Ghana’s Renewable Energy Projects and Energy Efficiency Measures towards achieving SDG 7 goals

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## Monitoring SDG 7

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2018/19</th>
<th>2030</th>
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<tbody>
<tr>
<td><strong>Electricity Access Rate</strong></td>
<td>~70%</td>
<td>84.5%</td>
<td>&gt;90%</td>
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<tr>
<td><strong>Population without Access to Electricity</strong></td>
<td>7.4 million</td>
<td>4.4 million</td>
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<td><strong>Access to Clean Cooking (Improved Cook stoves)</strong></td>
<td>&gt;0.8 million</td>
<td>2 million</td>
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<td><strong>Access to Clean Cooking (LPG)</strong></td>
<td>18%</td>
<td>25%</td>
<td>50%</td>
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<tr>
<td><strong>Penetration of Modern RE</strong></td>
<td>0.1%</td>
<td>1.8%</td>
<td>10%</td>
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Appiah, F.K. (2019)
Programs/Projects to support Access to Clean Energy Tech.

- Mini Grid Development
  - There over 2,000 island and lakeside communities
  - 5 island off-grid communities electrified serving over 6,000 inhabitants.

- Solar Lantern Promotion Program (SLAPP) From 2013-2020
  - to replace kerosene lanterns in off-grid rural households.
  - Target is **2 million** solar lanterns in off-grid rural homes
National Rooftop Solar Programme (NRSP) From 2016 - 2030
- Support the installation of 200,000 solar rooftop systems
- Focus of support is towards rural off-grid communities

Scaling Up Renewable Energy Program (SREP) From 2020 - 2023
- 55 RE based Mini-grids for island and lakeside communities
- 33,000 Stand-Alone Solar Home Systems for off-grid areas
- 15,000 solar PV based Net Metering with Battery Storage for households and SMEs

LPG – Cylinder Circulation Programme
- Pilot Cylinder Recirculation Model (CRM) to begin in Obuasi (Ashanti) and Kwaebibire (Eastern) by the end of 2019.
- 5 LPG marketing Companies licensed by the National Petroleum Authority (NPA) under the Cylinder Recirculation Model.

EE Projects
- Introduction of efficient appliances that support off-grid use
- Switch from CFL to LED
Programs/Projects to support Access to Clean Energy Tech.

- **Mini-Hydro Project** From 2013-2020
  - 40kW mini-hydro Tsatsadu Falls, VR completed. Developed by Bui Power Authority in collaboration with IN-SHP, China under UNDP-RETT Project
  - 60MW Pwalugu multi-purpose mini-hydro dam under development by VRA
  - BPA considering mini-hydro development along the western rivers

- Improved Cook stoves production and dissemination with the private sector (Clean Cooking Alliance)
  - > 800,000 improved cookstoves deployed since 2012.

- **Solar irrigation Application**
  - UNDP/EC - 78 smallholder farmers supported in Tamalugu, Nakpanduri, Datoyili and Fooshegu, NR
  - Green Climate funding to scale up
  - GIDA key partner
Financial Facilities to support Access to Clean Energy Technologies

- **Sustainable Use of Natural Resources and Energy Finance (SUNREF) Programme** by French Development Agency **From 2019 - 2022**
  - A green credit facility to support RE&EE projects.

- **KfW Green Credit line Facility**: **From 2019/20**
  - A green credit facility to support RE projects below SUNREF targets.

  - The UK Government funding through Department for International Development (DFID)
  - **50,000** solar home systems in rural off-grid areas in Ghana
  - Targets private sector financing; Interest Free Loans, grants, Technical Assistance

- **Regional Off-Grid Electrification Project (ROGEP)**: **From 2020 - 2023**
  - Implemented by ECREEE
  - Credit line facility to support off-grid deployment of Solar Home System
  - Grants for entrepreneurship technical & financial support
Challenges

- Over capacity of power plants in the midst of HIGH tariffs
- Low level of awareness on the benefits of RE and EE (including cook stoves)
- High cost of energy in remote off-grid communities vis-à-vis their ability to pay
- Accessibility to unserved communities
Thank You!