

Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility



STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: 17th March 2009

Screener: Lev Neretin

Panel member validation by: N.H. Ravindranath

I. PIF Information

Full size project **GEF Trust Fund**

GEFSEC PROJECT ID: 3724

GEF AGENCY PROJECT ID: 4175

COUNTRY(IES): Ukraine

PROJECT TITLE: Energy Efficient Lighting in Residential and Public Buildings

GEF AGENCY(IES): UNDP

OTHER EXECUTING PARTNER(S): Ministry of Environmental Protection of Ukraine, Agency for Rational Energy Use, DerzhStandard

GEF FOCAL AREA (S): Climate Change

GEF-4 STRATEGIC PROGRAM(S): CC-SP1

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: UNEP/UNDP "Global Market Transformation for Efficient Lighting"

II. STAP Advisory Response (*see table below for explanation*)

1. Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies):
Consent

III. Further guidance from STAP

2. STAP welcomes this UNDP project in Ukraine having an objective to reduce GHG emissions by transforming market towards efficient lighting technologies in residential and public buildings. The project has a balanced approach comprising interventions aimed at both, supply and demand sides of the market. Nationally developed framework will be supported by several demonstration projects in a number of municipalities. STAP supports the proposed framework and would like to see a clearly defined baseline at the CEO endorsement phase. Furthermore, technically justified criteria for selecting particular municipalities and interventions are desirable.
3. **Technical Intervention:** Transforming the Ukrainian market towards efficient lighting technologies and phasing out of inefficient lighting systems is in line with GEF Strategic Objective on "**Energy-efficient buildings**", as well as the IPCC (2007) recommendation. IPCC (2007) concluded that efficient lighting technologies are among the most promising GHG abatement measures in the residential and public buildings sector. Further, a significant portion of these savings can be achieved in ways that reduce life-cycle costs. This provides an opportunity for reduction in CO₂ emissions with a net negative cost, however, with higher investment and lower operating costs. Technology choice is in line with the GEF/UNEP/UNDP project '**Global market transformation for efficient lighting**'. Education and awareness alone may not be adequate. There is no scientific or technological innovation, but policy and institutional innovations are included based on the vast experience in promoting CFLs around the world. But the approach for overcoming the critical barrier of high first cost (as mentioned by IPCC) to individual users or the municipalities is not clear, since national policies may not be of much help. How will the marketing of CFLs post-GEF project period be promoted? Will the policy framework efficiency standards for CFLs alone be adequate to induce the buyers to shift to CFLs? Will the cost of the CFLs come down by the end of the project period? Will there be any policy to phase out the incandescent lamp manufacturing in Ukraine?
4. **Baseline and Monitoring:** Methodology for measurement and monitoring kWh of electricity consumption under baseline situation and under project situation is necessary for estimating energy conservation. Further, a scientific method would involve measuring or estimating the electricity consumption in the baseline situation (without CFLs) in sample households, public buildings, etc.

Further, reduction in expenditure on kWh of electricity used per month may trigger increased use of electricity with more bulbs or increased lighting hours. Thus monitoring electricity consumption in sample residential and municipal buildings is necessary.

5. **Risks of incremental investment:** Innovative measures to encourage individuals, municipalities to shift to efficient lighting systems, despite the high first or investment costs, are necessary. How will the import of low quality CFLs from outside be regulated? Economy of scale for domestic manufacturing units could be worked out to enable decisions on import versus national production. In the long term, the strategy of the project should be to promote domestic manufacturing.
6. **Financial viability or cost –effectiveness:** Large scale spread of CFLs depends on the financial attractiveness to individual residential and municipality establishments. Life-cycle costs and benefits analysis is not a common practice in the residential/municipal sector. It is important to address the critical issue of the first cost barrier to the success of CFLs program in Ukraine, especially since large experience and lessons are available.
7. **Risks:** The risk of high first or investment cost being a deterrent for residential and public buildings is not addressed.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	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.
2. Minor revision required.	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"> (i) Opening a dialogue between STAP and the proponent to clarify issues (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 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 revision required	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.