Austria presents master plan for solar thermal

At the beginning of October, the Austrian Environment Minister Nikolaus Berlakovich and the President of the Austrian Federal Economic Chamber Christoph Leitl presented a "Master plan for green jobs". The plan includes an offensive for solar heating and cooling in the private and commercial sectors. Over the next 10 years, this would create 55,000 jobs in production and in the installation trade, says a press release from the industry association Austria Solar.

In Austria, the potential for using solar thermal energy is huge. About 40 % of the country's total energy requirement is used for low-temperature heat, which can be provided by solar thermal installations. "At 9.5 TWh annually until 2020, the development potential of solar thermal energy even exceeds that of hydropower with 7 TWh annually", explains Roger Hackstock, the General Manager of Austria Solar.

The solar thermal industry increased its workforce enormously in the boom year 2008, and has been able to maintain this staffing level despite the economic crisis. In order to continue to keep it, Hackstock calls for the quick implementation of the plan: "What is necessary in order to keep the job engine going and to tap the energy potentials is renovation support with a total volume of at least € 300 million for the coming year, a solar offensive in the housing subsidy schemes of the states, the facilitation of solar installations in rental housing construction and intensified research and development."

Austrias Environment Minister Nikolaus Berlakovich (picture) and the President of the Austrian Federal Economic Chamber Christoph Leitl recently presented a "Master plan for green jobs". Photo: dpa

Ezinç starts training programme in the US

The Turkish solar component manufacturer Ezinç Metal San. Tic. A.S. launched its training programme in the United States. With this programme the company aims to broaden the solar knowledge of its distributors. The programme consists of a theoretical and a practical part. In the theoretical part, the trainees get to know the system principle of a solar water heater. In the practical part, the distributors learn how to install a solar water heater on the roof. After successfully passing the programme, the installers get a qualified installer certification from Ezinç. The Turkish company attaches great value to the education of its distributors as the combination of high quality products and accurate installation make up an efficient system. The Ezinç training programme will also be offered in other countries all over the world.

Installation of a drain-back system in Tallahassee, Florida Photo: Ezinç

Sandia Labs upgrade heliostat test field

The Sandia National Laboratories have ordered new heliostat mirrors for their testing facility in New Mexico. They opted for the manufacturer Guardian that already provided the mirrors for the first testing field back in 1978.

The entire field will be replaced by new mirrors of the type "EcoGuard Solar Boost". Guardian uses laminated mirrors that have a solar weighted direct reflectance of 94.5 %. Similar to a car windshield, two layers of glass are laminated together with a PVB interlayer. A mirrored surface is contained within the laminate on the backside of the forward glass. In Sandia's case, the front and back glass are the same size, resulting in a shorter transmission path and industry benchmark reflectivity performance. The mirrors will be laminated at Guardian's Galax, Virginia glass fabrication plant with glass produced at its Carleton, Michigan float glass plant.

District heating from the exhibition centre

The city of Wels in Upper Austria now boasts the state's second largest solar thermal installation. The 3,600 m² of solar collectors have been installed on the roof of the trade fair hall – the venue of the internationally renowned annual energy fair "Energiesparmesse". The solar collectors will harvest 1.55 GWh of solar thermal energy annually, enough to supply 150 households. A waste incineration plant is also connected to the district heating system in Wels, providing enough heating energy for 3,000 households. The solar installation is operated by the local utility company Elektrizitätswerke Wels AG (EWWAG). The exhibition hall itself was built according to passive house standards.

With a total installed collector area of 1 million m², the state of Upper Austria is regarded as one of the best examples of solar thermal energy utilization in Europe. The Upper Austrians have resolved to triple their collector area by the year 2030.

tion of chloride ions in the water. Enamelled tanks are equipped with either a magnesium anode or an impressed current anode for corrosion prevention.

Those manufacturers that have already opted for stainless steel tanks for many years include the Dutch company Itho BV. Erik Caelen, the Central Product Manager Renewables, explains the reasons: „More and more consumers, installers and wholesalers are recognising the benefits of lightweight storage tanks which are maintenance-free because no anodes are needed and there are no rust risks. They are therefore better in terms of total cost of ownership rather than lowest investment price." Itho has extended its product range by two stainless steel tanks for domestic hot water. The PHST 90 holds 90 litres and is equipped with an external heat exchanger, which is placed in a separate drain-back unit. The other new product is the PHST 150-500, also with an external heat exchanger. Its advantage is that it has 100 mm of EPS insulation and, according to Itho, perfectly sealed insulation around the connections.

In general, the assortment of storage tank models available on the market is continuing to grow. More and more manufacturers are adding high-volume storage tanks to their product range. Tanks with more than 5,000 litres are offered, among others, by Nuetech, Enalter and Stocksbro Energi AB. Transsen, too, has introduced high-volume tanks to its assortment, with volumes of up to 10,000 litres, built in compliance with the US-American ASME norm. Klara energy systems, started in 1996 as an OEM manufacturer, now also offers custom-made special tanks with volumes from 1,500 litres to 50,000 litres. The connections of the tanks are designed as requested by the customer.

The system tank ECOScience, made from aluminium, scores with a low weight and a pleasing design. Photo: Salzburger Aluminium AG

Likewise, it is becoming obvious that the trend towards system integration is continuing. The Turkish manufacturer Ezinç has launched a re-designed version of its S series Solar Box storage tank with an integrated solar controller and pump station. The new generation is compatible with different types of solar controller. A prototype of the new tank was displayed at the Intersolar in Munich in June. Ezinç's new IN series TWIN storage tank was another new product shown at the fair. The TWIN tanks have an enamelled interior surface with enamelled built-in serpentine coils. Additionally, to provide domestic hot water, a stainless steel corrugated coil is available inside the tank. Israel-based manufacturer Chromagen has launched

Ezinç's new TWIN series tanks are equipped with an enamelled interior surface and enamelled built-in serpentine coils.

Photo: Ezinç