

Freiburg, August 21, 2013 No. 20/13 Page 1

Expert Workshop on the Emerging Market for Solar Process Heat

Using Sector-Specific Concept to Incentivize the Application of Solar Heat in the Laundry Business

Solar thermal systems are able to meet a significant portion of heating requirements in many industrial and commercial settings. For many years, Fraunhofer ISE has been committed to optimizing solar process heat and launching it on the market. The institute recently organized an expert workshop entitled "The Emerging Market for Solar Process Heat." What's more, one of Fraunhofer ISE's current research projects is working on a concept for utilizing solar heat in the laundry business.

At the invitation of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Fraunhofer ISE, an expert workshop entitled "The Emerging Market for Solar Process Heat" took place in Berlin. At the event, the German Federal Office of Economics and Export Control (BAFA) gave an initial review of the government incentive scheme. Since August 2012, 50 percent of the net investment costs associated with the use of solar heat for thermal processes in industrial and commercial settings in Germany are being subsidized, with 60 applications for the support having been approved so far. With this funding, heat generation costs of just 4 to 6 euro cents per kWh can be achieved with systems with a life time of 20 years. The funding is also available to manufacturers of solar thermal installations who sell self-produced solar heat to customers (contracting). The workshop participants could appreciate the great potential of the concept, and discussed the ways forward and measures required to encourage more widespread use of solar process heat. The experts recognized

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Freiburg, August 21, 2013 No. 20/13 Page 2

family-owned businesses without any connection to the gas network and which work closely with end customers, e. g. in the agricultural or service sector, as especially attractive markets for solar process heat. Increasingly standardized solutions need to be developed for these target markets to further reduce planning and installation costs. "There is still great potential for the development of optimized system concepts and the integration of solar process heat in complete industrial solutions," remarks Dr. Werner Platzer, Division Director "Solar Thermal and Optics" at Fraunhofer ISE. "The development of concepts that take industry-specific conditions into account and are simultaneously applicable to other industries is an important driving force for the greater use of solar process heat."

"SoProW" Project: Solar Process Heat in the Laundry Business

Fraunhofer ISE is currently working on a concept for the use of solar process heat in laundries, coordinating a consortium of organizations from the solar thermal, laundry, research and software development sectors. The aim is to provide optimized and standardized solutions for solar process heat generation in laundries, and the range of tasks that this entails is diverse. In close collaboration with the Hohenstein Institut für Textilinnovation gGmbH, research will initially be conducted into the technical and commercial potential of using solar heat in the laundry industry. Fraunhofer ISE is developing a scientific simulation environment in order to evaluate different possibilities for solar heat integration, and between three and five standard integration concepts are being integrated into T*Sol software by Dr. Valentin Energiesoftware GmbH. Meanwhile, Industrial Solar GmbH is researching ways of modernizing industrial heating networks by developing hybrid solar systems, where Fresnel collectors work with various types of boilers in steam networks. Alongside the solar companies Wagner & Co. Solartechnik GmbH and s-power Entwicklungs- und Vertriebs GmbH, Industrial Solar GmbH is also carrying out the preliminary

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Freiburg, August 21, 2013 No. 20/13 Page 3

planning of three flagship projects to validate the design tools developed. The project results will also contribute to the IEA Task 49 "Solar Process Heat for Production and Advanced Applications" – <u>http://task49.iea-shc.org/.</u>

Laundries or solar companies which are designing systems for the laundry business are more than welcome to contact Fraunhofer ISE for free advice. Contact: Stefan Hess, stefan.hess@ise.fraunhofer.de. The "SoProW" project is running until June 2016 and is being funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

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Freiburg, August 21, 2013 No. 20/13 Page 4



Fraunhofer ISE is developing a sector-specific concept for using solar heat in laundries, which involves solar thermal installations being integrated into the system to cover part of the heat required for individual processes. The photo above shows the storages of a solar thermal installation providing heat for boiler feed water, boiler make-up water and washing machines. ©Fraunhofer ISE

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