



EnDev Results-based Financing Facility (RBFF) [Cook-stoves, Nepal/South Asia]

Country	Nepal
Technology	Improved cookstoves (hood-stove and portable cookstoves)
Project duration	October 2014 – June 2019
Budget	€ 1,527,974 (EnDev) + € 27,366 (co-financing from Practical Action)
Implementer	Practical Action
Targets	<ul style="list-style-type: none"> • 172,755 persons gaining access to clean cooking technologies • 34,900 clean cookstoves deployed
Achieved until 06/2017	<ul style="list-style-type: none"> • 68,000 people supplied with access to improved cooking technology • 14,055 clean cook-stoves deployed

Project Approach

Household Air Pollution (HAP) is one of the biggest causes of premature deaths globally killing more people than a combined number of TB, Malaria and Aids. In rural especially remote and poor communities of Nepal, solid biomass fuel burning in the kitchens with inefficient cook stoves has posed threat to not just health but also the atmosphere. In this backdrop, the project has been implemented in eight districts of Nepal since October 2014 to provide easy access of clean cook stoves to people to address the problem.

Identified barriers for the sustainable market creation of clean cook stoves in Nepal include: i) lack of awareness; ii) low willingness to pay; iii) limited access to affordable finance; iv) lack of economies of scale in cook stove production; v) problem on service delivery and supply chain of cook stoves.

In this context, the project aims to: i) strengthen private-sector led clean cook stove marketing approach; ii) strengthen market chain of clean cook stoves; and iii) minimise respiratory health problems in rural Nepal caused by open fire cooking. Learning objectives of the project include: i) setting incentives that enable poor users to

purchase and benefit push products despite their low financial means; and ii) innovative financing for clean cook-stoves through preferential loans via cooperatives as an alternative to the current approach of providing substantial subsidies for certain types of clean cookstoves.



Ms. Gurung from Dhading is very happy after having a hood-stove

The underlying **theory of change** is that once the clean cook stove and hood-stove entrepreneurs are provided with Results-based Financing (RBF) incentives over a period of five years, they will grow in capacity over the period and will be able to continue to meet the on-going demand on their own. Through their initially supported activities, they will gradually be able to achieve greater production, quality assurance, and decrease their costs through economies of scale, so that the price of a portable cook stove and hood-stove will reduce over the 5 years by approximately 10 per cent.

Our market development hypothesis is that bridging the gap for affordable finance at the household level will increase demand and ability to pay (upfront) while providing monetary incentives for the entrepreneurs for each cook-stove sale will motivate them to build supply and dissemination channels.

The project is being implemented in Gorkha, Dhading, Makwanpur, Nuwakot, Rasuwa, Baglung, Myagdi and Parbat Districts in Nepal. Most of the households from these areas use solid biomass fuel for cooking.

Funded by:



Coordinated and implemented by:



NMB Bank Limited is the RBF fund manager. Likewise, the project has partnership with five local NGOs while the project is working closely with District Cooperative Association, local cooperatives, cook stove manufacturers, importers, distributors and other supply chain actors.

Incentive Structure

The project uses a simple, but interlinked incentive scheme to trigger market acceleration at both, the demand and supply side. The project provides four types of RBF incentives as mentioned below:

- To Entrepreneurs: For documentation and marketing cost, up-front investment and taking risk
- To End-users: As the price discount
- To End-users: As interest premium on cook-stove loans
- To Cooperatives: For providing loans to the users

Currently effective, RBF incentive rates for portable cook-stoves in different years are as mentioned below:

Receipts	Year/Phase				
	1	2	3	4	5
Entrepreneurs (% of stove price)	9	9	9	9	9
Price discount to end-users (% of stove price)	75	50	40	30	20
Interest premium to end-users (% of interest)	0	100	75	50	25
Cooperatives (in EUR)	0	4.75	4.30	4.3	3.88

This RBF incentive level was determined after having consultation with key stakeholders and detail analysis of cook-stoves market, for bridging the existing viability gaps by providing a monetary incentive for taking investment risks and participating in the project. The incentive was designed to channels incentives for the long-term development of the market through directing payments to cook-stove SMEs and local cooperatives.

Historical Development

There have been two times adjustments of the project and the RBF incentives levels after approval of the project. The project was started to establish sustainable market of fixed type of hood-stoves. After 2015 earthquake, portable clean cook-stoves were also included for deployment in the project. Accordingly, new incentives level was set for the portable cook-stoves. Likewise, second adjustment of project was done in March 2017 to solve the problem created by free distribution of cook-stoves by the Government and relief organizations which had distorted the cook-stove market.

Achievements so far and outlook

Although having unfavourable and difficult circumstances caused by 2015 Earthquake, the project has been successful to make adjustment as per the need, and achieve outputs as outlined below:

- 14,522 technologies (hood-stoves and portable cook stoves) deployed benefiting around 70,160 people till December 2017.

- 10 hood-stove manufacturing companies, two portable cook stove manufacturing companies, 9 cook stove importers and 15 cook stove distributors/retailers are actively involved in supply of technologies.
- About 50 local cooperatives have been actively involved in project to provide loan for the cook stoves.
- There is increasing trend of private sector investment. Till June 2017, private sectors' investment was at ratio of 1: 0.68.
- Total 184 direct jobs have been created.
- There is a gradual reduction of RBF incentives in subsequent years. Third year RBF incentive level is effective at present.

Lessons learnt

The RBF model has been successful to create ownership and make active involvement of private sectors. The modality is very successful for leveraging private sector investment, quality control and achieving results. But there seems lots of scope for improvement as mentioned below:

- High transaction costs (time, money and risk), leading to higher price of stoves due to: i) lengthy and costly data verification process; ii) documentation costs and opportunity cost of investment.
- Limited fund with private sectors due to time gap to get payment (as per RBF modality) has been limiting their capacity to invest more.
- High tax (VAT, TDS) while working through private sectors.
- Benefitting mostly innovators and early adopters who are comparatively better-off leaving us with question, "with RBF, can we reach to the left behinds?"
- Annual decrease in RBF incentives creating confusion and negative impact on demand.
- As the RBF is a new model, NGOs in Nepal are not prepared or confident enough to work in result based modality. Results creation in all project districts is not equal. NGOs having low results are facing difficulty to manage staff salary as per the result based payment model.
- Required additional budget allocation to carryout intensive social marketing and organise adequate capacity building activities.

Further Information

Ms. Pooja Sharma
 Head of Energy Programme
 Practical Action South Asia Regional Office
 Kathmandu, Nepal
 Phone: 977-1-4423639, 4423640
 Email: Pooja.Sharma@practicalaction.org.np
 www.practicalaction.org/nepal

Published by:

Deutsche Gesellschaft
 für Internationale Zusammenarbeit (GIZ) GmbH
 Registered offices: Bonn and Eschborn, Germany
 GIZ Office Kathmandu
 P.O. Box 1457, Kathmandu, Nepal
 T +977 (1) 5523228
 F +977 (1) 5521982
 I www.giz.de and www.endev.info

Contact:

EnDev
 Dr. Peter Foerster
 E peter.foerster@giz.de

Photos:

© GIZ/EnDev.