

The number of community-based projects to reduce emissions is rapidly increasing ahead of EU restrictions on credit types from next year. ERIK WURSTER outlines the challenges in implementing these projects and how to overcome them

Distributing reductions

Since the carbon market's inception, projects involving large facilities and factories have dominated the Clean Development Mechanism. These entities were sophisticated and often well capitalised, simplifying the logistics, partnerships and business environment that enable project success and scale. Those days, however, are largely over. With the advent of the EU Emissions Trading System (ETS) post-2012 restrictions on certified emission reductions (CERs), generating significant credit volumes in tomorrow's carbon market will require aggregating CERs generated at the household level. This will necessitate nationwide, regional or even global programmes of activities. To succeed in this market, so called "last mile" product distribution, or sale of products such as cookstoves at the retail and household level, is essential – which requires carbon finance companies to develop expertise in an unfamiliar field.

Beginning in 2013, the EU ETS – the main source of demand – will accept CERs from newly-registered projects only if they are based in least-developed countries (LDCs), where large, centralised facilities are often challenging to build and maintain.

Further, their capital-intensive nature combined with their higher risk profile make them more challenging to finance. In contrast, products that slash greenhouse gas emissions at the household level, such as efficient biomass cookstoves, compact fluorescent bulbs and water filtration systems, require less upfront capital and also offer profound poverty reduction and sustainable development benefits, which will command a premium in a post-2012 world.

Yet getting high quality, durable and appealing products into millions of homes can be exceedingly challenging, and requires a skill

important but often least understood ingredient in carbon-financed product distribution. Since potential carbon revenues from such products frequently exceed their value, it is tempting to discount products heavily or even give them away. However, product giveaway programmes not only distort local markets, but they exponentially increase a project's implementation risk. Some suggest that, as prices drop, the proportion of users who actually use the product may also decrease and, without usage, CERs will not be realised.

Of course, whether or not a specific customer uses a product is not entirely dependent on the price paid. But through a self-selection process, price determines which customers are serviced. As the price of a product rises, one selects for a more committed household since that household sacrifices more to purchase the product. On the other hand, if products are priced too high, one targets a disproportionate share of higher income households. In such circumstances, aspirational products such as highly refined cookstoves might be purchased as a novelty item and not used every day. In short, the "ideal" price exists in each market for each product to ensure maximum long-term usage and expedited sales, but identifying that price can be challenging.

Tackling these variables requires significant market research to understand the market and create distribution channels that can be customised for unique market conditions, yet are sufficiently codified to be highly replicable and achieve scale. Focus groups and various auction approaches can provide some indication of willingness and ability to pay, but there is usually no substitute for testing the market via pilot sales, starting high and slowly dropping the price until the desired results are achieved.

Effective stove programmes vet technologies over a period of years to ensure cultural acceptance, efficiency and durability. Where local technologies are not available or effective, project developers must catalyse industry growth by supporting local manufacturing, importing high quality stoves, or sourcing knock-down, pre-fabricated stoves that can be shipped inexpensively and assembled domestically. Effective last mile distribution channels tend to leverage the informal economy by offering sales commissions at all levels of the value chain, allowing channels to grow organically. They borrow key ingredients from the formal sector, such as Walmart-style supply chain management approaches and 21st century data tracking methods using mobile phones and barcodes. These are critical not only for efficient supply chain management, but also to track requisite carbon data for streamlined verification and credit issuance.

Emission-reducing household products offer tremendous potential to generate carbon credits at scale. Tomorrow's market leaders are investing heavily to build, maintain and replicate effective distribution channels that take into account local conditions and variables specific to carbon finance. Companies seeking to thrive in the post-2012 carbon market should build this capacity internally or forge partnerships that leverage skill sets needed to ensure implementation success. Otherwise, households cooking banku in Ghana or beans in Rwanda might miss the opportunity to use more efficient and less polluting technology. **CF**

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Programmatic CDM projects

Host region	At validation	Registered	Issued credits
Latin America	55	4	0
Asia & Pacific	147	8	0
Europe & Central Asia	3	0	0
Africa	92	5	0
Middle East	10	0	0
Total	307	17	0
LDCs	30	3	0

Source: UNEP Risk PoA Pipeline, June 2012

set that most carbon finance companies lack. For example, scaling up biomass cookstove projects is subject to the whims of local consumer preference and cultural norms, poor infrastructure and inappropriate technology design.

For example, urban Ghanaian households seek stoves that burn charcoal and can withstand the rigours of mixing a highly viscous traditional dish called banku, which requires the cook to stand on steel bars affixed to the pot handles to keep the pot in place. Rural Rwandans, on the other hand, value wood-burning stoves that offer long cooking times to boil beans and corn. Cookstove projects tend to (and, many would argue, should) involve local partners operating in the informal sector and cottage industries, which can make it challenging to formalise partnerships. These relationships and geographical and cultural specificity make scaling logistics exceedingly challenging.

Another challenge is product pricing, which is perhaps the most