



# THE ENERGY IN ALBANIA

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## NEWSLETTER

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## THE ENERGY IN ALBANIA (NEWSLETTER)

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### PROJECT "SOLAR WATER HEATERS – ALBANIA"

#### 1. Albanian Potential of Solar Energy

The geographic position of Albania and its Mediterranean climate provide favorable conditions for the successful development of solar energy. The high intensity of solar radiation and its duration, temperature and air humidity, etc., will contribute to this. The Mediterranean climate with mild winters and hot and dry summers make Albania a country with higher potential for the utilisation of solar energy than the average. According to the measurements of the solar radiation carried out by the Institute of Hydro-meteorology that are based on the data of nine meteorological stations, under the conditions of the geographic belt where the meteorological stations are located, the total annual solar radiation varies from a minimum of 1,185 kWh/m<sup>2</sup> in North Eastern part of Albania (Kukes) to a maximum of 1,690 kWh/m<sup>2</sup> in the South Western part of Albania (Fier). So, the average annual solar radiation in Albania is 1,450 kWh/m<sup>2</sup>. In addition, from the same measurements appears that the average daily solar radiation varies between 3.2 kWh/m<sup>2</sup> per day in the North Eastern part of Albania (Kukes) and 4.6 kWh/m<sup>2</sup> per day in the South Western part of Albania (Fier). The average daily solar radiation for the whole country is 4.3 kWh/m<sup>2</sup> per day. It is to be mentioned that most of Albanian population lives in the western part of the country.

Compared with the average daily solar radiation in the Netherlands of 2.5 kWh/m<sup>2</sup> per day, in

Denmark less than 3 kWh/m<sup>2</sup> per day, in France and North of Italy about 3.8-4.6 kWh/m<sup>2</sup> per day, in Spain, South of Italy, and Greece more than 4.6 kWh/m<sup>2</sup> per day, Albania has the average daily solar radiation of 4.3 kWh/m<sup>2</sup> per day. As we can see from these values, Albania should be considered as a country with a good solar energy regime and a great potential for solar energy utilisation. Most areas of Albania benefits more than 2,200 hours of sunshine per year, while the average for the whole country is about 2,400 hours of sunshine per year. The Western part of Albania receives more than 2,500 hours of sunshine per year, while in Fier 2,850 hours of sunshine per year has been recorded.

Benefiting from the abundant sunshine and large number of sunny days, the solar energy market should be developed in Albania and so, the solar energy should be successfully used to provide the hot water for sanitary needs in different sectors such as residential, hotels, hospitals, and for technological needs in the industry (food or textile industry).

Under such circumstances, feeling the responsibility of the role to play, the Albania-EU Energy Efficiency Centre (EEC) in collaboration with Institute for Sustainable Technologies (AEE INTEC) in Gleisdorf - Austria, SWT Technologie in Stuttgart - Germany and Centre for Renewable Energy Sources (CRES) in Athens - Greece and financially supported by Austrian Development Agency - Vienna Office, in the framework of the project "Solar Water Heaters - Training of Experts & Professionals and Improvement of Technology & Production in Albania", intends to carry out a set of activities to support the solution of the above-mentioned issues.

## 2. Project Description

In 2003, Albania has set a modern energy policy by approving the National Strategy of Energy, which is based on energy efficiency and a full set of options for sustainable energy supply. Introducing the use of solar thermal systems is one of the priorities of the Albanian Action Plan for the Implementation of National Strategy of Energy 2004 - 2006, developed by the National Agency of Energy (NAE) and approved by the Albanian Parliament.

The overall objectives of this project are to enhance the productive and the educational sector in sustainable (solar thermal) energy, to strengthen local SME's as well as to create job opportunities based on environmental friendly energy products.

Furthermore, the project aims to improve the existing local production of solar thermal systems in order to allow for widespread market penetration in Albania. The project aims also at identifying negative framework conditions and tackles them in a comprehensive approach by including:

- Know-how transfer.
- Measurement and monitoring.
- Capacity building and training at all levels.
- Market analyses.
- Labelling for quality assurance.
- Cooperation at administrative/legal level.
- Improving public awareness.

With increasing electricity tariffs and the enforcement of elec-

tricity payment, solar thermal installations will become more economical in terms of cost for hot water and in terms of investment payback time for both, the private sector as well as the public sector. However, the barrier of low income and/or low investment capability at the private sector has to be solved either by governments support or by establishing appropriate financing schemes. All activities of this project will be implemented in close coordination with AEE INTEC, SWT Technologie, CRES as well as the Albanian manufactures of solar thermal systems and vocational schools.

## 3. Activities under the Project

The project will consist of the following main work packages:

1. *Work Package 1 - Project Management.*
2. *Work Package 2 - Kick-off Workshop in Tirana.*
3. *Work Package 3 - Measuring at 4 Existing Solar Systems.* The objective of this work package is to gain knowledge on the longterm performance of the solar thermal systems installed so far in Albania.
4. *Work Package 4 - Improved Thermosyphon System Concept.* Based on the analyses of the existing solar thermosyphon systems in Albania and the monitoring results of the four systems (WP3), an improved thermosyphon system/plant concept will be developed which is competitive and reliable.
5. *Work Package 5 - Analysis of the Solar Market in Albania.* The objective of this work package is to provide a report for decision makers on the future potential of solar thermal systems and the contribution to the energy supply in different sectors in Albania. The report should also show the potential of this technology in the reduction of CO<sub>2</sub> emissions.
6. *Work Package 6 - Solar Seminars in Albania.* This work package aims to provide a comprehensive training of key groups for production, installation & implementing of solar systems in Albania.
7. *Work Package 8 - Improvement of the Curricula of Vocational Schools.* To provide training material for the teachers of the vocational school a comprehensive PowerPoint based slide show containing all graphs and pictures of the training manual will be provided either on a CD or as print out on overhead transparencies. In cooperation of the company chosen out of the training courses, the technical staff of the vocational schools and the staff of AEE INTEC the demonstration systems will be installed.
8. *Work Package 10 - Improved Thermosyphon Demo Systems.* The objective of this work package is the installation of ten demonstration solar water heating systems with improved technology.
9. *Work Package 11 - Quality Labelling for Solar Thermal Installations and Components.* This work package includes the implementation of a national labelling scheme for solar thermal collectors and systems and foundation of a "Albania Solar Competence Centre". This centre will be responsible for the operation of the labelling scheme and also carry out the product tests that are the basis for the labelling.
10. *Work Package 12 - Awareness and Public Relation Campaign.* Information of the public and the key groups (house owners, housing companies, hotels, political decision makers) about the possibilities of the use of solar thermal systems.

## 4. Final Remarks

The project has started in September 2005 and it is expected

to be implemented within 36 months. This project can be considered as an important step in introducing to the Albanian residential and industry sectors issues such as utilization of clean energy, efficient management of energy resources, environment protection and consequently bring steady improvements in the long term. The EEC will promote and advocate the utilization of solar thermal systems and the energy conservation in residential sector, hotels and industry through all the country.

The successful implementation of this project is very crucial to the further development of solar thermal market and improvement of energy supply situation in Albania.



**Dr. Eng. Edmond M. HIDO**  
**Director**  
**Albania-EU Energy Efficiency**  
**Centre**

## **WORLD RENEWABLE ENERGY CONGRESS IX AND EXHIBITION**

### **1. Congress Mission Statement**

At no time in modern history has energy played a more crucial role in the development and well being of nations than at present. The source and nature of energy, the security of supply and the equity of distribution, the environmental impact of its supply and utilization, are all crucial matters to be addressed by suppliers, consumers, governments, industry, academia, and financial institutions.

The World Renewable Energy Congress (WREC), a major recognized forum for networking between these sectors, addresses these issues through regular meetings and exhibitions, bringing together representatives of all those involved in the supply, distribution, consumption and development of energy sources that are benign, sustainable, accessible and economically viable.

WREC enables policy makers, researchers, manufacturers, economists, financiers, sociologists, environmentalists and others to present their views in Plenary and Technical Sessions and to participate in discussions, both formal and informal, thus facilitating the transfer of knowledge between nations, institutions, disciplines and individuals. WREC applauds the recent ratification of the Kyoto Protocol by Russia. The recent World Renewable Energy Congress VIII in Denver, USA attended by more than a thousand of participants, signalled the increasing importance of renewable energy, but much effort is still required to make it a major energy supplier.

### **2. Congress Dates to Remember**

All papers will be subjected to full reviewing process before being accepted. The accepted papers will be published in the proceedings by Elsevier. All abstracts must be written in English and no more than one page A<sub>4</sub> in length. Full papers must be no longer than 7 pages. The key dates are:

- February 8, 2006 - Last date for receiving abstracts,

- February 28, 2006 - Acceptance notification,
- April 10, 2006 - Last date for receiving full papers, and
- May 5, 2006 - Acceptance notification.

A selection of 200 papers will be made by the Technical Committee to be published in Renewable Energy and Solar energy Journals.

### **3. Congress Organization**

Host Chairman: Prof. Marco Sala, Florence, Italy;  
International Chairman: Mr. Robert Noun, NREL, USA;  
Congress Chairman: Prof. Ali Sayigh, WREC, UK;  
Advisory Committee Chairman: Prof. Federico Butera, Politecnico di Milano, Italy;  
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### **4. General Information**

Congress Location: Italy, Florence, Grand Hotel CAVOUR.

Congress Registration: Pre-registration for this conference will be required. The registration fee for the World Renewable Energy Congress IX will be \$450 (\$550 after June 10, 2006). Students with a verification certificate, \$200; members of WREN, \$400.

For more information about the Congress and Exhibition contact [www.wrenuk.co.uk](http://www.wrenuk.co.uk).

**Dr. Eng. Edmond M. HIDO**  
**Member**  
**International Steering Committee**

## **TRAINING COURSE ON IMPROVING ENERGY DATABASE AT NATIONAL AND LOCAL LEVEL**

### **1. Background**

National Agency of Energy (NAE) has worked with USAID assistance for preparation and approval of the New Energy Efficiency Law (which was ratified by Albanian Parliament on April 27, 2005). The purpose of the Energy Efficiency Law is to create the legal framework required for the promotion and improvement of the efficient use of energy, in its whole energy cycle. Not only in the National Strategy of Energy, where the energy efficiency is given an important space, but in all development policies of energy sector, the energy efficiency and energy savings in whole energy cycle takes a wide space.

One of the most important aspects for monitoring the Action Plan of the implementation of the National Strategy of Energy and Energy Efficiency Law is securing the reliable data at the national level and local level as well. In order to get the proper database at local level it is important to establish the Local Energy Offices, which will play an important role as it is described in the following:

1. Local Energy Offices subordinated to the NAE, shall be created in every Prefecture. These offices shall be created

with a decision of the Council of Ministers, after the proposal of the minister responsible for energy.

2. Local Energy Offices shall create and periodically update a database on the consumption and potential of energy sources, at local level respectively, according to monitoring of the Energy Efficiency National Program.

3. Large energy consumers are obliged to submit, no later than March 31 of every year, to the Local Energy Office located in their area, a report on their energy consumption for the previous calendar year.

4. Consumers, who are not large energy consumers, are obliged to submit, no later than March 31 of each year, to the Local Energy Office located in their area, their actual energy consumption only if requested.

5. For household, agriculture and transport sectors, the Local Energy Offices shall undertake surveys for collecting data on energy consumption by consumers.

6. NAE should prepare and minister responsible for energy shall adopt a regulation on the content and manner of submitting energy reports by fuel and electric suppliers, and energy consumers under this Article.

In order to fulfill the above mentioned tasks, it was very important to train energy experts within the NAE with the national energy database and particularly local energy offices staff, which are going to be established very soon. In Albania, there are still a limited number of experts who are able to independently manage and established an energy database at national and local level. An appropriate way to address this problem was to implement a training program to develop such expertise among the staff of the NAE and this training to serve for training of Local Energy Offices for energy database at local level.

The general objective of the project was to develop expertise in national and local energy database for the NAE, which later will train the Local Energy Offices staffs in charge of energy database at national and local level for the Albanian energy sector. This objective was achieved by drawing up and implementing a Training Program oriented on experts responsible for energy database, at improving the existing national energy database and establishing based in this experience the local energy database, which is going to be the responsibility of the Albanian Energy Local Offices.

The World Learning through USAID provided funding for those training. This activity was in line with very important activities carried out up to now from USAID for the sustainable development of the energy sector. The restructuring of the power sector, the improvement of energy efficiency and of the national energy database, and the establishment of energy database at local level are the major priorities of the Government. USAID is currently providing assistance to the country in three above mentioned areas. The improvement of national energy database and the establishment of local energy database will enhance the quality of the Albanian Energy Statistics, which constitutes a major component for the monitoring the Action Plan of the National Strategy of Energy. Good quality of energy database at national and local level will be introduced also for helping with the updating of the National Strategy of Energy at the beginning of 2006, based on the Council of Ministers Decisions.

But this can be reached only if we start preparation for comprehensive energy database with more accurate methodologies. This energy national and local database will be used in Albania to make more appropriate policy decisions with respect to appropriate response measures in different energy sectors.

## 2. Training

For Albania, the development of national capacity for archiving and updating local and national energy database was critical to the sustainability of establishment the time series process especially for energy sector at national and local level. So, based in the above mentioned project with the support of USAID, in the first phase were trained 8 specialists of the NAE in Vienna Agency of Energy (February 2005). Later, during the second phase, they served as trainer for the second larger group. In the second larger group have been trained about 100 specialists from the Ministry of Industry and Energy (4), the NAE (12), specialists which are dealing with statistics in Municipality (65) - one for each municipality/District-Prefecture (12) - one for each district-prefecture, to improve the energy statistics at the national level and to establish the energy statistics at local level through the Energy Local Office.

The second phase include one week training period for the training on the local energy database by transfer of know-how in the field of energy database gained from the first training outside of Albania from 8 energy specialists of the NAE. Trainers, in five days, trained the second larger group. These training courses were organized in four consecutive groups based in its administrative division.

- First Group: In this training workshop have been trained 21 participants from three prefectures of Tirane, Durres and Lezhe, including all municipalities in their territories, new specialists from the NAE and from MIE (May 16-18, 2005).
- Second Group: In this training workshop have been trained 19 participants from three prefectures of Shkoder, Kukes and Diber, including all municipalities in their territories, new specialists from the NAE and from MIE (May 30 - June 01, 2005).
- Third Group: In this training workshop have been trained 21 participants from three prefectures of Fier, Vlore and Gjirokaster including all municipalities in their territories, new specialists from the NAE and from MIE (June 20-22, 2005).
- Fourth Group: In this training workshop have been trained 20 participants from three prefectures of Elbasan, Korce and Berat including all municipalities in their territories, new specialists from the NAE and from MIE (June 23-25, 2005).

( .....continued on next issue.....)



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**Chairman**  
**National Agency of Energy**