



## PROJECT PREPARATION GRANT (PPG)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

Submission date: 20 December 2011

Re-submission date: 22 March 2012

Re-submission date: 8 August 2012

Re-submission date: 29 August 2012

GEF PROJECT ID: 4790

GEF AGENCY PROJECT ID: 120073

COUNTRY(IES): Egypt

PROJECT TITLE: Promoting low-carbon technologies for cooling and heating in industrial applications

GEF AGENCY(IES): UNIDO, (select), (select)

GEF FOCAL AREA(S): Climate Change

### A. PROJECT PREPARATION TIMEFRAME

Start date of PPG	12/01/2012
Completion date of PPG	05/31/2014

### B. PROPOSED PROJECT PREPARATION ACTIVITIES (\$)

Describe the PPG activities and justifications: The PPG activities will include the comprehensive assessment of the key market players, relevant governmental and scientific institutions, financial institutions and target companies for implementation of solar energy for heating and cooling applications in industrial process and in large buildings (tourism industry, commercial buildings, etc.) in Egypt and determining their exact roles in implementing the project. In addition, background analysis will be carried out on the development and improvement of market economy tools and public policy instruments in Egypt to trigger investments in the field of solar heating and cooling applications, with the overall aim to reduce greenhouse gas (GHG) emissions, increase energy independence and improve competitiveness of the national economy through low-carbon industrial development. The PPG activities will include data collection, stakeholder consultations, mobilising of co-financing and the preparation of the detailed project document.

#### 1. Collection of supplemental data

Considerable baseline data has been gathered during the preparation of the PIF. Detailed analysis on policy and regulatory frameworks relevant to promotion of a market for low carbon technologies and identification of responsible institutions and capacity needs of market players will be conducted during PPG. Further detailed data is needed for a careful analysis on the available technologies, suppliers, domestic experience and capacities in the field of solar based heating and cooling applications for the target industrial sectors; energy use patterns and technical requirements for implementation of such applications for industry and large building/tourism facilities; investment and financial market mechanisms, etc. The findings will be encompassed in a comprehensive study for the feasibility and opportunity of the solar market for industrial applications in Egypt.

#### 1.1 Review of the relevant legal and regulatory framework

A detailed review of the existing policy and regulatory frameworks for low carbon technologies and in particular solar technologies (e.g. policy incentives i.e. feed-in tariffs and subsidies for SMEs, sectoral

development programmes, national strategies, etc.) will be carried out. A proposal will be made on the process for developing a comprehensive policy and associated regulatory framework that provides clear guidelines for promotion of low carbon technologies for heating and cooling in Egypt.

#### 1.2 Detailed capacity needs assessment

Market enablers (e.g. manufacturers, interested in solar applications companies, financial institutions) and support institutions (e.g. research, training institutions, quality control and standardization bodies, etc.) will be consulted on their capacity development needs. This will also include a preliminary market assessment through a SWOT analysis. Once capacity gaps are identified, interventions will be proposed.

#### 1.3. Detailed analysis of local manufacture of solar systems and components

The key market players of the local manufacturing industry for solar systems and components (e.g. R&D institutions, project developers & suppliers - local manufacturing and assembling companies of solar energy equipment and systems, distributors, service providers, etc.) will be identified, their experience (i.e. best practice), capacities and needs analyzed. A comprehensive study for the feasibility and opportunity of the market to absorb the application of solar energy in industry and commercial building to indicate the guarantee for its sustainability and its appropriateness within the national Egyptian context will be developed. Further analysis of the financial and market opportunities for sustainable financial mechanisms in partnership with the private sector and local financial institutions will be performed.

### 2. Stakeholder consultations

Stakeholders have been consulted in preparation of the PIF of this project. More detailed consultations, focusing on details of the project implementation, their capacities, specific needs and requirements, roles and contributions of the various stakeholders, will take place during PPG phase.

#### 2.1 Consultations with government and institutional stakeholders

Governmental institutions and public agencies interested by the project objective and activities will be consulted to discuss their views on the detailed objectives of and institutional arrangements for this project, to assess whether their involvement in its execution can be enlarged, to secure their commitment to critical outputs and to agree on the activities they could undertake as a part of their contribution to the project success. These consultations will also be used to review existing policy and regulatory frameworks and to propose strategies for improvements, and to review existing capacities and to propose adequate capacity building measures. The consultations will be facilitated through bilateral consultations with the relevant parties, workshops at national and local levels and close involvement of the The Ministry of Industry & Foreign Trade (MIFT), The Egyptian Environmental Affairs Agency (EEAA), Ministry of Tourism (MOT) - the Tourism and Development Authority (TDA), The Ministry of Electricity and Energy - the New & Renewable Energy Authority (NREA), etc.

#### 2.2 Consultations with market parties and NGOs

Some market parties were consulted during the preparation of the PIF stage, but further consultations with additional stakeholders are needed to detail the capacities and needs and cooperation with technology manufacturers, distributors and retailers as well as to coordinate arrangements for implementation projects. This will also take place via bilateral meetings with the major parties and their associations (e.g. UNDP, the Industrial Development & Workers Bank of Egypt and Credit Guarantee Companies, Academy of Scientific Research and Technology, private sector stakeholders (hotels in Cairo and at the Red Sea, industrial production facilities, local manufacturers, etc.), universities, local manufacturing and assembling of solar energy equipment and systems, project developers and service providers, Industrial Modernization Center (IMC), Construction Research Institute, Egypt National Clean Production Center), and specific workshops.

### 3. Design implementation projects

Selection of implementation projects, detailed design of the project implementation scheme and selected

projects including feasibility analysis, and mobilization of the co-financing will be performed during PPG phase. The implementation projects should demonstrate technical and financial feasibility of industrial processes that require heating and cooling energy (e.g. supply of hot water, steam, industrial processing), air conditioning applications for heating and cooling of large buildings (e.g. office or commercial) and tourism facilities. The identified sectors for implementation projects are:

- industrial and agro processing facilities (i.e. dairy factories and post harvest processing companies)
- tourism sector (e.g. hotel facilities in Cairo and in Sharm El Sheik)
- office or commercial buildings (preferable within an institution such as a university or a cooperating project) that could provide monitoring of the results within the context of their own on-going activities.

As part of the project, selected industries and SMEs will be invited to invest in solar technologies to showcase the technical feasibility and commercial viability of modern solar heatings and coolings for industrial applications. These investments need to be detailed and coordinated with other project activities, with a view to creating synergies between the public and private sectors during the implementation of renewable energy projects. These projects will need to be selected in such a manner that they address the identified critical barriers and have large replication potential.

**4. Project strategy and implementation detailing**

Based on the activities described above, the detailed planning of the full-sized project will be completed. Collaboration with related initiatives will be ensured when designing project strategies and defining the scope and activities for the pilot projects.

In summary, the PPG activities, which will lead to the GEF project document, will include:

- Evaluation of the social, economic and financial sustainability of proposed project activities;
- Identification of a set of viable outcomes, outputs and activities that constitute the most cost effective response to the identified threats and barriers;
- Costing of expected project outcomes and outputs, co-financing sources and co-financing commitments in compliance with the GEF incremental principle;
- Estimation of potential GHG emission reductions and a cost-effectiveness analysis
- A monitoring and evaluation plan, including a set of impact indicators to track the project's progress and effectiveness, baseline and target values on indicators.

<b>List of Proposed Project Preparation Activities</b>	<b>Output of the PPG Activities</b>	<b>Trust Fund</b>	<b>Grant Amount (a)</b>	<b>Co-financing (b)</b>	<b>Total c = a + b</b>
1. Collection of supplemental/ baseline data and analysis	Supplementary data collected is used in finalizing the project document; a comprehensive study for the feasibility and opportunity of the solar market for industrial applications in Egypt.	GEF TF	20,000	20,000	40,000
2. Stakeholder consultations	Stakeholder buy-in in the proposed project implementation strategy.	GEF TF	15,000	15,000	30,000
3. Design of implementation projects	Detailed feasibility studies projects.	GEF TF	30,000	30,000	60,000
4. Project strategy and implementation detailing	Detailed GEF project document produced for UNIDO approval and CEO endorsement.	GEF TF	15,000	15,000	30,000

<b>Total Project Preparation Financing</b>		<b>80,000</b>	<b>80,000</b>	<b>160,000</b>
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**C. FINANCING PLAN SUMMARY FOR PROJECT PREPARATION GRANT: (\$)**

	<b>Project Preparation</b>	<b>Agency Fee</b>
Grant Amount	80,000	8,000
Co-financing	80,000	
<b>Total</b>	<b>160,000</b>	<b>8,000</b>

**D. PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)<sup>1</sup>**

Trust Fund	GEF Agency	Focal Area	Country Name/ Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
GEF TF	UNIDO	Climate Change	Egypt	80,000	8,000	88,000
<b>Total PPG Amount</b>				<b>80,000</b>	<b>8,000</b>	<b>88,000</b>

<sup>1</sup> No need to provide information for this table if it is a single focal area, single country and single GEF Agency project.

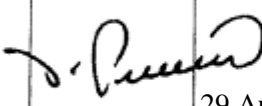
**E. PPG BUDGET**

Cost Items	Total Estimated Person Weeks for Grant (PW)	Grant Amount (\$)	Co-financing (\$)	Total(\$)
Local consultants *	35.00	35,000	10,000	45,000
International consultants*	15.00	45,000	30,000	75,000
Travel		0	10,000	10,000
In-kind contribution			30,000	30,000
<b>Total PPG Budget</b>		<b>80,000</b>	<b>80,000</b>	<b>160,000</b>

\* Annex A for Consultant cost details should be prepared first before completing this table. See notes on Annex A for the required detailed information. This table is the sum of all local and international consultants presented in Annex A

**F. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF LDCF/SCCF Trust Fund criteria for project identification and preparation.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mr. Dmitri Piskounov, Managing Director, PTC, UNIDO GEF Focal Point		29 August 2012	Ms. Rana Ghoneim, IDO, PTC/ECC/IEE	+ 43126026 4356	R.Ghoneim@unido.org

**Annex A**

**Consultants Financed by the Project Preparation Grant (PPG)**

<b>Type of Consultant</b>	<b>Position / Titles</b>	<b>\$/ Person Week<sup>1</sup></b>	<b>Estimated PWs<sup>2</sup></b>	<b>Tasks to be Performed</b>
Local	National Energy Expert	1000	20.00	Collect supplemental data on domestic solar market, capacities, barriers and needs.
Local	National Policy Expert	1000	15.00	Consultations with public and private sector stakeholders regarding the regulatory, technical and marketing activities and renewable energy/solar projects.
International	International Project Development Expert	3000	6.00	Provide expertise on the international best practices and lessons learnt in the design and implementation of similar projects <ul style="list-style-type: none"> <li>• Assist in the preparation of the project's logical framework and M&amp;E plan, with a set of measurable impact and progress indicators.</li> <li>• Review and profile baseline and barrier information delivered by the local experts.</li> <li>• Assist the local project team to define project scope and provide recommendations on the suggested project strategy and design.</li> <li>• Assess sustainability of suggested project outcomes and outputs.</li> <li>• Recommend possible solar projects.</li> <li>• Provide other guidance for the implementation of the PPG and preparation of the FSP proposal, as needed.</li> </ul>
International	International Energy Expert	3000	3.00	Collect supplemental data on energy use patterns, international best practice, technology suppliers, etc.
International	International Policy / Capacity Building Expert	3000	3.00	Consultations with public and private sector stakeholders regarding the regulatory, technical and marketing activities, training methodology and material, etc.
International	International Financial Expert	3000	3.00	Undertake detailed designing of the implementation projects and project strategy

<sup>1</sup> Provide dollar amount per person week.

<sup>2</sup> Provide person weeks needed to carry out the task