

# RENEWABLE ENERGY MASTER PLAN (REMP)

## FINANCING

## HIGHLIGHTS

- Total Investment of \$US 23 bn over the 15 year period
- Translates into an annual average cost of \$US 1.53bn
- 370,000 jobs to be created along the value chain
- **Main question is; where is this money going to come from?**

## STATUS OF FINANCING

- Limited access to long term financing and high cost of capital; main constraints to the growth of the RE sector
- Local banks are unable to offer long term lending for infrastructural projects including RE projects. Why?
- Is it only an issue of associated risks and uncertainties?
- Or low returns for investment?

## REMP-Proposals for Financing

- REMP proposes to encourage banks to develop long term financing portfolios for RE projects
  - Also proposes to develop and explore innovative funding mechanisms to support RE projects
- Sources of Funding to be explored:**
- Renewable Energy Fund;
  - Petroleum Fund;
  - Ghana Infrastructure Investment Fund (GIIF);
  - Multilateral development banks; v. Green Climate Funds;
  - Global Environmental Facility (GEF);
  - Sustainable Energy Fund for Africa (SEFA);
  - Abu Dhabi Fund;
  - Africa Renewable Energy Fund;
  - African Catalytic Fund;
  - Rural Electrification Levy for mini-grid development;
  - Loans and grants negotiated for rural electrification; and
  - Grants and matching funds;
- Further: Utility-scale renewable energy projects shall be supported with risk mitigation instruments (e.g. Renewable Energy Put Call Option Agreement (PCOAs), liquidity support, etc.).

## GENERAL COMMENTS

- The need for consistency in stating of figures throughout the entire document. For example; the write up states 370,000 jobs to be created whereas table 11 states 371,000 jobs. Check for overall coherence
- Sources of funding should also be split into equity, debt and grants with greater emphasis on equity and debt rather than grants
- The need to appropriately draw out the effects of the REMP interventions on economic indicators, particularly;
  - ✓ Contribution to overall employment
  - ✓ Improvements to personal and national income
  - ✓ Improvements in balance of payments from import savings
  - ✓ Effects on GDP

## GENERAL COMMENTS

- Further; the analysis should be expanded to capture and quantify where possible other costs and benefits including;
  - ✓ Opportunity cost of investing in RE projects rather than investing in other energy sources, example, coal or nuclear
  - ✓ Fuel savings from buying fuel to feed thermal generation
  - ✓ Abatement of CO2 emissions
  - ✓ Health benefits
  - ✓ Environmental benefits
- Another important observation was that the cost of solar seems over estimated. It would be better to get a cost that truly reflects the cost of solar in Ghana. Such costs may be estimated by taking into consideration the cost of various solar projects in Ghana including the BXC solar project, estimated costs in the tender for the Ministry of Power-Bui solar projects, etc.

## GENERAL COMMENTS-FUNDING RE

- Considering the funding sources already listed; are funds available to cover RE investment over 15 years? Are these sources sustainable? Reliable?
- In discussing the sources of funding, there should be a clear distinction. What proportion of funding would be obtained from the government? From private investors? From multilateral development partners?
- Once delineated, these sources should be separately quantified to ascertain the quantum of funds coming from each source.
- Quantify gains made from Renewable Energy Purchase Obligations and capture this in the REMP

## GENERAL COMMENTS-FUNDING RE

- Additional work is needed to understand the risk analysis employed in the cost estimations. Have costs for risk appropriately been captured in estimated costs? For example; wind energy harnessed offshore versus onshore; what are the different associated costs?
- Several factors considered in calculating costs are likely to change over time for example; cost of solar has seen a progressive decline over the past couple of years and is expected to decline further. By which method will the analysis capture such changing factors?
- The plan should consider breaking down the cost analysis to cover each 5-year cycle to make for the passage of time and changing economic factors. It will also help to appreciate realistically, what can be done with available funds within each cycle.

## OTHER FUNDING SOURCES

- RE projects should be localised such that they can be undertaken at the district/local government level and funded via the District Assembly Common Fund (DACF)
- Leveraging a portion of the second tier or third tier of the Pension funds to support RE especially at the household level. The government already proposes to leverage the second tier to finance housing; then rooftop solar for households can also be funded using same
- Funds can be assessed under the Climate Investment Funds but the process for assessing the funds should be project driven.
- Government can assist developers with funds for project feasibility. This will enable developers create more projects which are feasible to make it easier to seek funding

## OTHER SOURCES OF FUNDING

- End-user funding should still be encouraged through the provision of incentives for those who can afford to pay, for example, the consumer contributes 50% of the total cost of an RE system upfront and he is supported through banks to pay the other half at low interest rates
- Incentivise banks to provide funding for RE projects:
  - ✓ Clear purpose/direction from government in lieu of RE will spur banks to provide funding for it
  - ✓ Government provision of guarantees to banks for targeted on-lending, for example, through the Rural Development Fund of DANIDA
  - ✓ Government should structure guarantees under the umbrella of a special purpose renewable energy insurance. This insurance can serve as a collateral.
  - ✓ Develop award scheme-RE bank of the year etc.

## ADDITIONAL COMMENTS

- Banks should be educated on existing policies and how they can take advantage of these policies. This should be done via a collaboration between Bank of Ghana and the Energy Commission, inviting the Association of bankers
- Solar for industries-grid connected solar with net metering; circumventing storage technologies by using power directly from panels during the day so as to reduce cost
- Pooling of industries to use RE systems so that they can enjoy economies of scale

## ADDITIONAL COMMENTS

- Entire document-REMP should be backed by an overall investment plan broken down according to the 5 year cycles. The Investment Plan should highlight;
  - ✓ CO2 reduction equivalent per technology per the 5 year period
  - ✓ Should capture the % return and energy savings (energy counselling and energy audit)
- Strengthening of associations, for example, AGSI to approach banks to obtain funding
- Real Estate agencies incentivised to include rooftop solar on all new buildings
- Financing opportunities from carbon trading-CDM
- Local carbon taxing

# THANK YOU

## TEAM

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