

Review of Renewable Energy Master Plan – GROUP FIVE

Solar Irrigation
Solar Water Heaters
Solar Crop Driers

Solar Irrigation-Targets (baseline)

- The current targets are set to units. That is not standard and scientific. It is unable to help deduce cost and coverage.
- The group suggest that the target be set in terms of area of coverage
- Current target of 30 units was revised to 150 ha based on estimated average farm size (5ha) for the 30 units

Solar Irrigation-Targets (first five years)

- Formal Irrigation Schemes (IDA)
 - Piloting of Solar irrigation ongoing
 - Potential for 5 out of the 56 Large scale irrigation schemes (Akumadan, Suminya, Tanoso, Akrobi and Tono) to be converted to solar pumping totaling 955ha.
- COCOBOD Seed Farms
 - Plans to irrigate 120 COCOBOD seed farms with each having a size of about 25ha
 - Projected 50% to be Solar irrigated in first five years = 1500ha

Solar Irrigation-Targets (first five years)

- Private Initiatives
 - There are about five companies installing Solar Pumps in Ghana
 - The five companies install about 400ha of Solar Irrigation per annum.
 - Projection for first five years = 2000ha
- Small Holder Irrigation Systems (One Village One Dam)
 - The objective of the one village one dam policy is to provide water for farming and therefore it can be both dams and groundwater
 - Estimated 7000 village dams to be constructed
 - It is projected that 50% of the 7000 will be achieved and 50% of the constructed may use Solar Irrigation
 - 1750 solar systems with average size of 10ha = 17500ha

Solar Irrigation-Targets (Summary)

- Formal Irrigation Schemes = 1000ha
- COCOBOD Seed Farms = 1500ha
- Private Commercial Solar Farms = 2000ha
- Smallholder Irrigation Systems = 17500ha
- **TOTAL = 22,000ha**

Solar Irrigation-Targets

Technology	2017	2020	2025	2030
Solar Irrigation	150 ha	4,400 ha	26,400 ha	48,800 ha

Solar Irrigation-Strategies

- Government and Development partners to provide seed money of US\$88 Million for the first 4,400ha as a revolving fund. In terms of Energy, 8.8MW of Solar Energy will be used to irrigate the 4,400ha. (Basis: 1w of Solar Energy irrigates 5m²)
- COCOBOD To fund its planned projects
- Possible funding from the Climate Change Fund
- The South-South Cooperation Fund is another source for funding

Solar Water Heaters-Strategies

- Government Policy needed to discourage the use of Electric Water Heaters by imposing higher import taxes on the Electric Water Heaters and finally banning it within the first five years.
- Lower Tariffs of raw materials for producing Solar Home Systems locally and creating jobs.
- Potential for Local Production of Solar Water Heaters should be harnessed. The Solar Industry is an avenue for job creation. Information, shows that the Solar industry employs more people than the Oil, Gas and electricity industry combined.

Solar Water Heaters-Targets

- It is proposed that the team working on the masterplan revise the targets to reflect the proposed policy
- The Revision should be based on census figures on housing and the projections of the proposed policy

Solar Crop Driers-Strategies

- The strategies provided in the draft are good and in addition add the following:
 - Provide incentives for local manufacture of Solar Crop Driers
 - Revise targets from units to Tonnes of Food processed