



## **MPGE ENGINE: SUCCESSFUL FIRST BIPROPELLANT FIRING TESTS**

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**Colleferro (Rome), February 24<sup>th</sup> 2025** – The MPGE, Multi Purpose Green Engine, is an environmentally friendly engine that uses hydrogen peroxide and kerosene as propellants. It is entirely designed, manufactured, assembled, and tested in Italy.

The project, developed within the framework of the PNRR, is led by Avio and coordinated by ASI, with contributions from SMEs, universities, and startups.

In recent days, the first bipropellant ignition tests of the engine's prototype were successfully carried out on a test bench, also developed as part of the project, at Avio's facilities.

The engine ignited correctly, reached steady-state thermal conditions and the expected chamber pressure, demonstrating a combustion efficiency exceeding expectations. It also successfully performed a stable ignition and shutdown sequence. Furthermore, the accuracy of the regenerative cooling model was validated.

This marks a significant milestone for the project, which aims to qualify an innovative propulsion system for use in both launch systems and orbital and suborbital space applications.

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**Avio** is a leading international group engaged in the construction and development of space launchers and solid, liquid and cryogenic propulsion systems. The experience and knowhow built up over more than 50 years puts Avio at the cutting edge of the space launcher sector and defence program. Avio is present in Italy, France, United States and France Guyana with 5 facilities, employing approx. 1,400 highly qualified personnel, of which approx. 30% involved in research and development. Avio is a prime contractor for the Vega programme and a sub-contractor for the Ariane programme, both financed by the European Space Agency (ESA) placing Italy among the limited number of countries capable of producing a complete spacecraft.

### **For further information**

#### **Media Relations contacts:**

[francesco.delorenzo@avio.com](mailto:francesco.delorenzo@avio.com)

#### **Investor Relations contacts:**

[alessandro.agosti@avio.com](mailto:alessandro.agosti@avio.com)

[nevio.quattrin@avio.com](mailto:nevio.quattrin@avio.com)