Our approach: Reviewing programmes to share learning with policy-makers, financiers and practitioners.

**SITUATION BEFORE AND AFTER**

Situation helps determine...

1. **PRE-CONDITIONS**
   - Demography, inequality, natural resources and infrastructure

2. **WIDER MARKET CONDITIONS**
   - Supply, demand, policy and finance

3. **ENERGY ACCESS CONDITIONS**
   - Supply, demand, policy and finance for a particular energy access sector (mini-grids, cookstoves, etc.)

**PROGRAMMES**

...actions in a variety of areas...

- Supply
- Demand
- Policy
- Finance

**RESULTS**

...leading to energy access results in terms of:

- **SCALE OF DELIVERY**
  - Also considering:
    - Pace of change
    - Sustainability of access over time

- **INCLUSIVITY OF DELIVERY**
  - Also considering:
    - Poverty
    - Gender
    - Remoteness

The process is cyclical, with national factors and programme results subsequently re-informing programme design.

The design of particular programmes, how these are implemented and the results achieved is at the heart of our analysis. Solutions must be context-specific and adaptive over time.

The approach taken in design, decision-making and implementation is critical to results achieved.
**Striking the right balance** | Achieving energy access that is both inclusive and at scale

1. **Universal access**

Achieving universal energy access that leaves no one behind requires a mix of programmes considering both scale and inclusivity. Planning and delivery models need to integrate grid, off-grid, and clean cooking solutions.

We must achieve a better balance in order to progress these two objectives in parallel.

2. **Leaving no one behind**

Reaching the 'last mile' requires a concentrated focus, with sufficient, targeted finance, dedicated staffing and tailored processes. Measures of programme success should reflect not just numbers of connections, but aspects of remoteness, poverty and gender.

Addressing inclusivity should be a driver of success.

3. **Addressing barriers to scale**

Reaching scale requires a holistic approach, working not only on the volume and quality of supply, but on blockages in finance, weak demand and policy shortcomings.

We must find ways of scaling up programmes, while retaining the richness and quality of smaller scale initiatives.

Market activation approaches bring stakeholders together to address barriers to scale.

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**Understanding the context is crucial for strong programme design**

Planning for scale and inclusion requires better understanding the Total Energy Access service needs of rural communities and a good mapping of the context to help generate a range of appropriate delivery models.

**Addressing gender inequality is good for businesses and people**

Gender-sensitive and transformative approaches can boost company bottom lines and enable women’s full participation in the attainment and enjoyment of SDG7.

**Smart use of public funds will be critical to closing the affordability gap**

Because private-sector companies target the most profitable market segments first, public finance for well-designed subsidies and regulations remains crucial.

**Embracing multi-stakeholder processes at decentralized levels**

Bringing the right stakeholders together can improve trust, stimulate new markets and, together with a clear policy steer, ensure a focus on reaching marginalized groups.

**Adapting to the changing environment is key for scale and sustainability**

In a dynamic sector where innovations in technology and new opportunities arise rapidly, programmes need to learn and adapt to sustain progress.

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**Poor People’s Energy Outlook 2018**

Achieving Inclusive Energy Access At Scale

policy.practicaaction.org/PPED2018

@PracticalAction #PPEO2018
# Ghana Case Study: Clean Cookstoves Programme, 2002–2007

## Our Findings

### Key Takeaway: Scale
A 30-fold increase in stove sales since 2007.

### Key Takeaway: Inclusivity
Made efforts to ensure stoves were accessible to poor households. Gender-sensitive in its design, but not gender-transformative. Rural firewood users were not the intended market.

## Basic Programme Information

### Focus
To build a sustainable market for charcoal ICSs, and to reduce indoor air pollution in 40,000 urban and 5,000 rural homes through the uptake of Gyapa ICSs.

### Location
Nationwide, focusing on charcoal and potential charcoal users, which are low- to middle-income households in urban and peri-urban areas.

### Number of Beneficiaries
Estimated 1.5 million households since 2002 through Gyapa and its spin-offs, Toyola and Man and Man: 37% of the potential market.

### Key Stakeholders
EnterpriseWorks/VITA (EWV), Shell Foundation, USAID.

## Programme Result

- **4.1m households** the potential market for improved charcoal stoves in Ghana
- **Uptake of all types of improved charcoal stoves as a % of potential market by 2016**
- **Uptake of improved charcoal stoves as a % of potential market in 2001**

**Inclusivity: % of total possible score**

- Urban areas with population >30,000 in 2000
AN EXTENSIVE CENTRALIZED PROGRAMME WITH THE AMBITION TO ELECTRIFY ALL OF INDIA

OUR FINDINGS

KEY TAKEAWAY: SCALE
Achieved significant scale but issues of sustainability and quality of electricity remain.

KEY TAKEAWAY: INCLUSIVITY
Provided free connections for those registered as below the poverty line (BPL), but the off-grid component’s failure left remote villages out.

PROGRAMME RESULT

BASIC PROGRAMME INFORMATION

FOCUS
Provision of electricity to BPL households, but only in villages of 100 households or more.

LOCATION
Nationwide, but we focused on Odisha state.

NUMBER OF BENEFICIARIES
In Odisha state 2,865,036 BPL households were connected, as of March 2014. However, for one in six, the very poor quality of this connection meant almost no level of energy was actually delivered.

KEY STAKEHOLDERS
Led by the Government of India, implemented through private and state-owned distribution companies.
INSTRUMENTAL IN CREATING A LARGER MARKET SYSTEM AND STRONGER POLICY FRAMEWORK FOR RURAL BIOGAS

OUR FINDINGS

KEY TAKEAWAY: SCALE
A market system developed but so far has reached just 10.0% of the potential market for rural domestic biogas.

KEY TAKEAWAY: INCLUSIVITY
Clear and intentional gender-sensitive activities, but faced difficulties in targeting the poorest, remotest communities.

PROGRAMME RESULT

Basic Programme Information

FOCUS
Developing a commercial, market-oriented biogas sector serving rural farmers.

LOCATION
An initial focus in five priority districts, but later changed strategy to target dairy farmers, and coffee and tea cooperatives.

NUMBER OF BENEFICIARIES
17,134 biogas plants benefiting some 103,000 people.

KEY STAKEHOLDERS
Programme funded by Netherlands Ministry of Foreign Affairs and implemented by Hivos and SNV as part of a wider Africa Biogas Partnership Programme.

https://policy.practicalaction.org/ppeo2018
Nepal case study | Rural Energy Development Programme, 1996–2011

DECENTRALIZED DECISION-MAKING AND STRONG COMMUNITY OWNERSHIP AND OVERSIGHT

**OUR FINDINGS**

**KEY TAKEAWAY: SCALE**
Fairly large-scale in the context of mini-grid programmes (delivering 454 systems), but still only benefiting 3.8% of all households in the target districts.

**KEY TAKEAWAY: INCLUSIVITY**
Targeted remote areas and ensured strong engagement from women and poor households, from planning to implementation.

**BASIC PROGRAMME INFORMATION**

**FOCUS**
Community-managed micro-hydro systems providing household lighting and power for small appliances, with a secondary focus on productive uses such as milling.

**LOCATION**
Targeted 40 out of 75 districts.

**NUMBER OF BENEFICIARIES**
57,749 households or about 600,000 people.

**KEY STAKEHOLDERS**

**PROGRAMME RESULT**

- Total population of 40 target districts (1.8m in 2011)
- Electricity access in target districts in 2011
- Electricity access in target districts in 2001

**SCALE:** % of target population

**INCLUSIVITY:** % of total possible score

- Programme target districts

https://policy.practicalaction.org/ppeo2018 @PracticalAction #PPEO2018
ENCOURAGED RURAL DISTRIBUTION COMPANIES TO EXTEND THEIR SERVICES TO NEW COMMUNITIES

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<thead>
<tr>
<th>OUR FINDINGS</th>
<th>PROGRAMME RESULT</th>
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<tr>
<td><strong>KEY TAKEAWAY: SCALE</strong></td>
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<td>Reached new communities in the context of strong</td>
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<td>inequalities between electrification rates in a</td>
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<td>rural vs urban areas. Overall, scale fairly</td>
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<td><strong>KEY TAKEAWAY: INCLUSIVITY</strong></td>
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<td>Targeted remote and unelectrified provinces, but</td>
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<td>only the easiest to reach within that. Boosted</td>
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<td>livelihoods, but did not tackle gender</td>
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<td>disparities.</td>
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**BASIC PROGRAMME INFORMATION**

| **FOCUS**                                        |                  |
| Electrification of rural households through     |                  |
| decentralized distribution companies unlike      |                  |
| previous centrally planned electricity          |                  |
| programmes.                                     |                  |
| **LOCATION**                                     |                  |
| Operated in 48 of Peru’s 196 provinces.          |                  |
| **NUMBER OF BENEFICIARIES**                      |                  |
| 105,048 households, businesses and public       |                  |
| institutions or 446,715 people, representing 20%|                  |
| of the provinces’ unelectrified population.     |                  |
| **KEY STAKEHOLDERS**                             |                  |
| Peruvian Ministry of Energy and Mines, World     |                  |
| Bank (loan funds) and GEF (grant).               |                  |

https://policy.practicalaction.org/ppeo2018
One of the first attempts to engage the private sector in delivering off-grid electricity

Our Findings

Key Takeaway: Scale
By 2016 just 1.5% of target district households reported using SHSs, with many failed systems being returned by customers.

Key Takeaway: Inclusivity
Achieved greater parity between grid and off-grid subsidies, and removed up-front costs for poor households, but did not address the challenges women might face in benefiting from the electricity.

Basic Programme Information

Focus
To accelerate access to electricity for households in remote communities as an interim measure before grid connections could be extended.

Location
Concessions in 16 districts in four provinces.

Number of Beneficiaries
150,000 SHS installations providing at most 500,000 people with basic electricity access (although only 60,000 are thought to be still in use).

Key Stakeholders
Delivered by six private companies contracted by the government.