

Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility
(Version 5)

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

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I. PIF Information *(Copied from the PIF)*

FULL SIZE PROJECT GEF TRUST FUND

GEF PROJECT ID: 4785

PROJECT DURATION : 4

COUNTRIES : Cameroon

PROJECT TITLE: Promoting Investments in the Fight against Climate Change and Ecosystems Protection through Integrated Renewable Energy and Biomass Solutions for Productive Uses and Industrial Applications

GEF AGENCIES: UNIDO

OTHER EXECUTING PARTNERS: • Ministry of Energy and Water Resources (MINEE)
• Cameroon Rural Electrification Authority (AER)

GEF FOCAL AREA: Climate Change

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

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Minor revision required**

III. Further guidance from STAP

The project meets GEF Strategic Objective CCM-3 and will help develop a green economy pathway in Cameroon linked with poverty reduction goals through renewable energy deployment based upon the 4 key objectives whilst also reducing the demand for non-sustainable fuelwood. It is closely linked to the government's 2011 update of the Rural Electrification Master Plan. The majority of residents have no electricity and the diesel gensets operating provide expensive power.

The following categories of issues should be addressed during project preparation:

1. Demonstrations: Installing two or three projects around the 1 MW scale using renewable energy generation to supply mini-grids for off-grid rural areas is a commendable approach. However, it is not clear how the locations will be selected and the different technology systems will be integrated. Using local renewable resources is sensible, but the different renewable energy resources available will determine whether generation can easily remain balanced with the varying demand or not. How this will be achieved in practice for the 2 to 3 systems and who will act as the system operator should be explored during project preparation. The targeted capacity building plans for technical expertise are needed to ensure suitably skilled people are available. External technical expertise will be needed initially to design the systems and it's not clear how this capacity will be fulfilled.

Note the proposal states "2 or 3" demonstrations are planned, but then it states "the sites will focus on" four regions each producing different commodities. Whether hydro resources are also available in all 4 regions is not clear, nor is the basis on which the locations will be finally selected. How will the distribution lines from the generation plants be funded? How will customers pay " through pre-paid meters or other means? How the off-grid demonstration systems will be funded and operated is not clear either. These questions require further explanation before CEO endorsement.

Removal of barriers: Providing technical and investment assistance to offset the incremental costs of renewable energy generation systems is the reason why GEF funding is being sought. Overcoming the barriers to renewables is imperative. The costs of fossil fuel thermal generation have traditionally been low and several other projects are in place to support these least cost options, regardless of any related increase in GHG emissions. A cost/supply curve of the various renewable energy generation options listed would be useful for further project development. It is not clear whether the technologies selected for this project (hydro and bioenergy) are more cost-competitive than others (e.g. solar PV or geothermal), or indeed how much of the projected future electricity demand they could meet. STAP recommends detailed analysis of these barriers during project preparation.

2. Baseline: Assessing the baseline when so many other initiatives are in place will be difficult. Determining the additional generation through GEF funding for the new renewable mini-grid projects will be the key indicator. Little replication is likely to happen during the 4 years of project implementation. GHG baseline information is requested at the next stage.

3. Climate change abatement and risks: Only relatively low levels of CO2 emissions will be avoided by the demonstration projects (0.15 Mt) but this will be offset by gaining energy access for a greater share of the population. Drought conditions are already affecting the hydro schemes along the main rivers, so any mini-hydro schemes using small streams in the demonstration regions could also be affected. Seasonal variations may also exist and affect the reliability of the system. Competition for water by crop producers could also impact hydro generation potential. Deforestation is a major problem that can be reduced by lowering the demand for fuelwood.

4. Monitoring and evaluation: This is an important component of this "leapfrogging" project and will be critical for ensuring replication occurs as anticipated, not only in Cameroon but, if successful, also elsewhere.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the 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: <ul style="list-style-type: none"> (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.