

# 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)

Date of screening: January 27, 2012

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

**FULL SIZE PROJECT    GEF TRUST FUND**

**GEF PROJECT ID:** 4749

**PROJECT DURATION :** 4

**COUNTRIES :** Lebanon

**PROJECT TITLE:** Small Decentralized Renewable Energy Power Generation

**GEF AGENCIES:** UNDP

**OTHER EXECUTING PARTNERS:** Ministry of Energy and Water

**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 aims at the removal of barriers to widespread application of decentralized renewable energy based power generation in Lebanon.

STAP supports the project, however it suggests the following issues be addressed during project preparation and before CEO endorsement:

1. The project title states that decentralized renewable energy technologies will be promoted, and also on page 3 the PIF mentions wind, solar, hydro and biogas options. However, in the project framework only SPV is considered for policy formulation and demonstration. The rationale for focusing only on SPV in the project is not well justified.
2. The project is focused on small decentralized RE for power generation systems. Normally one associates small scale decentralized power system for decentralized and off grid applications. However, the PIF talks about only on-grid connection. The PIF also states that in Lebanon in many areas there is frequent black outs and no electricity supply from the grid. Thus, it may make sense to consider largely decentralized applications of power generated from decentralized systems.
3. Component 2.1 presents analysis of possible technical constraints for connecting decentralized RE systems to the grid. These technical specification and requirements are very well known and already used in many developing countries as well as most industrialized countries - and thus may not require any new analysis.
4. Costs of SPV electricity versus diesel based electricity: The PIF states that the cost of SPV-based electricity is lower than that from diesel-based generation. It is a surprising fact that diesel electricity could be costlier. In most countries, diesel electricity is cheaper than SPV. Please provide references.
5. Potential risks from possible high costs of SPV electricity needs to be addressed.
6. GEBs to be generated by the project are not entirely clear. If proposed decentralized PV and other potential RE sources will be utilized to substitute for small diesel generators, there would be a clear case for reduced GHG emissions. However, Lebanon is facing significant energy and electricity deficits and the proposed substitution for fossil-fuel generation might not happen at the expense of RE sources leading to no net GHG reduction benefits. How will project proponents ensure that the proposed substitution for RE sources does in fact take place? STAP recommends

exploring in the project promotion of the combined diesel-PV systems possibly without storage capacity for cost reduction benefits or with a storage capacity if financial resources are available.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
<b>1. Consent</b>	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.
<b>2. Minor revision required.</b>	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"> <li>(i) Opening a dialogue between STAP and the proponent to clarify issues</li> <li>(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</li> </ul> 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.
<b>3. Major revision required</b>	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.