

IEA finds huge potential to replace fossil fuels and electricity with solar heating and cooling

San Francisco 9 July 2012. At the International Conference on Solar Heating and Cooling in Buildings and Industry, SHC 2012, Paolo Frankl of the International Energy Agency presented their technology roadmap for solar heating and cooling. The document identifies a potential by 2050 of 430 Mtoe (18 EJ). The IEA finds “a stable, long-term policy framework for solar heating and cooling” the key task for the coming decade to realise the vast potential.

“The IEA’s Solar Heating and Cooling Roadmap confirms the great opportunity that lies in using solar thermal to replace fossil fuels and electricity”, says Werner Weiss, chairman of the IEA Solar Heating and Cooling Programme, which provided important expertise to the roadmap. “It rightly identifies reliable long-term framework conditions as the key challenge for the coming years. And, it does not overlook the role of non-economic factors that currently hinder an even quicker adoption of solar thermal energy technologies”.

Amongst the solar thermal applications, hot water production and space heating are the most important. By 2050, 213 Mtoe (8.9EJ) could be covered by solar energy, the IEA finds. The nascent market for solar heat for industrial processes could be the second largest with 171 Mtoe (7.2 EJ) in 2050. Solar swimming pool heating and solar cooling could provide another 45 Mtoe (1.9 EJ).

The IEA calls on all stakeholders to work toward realising the vision outlined in the roadmap. With a specific call for governments to take a lead role in creating a favourable investment climate by creating a stable, long-term policy framework for solar heating and cooling. Sudden changes in available financial support have proven detrimental to the development of a healthy solar thermal industry in many countries. Therefore, the IEA concludes, economic incentive schemes should be independent from state budgets to avoid “stop-and-go”.

However, support policies should not only focus on economic aspects. In many regions of the world, solar thermal is already cost-competitive with conventional technologies, but barriers, such as higher upfront investment and lack of trained installers keep people from choosing solar heating and cooling.

Technological development could provide another strong impetus to solar heating and cooling. While many mature products exist for solar hot water and space heating, more R&D could jump-start the adoption of solar heating and cooling solutions in emerging areas, such as heat for industrial processes and cooling. Governments should provide the necessary R&D funds to support these developments.

“We can only underline the importance of research, demonstration and development”, says IEA SHC chairman Weiss. “Our Programme provides a very successful framework for international cooperation in the research on solar thermal and solar buildings. By working together, governments can help achieve our even more ambitious goal: To supply, by 2030, 50% of the low-temperature heat demand with solar energy”.

PRESS RELEASE



Further information:

- IEA Roadmap on SHC:
http://www.iea.org/publications/freepublications/publication/2012_SolarHeatingCooling_Roadmap_FINAL_WEB.pdf
- IEA's own news release on the roadmap:
<http://www.iea.org/newsroomandevents/news/2012/july/name,28298,en.html>
- IEA SHC website: www.iea-shc.org

About the International Energy Agency's Solar Heating and Cooling Programme (IEA SHC):

- The Programme was established in 1977.
- Its objectives are co-operative research, development, demonstration and exchange of information regarding solar heating and cooling systems.
- 20 countries and the European Union are IEA SHC members.
- The research topics of the current 9 projects range from more general topics, such as "Solar resource assessment and forecasting", system research, such as "Large solar thermal systems" to material research, such as the use of "Polymeric materials for solar thermal applications."
- Additional information: www.iea-shc.org

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