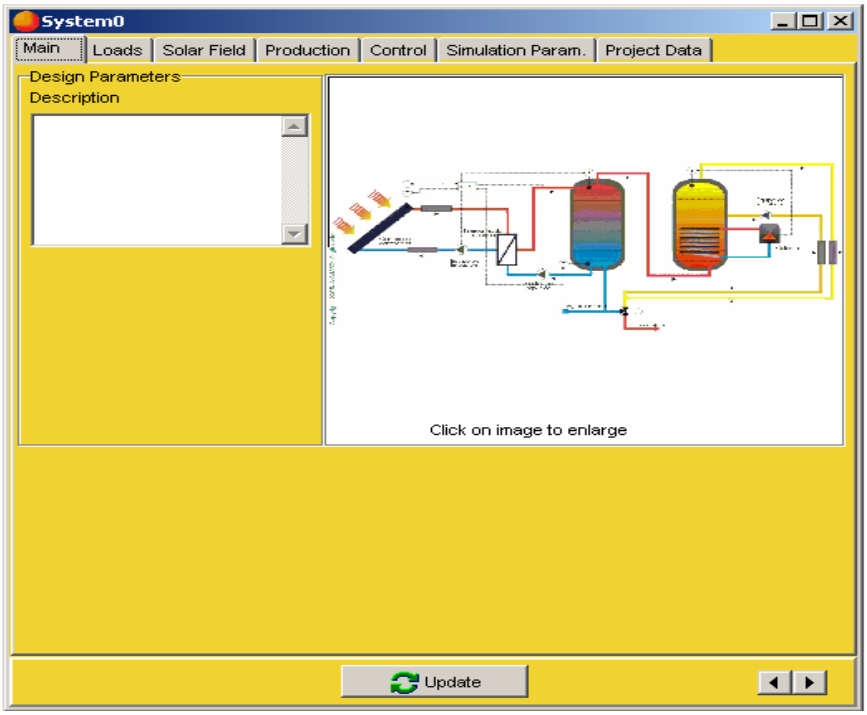
ST-ESCOs Project

КАПЕ
CRES

ST-ESCO software tool now available!

A deliverable of great importance of the ST-ESCOs project, the software tool, is now ready!
The **full** version of the Software tool - including manual and run examples - can be downloaded from the project's webpage http://www.stescos.org/tool.htm.
Web users interested in using the tool are welcomed to send their comments for the its further improvement.
Specifically, the Software tool was developed for the quick assessment of potential Solar Thermal ESCOs applications. It includes a complete analysis procedure from technical considerations regarding the solar system and optimization calculations regarding economic and contractual aspects. The tool starts with a simplified interface that leads the user to enter data in the Energetic Module (EnMo) and the Economic Module (EcMo).

Software tool: http://www.stescos.org/tool.htm



Software tool screenshot

Project Progress

Spain

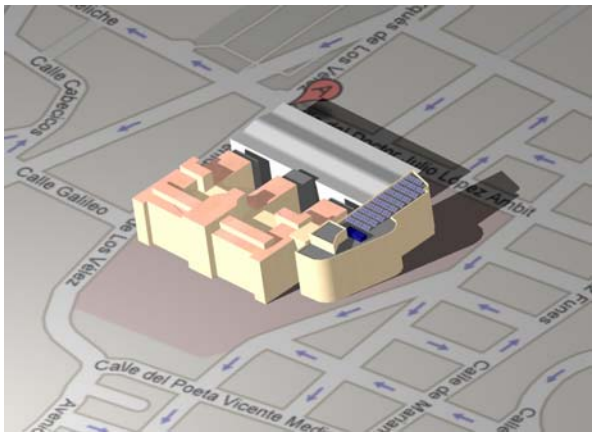
The first ST-ESCOs contract has been signed in Murcia

On November 2006, an agreement was signed between ARGEM and the Regional Health Administration in order to sell energy to a 400 beds hospital. The 190 m^2 solar thermal installation will produce 130,000 kWh/year and will cover 45% of the total hot water demands.

ARGEM will act as an ST-ESCO and will be responsible for the plant's operation. A tender will be made for the provider of the system, which will be responsible for the installation and maintenance of the solar thermal plant. Several data as mass flow rate, temperature and pressure in primary and secondary circuit will be monitored.

Moreover, solar gain will be maximized by using variable pump speeds.

A detailed study was made for the pipes' insulation due to the fact that the distance between the heat exchanger and the storage tank is 150 meters long.



Workshop meeting in Murcia

On October 24th, 2006, ARGEM conducted the second call of interest workshop. 42 Spanish coming from different places and fields attended the meeting. ARGEM project members presented the framework of the ST-ESCOs project, the different types of contracts and the way to focus on each one of them.

Initially , Francisco Ayala presented ST-ESCOs project and the main advantages of the ST-ESCO agreements. Following a presentation on the "guarantee solar results" process works, the actual project's state and its progress during the last twenty months were outlined.
José Pablo Delgado explained the different types of contracts and the different ways for billing the generated energy. A real case contract was presented to the audience in order to be shown that ST-ESCO agreements can be realised. The presentation focused on how and which are the main factors to be taken into account when updating the energy prices during the contract time frame.

Finally Damián Bornas made a simulation with the software tool that was specially designed for the analysis of the ST-ESCOs project. Attendants showed high interest in the economic analysis tool. Some data and strategies to be followed when designing and studying were given.

Further to the presentation, a session followed with an open discussion to the floor where the main issue was how to ensure that the bill will be paid during the whole contract period. Currently the different barriers are studied and a response will be given in the presentation

of the ST-ESCOs project to the RES association on the 1st of February.

ST-ESCOs Guide is being distributed in a book format

ARGEM adapted the Guide to the national language. The Guide, that contains useful information for the start-up phase of a ST-ESCO project, has been printed and distributed in a book format.

The Guide was presented to the national partners in the ST-ESCOs steering committee meeting held in Milano, on the 15th of December 2006.

ST-ESCOs Guide presentation to RES association in Murcia

On the 1st of February a meeting for the presentation and distribution of the ST-ESCOs Guide will take place in Murcia. All the members of the Renewable Energy Sources Association will participate in this meeting. Furthermore, the most important ST-ESCO projects developed in Spain will be presented and analysed.

The association members, whose main activity is solar thermal energy, are very interested in ST-ESCOs projects. Many of the associates will apply for the Morales Meseguer Hospital installation.

Contacts with Portugal

As it was planned within the scope of the ST-ESCOs project, ARGEM initiated contacts with people in Portugal in order to provide information and tools for the development of ST-ESCOs projects. Portugal, due to its climatic conditions, is a very promising market.

The first contact has been established with ADENE, a public energy administration, which will coordinate information/ dissemination activities in Portugal.

Hellas

ST-ESCOs workshop in Athens

In the framework of ST-ESCOs project, a workshop was held at the offices of CRES on Tuesday 19th of December 2006.
This workshop followed two previous meetings, one with the companies wishing to participate as ESCOs (developers) and one with end users, held on 7th of December 2005 and 30th of November 2005 respectively. The scope of this workshop was to bring into contact the companies that expressed interest to operate as ESCOs (or already ESCOs) with representatives from the hotels, hospitals and industries that had their pre-feasibility studies already elaborated in the framework of the project. The anticipated outcome was to initiate the procedures for contract signing.

Vassiliki Drosou opening the workshop

Initially, the participants were informed of the basic framework under which an agreement can be carried out, as well as the legal and financial implications. The main advantages and disadvantages of such a contract for both the ESCOS and the clients were analysed, and other successful examples carried out in Europe were given. Additionally, the complete ST-ESCOs Guide with financial, technical and contractual aspects was presented.

The workshop proceeded with a detailed presentation of the operation of the software tool created for the quick assessment of possible applications. This included the output of both energy and economic reports in the form of a full pre-feasibility study example for a hospital.

CRES staff answering questions

After these presentations, the participants had the opportunity to discuss possible agreements.

The workshop ended with a discussion between the participants and the staff of CRES where questions concerning the economical and technical aspects were answered.

Austria

Aristotelis Aidonis presenting the software's operation

Solar thermal plant in Graz

1,600 m² of solar collectors have been installed on top the AEVG building in Graz. These collectors represent the first construction phase of a solar plant which is going to have a total collector area of 5,900 m²; the remaining collector area is going to be installed in 2007. The commissioning (putting into operation) of the finalized part of the plant with 1,600 m² is planned for March 2007. This solar plant is going to supply hot water for the Graz district heating net.

The installed collectors are special large-scale collectors of type Gluatmugl HT, especially designed for high energy output on an elevated temperature level.
The construction of the solar plant is part of an ST-ESCO agreement, realised in the framework of the ST-ESCOs project.

Italy

Currently in Italy, the existing ESCos (big enterprises that provide heat services for big buildings and/or multiple buildings) are not interested in solar thermal technologies, due to the high pay back time of the technology (compared to their usual business, it requires a pay back time of about 3/5 years).
The pilot ST-ESCOs projects want to push up new trade agreements: on one hand a service-oriented enterprise, on the other hand a hardware provider (and technical expert). So, better than establishing new ST-ESCOs, the project focuses is stimulating new activities (and market prospects) for existing enterprises (mostly SMEs).
At the moment, energy service companies involved in solar thermal energy service projects (through a third part financing) are: Henergy srl, Eureco srl and AzzeroCO2.
The collector suppliers at the moment involved are: Costruzioni Solari (with Henergy), Kloben (with AzzeroCO2), Viessmann (to be defined an agreement with Eureco).
It is expected that the call for bid of the Municipality of Lodi solar heat service (that will be ready for March) will stimulate the creation of new local trade agreements.

More news...

Operating Solar Thermal Plants for Industrial Applications: Updated Statistics

More than 80 operating solar thermal plants for industrial applications have been reported up to October 2006, with an installed capacity of about 24 MW_{th} (34,000 m^2).

The majority of the plants operate in the sectors of food industry (especially dairies), car washing facilities, metal treatment, textile and chemicals.
The textile sector accounts for the highest share (about 40%) of the capacity installed.

Solar heat is used at 20-90°C for washing, space heating of production halls and preheating of boiler feed-water. A quite important application, especially in Greece, is the dairy, where solar is used to produce hot water for washing of equipment and to preheat the boiler feed-water at temperature levels up to 80 °C. Space heating of production halls (9 plants) is the most common application in Austria. Other applications in Austria are in the metal industry and car washing facilities. Car, lorry and container washing facilities account for 11 plants in Austria, Germany and Spain. Wineries account for 4 of the 6 plants reported within the beverage sector, showing a large potential for future applications.

About 80% of the plants supply heat below 100 °C: the major part are Flat

Plate Collectors or Ecavuated Tubes Collectors systems working at 60-100 ° C. In the range 100-160 °C only ETC installations are in operation, while above 160 °C PTC are used mainly for steam production or cooling with double effect absorption chillers.

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Commission fails to deliver Directive proposal on renewable heating and cooling

Even though renewable heating and cooling is now definitely recognised as essential for the future of Europe's energy supply, the Commission did not deliver the Directive proposal requested by the European Parliament.

At least in the discourse of the *Renewable Energy Roadmap,* solar thermal and other renewable heating and cooling technolgies are now fully integrated as a crucial element of Europe's renewables strategy, but concrete measures are still missing.

Solar thermal is one of the most cost effective renewable technologies, which can be directly applied on most of Europe's buildings.

EU Directives have been adopted to promote renewables in the electricity and in the transport sector, but no legislative framework exists for renewable heating and cooling (RES-H).

In February 2006, the European Parliament adopted, by an overwhelming multi-party and cross-country majority, a resolution asking the Commission to present a Directive proposal to promote RES-H, including specific targets at EU and national level. One year after the European Parliament's resolution, the Commission is not yet prepared to follow up with action and table a Directive proposal with clear targets and measures to promote renewable heating and cooling.

Later this month, ESTIF will publish an Action Plan for Solar Thermal in Europe, including analysis of success and barriers to growth as well as guidelines for best practice policies. This Action Plan will be presented at the *2007 European Renewable Energy Policy Conference*, organised by EREC (European Renewable Energy Council), 29-31 January, Brussels.

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

For further information
www.stescos.org