



Applications of Solar Thermal Energy in the Mediterranean Basin - ASTEMB -

MEDA Project - EuropeAid Co-operation Office

ADEME - Agency for Environment and Energy Management - France
Project Coordinator

&

ANER - National Agency for Renewable Energies - Tunisia





General presentation

- ➔ Initial project duration : 36 months
Endorsement n° 2 puts the duration up to 42 months

Project objectives

- ➔ Transfer the *Guarantee of Solar Results (GSR)* concept to the Southern partner countries
- ➔ Allow the emergence of a sustainable and autonomous thermal solar market in the Southern countries
- ➔ Contribute to the development of local industries of SMEs type and of artisans networks through training actions





12 partners

Of which 11 members of the MEDENER association (*)

➔ Seven southern-Mediterranean partners beneficiaries of the project

ALMEE* (Lebanon)

ANER* (Tunisia)

APRUE* (Algeria)

CDER* (Morocco)

NERC* (Jordan) since 07/04/2003

NREA* (Egypt)

PEC* (Palestinian National Authority)



➔ Five partners from the European Union

ADEME* (France, coordinator)

ADENE* (Portugal)

CRES* (Greece)

IDAE* (Spain)

ISNOVA (Italy)





Guarantee of Solar Results (GSR) concept

- Guarantee by contract the technical and economic performances of an installation equipped with a solar water-heater
- Contract between the customer and the technical groupment
 - On the basis of a given consumption
 - Energy production objective of the solar installation
 - Penalties clauses in case of non respect





Phase 1

Analysis of local situations in the 7 beneficiaries countries

- State of art and markets of solar thermal water
- Technical and material competencies available locally
- Quantification of regional development potentials
- Exchanges potentials balance sheet
- Synthesis document - Quantification of potentials for the implementation of GSR in every country concerned





Phase 2

Stimulation of solar thermal markets within the 7 beneficiary countries

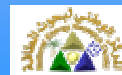
- Organisation of 2 high-level regional seminars and technical visits (Tunis - April 2002, Cairo - May 2002) - 350 attendees
- Organisation of 6 regional training sessions - 300 attendees
 - Session in Morocco - May 2002
 - Session in Tunisia - July 2002
 - Session in Lebanon - October 2002
 - Session in Egypt - December 2002
 - Session in Algeria - January 2003
 - Joint session in Jordan (Jordanian-Palestinian) - July 2002





Phase 3

- Adaptation of the GSR charter to each beneficiary countries
- Standards and material testing procedures





Phase 4

Pilot installations and exemplarity

Exchanges of experiences and competencies

- ➔ Visits and identification of existing collective installations
- ➔ Selection of one pilot installation per each southern country
- ➔ Installation of specific measurement and telemonitoring systems on the pilot solar installations chosen
- ➔ Guide and training for telemonitoring of installations





Phase 4

Pilot installations and exemplarity Exchanges of experiences and competencies

- ➔ **Algeria** SONELGAZ Installation
- ➔ **Egypt** Paints and chemical industries company (PACHIN) - AL-OBOUR CITY (40 m²)
- ➔ **Jordan** CROWNE PLAZA Hotel - AMMAN (92 m²)
- ➔ **Lebanon** Dar El Aytam Al Islamyia School - CHIAH (178 m²)
- ➔ **Morocco** Oncology Institute - RABAT (48 m²)
- ➔ **Palestine** Beir Zeit University - BEIR ZEIT (148 m²)
- ➔ **Tunisia** PHENICIA Hotel - HAMMAMET (625 m²)





Phase 5 National Plans

- Identification of the strengths and weaknesses (constraints) of the sector
- Identification of sectors to be developed
- Key factors for the sustainable development of the solar thermal market
- Financing requirements and typology





Prospect of regional development

- ➔ Importance of the regulation context
- ➔ Other energies tariff issue
- ➔ Mechanisms and financing tools
 - Trade banks, development banks,
 - Third part financing ESCO,
 - Leasing, project financing,
 - Support programs from backers,
 - Agencies for financing exports,
 - Partnerships applicable to the Euro-Mediterranean area,
 - FEMIP, CDM, public-private partnerships,
- ➔ Specificity of the mechanisms for solar water-heaters (projects size and financing requirements)





Phase 5

Final meeting - Paris 2 march 2004

- ➔ Presentation of the National Plans of the 7 Southern partner countries
- ➔ Significant and high level delegations from ASTEMB project partner countries (Ministries for Energy, Housing, Finance, Cooperation, Public and private banks, Chairmen and General directors of Energy agencies, energy operators)
- ➔ A significant number of representatives from international institutions, which delegations from EuropeAid, the Development General Direction and the TREN General Direction of the European Commission, from the Worldbank, from EIB-FEMIP, from UNEP and UNITAR
110 attendees
- ➔ Presentations available on the project Website





Conclusions & prospects

- ➔ Identification of development lines
- ➔ Competencies transfers, both North-South, South-South and even South-North to be continued and strengthened
- ➔ Coming projects on the development of solar thermal over all the Mediterranean area
- ➔ Regional certification platform





Conclusions & prospects

- ➔ In-deep work on financing mechanisms (on-going actions and new initiatives - ADEME, FFEM, MEDREP, UNEP, EIB, WB)
- ➔ Concerted action to be engaged on energy tariff
- ➔ Trainings to be developed on all the renewable energies fields
- ➔ Promotion of integrated projects with innovation constituents (integration of building)





Conclusions & prospects

- ➔ Strengthening of bilateral co-operations (ADEME-ANER, ADEME-APRUE and generally European Union countries-Southern countries)
- ➔ Strengthening of the Euro-Mediterranean cooperation
- ➔ Partnership within the framework of the II-type MEDiterranean Renewable Energy Programme (MEDREP) Italian initiative and of the regional Center for the development of Renewable Energies (MEDREC), set up in Tunisia.
- ➔ Actions to be continued in the framework of MEDENER
- ➔ Strengthening of the actions structured in the framework of the Mediterranean Action Plan (MAP)





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Thank you for your attention

For further information :

www.solarmed.net

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Stéphane POUFFARY - ADEME

Project coordinator

email : stephane.pouffary@ademe.fr

