Cities join forces to retrofit districts

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All over Europe cities and towns strive to become climate smart. They revamp their energy districts, step-by-step, while looking across borders to learn from best practice.

Cities have started to join forces to become more energy efficient. This trends stems from the findings of the first climate assessment report of the Intergovernmental Panel on Climate Change (IPCC), published in 1990, which was quite alarming. It led to the creation of Energy Cities, the European association of local authorities in energy transition. Today, it counts more than 1,000 cities from 30 countries.

"Energy Cities represents the interests of the cities on European level and try to influence European legislation in the way that cities can implement the energy transition on site," explains Eckard Würzner, who is the president of Energy Cities and the mayor of Heidelberg, Germany. He adds: "The association helps to understand the sometimes quite complex European legislation, supports funding of measures and programmes and encourages the member cities to participate in European-wide projects." Many cities in Europe have already shown that energy transition and reduction in carbon dioxide emission are possible. Such successes are to be emulated by copycats. However, "to promote their achievements, better European and national frameworks are required," Würzner says.

"Unfortunately European policies do not always coincide with local requirements, challenges and capabilities," he notes. His own home town, Heidelberg, was the first German city to adopt a communal concept for climate protection in 1992. And it has currently one of the largest passive house districts in the World, expanding constantly in an area of 115 hectares, near the city centre.

The trouble is that legislation is behind, when it comes to supporting such initiatives. This is particularly the case in Eastern European countries. There, municipalities are confined to State or commercial monopolies. Yet, rather large showcase projects are now flourishing everywhere in Europe. One of them is the EU-funded project, CITyFiED, which started in April 2014. As part of the project, with optimised energy and heating systems. The three showcase districts have been selected to cover three climate regions, being based in Lund, Sweden, Laguna de Duero-Valladolid, Spain, and Soma, Western Turkey.

The project objective is to achieve a saving of 50% of energy requirement after retrofitting all the 2,328 dwellings; thus it is estimated

to affect 7,250 citizens. "We are implementing innovative systems in order to cover all energy demands of the buildings with biomass, solar or thermal energy, in parallel with a drastic reduction of the thermal demand installing high performance insulation solutions in the buildings," explains Sergio Sanz, who is the project coordinator and energy division deputy manager at the CARTIF Technology Centre in Valladolid, Spain. "For electricity, we have interventions with photovoltaics and combined heat and power production. In Sweden, thermal heat will be exploited," he adds. He believes that it is also important to cooperate with the local industry. Not only do they develop the solutions, but they can also deliver recovered heat. This way, even new business models can come up locally over time. However, citizens participation is only limited. "

They are involved because we need their opinion about the projected benefits, and they should, of course, agree with this intervention," says Sanz. Taking the local economy along with the district developments is also important. "People responsible for local industrial cluster initiatives basically connect the dots.

They don't necessarily invest in particular solutions," says Ulrich Mans, who is responsible for the department of research innovation at the Centre for Innovation of the University Leiden, The Netherlands. "But they support academic research in cooperation with certain companies interested in developing or rolling out certain energy efficient products," adds Mans, who studied the role of local governments in promoting renewable energy businesses during his PhD. This enables mutual learning for cities. "These connections tend to stick. The networks in turn drive people," Mans says. But there are challenges to realise such ambitious energy efficiency plans. "Often the barrier is a lack of funding. But for such initiative to succeed you also need someone who is really committed, a team that actually has the full time mandate get started," Mans tells youris.com. Cities have a very strong mutual learning

interest.

This was demonstrated in the success of the Covenant of Mayors initiative, a European movement of local authorities, for which Energy Cities was a main driver in 2008. More than 6,000 municipalities now have signed the voluntary commitment to meet and exceed the European objective of reducing 20% of carbon dioxide emissions by 2020, compared to 1990, through increased energy efficiency and use of renewable energy sources. Mayor Würzner concludes: "Besides being a commitment for action and progress, the Covenant is a possibility to compete on the European level for energy sustainable districts."

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