

# Our Sleeping Giant at a Crossroad – Which Way Will It Turn?

**Dr. Daniel Mugnier, the IEA Solar Heating and Cooling Technology Collaboration Programme's former Chair shares his thoughts on the future of solar thermal.**

In a world where climate change is driving policies across the globe, solar thermal energy has a unique position and a lot of assets for becoming the King of energy.

Solar thermal is one of the most obvious and competitive options when it comes to producing renewable heat. And with heating accounting for nearly half of all the energy consumed globally, the IEA SHC Programme has the unique opportunity to capitalize on its more than 40 years of experience in technology development and innovation.

This scenario would be ideal, but the reality is, unfortunately, different in 2021.

Being deeply involved for more than 20 years in the IEA SHC Programme at nearly all levels—a Task expert starting in 1999, Task Operating Agent in 2008, Vice-Chair in 2015, and finally Chair from 2018 to 2021—I have had a front-row seat to the evolution of solar heating and cooling technology within the Renewable Energy world and more generally the Energy world.

Of course, there are reasons to explain why this sector has not had the massive deployment breakthrough you would expect, especially over the last 10 years. For me, this sector is hampered by—lack of massive investment in innovation, technical issues impacting reliability, operation costs for certain applications, and competition with other renewables, especially solar photovoltaics.

Nevertheless, from my point of view, a major mistake we should avoid in the coming years when orienting R&D on solar thermal is to think that this technology is a competitive option in all sectors. In other words, solar heat is nearly always performing when synonymous with simplicity or integration and when addressing regular and costly heat needs.

Simplicity is the keyword and the success story from more than 20 years of the Thermosiphon approach.

Why has solar PV been gaining from a marvelous momentum? Mainly because policymakers and investors are confident in the technology. “Magic” feed-in tariffs create ideal conditions for technology development. And solar PV electricity production is predictable for 20 years with minor risks of failure.

Therefore, I strongly think the solar thermal sector should concentrate its efforts in the coming years on innovation and applications where renewable heat is needed when the sun shines and for the long-term (several decades). This would include large district heating systems, heat-intensive industries based on stable governance, and residential domestic hot water applications.

The challenge for solar thermal is real as more and more energy actors describe and forecast renewable heat production as green electricity.

Instead of being a threat and a barrier, I believe solar PV for heating can be a boost for the solar thermal sector. Innovation is never so active and creative when a climate of survival is appearing.

Let's take this opportunity and let's innovate to awake our Sleeping Giant and make our policymakers think again that solar thermal is a competitive and reliable answer when dealing with renewable heat.

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