

# 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: May 08, 2012

Screeners: Lev Neretin

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

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

**FULL SIZE PROJECT**    **GEF TRUST FUND**

**GEF PROJECT ID:** 4878

**PROJECT DURATION :** 5

**COUNTRIES :** Malaysia

**PROJECT TITLE:** GHG Emissions Reductions In Targeted Industrial Sub-Sectors Through EE And Application Of Solar Thermal Systems

**GEF AGENCIES:** UNIDO

**OTHER EXECUTING PARTNERS:** KeTTHA, SIRIM ,UKM, MIGHT, FMM. MoSTI

**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

This project addresses GEF Strategic Objectives CCM-2 and CCM-3 and in line with the government's 10th Plan 2011-2015 that places emphasis on energy efficiency (EE) and renewable energy. STAP welcomes this initiative, however would like to point out a number of issues to be addressed during project preparation:

**Rationale:** The driver for EE is the continued growth in national energy demand, especially electricity. Hence little has been achieved in reducing demand and related GHG emissions in the heat market. Deploying EE systems to meet the thermal energy demands of the five nominated industry sub-sectors is the target, coupled with the uptake of solar thermal systems through demonstrations in selected factories. Policy advice and technical training are two related project objectives.

**Barriers:** A list is provided, mainly involving lack of experience of thermal heat demands in industry. These will be overcome in part by training and promotion campaigns.

**Baseline:** This will include continued R&D funding and continuation of other funding sources for EE in industry, but mainly for electrical appliances. Potential energy savings from EE and solar thermal systems have been calculated for each sub-sector. It is not clear if this is the technical or economic potential so the "realistic potential" may be lower.

**Demonstrations:** How will the factories be selected? Will the 40 plants be equally divided between the 5 sub-sectors or will the share be made according to the estimated shares of energy savings shown in Table 1? Will they all be energy inefficient without having implemented any energy saving techniques to date or will there be a mix? The baseline for each will need to be carefully evaluated. If already energy efficient, any improvements will be more difficult to achieve.

10 solar thermal plants are planned. Will solar thermal companies be invited to tender and, if so, will this only be local manufacturers or would foreign vendors also be allowed to tender? Will systems need to be certified to an industry standard? If cheaper Chinese models are available, might they provide a greater incentive for replication than more costly locally made systems? What scale of installation is envisaged for each factory? What form of thermal back-up, if any, will be used on cloudy days? How will the fossil fuel savings be assessed since annual energy demands often vary with the volume of production? STAP recommends using energy per unit of product produced as a metric in the project.

Climate change abatement and risk: It seems the GHG emission reductions should be 1,060,000 t CO<sub>2</sub>-eq/yr (not 1.060 kt as stated). This equates to around \$4/t CO<sub>2</sub> of GEF funding (including grants) which is relatively costly. A small risk of increased cloud cover from climate change warming reducing the solar radiation levels is possible.

EE Monitoring: It is not clear how the EE improvements will actually be measured in the various factories to be monitored. Will this be done for each technology or through the main gas/electricity meters for all technologies? Are baseline data likely to be available from past accounts?

<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.