



REAG
Renewable Energy
Association of Ghana

West Africa: A Key Market for Solar PV

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ENERGY SECTOR GOAL

The overall goal of the Energy Sector is to make competitively priced energy universally accessible and readily available in an environmentally sustainable manner for the local market and export.

Ghana's Power Sector – An Overview



- ❑ Population (est. 2019/20) ≈ **30 million** people
- ❑ Electricity Access (2019) is ≈ **85%**
- ❑ Electricity Installed capacity (2019) – **5,172 MW**
- ❑ Current Peak Demand (2019) – **2,881 MW**
- ❑ Unbundled sector (G-T-D)
- ❑ 2 Regulators (PURC -**Economic**) & (EC -**Technical**)
- ❑ RE in generation mix (incl. large hydro) is **1,647MW**
(≈ **31.8%**)
- ❑ Modern RE in generation mix is ≈ **1.5%**
- ❑ mRE Installed capacity (2019) ≈ **78.614 MW**
 - ❑ Large scale solar PV plants – 42.5 MW
 - ❑ Small-scale solar/wind systems ≈ 31. MW
 - ❑ (incl. stand-alone & grid-tied)
 - ❑ Biogas (W2E) – 0.1 MW
 - ❑ Biomass CHP ≈ 1.3 MW

Renewable Energy (RE)

RE is considered as one of the options to contribute to the overall supply mix, and to minimize adverse effects of energy production on the environment. RE development is guided by the **Renewable Energy Act, 2011 (ACT 832)** and the **RE Master Plan**.

The law (currently under review) obligates utilities and bulk customers to purchase part of their electricity requirements from RE sources. It also provided for a regulatory and licensing framework for the development of RE in Ghana.

Prior to the drafting of the law in 2008-2009, the biggest obstacle to the development of RE, especially solar – was the high cost of the technology.



RE Sector update



*Feed-In-Tariff (FIT) scheme was to guarantee a good rate of return for investors. However, with rapid technological development, there has been a steep reduction in the prices of RE products – especially solar. This rendered the FIT regime a burden on consumers who have to pay for extensive Solar PV power based on FIT whilst it could be secured cheaper through competitive bidding. A key item in the amendment is the repeal of the FIT and the provision for all future utility scale solar PV to be procured through competitive bidding.

*Also, to encourage small scale self-generation through Net-Metering. Other companies, fossil fuel-based wholesale electricity suppliers, and fossil fuel producers that contribute to GHG emissions are encouraged to invest in non-utility scale RE so as to complement efforts of climate change mitigation.

*Review of Power Purchase Agreements (PPAs) started in 2017 due to the situation of excess capacity and the significant financial challenges in Ghana's energy sector. Renegotiation of PPAs on-going, with Government of Ghana continuing to enforce interventions such as the current moratorium on signing new PPAs by public distribution utilities, Gas Supply Agreements (GSAs), Put-Call Option Agreements (PCOAs_ and any long-term take-or-pay contracts until notice, or unless properly excepted by Government on a case-by-case basis.

Solar PV

- **2015** – first bidding conducted by the Ministry of Energy for solar energy (**US Cents 11.47/kWh** from solar energy)
- **2016** – Bui Power Authority (BPA) tendered 50MW solar (**US Cents 8.8/kWh**)

Then, conventional power plant developers asked for **US Cents 13-15/kWh**, & the gazette FIT **US Cents 15/kWh**

Mini Grids

- National Electrification Scheme (NES)
- Zero connection fees
- Uniform Tariff Policy
- Public Sector led: ie, gen, ops, mtc, revenue collection – responsibility of public utilities
- Private sector role: Engineering Procurement and Construction (EPC).



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Thank You

Supported by

A presentation on Ghana (West Africa): a key market for Solar PV, during the African country markets briefing & roundtable

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For further information and engagement, contact:

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