

PRESS RELEASE

First year meeting of the HERMES project in Switzerland

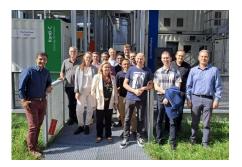
The HERMES (Highly Efficient Super Critical ZeRo eMission Energy System - <u>https://hermes-energy.eu/</u>) consortium partners met at Paul Scherrer Institute in Switzerland, within the first year of project implementation. The aim of the meeting was to discuss the achieved progress, assess possible risks and do planning for the next period.

Significant work has been accomplished in the project's three pillars. More specifically, in Pillar 1 "Synthesis of renewable fuels for interchangeable Gas Turbin operation and their value chains", the methods for producing renewable fuels were identified and established, while EU policies related to the HERMES concept, which essentially govern the eligibility of renewable fuels, were investigated. Also, simulation work to identify hourly production of electricity by PV and wind power plants was initiated, with Crete being chosen as the optimal model location due to its high solar irradiation and significant wind speed profiles. In Pillar 2 "Fundamentals of zero-emission highly efficient supercritical combustion of renewable fuels", the supercritical combustion systems are under development, with preliminary tests of the methanol flow in a CO2 atmosphere already being performed. Also, an analysis of the methanol combustion chemical kinetic mechanisms, which are relevant for the supercritical conditions, was conducted. Finally, in Pillar 3 "System integration and assessment for technology maturity leap forward", the work has begun on the design of a compressor for supercritical fluid. Further steps including validation of the numerical calculations are planned.

The highlight of the meeting was a visit to PSI laboratories, where partners had the opportunity to look into and learn more about the experimental test-rigs responsible for conducting research relevant to the synthesis of renewable fuels. Photos from the meeting are presented below.



Photos







Experimental set-up, PSI facilities

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此 HERMES project



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