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:	September 30, 2016
Screener:	Sarah Lebel
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:	9423
PROJECT DURATION:	4
COUNTRIES:	Egypt
PROJECT TITLE:	Egyptian Programme for Promoting Industrial Motor Efficiency
GEF AGENCIES:	UNIDO
OTHER EXECUTING PARTNERS:	Ministry of Industry, Trade and SMEs Egyptian National Cleaner Production Center (ENCPC) Federation of Egyptian Industries
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

STAP welcomes the UNIDO proposal "Egyptian Programme for Promoting Industrial Motor Efficiency". This UNIDO 4-year project aims to phase out older motor designs and replace with more efficient types by accelerating market penetration. A number of issues are raised below which may assist to further strengthen this investment. Key industrial sectors with the greatest potential will be targeted with an awareness campaign using demonstration projects and the "up-skilling" of vendors.

Saving energy by the uptake of new motor designs to replace older technologies has been well understood for many years (e.g. https://www.carbontrust.com/resources/guides/energy-efficiency/motors-and-drives/ and http://energy.gov/eere/amo/motor-systems). The project will help slow Egypt's high growth rate of GHG emissions.

The challenge will be to convince industries to spend more on purchasing more efficient motors to gain long term benefits rather than buy cheaper motors or continue to rewind old motors to extend their life. Financial support to encourage wise purchases of efficient motor designs for either new or replacement applications is necessary. The project is timely as the electricity saving by a firm can help to offset the increasing electricity price as projected out to 2019.

The capacity building approach is commendable, though the geographic distribution of those attending the 2 day user course, and of the location of the vendors is not clear, but hopefully they are spread widely throughout the industrial areas of the country so that wider dissemination can later result. Selection criteria for the pilot companies appears sensible in order to optimise the benefits.

How the ESCO will be selected is not clear, although the statement an ESCO "will be established" implies there are no existing companies suitable for the task. Perhaps the planned review of existing ESCOs should try and identify a company suitable for the task and that already exists.

Based on having around 70% of electricity generation from natural gas giving a grid emissions factor of 455 g CO2/kWh, the CO2 emissions reductions calculated as 0.48 â€“ 0.97 Mt direct and 1.44-2.93 Mt indirect seem appropriate. However, the detailed baseline assessment of motor size and the 10% and 20% potential savings scenarios for direct emission reductions gives emission reductions of 0.27 Mt CO2 and 0.54 Mt CO2 respectively over 10 years. The reason for this anomaly between the two ranges quoted for direct emissions is not clear.

The projected greenhouse gas emission reduction is only a small share of the Egyptian total of around 300 Mt CO2e / year, but it is cost effective, given that electricity subsidies are being phased out and the imported gas is relatively costly. It is also supportive of the NDC.

The risks are well identified. Building on the existing energy efficient projects in Egypt makes sense. However, "innovativeness" is claimed for the project but the GEF has supported other similar electric motor projects elsewhere in the past. It would be beneficial to ascertain the learning experiences from these projects so that this project can benefit as a result and avoid any pitfalls. Also since the project includes training courses for electric motor users and disseminating information on improved motor product design and production, it would be useful to integrate experiences and lessons learned on improving the efficiency of electric motors from other countries, for example through IEA's implementing agreement - http://www.iea-4e.org/ and https://www.motorsystems.org/

STAP advisory response	*Brief explanation of advisory response and action proposed*
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.