

First intelligent Heating and Cooling solution improving efficiency on Electrified Vehicles batteries, to be developed in Europe

March 2019. A European consortium has started working on the development of an intelligent Heating and Cooling solution -named i-HeCoBatt- that is expected to offer an enhanced range on Electrified Vehicles (EV) battery packs.

This consortium led by CIDETEC Energy Storage (Spain), with the participation of MIBA AG (Austria), AUDI AG (Germany), Commissariat à l'énergie atomique et aux énergies alternatives (French Nuclear and Alternative Energies Commission), Datik Información inteligente (Spain), Vertech Group (France), and EPI (Austria) will work for 36 months to achieve a smart, cost bursting industrial battery heat exchanger to minimize the impact on full electric vehicle range in extreme conditions.

The envisaged European CO2 fleet emission limits for 2025-2030 already require a massive market introduction of EVs. For customers, important reasons to buy include fast charging and range. In this scenario, i-HeCoBatt's industrialization will enhance the efficiency of the heating and cooling system, through the cost reduction of its design and development.

To achieve so, i-HeCoBatt will integrate an innovative heat exchanger developed by MIBA AG, which allows to remove the currently used gap filler between the heat exchanger and the battery. This design not only reduces weight but enhances the efficiency of the heating and cooling system. The generated temperature data feed in the battery management control unit, as well as an external early diagnostic and safety system connected to the cloud. Different interfaces will be created to access these data according to user profiles: designers, testers, maintenance teams or driver. The i-HeCoBatt technology targets EVs with a time to market of about five years.