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## “Tools to raise awareness are key for the RES heating and cooling market uptake.”

*While consumers are generally willing to incorporate alternative heating and cooling systems in their homes, there is a barrier resulting from lack of information, says Professor Javier Urchueguía, from the Universidad Politécnica de Valencia. Regulations such as minimum requirements in new buildings can support the market uptake of renewables in buildings; yet, there is a need to send the right signal to installers and manufacturers and to reduce costs through research and innovation, stresses Prof. Urchueguía in a special interview.*

### **In your country, what is the market uptake of alternative technologies for heating and cooling?**

Renewables account for roughly 15% of the heating and cooling demand in Spain. The sector boomed in 2008 with the housing market, thanks to legislative changes obliging to install renewables in new homes. This was notably achieved through a “solar obligation”, which is a minimum requirement of the energy to be covered by solar energy – the text still allowed alternative technologies to be used instead. What followed was a big boom in renewable heating and cooling. The problem was that, in 2012, the housing sector collapsed in Spain, which slowed the uptake of new renewable technologies – and it has not yet picked up again. However, the legislative framework is still there, and could support renewable heating and cooling in the future.

### **What is the level of awareness among consumers? This is particularly important as they are the ones in charge of existing buildings, which may need to go through renovation to integrate more renewables.**

There is already quite a significant level of awareness among consumers regarding renewables for heating and cooling. Solar and biomass are the most well-known options, but shallow geothermal too is becoming more widely known by consumers, notably thanks to awareness raising campaigns. To further raise the development though, architects are very important. They have a key role in the development of renewable heating and cooling. Regarding existing buildings, administrations have to be a showcase and lead consumers by setting an example. To this extent, provisions in the (Energy Efficiency) Directive stating that 1%/year of public buildings must be renovated is a good measure, but it is not enforced enough. This provision has to be put in practice and we have to push the administration to be an example in including renewable heating and cooling in refurbished buildings.



### **What is the role of projects like FROnT to improve this awareness?**

The issue of costs is a very serious one. Any tool that can raise the level of knowledge of the consumer in this regard, using simple but robust information, is welcome. While consumers are generally willing to incorporate alternative energy in their homes – notably newly built – there is a barrier resulting from lack of information. Besides information on costs, however, consumers request information on the quality of the systems that are available. There are a lot of examples of alternative energy system in heating and cooling that do not work properly, and that damages the market significantly – notably at its early stage.

### **What is the role of the support schemes in the deployment of renewable heating and cooling?**

One of the objectives of a support scheme is to develop emerging technologies. In this regard, financial support should be differentiated according to the maturity of the technology and of the market, somehow cover new buildings, be accompanied by information, and contribute to the development of installation standards and product certification.

### **What else policy-makers should consider when designing a support scheme?**

The major problem with some support schemes is that they do not make distinction between renewable energy and condensing boilers. This may be offsetting some good measures in the support of emerging renewable technologies. Besides that, it may not give the right signal to installers and manufacturers as well as the consumer.

### **Besides regulation and information, what are the other priorities to make renewables mainstream in the building sector?**

In the context of shallow geothermal for instance, and with the European Technology and Innovation Platform, we have been looking for a roadmap to increase the competitiveness of the technology, which has very high upfront investment due to drilling. This led us to explore a number of areas where there were prospects to make it cheaper, for instance by reducing the costs of drilling through innovation with new technologies, new materials or new techniques. Another area of thinking is to make the system design simpler and more efficient, so it is better understood by the consumer and cheaper to install. For shallow geothermal specifically, there is the possibility – through connection to smart grids – to use it to store heat, or for power-to-heat. With 1.4 million shallow geothermal systems installed in the EU, it already is a competitive solution. Besides, it has an advantage in the South of Europe, as it can be used for heating and cooling. This is a comparative advantage that has to be put forward!