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THE FIRST FULL SIZE ELECTROLYZER PROTOTYPE BY ANSALDO GREEN TECH TESTED

Ansaldo Green Tech, in the framework of its development program for anion exchange membrane electrolyzers (AEM), has reached an important milestone by successfully concluding the tests on short stack prototypes of full-size geometry, which will lead to a commercial stack of 1 MW.

The prototypes, whose electrochemical cells have an active area equal to several thousand square centimeters, were operated until full power was achieved, exceeding expectations in terms of current density and efficiency.

This result, part of the Nemesi project (<https://www.ansaldoenergia.com/it/media-center/power-generation-news-insights/detail-news/ansaldo-green-tech-news-nemesi-project>), supported by PNRR funds (M2C2I3.5 Research and development on hydrogen), was successfully achieved also thanks to the know-how and experience of Ansaldo Energia Group in the field of hydrogen and fuel cells.

The program foresees, in the short term, the completion of the test facility to continue the performance verification phase which will allow to proceed towards the objective of the product industrialization and commercialization; in parallel, research and development activities continue at the Ansaldo Green Tech laboratories and the University of Genoa (partner of the Nemesi project), with the aim of improving the performance of electrodes and membranes.

The development of new generation electrolyzers by Ansaldo Green Tech represents an important contribution to the "green" evolution of Ansaldo Energia portfolio, aimed at expanding the scope of the Group's activities by offering new energy generation and conservation technologies. The AEM electrolyzer is characterized by a reduced use of critical raw materials and electrolytes, by high flexibility, which makes it suitable to follow the cyclicity of renewable sources, and by the possibility of producing hydrogen under pressure. The product integrates synergistically with the other activities of the Ansaldo Energia Group aimed at supporting the decarbonisation process.

The production of hydrogen at sustainable prices and with low environmental impact is an essential element in the energy transition, which sees Ansaldo Energia at the forefront in the production of gas turbines capable of burning hydrogen in significant proportions. Looking ahead, the electrolyzers may also be offered on the nuclear market, allowing to produce pink hydrogen.

The Ansaldo Energia Group, international leader in the field of power generation and key player of the energy transition, is a company controlled by CDP Equity, Gruppo Cassa Depositi e Prestiti.

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