

# Scale pilots to facilitate uptake of electric cooking in Cambodia

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Kandal, Ang Snoul

## Background

Finding a reliable and clean source of cooking fuel in developing countries is a persistent obstacle for poor households. 80% of the rural population in Cambodia does not have access to clean cooking (ESMAP, 2017). Most rural Cambodians cook with wood (77%) and 6% cook with charcoal, spending approximately 1.5 hours a day on cooking. Cooking on traditional biomass stoves not only contributes to deforestation, local natural resource degradation and increased greenhouse gas emissions, but also has severe negative impacts on health through the smoke that pollutes households and the ambient air.

**The low level of modern cooking services taken up in Cambodia suggests it is time to introduce a new technology and solution to change behaviour and offer rural Cambodian households an option to transition away from cooking with firewood and charcoal, and mitigate the negative impacts on health, forests and air quality.**

## Objectives

### Overall Objectives:

Test how electric cooking products and innovative delivery methods can be effectively introduced and scaled to be affordable, meet household needs, and accelerate a transition to clean cooking in Cambodia. Understand the climate impacts of this transition in Cambodia.

### Specific Objectives:

- Address barriers for rural households to adopt electric cooking devices
- Test and iterate different products/technologies, financial mechanisms and business model combinations, including the viability and potential of carbon finance to assist broader adoption of electric cooking devices in Cambodia
- Identify approaches (products, distribution of the products, financial models including carbon finance, service delivery models) for effectively scaling up new electric cooking products in the Cambodian market

## Key technologies and approaches introduced

- This project is implemented in rural and peri-urban Cambodian locations as an action research wherein ATECs electric cooking products are test marketed to purchasing customers through the sales and distribution chain of iDE's MECS micro enterprise.
- Deploying an agile project management style to facilitate the iterative designing pilot process, the project collects regular sales data to improve sales conversion through data-driven decision-making for different pilot testing cycles
- At the same time action research is conducted through surveying the cooking experience of paying customers to assess the extent of climate mitigation benefits through the switch from their existing biomass/LPG stoves to efficient induction stoves
- Assessment of the financial modelling aspects of the product offering aims to identify additional opportunities to improve electric cooking adoption through alternative financing mechanisms

## Outputs and key activities

- Increased awareness of clean cooking technologies and the benefits of clean cooking to the household among rural Cambodian households.
- Increased adoption of clean cooking technologies among rural Cambodian households
- Ensuring equitable access to and adoption of clean cooking technologies for all rural Cambodian households
- Rural Cambodian households use electricity for cooking in place of biomass contributing to climate benefits (air pollution and deforestation)
- Increased use of clean cooking technologies among rural Cambodian households
- Protocols and policies for carbon credit generation are proposed, recognizing

## Implementation progress

At the time of writing, field sales activities have reached over 570 households, given 352 sales pitches and generated 103 sales of electric stoves generating 29% sales conversion – almost 1 in every 3 people receiving the sales pitch choose to opt into purchasing the technology. A large factor driving the decision making for households are the availability of affordable installments starting at 10\$ per month. These early results provide a positive indication of innovative electric cooking technology matching people's needs.



## Key challenges and lessons learnt

**Employing lean data approaches:** A rigorous data collection system allow the project team to assess the overall success of the project in real time. This helps deliver better value for money of our sales activities. This data is useful for sales managers who can utilize credible information to constantly assess the coaching and training needs of the team, and improve sales.

The learning curve on setting up the data platform has helped us understand how to better develop internal controls for data collection, tracking, and error prevention through training and follow ups.

**COVID transmission risks:** At the start of the sales pilot in September, 2021, communities in Takhmau – the location of our previous sales pilot were hesitant to engage with sales agents. Acknowledging the challenge in conducting door to door sales in this situation, a similar rural location in Kandal, Ang Snoul was identified that matched our selection criteria (rural locations, low electric cooking options, grid extension and available target customers).