

Press release concerning.:

Marstal District Heating - the EU funded 100% renewable energy system.

Marstal District Heating has, through the EU's 7th program, received pledges of support for a project called SUNSTORE 4.

The contract is signed by Director-General for Energy, Mr Fabrizio Barbaso and the project is, along with 10 other European projects selected to be a part of the so-called "EU flag projects".

Besides the fact that Marstal District Heating has received grants for expansion of the current solar installations, the EU has also given grants to disseminate the knowledge, gained through the SUNSTORE 4 project into Europe. The aim of the project is to demonstrate a large scale innovative, cost-effective and technically 100 % sustainable renewable energy system.

Marstal District Heatings nearly 1,500 members will now receive 55% of their energy from the solar production and 45% of their energy from locally produced biomass (energy willow). The project also includes a heat pump which is "moving" energy to the energy storage and a turbine, a so called ORC (Organic Rankine Cycle) which is an electricity-producing device that can use the energy from the flue gas produced in the biomass boiler.

The project will be disseminated to 10 EU countries with the aim to shortly establish 20 similar facilities in Europe. The countries are Austria, Czech Republic, Denmark, France, Germany, Italy, Poland, Spain, Sweden and England

The goal for 2020 is to achieve a thermal capacity of 0.9 - 1.8 GWth and on long terms from 5 -10 GWth.

The project involves the following:

- Expansion of the existing 18,365 m² solar plant with 15,000 m² of solar collectors,
- a 4 MW biomass boiler with a built-in ORC power producing unit
- a 1.5 MW heat pump
- a 75,000 M³ pit heat storage.

The total budget for the project is 15,1 mill. Euros. From the EU, the project has achieved 6,1 mil. Euros in grants.

The participating partners contribute to the project with 0,4 mill. Euros.

The Danish project participants are:

- MARSTAL DISTRICT HEATING, promoter of the plant. Project coordinator is manager Leo Holm. Hans Bjerregaard, from Bjerregaard Consulting, is employed as a contract advisor.
- SUNMARK by Hans Grydehøj, is selected as the supplier of the 15,000 m² of collector area. SUNMARK has chosen the firm Rambøll as their subcontractor.
- EURO THERM by Michael Jørgensen, is selected as supplier of the 4 MW biofuel boiler with parts for the electricity-producing ORC unit.
- ADVANSOR by Torben Hansen, is selected as the supplier of the 1.5 Mw heat pump.
- PLAN ENERGI by Per Alex Sørensen, is consultant for MARSTAL DISTRICT HEATING and is responsible for the technical part of the project.

The foreign project participants are:

- ENERGY MANAGEMENT AB, Gothenburg, by Jan-Olof Dalenbäck, will support the work with innovation of solar- and long-term storage and be responsible for evaluation and dissemination of the project results.
- BIOS, Graz, by Ingwald Obernberg is adviser for the electricity-producing ORC turbine and adviser in the design of the biofuel boiler.
- AMBIENTE ITALIA, Milan by Maria Luisa Berrini, will be responsible for dissemination of project results in Southern Europe.
- CITY PLAN, Prague, by Ivan Benes, will be responsible for dissemination of project results in Eastern Europe.
- EURO HEAT & POWER, Brussels, by Sabine Froning, will be responsible for dissemination of project results in Central Europe.

EURO HEAT & POWER is the industry association for district heating in Europe.

- **SOLITES** (Steinbeis Research Institute for Solar and Sustainable Energy Systems), Stuttgart, by Thomas Pauschinger, is advisor for long-term storage of solar heat and helping in composing the measurement program for the project.

The project runs for a period of 4 years (48 month).

Expected start-up is the 1st of July 2010 and expected completion date is the 30th of June 2014.

For further information please contact Marstal District Heating or visit our website www.solarmarstal.dk which will be currently updated.

MARSTAL DISTRICT HEATING Amba
Jagtvej 2, 5960 Marstal
Tel: + 4562531564