Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility

STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: 18th May 2009  Screener: Lev Neretin
Panel member validation by: N.H. Ravindranath

I. PIF Information

Full size project  GEF Trust Fund
GEF Project ID: 3959
Country: Chad
Project Title: Promoting renewable energy based mini-grids for rural electrification and productive uses
GEF Agency: UNIDO
Other Executing partner: Ministry of Mines and Energy
GEF Focal Area: Climate Change
GEF-4 Strategic programs: SP3-Promoting Market Approaches for Renewable Energy; SP-4 Promoting Sustainable Energy Production from Biomass
Name of parent program/umbrella project: GEF Programmatic Approach on Access to Energy in West Africa

II. STAP Advisory Response (see table below for explanation)

1. Based on this PIF screening, STAP’s advisory response to the GEF Secretariat and GEF Agency(ies):
   Consent

III. Further guidance from STAP

1. STAP advises conducting a systematic study of barriers to the spread of RE systems in Chad.
2. The project aims at an assessment and mapping of RE resources. PIF does not specify which of the RE technologies (biomass, solar and small hydropower) will be considered for promotion. There is a need to identify the potential locations for different renewables or a combination of renewables on a spatial basis considering, inter alia, cost effectiveness of different RE technologies in different regions. Furthermore, proponents are advised to promote an integrated energy approach, where a village or cluster of villages are selected for demonstrations and produced energy is used for cooking, lighting, process heat and shaft power activities.
3. Apart from, as indicated in the PIF information, institutional, policy, legal and capacity building barriers, one of the key barriers in promoting RE based mini-grids is the lack of sustainable financing. The Project aims to increase capacity building of local banks in project appraisal. These measures are not sufficient to assure long-term financial sustainability of GEF investments. Engagement of private sector can be made cost-effective by utilizing regional approach of the proposed programmatic approach on access to energy in West Africa.
4. Technical feasibility and commercial viability analysis of RE based mini-grid should consider potential competition between RE and fossil fuel based sources of energy. Feasibility of providing incentives to consumers and private sector to support RE based mini-grid should be explored during project preparation.
5. STAP recommends consulting with the existing work on bioenergy sustainability standards, particularly within the EU (http://ec.europa.eu/energy/res/sectors/doc/bioenergy/sustainability_criteria_and_certification_systems.pdf) instead of developing own standards proposed in Project Component 3.
6. The PIF states that agricultural residues will be used for biomass power generation. A number of studies showed that the degraded and waste lands can be used for producing biomass feedstock sustainably. STAP recommends exploring options for sustainable biofuel production on degraded and waste lands.
7. Medium – to long-term risks of climate variability and change should be considered as an integral part of RE resources mapping, particularly for SHP.

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<th>STAP advisory response</th>
<th>Brief explanation of advisory response and action proposed</th>
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<tr>
<td>1. Consent</td>
<td>STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the</td>
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concept emphasising any issues that could be improved and the proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.

| 2. Minor revision required | STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include:
   (i) Opening a dialogue between STAP and the proponent to clarify issues
   (ii) Setting a review point during early stage project development and agreeing terms of reference for an independent expert to be appointed to conduct this review
The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement. |

| 3. Major revision required | STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement.
The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement. |