

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:	9789
PROJECT DURATION:	4
COUNTRIES:	Trinidad and Tobago
PROJECT TITLE:	Energy Efficiency through the Development of Low-carbon RAC Technologies in Trinidad and Tobago
GEF AGENCIES:	UNDP
OTHER EXECUTING PARTNERS:	Ministry of Planning and Development (MPD)
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 promote the adoption of low-carbon technologies for refrigeration and air conditioning end-use in Trinidad and Tobago.
2. Given the rapid growth of refrigerators and air conditioners in T&T, the project will make low-C refrigeration and air-conditioning technologies more efficient. This includes, through the use of standards and labeling, as well as fiscal incentives for imports. Market transformation is also planned to replace high energy technologies, including for district cooling as part of the USD 8.5M investment portfolio from co-financing. The project also includes awareness raising and capacity building efforts, along with data collection on F-gas emissions.
3. High per capita emissions are evident in T&T, although the 2005 and 2006 data quoted is out of date and should be updated in the proposal.
4. The current baseline scenario of use of high GWP refrigerants and low-efficiency equipment can be improved by various practical means such as ensuring imported technology meets stringent guidelines. Disposal of spent refrigerant can also be improved but not totally avoided. The project, through the outline activities, seeks to achieve this.
5. A 1.5 Mt CO₂-eq emission avoidance is projected over 20 years in line with the country's NDC. Replication from other projects is also possible and can provide further climate benefits. A further 62.5t of emissions can be avoided indirectly by using natural refrigerants to replace ODS.
6. The introduction of energy efficient equipment/technologies through the GEF funding will also allow for the introduction of low-GWP refrigerants which will be implemented through funds from the Montreal

Protocol. Hence, GEF funding would indirectly help the phase-out of ozone-depleting substances – (such as HCFCs). This should have been recognized in the project document, but was not.

7. Furthermore, since 100% of T&T's electricity comes from natural gas and diesel oil units (see Paragraph 53 in the project document), improving energy efficiency in the refrigeration and air conditioning sectors will not only provide CO2 emission reduction benefits, but will also help avoid black carbon emissions reduction for which diesel power generators are an important source (see for example, Evans et al, 2015: <https://www.atmos-chem-phys.net/15/8349/2015/acp-15-8349-2015.pdf>; WHO: <http://www.who.int/sustainable-development/cities/health-risks/climate-risks/en/>; and Chow et al., 2006: https://www.arb.ca.gov/research/apr/past/04-307_v1.pdf). This should be recognized as part of the possible climate benefits from this project.

8. A wide range of project stakeholders exists with several ministries involved in the project. Close co-operation and communication across ministries will be essential. Lessons learned, such as from the district cooling scheme, will be shared with the private sector.

<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	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: (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. 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.
3. Major issues to be considered during project design	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: (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. The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP’s concerns. 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.