



ST-ESCOs Project



NEWSLETTER

Demand for speedy legislation on renewable energy for heating and cooling

On the 26th of January, 2006, in Brussels, the ITRE (Committee on Industry, Research and Energy) of the European Parliament adopted the Initiative Report on Renewable Heating and Cooling presented by MEP Mechtild Rothe. The report calls the European Commission to present a Proposal for a Directive for the promotion of renewable heating and cooling. The report was adopted with 39 votes, against 0 votes, and 3 abstentions.

On the 8th of February, the Industry Committee called on the European Commission to propose legislation by July to at least double by 2020 the share of renewable energy used in Europe for heating and cooling. Benefits would include more secure energy supply, reduced demand for conventional energy, a cleaner environment and the creation of jobs in new industries.

About 50% of primary energy consumption goes on heating. Demand for energy for cooling is also growing. Legislation is urgently needed if the share of renewable energy - mainly

geothermal, solar thermal and biomass - in these sectors is to be doubled from its present level of 10% by 2020 and also to reach the target of 12% of renewable energy in total energy consumption by 2010 as laid down in the 1997 EU White Paper on renewable energy.

Such legislation would provide the framework for national instruments and would fill the legislative gap, as EU strategies promoting electricity from renewable sources, bio-fuels or other renewable fuels for transport, already exist. The legislation would provide long-term investment and planning security, which is crucial for energy investments. Financial incentives should be provided by the Member States, although national support schemes should in the end be phased out. For example, Member States might use tax breaks or direct investment aid or make renewable energy plants mandatory for new buildings.

Source: http://www.europarl.eu.int/news/expert/briefing_page/5029-038-02-06-20060206BRI05028-07-02-2006-2006/default_p001c015_en.htm

Energy in Upper Austria

The region of Upper Austria has 1.4 Million inhabitants and a surface of 11,980 km². In the field of renewable

energy sources and energy efficiency, Upper Austria plays a leading role as more than 30% of the primary energy consumption is produced from renewable energy sources.

The basis for this success is a comprehensive regional energy action plan, passed in 1994 by the regional government, determining clear goals as well as numerous implementation measures and the continuation of this strategy into the 21st century. As far as solar thermal energy is concerned, the target set in 1993 of reaching an installed surface area of solar thermal collectors of 300,000 m² by 2000, was achieved at the mid-nineties and was later increased to 500,000 m².

Nowadays, 700.000 m² of thermal solar collectors are installed in the region of Upper Austria (0.47 m² per inhabitant), a value that makes Upper Austria one of the leading solar regions in the world. Annually, 220 Mio kWh heat are produced by those collectors, and about 40,000 – 50,000 m² new collectors are installed.

The next target set is to reach 1,000,000 m² of solar thermal collectors by 2010 - equalling nearly 1 m² per inhabitant.

In the year 2004 almost 35% of the installed solar plants are used for hot water and/or heating for multifamily houses, hotels, leisure facilities and industry. A part of these solar plants would also be suitable for solar thermal ESCO applications, if the collector area of the plant is large enough (more than 200 m²). Therefore a great potential for the implementation of solar plant with ESCOs exists in

Austria.

Source: <http://www.energiesparverband.com/esv/index.php?id=87&L=1>

World Sustainable Energy Days Conference 2006

The World Sustainable Energy Days conference is an event which takes place annually in the city of Wels, Austria. This year the conference was held between 1-3 March and combined the following themes:

- European Energy Efficiency Conference
- Green electricity for Europe's regions conference
- Renewable Heating and Cooling conference
- European Pellets Forum
- Green Energy Business seminar
- Technical site visits
- Energiesparmesse exhibition

The World Sustainable Energy Days Conference is the largest annual conference in this field, in Europe and attracts a large number of attendees from all over the world.

The next conference is already scheduled for the 28/2 – 2/3, 2007. Conference site:

Source: <http://www.wsed.at>

Spain approves national solar thermal obligation

Spain has become one of the countries with the most advanced solar legislation

in the world. On the 17th of March, the Spanish government approved the new Technical Buildings Code (CTE, Código Técnico de la Edificación), the most significant reform of the Spanish building sector for decades.

The new CTE includes the following main areas: security of the buildings structure, fire safety, other safety and health issues, sustainability and energy efficiency of the buildings. The latter part ("Documento Básico HE - Ahorro de Energía") goes far beyond the minimal level of implementation of the EC Directive on the Energy Performance of Buildings and includes **an obligation to cover 30-70% of the Domestic Hot Water (DHW) demand** with solar thermal energy.

The solar thermal part applies to all new buildings and to those undergoing a renovation. It applies to any kind of buildings, regardless of their use. Some exceptions are defined in the law; mainly in the case of buildings that either satisfy their DHW demand by other renewables or by cogeneration or for shaded buildings. The variation of the solar fraction from 30-70% depends on different parameters, mainly the assumed volume of DHW demand and the geographical position of the building. Moreover, large buildings in the tertiary sector (for instance office buildings > 4.000 m²) will also be obliged to install PV systems.

With the approval of CTE, it is foreseen that practically the collector area installed per year is to be multiplied by ten times.

The new regulation runs in parallel with the targets of ST-ESCOs project, and this represents an important field of opportunities for ST-ESCO companies, as they can overcome the barrier of high

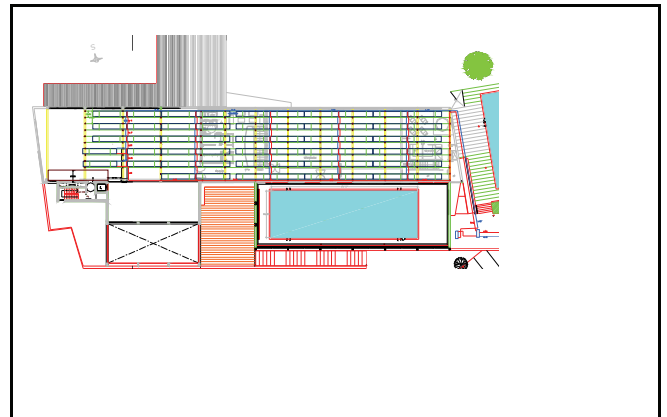
initial investment.

Fortunately, there are actually many financing schemes at low interest ratios (about 3,75%) that permit building developers to accomplish the initial investment for the solar thermal by external funds.

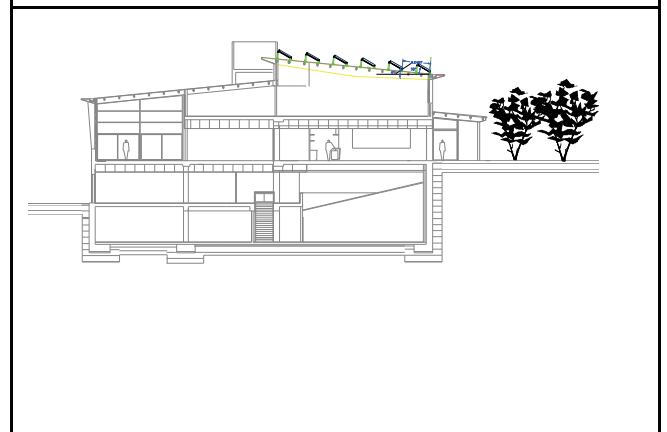
Source: <http://www.estif.org>

ST-ESCO Agreement

A ST-ESCO agreement was signed in Spain in the framework of the project. The Sabadell Tennis Club, near Barcelona, decided to reduce its energy bill by installing a solar thermal system.



Details of the solar plant. Seen from the top



Details of the solar plant. Look from the side

The system began to operate on January 2006, covering part of the hot water demand and heating the swimming-pool.

Technical Aspects

The measures taken by the ESCo were:

- Design and construction of the solar plant
- Financing via a state-owned corporate entity and direct subsidies
- Operation management

The results of the agreement summarise to:

- Yearly hot water demand (DHW + swimming pool): 720,5 MWh
- Collector area: 348 m²
- Expected yearly energy production: 868 kWh/m²

Contractual aspects

The ESCo (Pasch y Cia), contracted Aguasol Ingeniería for the design of the solar plant, and the system was installed by Fototerm. The duration of the contract is 12 years, and at the end the plant becomes property of the end user, without any payment for this installation. The contract includes a minimum consumption for the end user of about 85% of the expected energy production. The billing is made monthly via a fixed quantity, and at the end of the year the result is compensated in agreement with the real consumption.

Project progress

ST-ESCOs Guide

One of the main deliverables of the project, the ST-ESCO Guide, is ready and will be soon available on the project web site. The Guide is a useful handbook that will help the potential developer to set and manage a ST-ESCO, as it has vital information necessary for relevant parties. It is an attempt to gather and analyze all the crucial aspects (marketing, financial, contractual, legal, technical) concerning possible ST-ESCOs and projects.

Hellas

During the current phase of the project pre-feasibility studies will be carried out for selected end-users on national level.

A call for interest, published in technical magazines, was undertaken by CRES. Possible end-users have to send data concerning mainly the thermal load profile for the preparation of sanitary water (or swimming pool heating), as this is the crucial factor for a project's economic efficiency. The most promising cases will be selected and analyzed. A notable number of end – users have already shown significant interest.

Spain

There is a discussion between the end-users and the ST-ESCOs, so that a draft contract defining the conditions is developed. A pre-feasibility study to supply hot water to the Hospital Morales Meseguer in Murcia (about 1000 m²) is in progress, with the possible ST-ESCO being a joint venture of regional companies.

Further information:

<http://www.ficci.com/ficci/media-room/speeches-presentations/2005/june/june1-esco.htm>

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