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Press release

New European Technology to Improve Electric Vehicle Energy Efficiency

VALENCIA, SPAIN – A trans-European collaboration kicked off recently in Valencia aiming to develop a novel energy efficient climate control system to help reduce the energy used for passenger comfort in electric vehicles by at least 50 %. Even in today's modern electric vehicles, a lot of energy is wasted on heating or cooling, in turn limiting the already relatively short range by further draining the battery capacity.

The 6.7 million Euro JOSPEL project aims to greatly optimise on the energy consumption and simultaneously make electric vehicles more attractive to the European car buyers. Industry and research partners from the involved companies and organisations in Spain, Croatia, Italy, United Kingdom, Luxembourg, France, Portugal, Denmark and Germany met in Valencia to align expectations and aims of the JOSPEL project:

"The JOSPEL project is ambitious in size and scope, and we believe to be able to reduce not only the energy used for passenger comfort heating with at least 50 %, but also to reduce the energy used for component cooling in extreme conditions with at least 30 %. Both objectives will help make the electric vehicles much more energy efficient and marketable", says the project coordinator, Cristina Abad from AIMPLAS.

Many technological improvements in one package

Taking its name from the thermoelectric Joule and Peltier effects, JOSPEL's main energy efficiency improvements will consist of developing a novel and innovative heating system based on the Joule effect and a cooling system based on the use of Peltier cells. Both of these technologies are expected to reduce the energy consumption with at least between 25-30 % each in comparison with current heaters and heat pump inverters for cooling.

Besides improving on the heating/cooling technology through thermoelectric technology and effects, JOSPEL will also enhance the energy and battery efficiency through various other solutions, such as improving on the insulation via new glazing designs, reducing the energy needed to defrost and so on. This is where the project benefits from all of the European expertise within the project:

"We have put together a strong consortium of European experts, who will help combine several solutions into the most energy efficient optimisation of electric vehicles in terms of not wasting unnecessary energy on heating or cooling. Energy, which could have been used on mobility instead by getting more kilometres out of the battery capacity", says Cristina Abad.

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