

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: November 06, 2017
Screener: Sunday Leonard
Panel member validation by: Ralph E. Sims
Consultant(s):

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

FULL-SIZED PROJECT	GEF TRUST FUND
GEF PROJECT ID:	9749
PROJECT DURATION:	5
COUNTRIES:	China
PROJECT TITLE:	China Distributed Renewable Energy Scale-up Project
GEF AGENCIES:	World Bank
OTHER EXECUTING PARTNERS:	NATIONAL ENERGY ADMINISTRATION, 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):
Concur

III. Further guidance from STAP

1. The project aims to support the development of policies related to pricing, grid access, urban planning, etc. and to pilot business and finance models, initially for four cities selected as pilots. USD75 M of co-financing is sought for the latter aim, from equity and loans from the private sector (although the Concept Note of October 2016 states "US\$80 million from the national and local governments, renewable energy developers, and investors will be provided towards the pilot activities").
2. RE development is supported by feed-in-tariffs and an "energy revolution" is planned. Solar PV has not grown as expected due to limited access to privately owned urban rooftops by project developers.
3. Developing micro-grids on a group of buildings using solar PV and other RE systems in urban areas is a key concept that involves producing a district plan by the local government. A series of "use cases" are envisaged involving a range of technologies, stakeholders, business plans, financing, etc. as determined by specific circumstances. Some distributed energy systems may involve heat supply as well as electricity.
4. Around 440 kt CO₂-eq emissions are quoted to be avoided over a 20 year lifetime, including direct emissions from this 5-year project.
5. The Policy Support component (~USD 3M) makes good sense given the existing constraints to distributed RE systems (although it is not clear what "New Energy City" refers to).
6. Component 2 (~USD 4.2M) aims to pilot business and finance models in selected cities (although the number of cities and selection process to be used is not clear).
7. Key questions are:
 - Are there 4 pilot cities involved?

- Will any be linked with the GEF Sustainable Cities programme as administered by the World Bank? See <http://www.worldbank.org/en/topic/urbandevelopment/brief/global-platform-for-sustainable-cities> This could cause a conflict of interest, if so, but it could also be beneficial to link with the Knowledge Platform with regard to methodologies, tools, and indicators.
- Will they all have similar populations or a range from small to large so replications can match cities of similar sizes?
- Will they be existing cities or new cities being developed on greenfield sites? Different approaches and policies would be needed for each situation.
- How will any benefits or disbenefits resulting from the investment be monitored and evaluated, and using what indicators?
- Will social issues be considered?
- How were the GHG emission reductions calculated, and were they based on reaching the national goal of 60 GW of installed RE projects by 2020? Does this goal include renewable heat or only electricity?
- The risk is "substantial." Is this in part due to the private sector not investing in the project to the degree anticipated?

8. Projects involving the uptake of smart-grids and integration of higher shares of renewables into the existing energy systems have been undertaken in many countries. Perhaps there are lessons to be learned from successes and failures for this project. Some useful information can be found in the "Integration" chapter (Chapter 8) of the IPCC Special Report on Renewable Energy <http://ipcc.ch/report/srren/>

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Concur	In cases where STAP is satisfied with the scientific and technical quality of the proposal, a simple "Concur" response will be provided; the STAP may flag specific issues that should be pursued rigorously as the proposal is developed into a full project document. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design prior to submission for CEO endorsement.
2. Minor issues to be considered during project design	<p>STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised. (ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review.</p> <p>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.</p>
3. Major issues to be considered during project design	<p>STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required.</p> <p>The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP's concerns.</p> <p>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.</p>