

THE PROJECT FOR A NEW ZERO IMPACT MICROTURBINE FOR THE ENERGY TRANSITION KICKS OFF

The project involves the development, application, monitoring and optimization of the microturbine in complex contexts such as those of Energy Communities and Micro-grids.

Genoa, 21 May 2024 - The ATS consortium, made up of Ansaldo Green Tech (leader of the consortium) and the companies Maps Group, SIMCO and SIGE, was awarded the financing by the Liguria Region through its FILSE financial institution, with the F.E.S.R. Cohesion funds. - European Regional Development Fund - to create a new microturbine that can adequately respond to the challenges of the energy transition.

The climate neutrality objectives set by the European Union emphasize the need to reduce climate-altering emissions by 55% by 2030 and 90% in 2040. Technologies such as cogeneration or tri-generation microturbines, powered by CO₂ neutral e-fuels, can play a fundamental role in the production of renewable electricity and thermal energy in the context of energy communities. The project that the Consortium led by Ansaldo Green Tech will implement together with its partners, fits into this scenario, aimed at studying and developing a microturbine prototype that makes the existing characteristics of the machine usable to expand its use with neutral carbon footprint fuels and enabling its insertion it into micro-grids and energy communities.

The application of new types of zero-emission fuels (such as hydrogen) requires, indeed, an in-depth analysis of the technology, with particular attention to the materials that can be used to make the components, and of the environmental impact before, during and after use, to guarantee complete compatibility and safe use. Furthermore, the application of the microturbine in still new contexts, such as micro-grids, with possible non-programmable variable loads, makes a thorough study necessary for the design of the new generation system itself.

Within the project, Maps Group will make the ROSE platform available to monitor and coordinate the use of the new microturbine in contexts characterized by variable and non-programmable energy loads, due to the presence of renewable sources, where the use of intelligent systems - capable of managing and optimizing the system as a whole - is essential.

Part and conclusion of the project is the creation at the Ansaldo Energia headquarters of a first micro-grid nucleus using both photovoltaics (installed since 2012 on the factory and the offices roofs) and the new microturbine, following the technological implementations that will emerge at the end of the study and development of the new prototype.

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