

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: April 12, 2014

Screener: Virginia Gorsevski

Panel member validation by: Ralph E. Sims
Consultant(s):

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

FULL SIZE PROJECT GEF TRUST FUND

GEF PROJECT ID: 5732

PROJECT DURATION : 4

COUNTRIES : Turkey

PROJECT TITLE: Sustainable Energy Financing Mechanism for Solar PV in Forest Villages in Turkey

GEF AGENCIES: UNDP

OTHER EXECUTING PARTNERS: Ministry of Forestry and Water Affairs, General Directorate of Forestry (GDF), Forest and Villagers Relations Department (ORKOY)

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):
Consent

III. Further guidance from STAP

1. STAP welcomes this project which outlines an initiative which is all embracing in terms of financing; demonstration sites in forest villages where power quality is low and inhabitants generally poor (over half of total funding for two medium scale 100 kW PV plants and two 50 kW PV linked with solar hot water as hybrids); grid integration; soft zero interest loans to encourage scale up to 30MW; awareness raising and preparation of their NAMAs. The 2005 FIT programme for PV support was revised in 2012 but has not been taken up in rural villages. Capacity building is a key component of this initiative.

2. The ORKOY budget is limited but they are planning to increase the budget in this area so this GEF funding would enable the barriers as listed to be overcome and PV deployment to occur more rapidly than what might otherwise be the case.

3. Component 1: The business model for the soft loans has not yet been confirmed. It is not clear who at ORKOY will make this decision and on what basis. The project could benefit from looking at similar efforts in other countries to avoid pitfalls, etc. Portugal and Spain are models that might be followed, with similar solar resources, so perhaps more appropriate than Germany or UK, also with successful programmes based on FITs.

4. Component 2: Where will the four selected villages be located? If the ultimate objective is to scale up, it will be very important to carefully select the first four villages to demonstrate local economic and environmental benefits. Will each village be representative of a different region within the (very large) country? And what level of co-financing is expected? If selection is to be based on technical and financial criteria, including solar irradiation potential of selected sites, where will this data come from? What type of analysis (or model) will be used to incorporate all of the variables? HOMER, RETSCREEN and LEAP may be worth investigating.

5. Component 3: Finance through the banks has been arranged in other countries in a similar way so there may be lessons to learn in this respect.

6. The mitigation potential at \$3/t CO₂ avoided appears surprisingly cost effective for PV systems. Over 20 years life, it is calculated 1.09 Mt of CO₂ is avoided from 30MW total schemes. If the claim is \$3/t avoided total the investment cost is around \$3M. It is not clear what investment cost was selected for the calculation

but this equates to \$100 / kW which must be incorrect. The mitigation costs and potential should be reviewed.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	<p>STAP acknowledges that on scientific or technical grounds the concept has merit. However, STAP may state its views on the concept emphasizing any issues where the project could be improved.</p> <p>Follow up: The GEF Agency is invited to approach STAP for advice during the development of the project prior to submission of the final document for CEO endorsement.</p>
2. Minor revision required.	<p>STAP has identified specific scientific or technical challenges, omissions or opportunities that should be addressed by the project proponents during project development.</p> <p>Follow up: One or more options are open to STAP and the GEF Agency:</p> <ul style="list-style-type: none"> (i) GEF Agency should discuss the issues with STAP to clarify them and possible solutions. (ii) In its request for CEO endorsement, the GEF Agency will report on actions taken in response to STAP's recommended actions.
3. Major revision required	<p>STAP has identified significant scientific or technical challenges or omissions in the PIF and recommends significant improvements to project design.</p> <p>Follow-up:</p> <ul style="list-style-type: none"> (i) The Agency should request that the project undergo a STAP review prior to CEO endorsement, at a point in time when the particular scientific or technical issue is sufficiently developed to be reviewed, or as agreed between the Agency and STAP. (ii) In its request for CEO endorsement, the Agency will report on actions taken in response to STAP concerns.