



## PRESS RELEASE

### First year meeting of the HERMES project in Switzerland

The HERMES (**H**ighly **E**fficient Super Critical **Z**eRo e**M**ission **E**nergy **S**ystem - <https://hermes-energy.eu/>) 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 CO<sub>2</sub> 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



Consortium partners at PSI



Experimental set-up, PSI facilities

### For further information:

Project Coordinator: Artur Pozarlik  
(a.k.pozarlik@utwente.nl)

<https://hermes-energy.eu/>



info@hermes-energy.eu



HERMES project



@HERMESproject4



Funded by  
the European Union

UNIVERSITY  
OF TWENTE.



National  
Technical  
University of  
Athens

TEC4  
FUELS

exergia  
CLIMATE CHANGE CONSULTANTS

Science4Fuels  
OWI  
an der RWTH Aachen

PAUL SCHERRER INSTITUT  
PSI

Imperial College  
London

EPFL



Politechnika Wroclawska

CERFACS  
CENTRE EUROPEEN DE RECHERCHE ET DE FORMATION EN ENERGIE ET EN ENVIRONNEMENT



Funded by  
the European Union