Neelis

CARNEGIE CONSULT
Investment Advisory Services

POWER AUCTIONS

ECOFYS
sustainable energy for everyone

CLIMATEFOCUS

Content

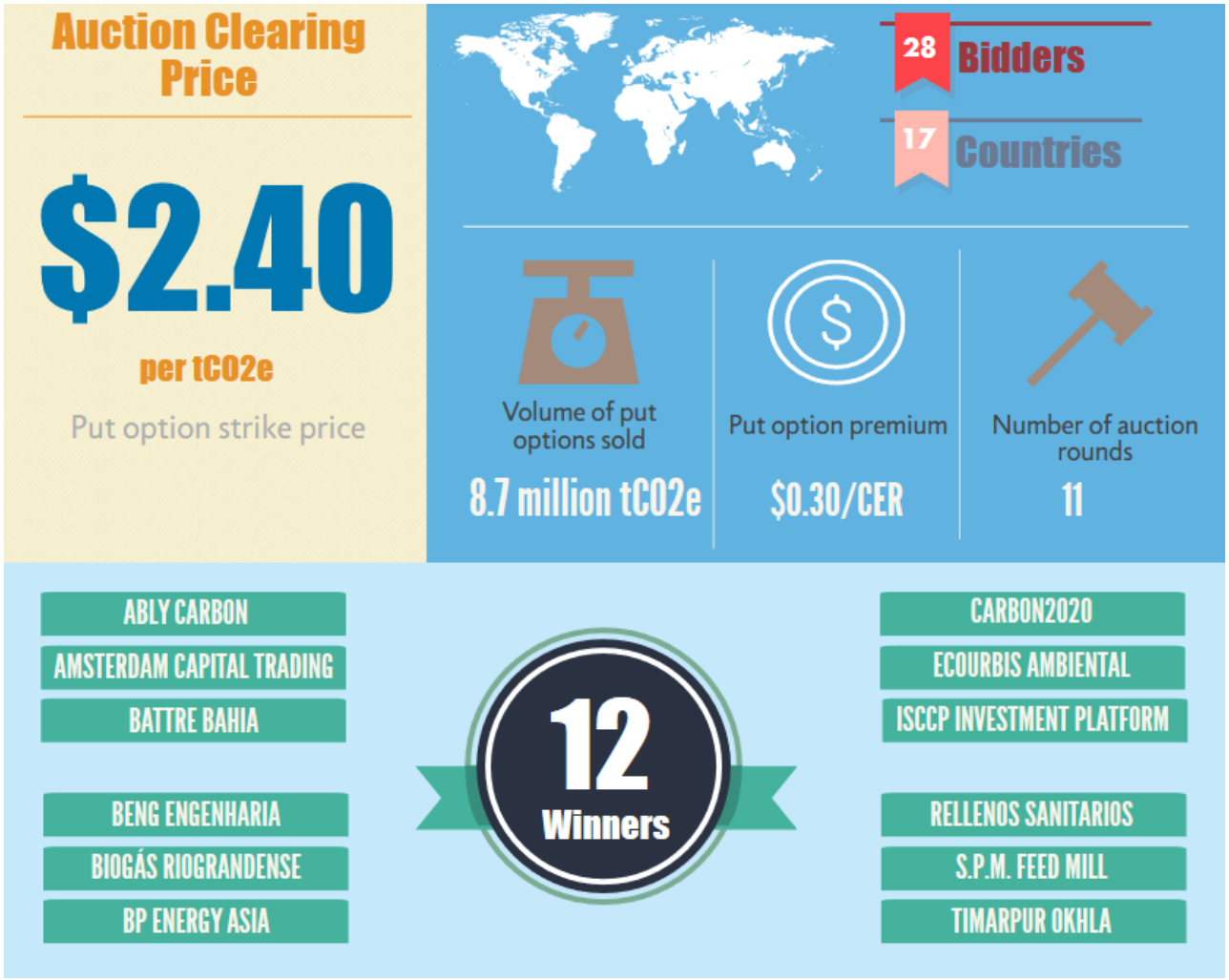
1. Introduction to the PAF
2. Research interests
3. Assessment framework
4. Preliminary results
5. Discussion

CLIMATEFOCUS

Introducing the PAF

- **Innovative pay-for-performance scheme** that emerged from research by the Methane Finance Study Group.
- **Objective** is to demonstrate cost-efficient disbursement of climate finance
- Capitalization of $53 million, supported by Germany, Sweden, Switzerland, and the United States
- Two auctions completed. focused on **methane-reduction projects** at landfills, agriculture and wastewater sites from stalled CDM pipeline. Third auction likely includes N2O destruction.
- First auction allowed CERs, second auction allowed CER and VERs from VCS and GS
- PAF provides **price guarantees in the form of put options** which are auctioned off. Project developers pay a premium for the right to sell future CERs/VERs at a guaranteed price

Results first (reverse) auction July 2015



Source: http://www.pilotauctionfacility.org/content/auction-results

Results second (forward) auction May 2016

By comparison:

- Both auctions roughly same size (~$20 million)
- First auction sold ~ 2 million more put options
- Net benefit to winners almost identical ($2.10 vs. $2.09)
- Premium raised in second auction $8 million vs. $2.6 million in first auction.

Source: http://www.pilotauctionfacility.org/content/auction-results

Basic elements of the “PAF model”

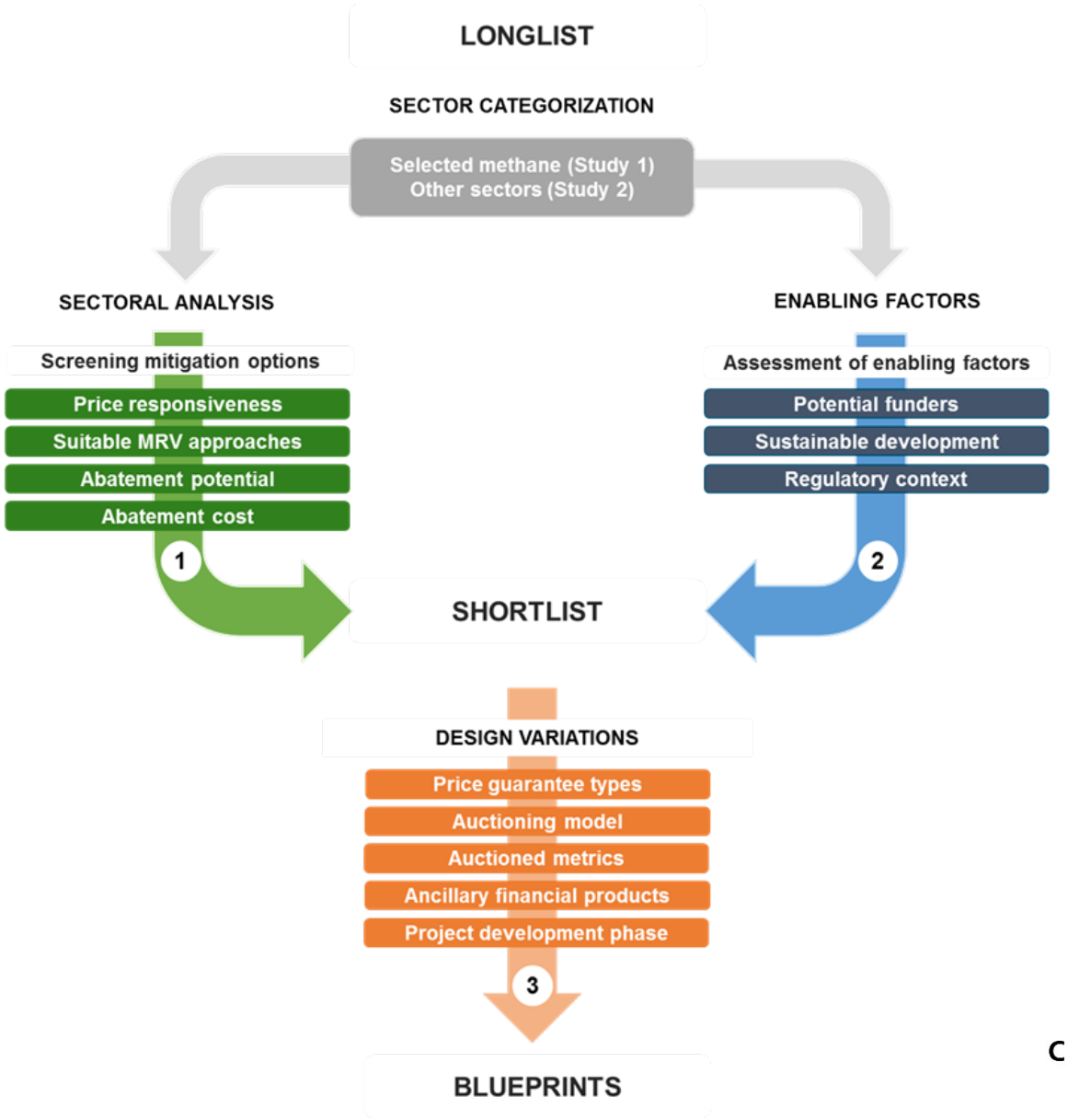
1. Price guarantee for emission reductions
2. Auction mechanism for determining the value of the price guarantee
3. Trading of put options, allowing auction winners to sell put options to other firms if they can sell ERs at a higher price

CLIMATEFOCUS

Scaling up and replicating the PAF model: Research interests

- Are there opportunities for methane reduction beyond the project categories already targeted?
- Beyond methane, which other sectors are natural targets for the PAF model?
- Can the PAF model work for new investments (greenfields) as well as it has for “stranded assets”?
- How can the PAF better unlock potential through tailored offerings (e.g. regional auctions, use of risk mitigation instruments)?
- How can the model work in settings beyond a donor-funded model, e.g. to support the implementation of NDCs, private sector ambitions or other environmental agreements?

Assessment framework



CLIMATEFOCUS

Opportunities in methane reduction: preliminary results

	Biomass waste	Rice cultivation	Palm oil waste water	Enteric fermentation	Coalmine methane
Price responsiveness	Yes	- (No CDM experience)	Yes	-	Yes
MRV	Possible	Challenging	Possible	Challenging	Possible
Abatement potential	-	7% total CH4 emissions	-	30% total CH4 emissions	8% total CH4 emissions
Abatement cost	-	Negative to $20	$10 to $20	-	$0 to $15
Geography	Scattered	China, India, Indonesia, Vietnam	Indonesia, Malaysia (Eligibility criteria)	Brazil, Argentina, USA, China	China
SD risks	Low ('Carve-outs')	Low	Elevated	Elevated	Elevated
Characteristic	Heterogeneous	Heterogeneous	Homogeneous	Heterogeneous	Homogeneous

Opportunities in other sectors: preliminary results

	Energy sector	Industrial Processes	Non-combustion emissions	Forestry and Land use	Transport
Price responsiveness	Yes	Yes	Yes	Yes	Limited
MRV	Possible	Possible	Possible	Challenging	Challenging
Abatement potential	High				
Abatement cost	Diverse	Medium	Low	For some activities <5USD/ tCO2	Diverse
Geography	No regional limitations	Strong regional variations	Strong regional variations	No regional limitations	No regional limitations
SD risks	Low	Low	Elevated	Elevated	Low

Waste-heat recovery

N2O, HFC23

CLIMATEFOCUS

New frontiers for the PAF model

New vs. existing projects

- The current PAF aims at **rapidly reviving existing, stalled GHG mitigation** activities that have already concluded CAPEX investments and require operational revenue (OPEX) support
- Could a scaled-up intervention target **greenfield projects** that are facing access-to-finance barriers to close the CAPEX gap?

Alternative MRV approaches and auction metrics (non-CO2)

- The current PAF leverages the **MRV tool box** of the CDM, VCS and Gold Standard
- For some sectors this has proven to be a barrier
- Could alternative standards that could be monitored and verified open up new sectors for results-based climate finance?

Options for scale-up and replication of the PAF model

	Covered Under Existing Carbon Crediting Schemes	**Not Covered** Under Existing Carbon Crediting Schemes
Existing Projects	Option 1 Existing projects requiring OPEX support	
New Projects	Option 2 New projects requiring CAPEX support, using existing carbon crediting schemes	Option 3 New projects requiring CAPEX support, using new MRV schemes and performance metrics

Next steps of the research

- Understanding under which circumstances auctions can incentivize new investments (drawing on lessons from renewable energy auctions)
- Understanding whether sectors excluded from existing carbon crediting schemes may be price responsive if targeted through different metrics
- Prioritizing opportunities for blueprint development
- Identifying feasible designs models for implementation (funders, auction format, eligibility criteria etc.)

Thank you for your attention.

CARNEGIE CONSULT
Investment Advisory Services

POWER AUCTIONS

ECOFYS
sustainable energy for everyone

CLIMATEFOCUS