Apresentação do Central Solar Gardete: Suntrough Energy

Presentation of Gardete Solar PV Plant: Suntrough Energy

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- Solar project developer & Independent Power Producer (IPP)
- Solar projects in USA, Middle-East and Africa
- Experienced team in Bissau, 30+ years experience with power generation using thermal and solar generation and battery storage facilities in both on-grid and off-grid locations
Solar Project Gardete - Summary

- 10 Megawatt capacity, with the possibility to extend to 20 Megawatt
- Grid-connected (ligada à rede)
- 5 km to the west of the capital Bissau
- close to the new thermal power plant in Bor, currently under construction, which will facilitate grid-stability
- Annual reduction in CO2 emission: 16,000 tonnes at capacity of 10 MW
- Currently under construction, pilot project built
- Additional financing required to complete construction to full capacity
Solar Project Gardete - Status

- 3 phase construction:
  - **Phase 1**: pilot project and grid-connection
    - Financing for phase 1 has been completed
      - Co-financed with GEF-support and technical support from UNIDO and ECREEE
    - Phase 1 is now under construction
    - Pilot project (200 Kilowatt) has been built and the construction of the interconnection with the grid in Bissau is planned to complete by the end of 2018
  - **Phase 2**: Extension to 3 Megawatt
    - Financing to be raised
    - Planned completion by the end of 2019
  - **Phase 3**: Extension to 10 Megawatt with possibility to extend to 20 Megawatt
    - Financing to be raised
    - Planned completion by the end of 2020
Commercial Market Analysis

- Brief SWOT-Analysis of the commercial sustainable energy market in Guinea-Bissau
- Strengths
- Weaknesses
- Opportunities
- Threats
Commercial Market Analysis

- **Strengths**
  - Ample sunshine, typically about 50-75% more than in Europe
    - Demand for electricity is much higher than supply
    - Grid-connected solar is still relatively new in Guinea-Bissau: many opportunities to add solar energy into the mix of sustainable energies in the future
    - Availability of land close to the capital of Bissau
  - Significant amount of funds available as an investment
    - Expectation of a financial return on investment.
  - Franc CFA fixed to the Euro: low exchange rate risk for Euro-based investors
Commercial Market Analysis

- **Weaknesses**
  - Expert knowledge and technical skills in the realm of sustainable energy need further development
  - Transportation (Shipment) to Guinea-Bissau is a larger cost- and time factor compared to other countries in the region
  - Lack of in-depth knowledge of country-specifics outside of the region
    - challenges to get support from overseas stakeholders such as investors, but also for insurance.
Commercial Market Analysis

- Opportunities

- Lower costs of generation with solar compared to diesel
- Investors are interested, provided certain conditions are met
  - Demand for electricity is larger than current supply: no direct competition for market share with existing players in the market
Commercial Market Analysis

Threats

- Sustainable use of energy:
  - Balancing sustainable energy and energy efficiency

- Sustainable financial model
  - Investors look closely at the off-taker risk. Limited possibilities for insurance are a threat to attract future investors

- Management and knowledge transfer
  - In the long run, management and operations have to be taken over by local experts with sustainable train-the-trainer models

- Support of new and existing infrastructure:
  - Proper maintenance is required, so that investments can deliver on their promise
Cost of Energy & Emissions

Figure. Average emissions reductions from FFSR across 20 countries with 10% of savings invested in renewables and 20% into energy efficiency (as against business as usual [BAU]). Source: Merrill et al. 2015.
Summary

- Many opportunities to invest in sustainable energy projects
- Solar Project Gardete is ready for expansion to phase 2
- Phase 2 requires further financing to be arranged
- Suntrough wants to continue to be a strong partner in the development of solar projects in Guinea-Bissau

Thank You
Suntrough Energy

FUTURAS INSTALAÇÕES  CENTRAL SOLAR  20 MEGAWATT

UNIDO

ECREEE  Towards Sustainable Energy

ALER

Electricidade e Águas da Guiné-Bissau  E.A.G.B.