

TGC1 -

Coal mining operation, mine infrastructure and management, unconventional use of coal deposits

- Improving automation of coal winning and heading technologies corresponding to the geological characteristics of European hard coal deposits.
- Geomechanics of the mining deposit, including stress analysis and control, modelling, monitoring systems, roadway support technologies, rockbursts and gas outbursts.
- Underground instrumentation, communication and information technology, including operational simulation and modelling technology.
- Control of underground gas emissions in operational mines and novel methods of mine climate control.
- Prediction and reduction of the influence of mine waters on water tables and surface subsidence of abandoned mines.

TGC2 -

Coal preparation, conversion and upgrading

- Improving the efficiency and economics of coal gasification through process changes or enhanced components and their integration.
- Development of novel coal based pitches and precursors for specialist carbon products.
- Production of liquid fuels from coal, with a particular emphasis on technologies that address the requirements of clean coal technologies and the need for greenhouse gas emission reduction.

TGC3 -

Coal combustion, clean and efficient coal technologies, CO₂ capture

- Technological improvements targeting enhanced efficiency of coal fired power plants.
- Novel CO₂ capture technologies for retrofitting to existing coal power plants.
- Enhanced pollution control in conjunction with CCS technologies.