

# 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 20, 2011

Screeners: Lev Neretin

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

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

**FULL SIZE PROJECT    GEF TRUST FUND**

**GEF PROJECT ID:** 4488

**PROJECT DURATION :** 4

**COUNTRIES :** China

**PROJECT TITLE:** Green Energy Schemes for Low-Carbon City in Shanghai, China

**GEF AGENCIES:** World Bank

**OTHER EXECUTING PARTNERS:** Shanghai municipal government and Changning district government, P. R. China

**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's objective is to pilot a low-carbon city concept in Changning district in Shanghai. The proposed project focuses on green buildings, low-carbon energy mix, and integration of green energy schemes to achieve cross-sectoral low-carbon objectives. This is one of the few projects which are based on systematic or scientific assessment of technologies for incorporation into a GEF project. This project also addresses multiple climate change focal area strategic objectives; energy efficiency, clean energy technologies and sustainable transport with measurable indicators. STAP considers this as a model approach for future projects focused on low carbon technologies and energy efficiency in urban areas. The project focus on specific sectors and is based on the results of the abatement cost curves and scenario building done in an integrated fashion for different sectors. STAP commends the project proponents for conducting such an analysis and recommends that this approach is applied broadly among GEF agencies submitting projects for low-carbon urban centers. The project could also consider the approach, methodology and lessons learned to be disseminated in China and beyond in World Bank operations. There are few comments/recommendations STAP wants to convey:

1. While zero-emission or zero-energy buildings (ZEB) is an attractive and new concept (a few examples already exist in emerging economies - Pearl River Tower in Guangzhou, China or PTM Green Energy Office in Selangor, Malaysia), widespread expansion of these practices is hampered by a number of important barriers such as high initial costs, lack of necessary skills and experience, effectiveness of subsidies in the long-term, low adaptability to changing climate and other factors. STAP recommends exploring more carefully the longer-term sustainability and reliability of the ZEB concept in China during project preparation. Relaxing emission requirements and taking into account other "green elements" of urban development such as improved waste generation and processing practices, environmentally responsible land-use changes, etc., might be more beneficial for a wider replicability of the project outcomes (even at the expense of zero-emission goals). STAP recommends a detailed assessment of the economic and technological feasibility of zero carbon emissions buildings during project preparation. Low GHG emitting buildings may be more practical and economical, at least in the short term, to derive maximum GHG reduction benefits for a given investment.
2. STAP recommends conducting a more detailed analysis of available low-carbon transport options for Changning district taking into account the inclusive concept of Avoid-Shift-Improve policies. No single element of the framework will be more effective than more comprehensive approach across the three pillars of transport sustainability (GEF-STAP (2010): Advancing sustainable low-carbon transport through the GEF, <http://www.unep.org/stap/Portals/61/pubs/For%20website%20-%20Sustainable%20transport.pdf>).

3. The experience learned in measurement and verification tools and methodologies employed by this project (Component 4) is widely applicable in the GEF and STAP would like to see the World Bank playing a proactive role in disseminating this "know-how" among GEF partners and beyond.

<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.