
Enam Akoetey-Eyiah
Regional Representative West and Central Africa
The International REC Standard Foundation
The why and how of EAC schemes

<table>
<thead>
<tr>
<th>ELECTRICITY SOURCES</th>
<th>ELECTRICITY GENERATORS</th>
<th>ELECTRICITY END-USERS</th>
<th>END-USER CLAIMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>☀️ ☀️ ☀️ ☀️</td>
<td>☑️</td>
<td>☑️</td>
<td>☐</td>
</tr>
</tbody>
</table>

- TRACKED
- RESIDUAL
The why and how of EAC schemes

- **ELECTRICITY SOURCES**
  - Solar
  - Wind
  - Fire
  - Water
  - Nuclear
  - Gas

- **ELECTRICITY GENERATORS**

- **ELECTRICITY END-USEERS**

- **END-USER CLAIMS**

**Colors**:
- **TRACKED**
- **RESIDUAL**
The why and how of EAC schemes

The system is governed by locally by issuer adherent to standards:
- The Issuer, inline with Standards, sets the rules and fees for participation of producers
- The Issuer controls access to the market and therefore must be independent
- The Issuer operates within a market boundary
The why and how of EAC schemes
The why and how of EAC schemes
The International REC Standard Foundation
Market Players
- Electricity traders
- Market brokers
- Electricity producers
- Others

Participants
- Electricity traders
- Market brokers
- Individual End-users
- Electricity producers
- Others
Registry Operator
- Government
- Not for profit
- Private Company
- Independent organization

Issuer
- Responsive operator of the market
- Government
- Not-for-profit
- Industry organization
- Private company

The Label
- EKOenergy
- Energy Peace Partners
- Green-e

Platform Operator
Who uses EACs and various ways to buy EACs
Who Purchases EACs (e.g. I-RECs)

More than +8000 companies report to CDP worldwide …

…their energy usage, using the GHG Protocol Scope 2 reporting criteria…

…and documenting this with GOs adherent to the EECS Standard, RECs adherent with US law or I-RECs adherent to the International REC Standards.
EACs in Africa
International EAC Markets
Tesla’s Revenue from EAUs: 2017 - 2021

Cashing In

Tesla’s revenue from regulatory credits has been on the rise

- Regulatory credit revenue
- Credit Suisse estimates

Sources: Tesla filings, Credit Suisse
Lessons from India

Figure 3: REC trade estimation for FY2021

Source – IEX & PXIL, JMK Research
80% of the population in West & Central Africa lack access to electricity.

In Nigeria, the grid generates 4GW of energy whereas diesel generators produce 14GW of electricity.

Global average household energy consumption (Shrinkthefootprint, 2021)
I-RECs Coverage in West and Central Africa

Three of fifteen countries in West Africa
- Burkina Faso
- Ghana
- Nigeria

Two of eight countries in Central Africa
### Table 6. Existing Generating Capacity (MW)

<table>
<thead>
<tr>
<th>Country</th>
<th>Oil</th>
<th>Coal</th>
<th>Gas</th>
<th>Hydro</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>146</td>
<td></td>
<td>23</td>
<td></td>
<td>169</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td></td>
<td>765</td>
<td>585</td>
<td></td>
<td>1,350</td>
</tr>
<tr>
<td>Gambia</td>
<td>49</td>
<td></td>
<td></td>
<td>0</td>
<td>49</td>
</tr>
<tr>
<td>Ghana</td>
<td>685</td>
<td>180</td>
<td>1,044</td>
<td></td>
<td>1,909</td>
</tr>
<tr>
<td>Guinea</td>
<td>19</td>
<td></td>
<td>95</td>
<td></td>
<td>114</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>4</td>
<td></td>
<td></td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Liberia</td>
<td>13</td>
<td></td>
<td></td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Mali</td>
<td>114</td>
<td>20</td>
<td>153</td>
<td></td>
<td>287</td>
</tr>
<tr>
<td>Niger</td>
<td>15</td>
<td>32</td>
<td>20</td>
<td>0</td>
<td>67</td>
</tr>
<tr>
<td>Nigeria</td>
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<td>3,858</td>
<td>1,358</td>
<td></td>
<td>5,216</td>
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<tr>
<td>Senegal</td>
<td>395</td>
<td></td>
<td>49</td>
<td>68</td>
<td>512</td>
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<tr>
<td>Sierra Leone</td>
<td>44</td>
<td></td>
<td>56</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Togo/Benin</td>
<td>57</td>
<td></td>
<td>65</td>
<td></td>
<td>122</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,541</td>
<td>32</td>
<td>4,892</td>
<td>3,447</td>
<td>9,912</td>
</tr>
</tbody>
</table>
## PROSPECTS AND OPPORTUNITIES

### Table 3. Non-Large-Hydro Renewable Energy Potential Rough Estimates

<table>
<thead>
<tr>
<th>Country</th>
<th>Mini Hydro MW</th>
<th>Solar CSP TWh</th>
<th>Solar PV TWh</th>
<th>Biomass MW</th>
<th>Wind 20% MW</th>
<th>Wind 30% MW</th>
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</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>140</td>
<td>18.1</td>
<td>77.4</td>
<td>2,250</td>
<td>4,742</td>
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<tr>
<td>Cote d’Ivoire</td>
<td>242</td>
<td>2.2</td>
<td>103</td>
<td>1,530</td>
<td>491</td>
<td>0.0</td>
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<tr>
<td>Gambia</td>
<td>12</td>
<td>3.2</td>
<td>4.74</td>
<td>23.75</td>
<td>197</td>
<td>5</td>
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<tr>
<td>Ghana</td>
<td>1</td>
<td>2.3</td>
<td>76.4</td>
<td>1,133</td>
<td>691</td>
<td>9</td>
</tr>
<tr>
<td>Guinea</td>
<td>332</td>
<td>4.7</td>
<td>52.0</td>
<td>656</td>
<td>2.4</td>
<td>0</td>
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<tr>
<td>Guinea-Bissau</td>
<td>2</td>
<td>9.0</td>
<td>14.9</td>
<td>71</td>
<td>142</td>
<td>0</td>
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<tr>
<td>Liberia</td>
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<td>0.0</td>
<td>6.67</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mali</td>
<td>67</td>
<td>36.2</td>
<td>79.1</td>
<td>1,031</td>
<td>2,195</td>
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<tr>
<td>Niger</td>
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<td>88.3</td>
<td>157</td>
<td>1,115</td>
<td>16,698</td>
<td>5,015</td>
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<tr>
<td>Nigeria</td>
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<td>100</td>
<td>325</td>
<td>10,000</td>
<td>14,689</td>
<td>363</td>
</tr>
<tr>
<td>Senegal</td>
<td>104</td>
<td>15.4</td>
<td>75.2</td>
<td>475</td>
<td>6,226</td>
<td>1,243</td>
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<tr>
<td>Sierra Leone</td>
<td>85</td>
<td>2.0</td>
<td>15.0</td>
<td>166</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Togo/Benin</td>
<td>336</td>
<td>0.0</td>
<td>51.6</td>
<td>957</td>
<td>551</td>
<td>0</td>
</tr>
</tbody>
</table>

IRENA assessments 2013
Opportunities for West and Central Africa

Trading I-RECs leading to additional income for established renewable energy installations in the region.

Alternative finance source to catalyse investment in renewables.

Developing market as multinationals with country/regional operations are expected to source local IRECs.

Increase renewable energy across the region from all generation types thereby meeting energy demand from clean green sources.

Increase regional energy access and security for household, MSME corporate and national level.

Facilitate energy transition, reduce emissions and indoor pollution by embedding renewables in energy mix and be climate smart (e.g. solar PV and larger installations).

Local issuer based in Ghana to support registration and development.

Training and capacity building to support country registration and issuance.
Market Access Support

- Training and capacity building to policy and market players (public and private power producers).
- Training and capacity building for solarPV associations
- Registration support
- Issuance support
- Support for self generators
Q & A
Thank you

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