



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE



Ministère de l'Industrie, de l'Energie et
des Mines



ENERSOL World Sustainable Energy Forum 2014

Business Forum

Workshop

PROSOL Industrial:

Solar Water Heating for Industrial Processes

November 28th, 2014

UTICA Headquarters, Tunis, Tunisia

The National Agency for Energy Conservation (ANME), in collaboration with the Italian Ministry for the Environment Land and Sea (IMELS), the Mediterranean Renewable Energy Centre (MEDREC), and the United Nations Environment Programme (UNEP) launched the project **PROSOL Industrial** in order to promote the development of solar thermal systems in the industrial sector.

Starting from the successful initiatives for Solar Water Heating in residential and tertiary sector in Tunisia (projects “Prosol Residential” and “Prosol Tertiary”), and taking into account the complexity of its application in industrial processes, different actions have been carried out, in order to overcome the existing regulatory, technical and market barriers and promote the deployment in Tunisia of Solar Process Heating as an economically viable as well as environmentally sound technology.

In particular, in the framework of the collaboration between IMELS, UNEP-DTIE and MEDREC, the following activities have been carried out:

- A study on the evaluation of the potential of solar thermal technology in the industrial sector in Tunisia, with a detailed analysis targeting industrial branch, geographical area and technological application. The analysis has been, conducted through detailed energy audits in 64 Tunisian industrial facilities
- A study for the development of an incentive mechanism tailored in order to deploy solar systems application in Tunisian industries in a simple, economically attractive and financially viable way.
- A large-scale demonstration solar plant of 1000 square meters of flat plate, installed in the BENETTON production unit located in Monastir allowing an annual fuel saving of more than 83,000 Nm³ of natural gas. The plant has been designed by the Energy Department of Politecnico di Milano University with the local support of CAMI engineering, and has been co-financed by MEDREC and BENETTON in the framework of PROSOL Industrial Project.

The workshop will be held during **Enersol WSEF 2014**, the second edition of the forum-exhibition focused on the most recent technological, commercial, financial, social and regulatory developments in the areas of renewable energy and energy efficiency, gathering the global sustainable energy community

The Forum aims to promote investments, business and employment creation, to endorse technological innovations and transfer of know-how, to strengthen RE and EE industrial sectors and accelerate the adoption of green economy in Tunisia.

Session I will be devoted to the presentation of the results of the two studies and will be focused on the distributed solar energy and energy efficiency promotion in Tunisia.

In **Session II**, the activities carried out with the support of IMELS at BENETTON facility will be presented, including the pilot solar plant. A particular attention will be devoted to the latest technological development for large scale solar energy integration into the industrial process heat.

Session III will be focused on how international cooperation actors in agreement with the ANME and local banks can collaborate in the promotion of distributed solar technologies in Tunisia.

Tentative agenda of the Workshop:

9.00 – 9.30 **PRESENTATION AND INTRODUCTION**

Welcome – **Hamdi Harrouch**, Director General, **National Agency for Energy Conservation (ANME)**

Introductory remarks – **Marco Polverari**, Director, **Mediterranean Renewable Energy Centre (MEDREC)**

Greetings – **Wahid Bouterra**, Financial Director, **Benetton Tunisie**

9.30 – 10.30 **SESSION I: *Market stimulus instruments for the deployment of Solar Thermal technologies***

Moderator: **Salvatore Moretta** – Expert - **Mediterranean Renewable Energy Centre (MEDREC)**

The Tunisian solar thermal market : the change of scale

9.30 – 9.45 **Abdelkader Baccouche** Head of PROSOL Tertiary and Industrial Unit, **National Agency for Energy Conservation (ANME)**

A new incentive tool to promote solar thermal systems in Tunisian industrial sector: evaluation of the potential and set up of the support scheme

9.45 -10.15 **Samir Amous** – Senior Consultant – **APEX**

UNEP Strategy for increasing investment flows to renewable energy and energy efficiency technologies

10.15 – 10.30 **Ghita Hannane** – Associate Programme Officer - **United Nations Environment Programme, DTIE**

10.30 – 11.00 **Networking Coffee break + Poster Session**

11.00 – 12.30 **SESSION II: *Solar Thermal technologies for industrial processes***

Moderator: **Ghita Hannane** – Associate Programme Officer - **United Nations Environment Programme, DTIE**

Integration of SWH in industrial processes – Global results and main factors influencing technical solutions in the demonstration solar plant in Benetton facility

11.00 – 11.30 **Mario Motta**, Department of Energy, **Politecnico di Milano**

A global outlook on Solar Heating Integration in Industrial Processes

11.30 – 11.50 **Francesco Orioli** – Participant in IEA Solar Heating and Cooling Task 49 – Chief of the technical committee - **Soltigua**

Sergio Caimi – Technical Manager - **Dentro il Sole S.p.A. - Energie del Sole S.A.**

Solar Process Steam Generation – Technology and Integration Concepts

11.50 – 12.05 **Abdallah Khenissi** – Researcher within the department Line Focus Systems -
Institute of Solar Research – DLR

12.05 -12.30 **Discussion**

12.30 – 14.00 **Networking Lunch + Poster Session**

14.00 – 16.15 SESSION III: *Local and international financial support for the deployment of distributed solar energy in Tunisia*

Round table with Institutions, Cooperation agencies, IFIs and Banks active on Renewable Energy and Energy Efficiency in Tunisia

Presentation: Annalidia Pansini - Financial Mechanisms Task Coordinator -
Project MED DESIRE - MEDiterranean DEVELOPMENT of Support schemes for solar Initiatives and Renewable Energies - ENPI CBC MED

Moderator: Sami Marrouki – Senior Consultant – **ECOSER - Project MED DESIRE - MEDiterranean DEVELOPMENT of Support schemes for solar Initiatives and Renewable Energies - ENPI CBC MED**

Participants:

MED DESIRE:

Annalidia Pansini/IMELS

BEI:

Mahmoud Babay

GIZ :

Christopher Gross/DMS

14.00 – 16.15

Amen Banque:

Zied Sdiri

ANME :

Abdeldaker Baccouche/PROSOL / MED DESIRE

Abdessalem Khazen/DER

Experts:

Rafik Missaoui/ALCOR

Samir Amous/APEX

16.15 – 16.30 *Wrap up and conclusions* – **Marco Polverari**, Director, **Mediterranean Renewable Energy Centre (MEDREC)**