

Genoa, 15 November 2023

## **Ansaldo Energia MXL3 upgrade maximizes the performances of ENGIE's Maxima power plant**

*In the frame of a scheduled major inspection, Ansaldo Energia completed the first installation of the innovative MXL3 upgrade technology for GT26 gas turbines at the Maxima combined cycle power plant owned by ENGIE*

- Over 60% efficiency
- Significant CO2 savings
- Ready for hydrogen

The combined cycle power plant Maxima Unit 5, owned by ENGIE has entered service following the GT upgrade with the MXL3 system successfully completed by Ansaldo Energia. The results outperformed the guarantees: compared to the performance test prior to the outage, gas turbine efficiency was improved by almost 3%, making it the first F-Class gas turbine in Central West Europe to reach more than 60% combined cycle efficiency, with a boost in power output of 37MW.

The intervention, in addition to having improved efficiency, has made the plant ready to face the challenges of the energy transition by significantly reducing CO2 emissions. Furthermore, the combustor is already set up for the combustion of hydrogen, which allows future co-firing of hydrogen up to 45% of volume flow enabling further far higher CO2 emission savings. This makes the plant ready for future energy transitions.

This upgrade design strikes an excellent balance between cost and performance: MXL3 requires limited replacement/upgrade of gas turbine parts which means lower cost: in Maxima power plant the MXL3 was smoothly implemented into the plants water steam cycle with no changes to existing hardware. Furthermore, with the new upgrade, longer maintenance intervals are possible (approximately 40,000 Equivalent Operating Hours), thereby drastically reducing maintenance costs.

MXL3 upgrade is compatible with the whole GT26 fleet and its flexible operation modes (M and XL modes) allow the operators to switch online between "optimized performance" or "optimized maintenance cost" profiles and guarantee an extension of fuel flexibility due to the leading-edge technology MXL3 combustor.

Cedric Osterrieth, Managing Director ENGIE FLEXIBLE GENERATION Europe: "By acting as a launching customer for the introduction of the cutting edge MXL3-upgrade at our Maxima power plant, ENGIE confirms its role as an innovative and responsible player in the energy market. Thanks to the MXL3-upgrade, we will

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

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explore the future use of low-carbon hydrogen, as the technology allows co-firing of hydrogen up to 45% in the fuel mix. This successful collaboration with Ansaldo demonstrates the important role of ENGIE's best-in-class generation assets in the energy transition towards carbon-neutrality by 2045."

"Having reached this rewarding result in a very close co-operation is a great achievement for both companies" said Reto Furrer, Ansaldo Energia Executive Vice President Service. "We are pleased to have given ENGIE, a customer with whom we have a trusted, fruitful and long-standing collaboration, the tools to have a power plant that is ready to face the market challenges of the energy transition, guaranteeing a cleaner, more sustainable and flexible electricity production".

This upgrade makes Maxima power plant one of the most modern and best-performing GT26 plants in the world and represents a great pride for Ansaldo Energia in its search for increasingly innovative solutions capable of providing its customers with the best tools to increase power plants' performances, reduce operational costs and face the energy transition.

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