

From coal to heat mining: chances and challenges of geothermal energy and underground heat storage

PD Dr. Frank Strozzyk, Fraunhofer IEG, Institution for Energy Infrastructures and Geothermal Systems

Using the examples of the planned Fraunhofer geothermal research power plant at the site of RWE's Weisweiler lignite-fired power plant, which is soon to be phased out, and a large-scale laboratory for the underground storage of heat generated by solar thermal energy in former mine structures for feeding into district heating networks in Bochum, current examples of exploration work and fields of activity of geoscientists in the coming years will be presented. Since the demonstrators will cover the entire value chain of project development and commissioning, opportunities and challenges of such projects can be discussed and evaluated for future projects. One focus is on the exploration and exploitation of infrastructurally developable locations for underground heat mining by means of geophysical and engineering methods. Besides to the growing need for expertise and experiences from the energy industry, a continuous exchange between science, industry and politics as well as the involvement of the public are essential.