Results-based financing in EnDev

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Elina Weber, 2 June 2016
Results-based financing in EnDev

• Concept & key principles

“Overcome (financial) market barriers through contractual agreements with private companies to pay incentives after verification of pre-agreed results”

1. Payments to a recipient are made contingent on achievement of pre-agreed results
2. Recipient is given freedom as to how results are achieved
3. Independent verification of results functions as trigger for disbursement

• RBF in the energy access sector:
  – Targeting barriers or market failures that constrain private sector delivery of modern energy services to the poor with the aim to develop decentralised renewable energy markets
RBF portfolio

- Total budget committed in RBF facility: GBP 40,000,000
- Timeframe for project set-up & implementation: 4 years

Technologies:
- Solar (6)
- Cookstoves (6)
- Mini-grids (2)
- Street lights (1)
- Gasifier stoves (1)
- Domestic biogas (2)
- Solar Water Heaters (1)
- Solar Water Pumping (1)
- Grid connections (1)

Organizations:
- GIZ/EnDev (10)
- SNV (4)
- HIVOS (1)
- Practical Action (1)
- CLASP(1)

Countries:
- Africa: Benin, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda
- Asia: Bangladesh, Cambodia, Laos, Nepal, Vietnam
- South America: Peru

RBF types and approaches:
- AMC (2)
- Auctions (2)
- (Market development) OBA(10)
- CCT (1)
- Voucher (2)
- Credit OBA (3)
- Inducement prize (2)
### RBF projects in the cooking sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Objective</th>
<th>Bottleneck</th>
<th>RBF design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>Connect urban production to rural distribution via cooperatives</td>
<td>Transport and distribution costs and risks too high</td>
<td>Incentives per stove to cooperatives to invest in profitable distribution chain -&gt; <strong>market development OBA</strong></td>
</tr>
<tr>
<td>Peru</td>
<td>Design and market introduction of <strong>portable stoves</strong></td>
<td>No portable stoves available in the Peruvian market</td>
<td>Innovation contest for design of portable stoves. Winning stoves brought to market -&gt; <strong>inducement prize</strong></td>
</tr>
<tr>
<td>Kenya</td>
<td>Strengthening market for <strong>tier 2 and higher stoves</strong></td>
<td>Consumer financing constraints, absence of affordable credit mechanisms</td>
<td>Incentives for FI/MFI per loan extended to household purchasing stove, securing stoves loan product in MFI/FI standard portfolio -&gt; <strong>credit OBA</strong></td>
</tr>
<tr>
<td>Mekong (Cambodia, Lao, Vietnam)</td>
<td>Introduction of <strong>higher tier stoves</strong> to the region</td>
<td>Manufacturers hesitant to enter new market, no connection with local distribution market</td>
<td>Stove auction with increasing min. price and connecting manufacturers to national distribution agents -&gt; <strong>auction</strong></td>
</tr>
</tbody>
</table>

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**Notes:**
- **OBA** denotes an Output-Based Approach.
- **tier 2 and higher stoves** refer to different types and grades of cooking stoves.
**Stove Auction Mekong – Snapshot**

- **TITLE:** Market Acceleration of Advanced Clean Cookstoves in the Greater Mekong Sub-region (Cambodia, Laos and Vietnam)
- **DURATION:** 4 years - March 2015 to March 2019
- **BUDGET:** EUR 3,839,704
  - Management and TA = EUR 767,704 (cannot exceed 20% of total budget)
  - RBF incentives = EUR 3,072,000 (80% of total budget)
- **OBJECTIVE:** Accelerate market for advanced biomass stoves which are cleaner and safer than other biomass stove alternatives
  - Increase number of actors in the market
  - Improve access to cleaner and more efficient energy services for end-users

<table>
<thead>
<tr>
<th>STOVE TARGETS</th>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>-</td>
<td>10,000</td>
<td>16,000</td>
<td>21,550</td>
<td>47,550</td>
</tr>
<tr>
<td>Laos</td>
<td>-</td>
<td>4,275</td>
<td>8,550</td>
<td>13,538</td>
<td>26,363</td>
</tr>
<tr>
<td>Vietnam</td>
<td>-</td>
<td>6,413</td>
<td>12,825</td>
<td>27,075</td>
<td>46,313</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>120,225</td>
</tr>
</tbody>
</table>
Stove Auction Mekong - Concept

HOW IT WORKS

- Like in every auction there are Sellers and Buyers.
- The Sellers in *The Stove Auction* are stove producers or their agents and the Buyers are locally based stove distributors and retailers.
- **Sellers consign their stoves to The Stove Auction** located in Phnom Penh, Vientiane and Hanoi to sell to Buyers.

BENEFITS FOR SELLERS

- **Guaranteed prices backed by an RBF mechanism** for stoves that are auctioned
- Early, low cost entry into new markets in Southeast Asia
- Access to incentivised distribution channels facilitated by The Stove Auction
- Auction bypass option where Sellers can sell directly to Buyers at the full wholesale value price

BENEFITS FOR BUYERS

- Access to high quality products at competitive prices
- Can purchase in affordable quantities
- Receive a **cash incentive for each sale** to an end customer
Dynamic market valuation of RBF incentive to seller

Guarantee price to the supplier of stoves
- Economy of scales = less profit/unit & lower landing costs allows to bring down guarantee price

Lower RBF Incentive
- Increasing demand = competition = higher bids
  - Auction price for the distributor

EnDev/SNV Increasing the reserve price over time

Reserve price (minimum acceptable offer)

No sales
Buyer’s incentive valuation

- Based on the performance of the stove and categorized into **Standard and Premium level categories** according to the stove selection criteria.

- **Standard category** includes stoves that achieve **10-19% fuel savings** according to local CCTs and IWA Tier 2 or higher in total emissions, and with a “Best” or higher safety rating.

- **Premium category** includes stoves that achieve **20% fuel savings** or higher according to local CCTs and IWA Tier 3 or higher in total emissions, and with a “Good” safety rating.

- Each performance factor is then multiplied by different weight factors, resulting in an overall score for each performance factor. The **highest weight is given to ‘total emissions’** to push innovation on cleaner stoves.

- Each point in the overall score is then priced at EUR 1.00 in year 1 and is phased downward by 20% per year.

<table>
<thead>
<tr>
<th>Category</th>
<th>Stove Performance Scoring EnDev</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fuel Savings (CCT)</td>
<td>Fuel Savings Score</td>
<td>Total Emissions IWA Tier</td>
<td>Total Emissions Score</td>
</tr>
<tr>
<td>Standard</td>
<td>10%-19% (2.0)</td>
<td>2.0</td>
<td>2.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Premium</td>
<td>20% or higher (3.0)</td>
<td>3.0</td>
<td>3.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Weight of Scoring (1 - 3)</td>
<td>1.0</td>
<td>3.0</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>
Verification

• **RBF payments to Sellers**: paid once their stoves are sold at auction and the transaction has been independently verified. The price paid by the winning bidder plus RBF amount minus fees will be transferred to the Sellers bank account.

• **RBF payments to Buyers**: paid once their stoves have been sold to end-user and that transaction has been verified through phone calls and physical inspections by the IVA. Frequency: one time per month that verification and payment would take place.

• Transaction records that Buyers would need to submit to claim RBF are:
  – Full customer contact info
  – Serial numbers are recorded
  – All registration cards are included
  – RBF Claim calculations are correct

• RBF claims by Buyers will be deemed to have failed verification process when greater than 20% of consumer claims as inspected both onsite and via phone prove false.

<table>
<thead>
<tr>
<th>Method</th>
<th>Who</th>
<th>Producer</th>
<th>Distributor</th>
<th>End-consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Trail</td>
<td>IVA/FI</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Onsite</td>
<td>IVA</td>
<td>10% of boxes</td>
<td>0</td>
<td>5%</td>
</tr>
<tr>
<td>Phone</td>
<td>IVA</td>
<td>0%</td>
<td>0</td>
<td>10%</td>
</tr>
</tbody>
</table>
Thank you for your attention.

Funded by:

[Logos of various funding agencies]

Implemented by:

[Logos of implementing organizations]
EnDev RBF Global Programme
Elina Weber: elina.weber@giz.de

EnDev RBF Mekong (SNV)
Jason Steele, Regional Programme Manager: JSteele@snvworld.org

www.endev.info    www.thestoveauction.org
Pilot phase

- SNV has been piloting *The Stove Auction first in Cambodia* prior to third-party implementation.
- The first auction was March 31, and subsequent auctions on April 21, May 11 and May 26. Two auctions per week are scheduled.
- Currently there are **two stove models auctioned** so far (ACE 1 and Prime Fuelwood), with others waiting to be shipped and others in the pipeline undergoing approval.
- With the first four auctions, **980 stoves have been sold**. The clearing price has already slowly been going up as well as having highest bids.
- SNV is currently mobilising Buyers to register for *The Stove Auction*, with a target of at least 15 by September 2016 in Cambodia. **Currently there are 8 registered bidders** in the Cambodia auction.
## Key performance indicators

<table>
<thead>
<tr>
<th>EnDev indicators and RBF Key Performance Indicators (KPI)</th>
<th>Target</th>
<th>Rationale of estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total people gaining access (EnDev counting method)</td>
<td>609,425 people</td>
<td>Avg people per household (5 for Cambodia and Vietnam and 6 for Laos) multiplied by “Technologies Deployed” (this amount also takes into account repeated customers from year 1 due to a 3 year stove life, e.g. customers in year 1 buy again in year 4 and they are not counted twice)</td>
</tr>
<tr>
<td>EUR per person gaining access</td>
<td>6.30 EUR</td>
<td>Total EnDev contribution (RBF plus programme costs) divided by “Total people gaining access”</td>
</tr>
<tr>
<td>T CO₂ emissions avoided (over the lifetime of the products sold during project)</td>
<td>541,013 tCO₂e</td>
<td>3 year product life, avg 1.5 tCOe ERs/stove/hh/yr</td>
</tr>
<tr>
<td>EUR per t CO₂ emissions avoided</td>
<td>7.10 EUR</td>
<td>Total EnDev contribution (RBF plus programme costs) divided by “TCO₂ emissions avoided”</td>
</tr>
<tr>
<td>Private sector leverage ratio</td>
<td>2.19</td>
<td>End-user investment (70 EUR/stove * 120,225 stoves) divided by RBF payments + EnDev funded programme costs (EUR 3,840,000)</td>
</tr>
<tr>
<td>Jobs created</td>
<td>300</td>
<td>50 in Laos, 100 in Cambodia and 150 in Vietnam (auction, transport, sales agents/retail)</td>
</tr>
<tr>
<td>Enterprises created plus existing enterprises strengthened.</td>
<td>100</td>
<td>This takes into account about one-quarter of existing distribution companies and retailers in the three countries that SNV has identified – and has the potential to be scaled up significantly through the EnDev RBF programme</td>
</tr>
<tr>
<td>Technologies deployed</td>
<td>120,225 (indicative, based on modelled level of RBF)</td>
<td>Total of 47,550 in Cambodia, 46,313 in Vietnam and 26,363 in Laos over 4 years</td>
</tr>
</tbody>
</table>