

Scaling up frameworks and innovative energy interventions

Executive summary

This study attempts to analyse the experiences in scaling up of solutions to rural energy problems with respect to the scaling up assessment tool developed by International Fund for Agricultural Development (IFAD). Systematically studying scaling up in energy access is necessary because of the centrality of energy access to development goals, because of the scale of the problem still unaddressed and because achieving the requisite scale will require collaboration across sectors with different motivations and approaches. Analysing examples of such interventions across sectors based on a framework for scaling up enables us to standardize and compare varying motivations and approaches in relation to the energy access challenge.

The study analyses the five case studies of clean energy interventions in India and Africa in conjunction with the IFAD tool. The framework has 5 core conceptual bases - Ideas, Vision, Drivers, Spaces, and Pathways. These are used to evaluate an intervention which may be at the pilot stage, in the process of scaling up or have achieved scale. The five cases chosen – Solar Electric Lighting Company (SELCO), Nuru Energy, the National Programme for Improved Cookstoves (NPIC), Husk Power Systems (HPS) and the Rural Energy Development Programme (REDP) - represent diverse elements of the rural energy access problem operating at different levels of scale. They are drawn from the public, private and non-Governmental sector.

Since its inception, SELCO has expanded geographically area as well as diversified its product line. On the former parameter, it has established itself throughout Karnataka but has been less successful outside the State. Regarding product diversification, SELCO can be said to have achieved scale. SELCO's focus on customized quality service to their customers requires constant interaction and building close relations with customers. Therefore, rather than scaling up as an organisation, SELCO intends to achieve scale through replication of their model.

Nuru Energy offers an example of a 'social enterprise', an organisation which aims to use the market to fulfill philanthropic goals. However, the philanthropic underpinnings of Nuru's vision and its for-profit nature are not necessarily complementary drivers. In this case, it is possible that the former driver has dictated their decision to enter new markets without adequately evaluating the impact on business sustainability.

The National Programme for Improved Cook-stoves has achieved significant distribution figures; however, there remain questions over whether the underlying objectives of the programme were achieved. The programme misidentified some spaces, relied excessively on a single, unsustainable driver (subsidies) and lacked a coherent vision for its desired impact. However, the proliferation of non-Governmental improved cook-stove initiatives following the programme's closure indicates that it has triggered a process of scale through diffusion.

Husk Power Systems has demonstrated a scalable business model through six years of operations. However it still has not covered much ground in the Indian market (barring in Bihar) owing to the poor electricity access conditions prevailing in the states.

The main challenge for an energy enterprise such as HPS is grid expansion by utilities. Husk also realizes that for long term growth going beyond biomass based electrification is crucial. Despite enhancing its credibility and cementing investor interest, it still needs crucial government support to improve its business case.

The scaling up of the Rural Energy Development Programme, Nepal has been measured, phased and systematic. Having multiple products to offer and household specific demands to cater to, the process of scaling up was not uniform across products. The changes brought about in the daily lives of participants, especially of the women, have resulted in reduced drudgery in household tasks and an increase in productive and community roles. Women have emerged as leaders and decision-makers within the programme, their households and the community – an outcome that will have enduring inter-generational impacts.

The 'Vision' element of the framework, which incorporates the idea of 'appropriate scale' was an element that was not found to be strongly considered in most of the cases considered in this report. The particular conceptualization of 'Spaces' by the framework encourages the intervention planner to think about these factors as fluid and inter-related and deal with them as such. Finally, while the analytical benefits of the framework for donor and implementing agencies are evident, its use can also positively benefit the performance of ground level implementers of interventions attempting to scale up.

In conclusion, rather than operating as a prescriptive tool, the IFAD framework encourages intervention planners to engage in critical self-evaluation. In contrast to several other frameworks which evaluate scaling up challenges as checklists or linear flow-charts, the IFAD tool successfully lays the base for solutions to organically emerge from within the existing innovation process.

One of the key aspects of analysis that could be developed further is the effect of distinct Drivers of scaling up on each other. In addition, the framework could be strengthened by customizing it for different actors and adding weightages for different parameters of scalability.