EnDev Results-based Financing Facility (RBFF)
Advanced Biomass Cookstoves, Mekong region

<table>
<thead>
<tr>
<th>Countries</th>
<th>Cambodia, Vietnam, Lao PDR</th>
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<tbody>
<tr>
<td>Technology</td>
<td>Advanced Biomass Cookstoves</td>
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<tr>
<td>Project duration</td>
<td>03/2015 – 03/2019</td>
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<tr>
<td>Budget</td>
<td>€ 3,840,296</td>
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<tr>
<td>Implementer</td>
<td>SNV Netherlands Development Organisation</td>
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| Targets            | • 120,225 technologies deployed  
                     • 609,425 people gaining access  
                     • 541,013 tCO2e avoided |
| Achieved until     | 18,441 people supplied with cleaner cooking energy services |

### Project Approach

In Cambodia, Vietnam and Lao PDR, over 65 million people still cook on traditional biomass cookstoves that contribute to local natural resource degradation, and generate significant amounts of greenhouse gas emissions and smoke that pollute kitchens and ambient air. According to the WHO, no less than 60,000 people die in these countries each year as a consequence of inhaling smoke from cooking – a number exceeding the amount of deaths caused by diarrhea, malaria, HIV/AIDS, and tuberculosis combined. This health-hazard can be drastically reduced by Advanced Biomass Cookstoves (ABCs) that are cleaner, more energy efficient and safer than traditional cookstoves.

While super-clean gasifier cookstoves that achieve lowest levels of pollution exist elsewhere, at the on-set of this project they are virtually inaccessible to millions of people in the Mekong Region that cook on smoky traditional stoves every day. The project aims to start and accelerate sustainable markets for these clean smokeless cookstoves and uses an innovative Results-based Financing (RBF) approach that strengthens nascent supply chain actors.

### Incentive Structure

The main intervention to achieve the project objectives is the creation of an ‘Auction Platform’ in each country as a dynamic market-based mechanism to determine required RBF incentive levels for the development of self-sustaining markets for ABCs. In Cambodia, the project focuses on imported ABCs and on facilitating the vital connection between international stove manufacturers and local clean energy distributors, while in Vietnam and Lao PDR the intervention focuses on the potential of local manufacturers to bring ABCs to the market.
In Cambodia, this mechanism is employed through a ‘market aggregation platform’ that was initiated to facilitate business relationships between international ABC manufacturers and local clean energy distributors in an effort to aggregate the number of local stove buyers/distributors to critical mass for bulk purchases; and to replace the need for stove manufacturers to make these relationships themselves, thereby reducing their entry risk in a new, unknown market. Through bi-weekly SMS-based ‘stove auctions’, local distributors bid for small quantities of stoves with the ‘Lot’ going to the highest bidder. At the same time, a price is guaranteed to the international manufacturer. The difference between auction bid price and guaranteed price is covered by the RBF incentive, with the hypothesis that local demand for these new products will increase over time, leading to increased willingness to pay higher prices and thus reducing required RBF incentives.

In Vietnam, the project has developed a unique and innovative concept to define the level and distribute the financial incentives to producers of leading ABCs – an auction for results-based financing ‘options’. Companies that produce cookstoves meeting the project’s criteria are allowed to join the auctions to bid on incentive options. Through an online platform, producers submit their bids, and the options are awarded to the lowest bidders – i.e. those who require the least amount of RBF incentives to bring ABCs to end-users. After the stoves are sold, the producers provide customer data to the project with their smartphone. The project’s implementation partner, the Vietnamese Women’s Union (VWU) verifies these household data by phone and through field visits, which serves as the basis for incentive payments to producers.

In Lao PDR, a preliminary RBF scheme was introduced that incentivizes existing artisanal producers of traditional stoves to become engaged in the manufacturing of next-generation clean cookstoves. Once sufficient producers are engaged, a system will be developed that creates competition for incentives.

To date, four international stove manufacturers and sixteen local distribution companies are engaged in Cambodia; five local producers in Vietnam promoting eight different ABC models; and five local producers with 90+ retail points in Lao PDR. New project participants are on-boarded on a continuous basis.

Achievements so far and outlook

The project has kick-started markets for a new generation of cleaner cooking devices in three countries where such technologies were virtually absent at project start, and has created first-ever access for end-users to ABC stoves, broadening their choices towards healthier cooking methods. A number of local businesses now have considerable experience working in the supply chain for this new product, and are continuously creating new business models to help additional end-users access ABC stoves despite their relatively higher prices compared to traditional biomass stoves. New market entrants build on the opportunity to commercially introduce renewable biomass fuels such as pellets and briquettes, and technology-based consumer financing options. End-user satisfaction with the new stoves is high, and shifts to cleaner cooking practices are observed with replacement of traditional stoves. First indications are that self-propelling markets may continue after RBF incentives are phased-out, although currently incentives remain necessary.

Lessons learnt

As increasingly observed in other EnDev RBF interventions, too, RBF works best in markets that already exhibit certain pre-conditions and readiness for the uptake of an RBF mechanism. The three countries in the Mekong Region required significant up-front preparation for the ABC market to reach the point where RBF schemes could take hold. Higher levels of ‘traditional’ technical assistance were required, for instance, to support stove technology development, and to prepare market actors for participation in the RBF project. A well-functioning RBF project with disbursement and verification mechanisms is no easy feat and takes time. It is important to plan realistic timeframes, and to show patience as markets require time to mature.

Further Information

www.thestoveauction.org
www.endev.info