Promoting Sustainable Energy for Equitable Development

GIZ approaches on decentralised renewable energy
The Main Challenges for decentralised RE

Regulatory framework for the electricity sector needs to provide easy market-access, on fair terms, to private sector entities and IPPs.

Unclear policy framework – Are SME and the off grid sector relevant to climate and electrification?

Shortage of qualified professionals

No access to finance due to many (perceived) risks

- Political risks
- Changes in legal or regulatory policies
- Off-taker risk
- Currency risk
- Technology and resource risk
- SME lack financial track record

Untested business models: business models are often hindered by inflexible tariff structure for cost (high upfront costs yet low ability-to-pay).
GIZ’s contribution to off-grid Development

The following contributions are already being made from the current portfolio:

- **Improved framework conditions for decentral energy supply**: Key aspect of almost every bilateral project in Africa; structured advisory tools via the global programme GET.pro

- **Investment mobilization**: local market development through EnDev (e.g. results-based financing); pipeline development and access to finance via GET.pro

- **Productive and consumptive use of energy**: enabling households to consume and utilise energy for income generating activities, and local enterprises as well as social institutions to expand and improve their products/services (e.g. Uganda)

- **Vocational education and training**: development of certification schemes, curricula, training of trainers, promotion of local training institutions; as autonomous projects (e.g. Egypt) or as components of bilateral programmes (e.g. Nigeria)

- **Partnerships**: promotion of partnerships on communal level; e.g. via the implementation of the Covenant of Mayors
Project Examples – EnDev, GET.pro, Bilateral Programmes

Thematic focus: GTF - Tiers

1. EnDev
   - Energy access topics
   - Local market development
   - Results-based financing „bottom-up push“

2. Bilateral Programmes
   - Long-term in-country presence
   - Institutional development
   - Policy advice

3. GET.pro
   - Energy transition topics
   - Systemic energy transformation
   - Mobilisation of investments „top-down pull“

4. Energy transition context
Project Example GET.pro: Investment mobilization approach

https://www.africa-eu-renewables.org/finance-catalyst/
Activity Highlight 2 – Finance Catalyst ctd.

- Since 2016, Finance Catalyst has received 330+ applications
- Currently, 51 projects receiving assistance
- 17 projects already successfully introduced to financiers
Promotion of Solar-Hybrid Mini-Grids in Kenya

- Focus: remote rural areas
- Aim: Promote the development of greenfield solar-hybrid mini- and micro-grids
- Main objective: contribute to cost-effective and sustainable power supply in rural areas
- Partner institutions: MoEP, REA, ERC, KPLC

- KFW: 15 m Euro
- giz: 7.5 m Euro
DKTI Programme “Promotion of Solar-Hybrid Mini-Grids” in Kenya

**Multi-level approach:**

<table>
<thead>
<tr>
<th>Energy Policy Advisory and Strategy Development</th>
<th>Implementation mechanisms</th>
<th>Capacity building and training</th>
<th>Support to pilot projects</th>
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<tbody>
<tr>
<td>• Develop of conducive Mini-Grid policy and regulations</td>
<td>• Exemplary licensing of privately owned Mini-Grids</td>
<td>• Development of training curricula</td>
<td>• Feasibility studies and project development support</td>
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<td>• National framework for county energy planning</td>
<td>• Economic analyses of business models</td>
<td>• Trainings for solar technicians, training-of-trainers</td>
<td>• Handbooks for practitioners</td>
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<td>• Development of County Energy Sector Plans</td>
<td>• Strengthen incentive frameworks and tariff schemes</td>
<td>• Capacity building in planning, design and O&amp;M</td>
<td>• Development and testing of smart operating and business models for Mini-Grids</td>
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<td>• Monitoring of Mini-Grid performance</td>
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Ongoing GIZ Programs to support the energy: GIZ Portfolio world wide (not exclusively off-grid)

GIZ worldwide energy projects: 170
Volume: EUR 750 m.

- Africa: 12%
- Asia: 30%
- Europe: 17%
- Latin America: 18%
- MENA region: 12%
- Trans-regional: 10%
Renewable Energy Off-grid Components of NDCs and their Market and Climate Change Mitigation Potential

- **Scenario Development for Rural Electrification**
- **REOG Market- and Climate Change Mitigation Potential**
- **Best Practices to Support REOG Ecosystems**
- **Country Readiness Assessment and Suggestion for NDC Revision**

Side Event Tomorrow: 12:30 – 14:00
Thank you!

Stefan Mager
Strategies for renewable energy for climate protection in developing countries

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GET.invest „Market Segments“ / Technologies

**On-Grid Electricity**
- IPP (large)
- IPP (small)
- Commercial & Industrial E.

**Off-Grid Electricity**
- Mini-Grids
- Solar Home / Inst. Systems
- Solar Lighting / Lanterns

**Non-Electricity**
- Household Cooking Energy
- Commercial Thermal Energy
- Liquid biofuels
Why looking at decentralised renewable energy

- The big, centralized energy companies are struggling with a variety of internal problems.
- The utilities are unable to ensure SDG 7 achievement.
- The utilities have little interest in investing in rural areas.

Energy supply must be driven by broad involvement of the people, by small and medium-sized companies, municipalities, cooperatives, and other public associations.

Broad initiatives are needed to ensure reliable and affordable electricity supply in rural areas.