

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 10, 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: 5733

PROJECT DURATION : 5

COUNTRIES : Trinidad and Tobago

PROJECT TITLE: Improving Energy Efficiency in the Social Housing Sector

GEF AGENCIES: IADB

OTHER EXECUTING PARTNERS: Ministry of Energy and Energy Affairs (MEEA)

Ministry of Housing and Urban Development (MHUD)

Housing Development Corporation (HDC)

Trinidad and Tobago Bureau of Standards (TTBS)

T&T Green Building Council

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):
Minor revision required

III. Further guidance from STAP

1. Under this project, methodology auditing and monitoring of existing buildings will be developed and market analysis undertaken on energy efficiency with capacity building added for a range of stake holder levels. A regulatory framework will be developed. New houses and retrofits will be used for demonstrations of reducing energy demand by efficiency measures. The houses will be monitored. Financial models are discussed.
2. The majority of the funding is to go towards house construction and retrofits. Yet who will design the new houses so they conform with the energy standard? What low energy features will they possess? The additional costs of these EE design features is not provided compared with baseline houses, nor the likely payback period.
3. It is noted that with a life of 50 or more years, once a building is constructed, energy use is largely locked-in, even with future retrofitting options. Note Table B mentions 100 retrofits whereas text of component 3 talks of 150 retrofits. Which is it?
4. LED street lighting is also to be "tested" but how and by whom is not presented. Is the test of light quality, cost effectiveness, or reduced energy demand (or all three)?
5. Who will supply the energy efficiency technologies once they are selected? Are there local manufacturers, distributors, etc. and if so, can they be brought into the project? Encouraging and potentially providing support for local businesses could improve the long term sustainability of the program and reduce resistance by consumers if it (the program) can show concomitant benefits to the local economy. Please list any co-benefits that might be gained through the implementation of this project.
6. The barriers are addressed to both EE and RE, yet renewable energy is not included in the introduction, though it is covered in the financial section. However it is not clear what forms of RE are being considered.

7. What energy audit tools will be used for the baseline analysis and the demonstration project homes? See, for example, http://energy.gov/sites/prod/files/2013/11/f5/auditing_tool_review.pdf for a review of some home energy auditing tools. There may be others more suited for housing in tropical countries.

8. As another risk, although Trinidad and Tobago is outside the path of hurricanes and tropical storms, it is still subject to flooding with urban areas along the foothills of the Northern Range at particular risk due to increased urban runoff (Middelbeek, L. et al. 2014. Built to last? Local climate change adaptation and governance in the Caribbean “ The case of an informal urban settlement in Trinidad and Tobago. Urban Climate). Therefore, if a total of 6,500 new housing units per year are to be built over ten years for a total of \$65,000 new units, it makes sense to ensure that not only are these units built using energy efficient technologies to reduce greenhouse gas emissions, but that their design also takes into account possible risks associated with climate change related events.

9. The global environment benefits from GHG reduction potential are not presented.

10. Overall the analysis of the project costs and potentials appears to be lacking.

<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: (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.</p>
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: (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.</p>