Green Energy Technologies Centre of UJEP

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- energy-oriented workplace offering R&D and educational services, mainly in the region of North Bohemia
- industrial partnership in the field of Science and Resarch, know-how transfer
- educational centre providing information in the field of new energy technologies and systems to the general public as well as to local administrations

Partners of the project:

VRŠANSKÁ UHELNÁ
SEVEN ENERGY

VŠCHT PRAHA

CVŘ

ČVUT
ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE

ÚJV

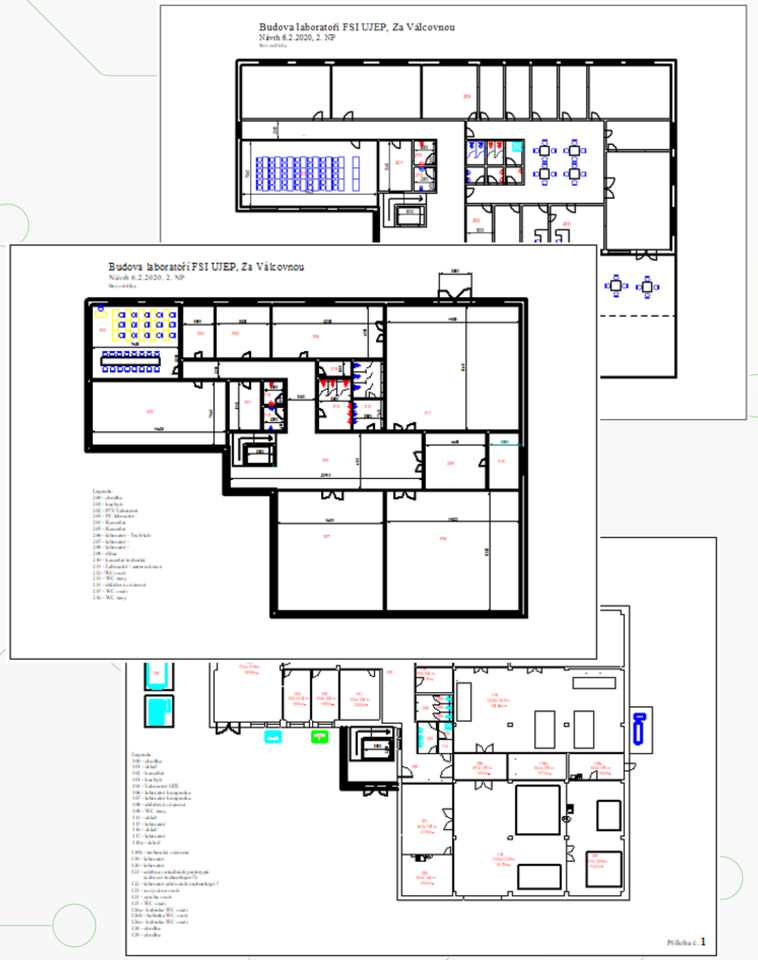
- Hydrogen Technology Centre of UJEP
- Clean Energy and Technology Centre of FSI
- External cooperation and partnership

Centre's Focus

- energy sources in the Usti and Carlsbad regions
- Power-to-X systems, energy systems with energy accumulation, biomass utilization
- harnessing and utilising hydrogen as a source of energy for transportation and energetics
- improving the efficiency of fuel cells, reverse fuel cells
- storage and distribution of hydrogen
- material development in the field of micro- and nanocoating, its application in agressive environment, material degradation and its minimization
- education and training of experts in the field of sustainable energy and hydrogen technologies

Hydrogen Technology Centre of UJEP

- hydrogen technology research and development centre
- research and educational laboratories for testing fuel cells
- workplace focused on research and optimization of hydrogen combustion processes with the use of optical methods LIF and PIV - research of hydrogen combustion technology
- laboratories of additive technology, focused on metallic materials for innovative design of solid-state energy storage
- laboratories for testing the effects of hydrogen on mechanical properties of construction materials
- testing processes in the field of new materials for storing hydrogen
- new educational, requalification and training facilities



Clean Energy and Technology Centre of UJEP

- research and development centre focused on photovoltaics and electromobility
- RES and accumulation educational models
- specialized laboratories focused on photovoltaic systems in the field of electromobility, hydrogen mobility and energy storage
- education and training of experts in the field of sustainable energetics
- updating existing Bachelor's and Master's degree programmes of Energetics with focus on sustainable and renewable energy
- support of Doctoral study programme of Energetics

Open-cathode fuel cell testing bench

- thermal management testing and optimization
- fuel cell power characteristics testing and optimization
- numerical simulations

- Bench parameters
- PEM 60 cell-type fuel cells
- temperature, voltage and cooling control
- max. power 2,1kW
- max. current 180A
- max. voltage 60V