

WE ARE PRODUCING GREEN HYDROGEN

STUDY PROJECT

The energy sector must become CO_2-free and sustainable in order to prevent the imminent climate catastrophe. The necessary paradigm shift in society must be further initiated. The necessary technologies have already been researched; now implementation must begin. One way to do this is through education: awareness and interest must be awakened among young people, who are the decision-makers of the future.
Green hydrogen is the gaseous energy carrier of the future. It can be produced by the electrolysis process with green electricity from water, stored and burned emission-free in the fuel cell. This technology must be brought closer to our society.

At the FH Joanneum in Graz, civil engineering students were working on an interdisciplinary project in their master's program. In WS 2021/22 we designed an integrated green hydrogen production plant, with a linked wind farm with 400 MW and a photovoltaic plant with 100 MW. The green hydrogen will be methanized, and 15% will be delivered to end users via trailers and 85% via the natural gas network. In the project work the process, the material flows, the layout of the plant as well as the civil engineering works will be elaborated and presented in English at the end of the lecture.

The project was presented in the "Youth Meets Experience" program of the ÖIAV.

Project work at:
FH Joanneum Graz, Austria
Power generation by:
Wind (400 MW) and photovoltaics (100 MW)

Hydrogen production by:
Electrolysis
Methanization using:
CO_2
Distribution by:
15% trailer transport, 85% natural gas grid

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