

# **The Solar Water Heating System Facility for the Red Sea and South Sinai Hotels**

## **Request for tender**

### **1. Objectives**

Under the MEDREP Finance Initiative, the United Nations Environment Programme (UNEP) is launching a new scheme for the diffusion of the solar thermal technology in Egypt.

The Solar Water Heating System Facility intends to promote collective solar water heating installations in hotels and resorts (both existing and under construction) in the Red Sea and South Sinai governorates. The initial target is to install new solar thermal systems for hot water demand in about 15 hotels and resorts.

### **2. Funds and admission procedures**

Total budget available is USD 500,000 (LE 2.8 million), entirely donated by the Italian Ministry for the Environment, Land and Sea through the UNEP MEDREP Trust Funds.

This budget will be used to grant a capital cost subsidy and a maintenance cost subsidy over a 4-year timeframe for the installation, operation and maintenance of collective solar water heating systems.

The maximum subsidy allowed is:

- ⇒ 25% for the capital cost component, and
- ⇒ USD 4/m<sup>2</sup>/yr for the maintenance cost component for the first two years of operation, and USD 3/m<sup>2</sup>/yr, for the remaining two years.

Capital cost and maintenance subsidies will be granted until availability of funds, on a first-come first served basis, and according to a series of preferential criteria listed in paragraph 7.

To be eligible, the solar thermal installations must satisfy a series of technical specifications and performance requirements listed in the following paragraph 5. In addition, all the information requested in the Technical Annex must be provided.

Only those solar water heating systems presenting the characteristics listed in the following paragraphs will be admitted within the scheme.

### **3. Beneficiaries**

The present project is addressing the tertiary sector, in particular:

- ⇒ Hotels and resorts, leisure industry
- ⇒ Clinics, hospitals

- ⇒ Sport and wellness centres
- ⇒ Restaurants

The domestic and industrial sectors, as well as other activities in the service sector not listed above are excluded from the current programme. Both existing and under construction buildings are admitted. Only solar water heating systems to be installed in the Red Sea and South Sinai governorates are eligible within the current scheme.

#### **4. Description of procedures**

Only applications received from eligible beneficiaries (see paragraph 3 above) will be screened. Applications must include:

- ⇒ The name of the designated solar water heating system designer
- ⇒ The name of the designated technology supplier
- ⇒ The name of the designated installer
- ⇒ The name of the designated maintenance operator.

A registry of eligible solar thermal system designers, suppliers, installers and maintenance operators will be maintained and regularly updated by NREA, and will be made available upon request to all interested applicants.

Applications containing the name of designers, technology suppliers, installers, maintenance operators not included in the official registry of NREA will not be considered.

The capital cost subsidy component (purchase + installation) will be granted to the solar water heating system supplier designated by the applicant. In order to guarantee equal access to market and stimulate competitiveness, each solar thermal supplier is allowed to receive a maximum of 4 grants (i.e. to participate in maximum four projects) within the present call.

The maintenance cost subsidy will be granted directly to the applicant.

#### **5. Technical specifications of solar water heating systems**

In order to be granted the capital cost subsidy, solar water heating systems must meet the following minimum requirements:

- ⇒ They must be new installations, not yet installed as of the date of the present call
- ⇒ The size of solar thermal plants shall be comprised between 30 and 250 square meters

A heat metering device should be in place for monitoring output and performance of the solar systems

As for solar systems and its components, the following standards do also apply:

- ⇒ Solar collectors must be tested according to the methods described in the standards ISO 9806-1:1994 and ISO 9806-2:1995 by a qualified certified laboratory.

- ⇒ Solar systems must be tested according to the methods described in the standard ISO 9459-2:1995 by a qualified certified laboratory
- ⇒ Solar system components must be made of materials having a high resistance to the special climatological conditions of Red Sea and South Sinai areas. In particular, the high ratios of humidity and water vapor saturated with sodium chloride, may have bad effects on the outer surfaces of solar collector, tanks, covers of pipe line insulation materials, etc. In addition, the internal components/parts of solar system must be made of/coated with special materials have a high resistance to the high ratios of chlorine used in treatment of water supply grids of Red Sea and South Sinai areas.
- ⇒ Solar system must be included /or connected to an auxiliary heating system witch can be used for heating water during cloudy days or in cases of high consumption rates of hot water.
- ⇒ Solar systems must be equipped with all necessary control, safety and alarm devices.
- ⇒ Solar system must have a minimum 5-year guarantee.

All companies operating within the present programme must comply with applicable Egyptian laws. Non Egyptian companies shall appoint a commercial agent in the country in case the operation is adjudicated in their favour.

In order to determine the amount of annual energy production, the irradiation on the collector's surface may be determined according to the GIS-based interactive solar irradiation maps developed by the DG Joint Research Centre of the European Commission (available at: <http://re.jrc.ec.europa.eu/pvgis/apps/radmonth.php?lang=en&map=africa>).

## **6. Presentation of the applications**

The application shall be submitted electronically to the following address: **sobhy@nreaeg.com** with a copy to: **myriem.touhami@unep.fr**

The applications must include:

- ⇒ The Technical Annex, duly filled out and
- ⇒ A series of additional documents, as requested in the Technical Annex

Applications must be sent starting from 1 June 2008. Grants will be disbursed until availability of funds.

## **7. Screening of applications and determination of the final list**

The applications received will be screened by a committee composed of technical experts of NREA and independent consultants appointed by UNEP after a selection process carried out with NREA. The final evaluation will be made according to the following criteria, listed in order of relevance:

- ⇒ The ratio between the annual energy output (expressed as kWh/year, and calculated with TRNSYS or similar widely recognized softwares) and the total cost of the project (merit index). Priority will be given to projects showing the highest merit index
- ⇒ Envisaged construction of the plant. Priority will be given to plants being built within the shortest timeframe
- ⇒ The typology of the installation. Preference will be given to collective systems. Individual systems might be admitted as well, if a clear justification for this choice is provided in the application
- ⇒ Certification and testing. Priority will be given to solar collectors complying with the standard EN 12975-1:2006 and tested according to the methods described in the standard EN 12975-2:2006 by an accredited laboratory (for Factory made systems EN 12976-1:2006 and EN 12976-2:2006 do apply). A Solar KeyMark certification can also be used in alternative to the above.
- ⇒ Displaced fuel. Priority will be given to solar thermal installations displacing higher polluting fuels like fuel oil and diesel, and electricity
- ⇒ Architectural integration. Priority will be given to well-designed systems showing a high level of architectural integration

As far as the capital cost incentive component is concerned, only costs strictly related to the purchase and installation of the solar water heating system and auxiliary components are admitted. Higher costs of closed loop systems will be taken into consideration in the screening process. Costs for the installation of the systems shall not exceed 10% of total investment (purchase + installation) costs.

Costs for pre-feasibility and feasibility studies are admitted, up to a maximum of LE 20,000 (USD 3500).

In order to foster technological advance and increase the quality of locally manufactured and assembled products, an additional incentive is offered to Egyptian technology suppliers to cover 50% of the costs for the certification and testing of solar thermal systems and components according to the aforementioned EN- standards. The grant will be disbursed according to the procedures described below only to those suppliers which will be shortlisted.

## **8. Procedures**

Applicants will be notified of the outcome of the screening and evaluation process via e-mail, at the address provided in the standard application form (Technical Annex).

The communication will be given within 30 days from the receiving of the demand.

Within two weeks after the receiving of the positive evaluation letter, the applicant shall provide copy of the purchase order.

The 25% grant will be disbursed by UNEP within 30 days after the verification of installation and testing of the system, while the maintenance cost subsidy will be disbursed on an annual basis, every 31 December, provided that a maintenance report is received by NREA.

The maintenance cost subsidy will be assigned starting from the first year after the installation and testing of the plant.

As for the certification costs, the subsidy will be disbursed to shortlisted Egyptian suppliers within 30 days from the receiving of the certification and invoice copies.

### **9. Renunciation**

Applicants can withdraw their application and renounce the allowed grant for sudden impediments. A renunciation letter must be sent to UNEP within 60 days from the receiving of the positive evaluation communication, indicating the reasons for such renunciation.

The amount will be used to grant the subsidy to the next beneficiary in the list.

### **10. Controls**

Without any notice, UNEP or NREA representatives might carry out on-site inspections in order to verify the progress of work and check the conformity of the documentation and the compliance with what declared.

To this end, with the present demand applicants engage themselves to make available all relevant documentation for a period of three years from the communication of assignment.

In case during the inspections non-regularities emerge or the product does not present the characteristics declared, the grant will immediately be claimed back.