

# 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: 7-3-2008

Screeener: N.H. Ravindranath and Douglas Taylor

Panel member validation by: N.H. Ravindranath

### I. PIF Information: Building Sector Energy Efficiency Project- Malaysia

#### Full size project      GEF Trust Fund

GEFSEC PROJECT ID: 3598

GEF AGENCY PROJECT ID: PIMS 3108

COUNTRY(IES): Malaysia

PROJECT TITLE: Buildings Sector Energy Efficiency Project (BSEEP)

GEF AGENCY(IES): UNDP

OTHER EXECUTING PARTNERS: In Malaysia – Public Works Department (PWD)

GEF FOCAL AREAS: Climate Change

GEF-4 STRATEGIC PROGRAM(S): CC-SP1: Promoting Energy Efficiency in Residential and Commercial Buildings

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: N.A.

### 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

2. *i) Technical Interventions:* The proposal states that the main goal is the improvements of energy utilization in commercial and government buildings by promoting energy conserving design for new buildings and increasing energy use efficiency in the exiting buildings. IPCC (2007) has listed a number of technological interventions for mitigation in the buildings sector namely; a) reducing energy consumption (particularly, electricity) and embodied energy in buildings, b) switching to low-carbon fuels, particularly to renewable energy, and c) controlling emissions of non CO<sub>2</sub> GHGs. IPCC also highlights the fact that most interventions aimed at energy efficiency can be achieved in ways that reduce life cycle costs, thus providing reductions in CO<sub>2</sub> emissions that have net negative costs (generally higher investment but lower operating costs). Thus, it is very important to identify the right technology mix for reducing energy consumption in a profitable way. Criteria and guidelines to identify technologies to be selected is necessary. What are the design features or technological interventions proposed for the new buildings? Further, which technologies will be incorporated for existing buildings; lighting, heating, cooling, appliances or all technologies. Will there be prioritization of energy efficient technologies, based on potential for energy conservation or GHG emission reduction. Will cost (investment or maintenance) be a factor in selecting technological interventions? Any quantitative estimates of energy conservation potential in new buildings and existing buildings with different technological interventions. What is the source of best practices? Is the Malaysian standard for defining energy efficiency adequate (136 kWh/m<sup>2</sup>/year of energy use)? If not how will the new performance standards / labels be evolved; steps and approach to be adopted could be explained.

*ii) Baseline Scenario:* How will the baseline energy use or GHG emissions be measured or monitored; methods and techniques could be mentioned. The value of "annual CO<sub>2</sub> emissions from the building sector at 4672 tonnes during 2003-2006" can't be correct. It cannot be so low for Malaysia, STAP presumes it is kilo tonnes.

*iii) Control group of buildings:* Will there be control group of buildings to monitor the impact of energy efficiency measures in demonstration buildings and in the national programme.

*iv) Monitoring of Energy use and GHG emission reduction:* Institutional arrangements for monitoring are well presented. Technical and scientific methods and procedures are not mentioned. Separate methods may be required for new buildings and existing buildings.

**v) Risks:** Institutional and policy risks and mitigation measures are presented. Risks related to performance of technologies, energy savings and increased investment or maintenance costs for energy efficient technologies are not presented.

<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: (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.
<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.