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Why an SE4ALL MER system for Ghana?
Guiding principles used
Monitoring and link to GTF
Current monitoring activities
Reporting & Implementation challenges
WHY AN SE4ALL MER SYSTEM FOR GHANA?

Two main reasons

- Different implementing institutions, different reporting protocols = Need to provide a standard template for reporting
- Track national progress toward the achievement of SE4ALL goals

2014: a proposal was sent to AfDB/SE4ALL Africa Hub for Technical Assistance to develop the MER, among other deliverables

2014 - 2015: IT Power Consulting was engaged to develop the MER system for Ghana
GUIDING PRINCIPLES USED

1. Assessment of current M&E systems used by implementing agencies and data gathered
   - E.g. PHC, GLSS, Energy outlook

2. Study GTF’s Multi-tier approach & indicators identified for EA, RE and EE interventions

3. Adapt GTF indicators to the Ghanaian context
   - Design an MER system to fit Ghanaian context and needs
MONITORING: GOAL AND OBJECTIVE LEVEL INDICATORS & LINK TO GTF

SE4ALL Goal 1: Universal Energy Access by 2030

Universal access to electricity

Goal level indicators
- National electricity access percentage (%) (1)
- Proportion of households connected to the national grid (%) (1)
- Electricity consumption per capita (kWh/person/year)
- Proportion of households connected to an off-grid system (%) (1)
- Number of communal facilities with access to electricity through a decentralised RE system (6)
- Number of businesses with access to energy for productive uses applications (8, 9)
- Number of solar lanterns distributed in off-grid communities (7)

Objective level indicators breakdown
- HH connected to on-grid hybrid system
- HH connected to an off-grid fossil fuel system
- HH connected to an off-grid RE system (3, 4, 5)
- Number connected to SHS
- Number connected to RE mini-grid
- Number connected to RE multi-utility
- Number of irrigation schemes implemented connected to (8)
- Number of Other businesses as PUE connected to

Tiers (if applicable)
- Tier 0: No access
- Tier 1: RE as primary source of energy for lighting and very low power appliances (≤30 W)
- Tier 2: RE as primary source of energy for lighting and low power appliances (31-150 W)
- Tier 3, 4 and 5: RE as primary source of energy for lighting and medium to high power appliances (>150 W)

# GTF: Binary approach – access/no access to electricity

Legend:
HH: Households
PUE: Productive Use of Energy

Indicators highlighted in green are partially or fully monitored.
#GTF: Access is relying primarily on non-solid fuel (BLEN); ICS is basic access

Legend:
HH: Households
BLEN: Biogas-LPG-Electricity-Natural gas
SE4ALL Goal: Double the share of RE in the global energy mix by 2030

Goal level indicators

- Percentage of RE in the national electricity mix (%) (16)
- Off-grid RE installed capacity (MW) (16b)

Objective level indicators and breakdown

- Installed capacity of RE mini grids in off-grid communities (MW) (17)
- Total capacity of Solar Community Lighting Systems (Solar Street lights) installed in off-grid communities (MW) (18)
- Total capacity of solar lanterns distributed in off-grid communities (MW) (19)
- Installed capacity of SHS (MW) (20)
- Installed capacity RE multi-utility (MW)
- Installed capacity of other off-grid RE systems (MW)

Legend:
RE: Renewable Energy
SHS: Solar Home System
SE4ALL Goal: Double the global rate of improvement in energy efficiency by 2030

Goal level indicators:
- Rate of improvement in energy intensity (%)
- Average energy losses in the distribution grid per year (%)
- Annual average consumption of solid fuels for cooking (kg/year)

Objective level indicators breakdown:
- Annual average firewood consumption per household (kg/hh*year) (21)
- Annual average consumption per public institutions
- Annual average consumption per commercial cooking activities
- Annual average consumption per agro-processing activities
- Annual average charcoal consumption per household (kg/hh*year) (22)
- Annual average consumption per public institutions
- Annual average consumption per commercial cooking activities
- Annual average consumption per agro-processing activities

Legend:
HH: households

Indicators highlighted in green are partially or fully monitored
Evaluation process

- Obtained Monitoring Results
  - Improved with respect to baseline or previous monitoring result?
    - NO
    - YES
      - Is the current strategy likely to lead to the achievement of the interim targets (if they exist) and the target by 2020?
        - NO
        - YES
          - Analyse reasons for failure and revise/adapt activities, and/or strategies for next monitoring period
            - NO
            - YES
              - Inform monitoring results for “Reporting Plan”
                - Start Next Monitoring Period
<table>
<thead>
<tr>
<th>Key performance indicators</th>
<th>Baseline (year &amp; figure)</th>
<th>Targets (year &amp; figure)</th>
<th>Data collection to assess indicator</th>
<th>Indicator Reporting (entity and format)</th>
<th>Means of Verification</th>
<th>Immediate Actions and Risks (if any)</th>
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<tbody>
<tr>
<td></td>
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<td>Frequency of collection</td>
<td>Data sources</td>
<td>Data source format</td>
<td>Responsible entity for providin g data</td>
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<td><strong>SE4ALL Global Goal 1: Universal Energy Access by 2030</strong></td>
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<tr>
<td><strong>SE4ALL Ghana Goal 1: Ensure universal access to modern energy services by 2020</strong></td>
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<td>1 National electricity access percentage (%) - measure based on number of hh connected</td>
<td>2015</td>
<td>2020</td>
<td>Once a year</td>
<td>Reports by MoP, PHC, GLSS</td>
<td>Report, excel spreadsheet</td>
<td>MoP</td>
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<tr>
<td>2 National access percentage to modern energy for cooking (%) - measure based on number of hh using LPG or non-BLEN manufactured biomass cookstoves as primary solution for cooking</td>
<td>2015 see below indicator #10 for LPG and indicator #15 for cookstoves</td>
<td>2020</td>
<td>Once a year</td>
<td>Reports by MoP, MoPet, GHACCO, PHC/GLSS</td>
<td>Report, excel spreadsheet</td>
<td>MoP / GHACCO</td>
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CURRENT MONITORING ACTIVITIES

- **National electrification**
  - No. of HH with access to grid electricity
  - No. of HH with access to electricity from RE mini-grid

- **PUE**
  - No. of farmers with access to grid-electricity or RE for irrigation
  - No. of solar dryers deployed to date

- **Adoption of ICS**
  - No. of ICS produced/imported and sold (2010 - date)
  - Adoption of ICS as primarily cooking device (survey to be conducted)

- **LPG for cooking**
  - GLSS 6 provides adoption as at 2014
Reporting

- Two main channels
  - SE4ALL Ghana Newsletters and annual reports
  - Annual SE4ALL forum

Implementation Challenges

- Non-existent baseline for some indicators e.g. no. of farmers with no access to modern energy for irrigation; no. of HH using improved non-BLEN stoves
- High cost of data collection and analysis
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