

European Technology

Deep Geothermal

& Innovation Platform

Report from the WGs

Production

A1 – Developing the next generation of deep geothermal electricity and heating/cooling technologies

Production, Engineering	24	Design of insulation of conductor from seafloor to surface in off shore geothermal utilization.
	25	Chemical and thermo-physical properties of geothermal fluids, their relevance for sustainable operation, and application in reactive modelling
	26	Improving deep geothermal production technologies: New materials
	27	Gain in representativeness in reservoir modelling for thermal exchanges in (fractured) reservoir, multiphase systems
	28	Enhanced multiphase flow wellbore model for performance and maintenance
	29	Chemical and thermo-physical properties of geothermal fluids, their relevance for sustainable operation, and application in reactive modelling
	30	Developing smart monitoring technologies with 1 – optical fiber of wells or steam lines, 2–nano-based analytical solutions, in : <ul style="list-style-type: none"> •downhole tools •surface instrumentation 3 – Digital approach and big data analysis
	31	Development and testing of coatings for heat exchangers and evaporators to cope with corrosive aspects of the brine

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EGS & SGS (Super - hot Geothermal Systems)	32	Rock mechanics under high pressure and temperature
	33	Chemistry of Super - hot geothermal fluids
	34	Engineering of subsurface and surface equipment including mitigation and material selection for SGS.
	35	Establish network of complementary 5-10 European EGS test laboratories.
	36	Design, simulate and operate stimulation for increase of effectiveness (increase recovery factor) over exploitation period
	37	Seismic monitoring and mapping of seismic events
	38	Stimulation indicators guidelines for preventing surface impacts
	39	High temperature (up to 350°C)/high pressure down-hole sensing tools for monitoring and pumps

A2 – Close-to-market demonstration of competitive deep geothermal electricity and heating/cooling

Production, Engineering	57	Minimize the costs of stimulation treatments and Reduce the costs of novel stimulation treatments
	58	Minimize the risk of scaling and corrosion
	59	Production Down Hole Pump able to resist to 190°C with 5 years life duration (not Long Shaft) with in well long test
	60	Development and implementation of robust and/or new corrosion, scaling, fouling prevention and mitigation chemicals, techniques and biotechnologies
	61	High temperature/high pressure down-hole sensing tools for monitoring of dynamic processes in deep geothermal systems (up to 250°C, high salinity...)
	62	High temperature ESP (Electro Submersible Pump)/LSP (Line shaft Pump) downhole production pumps
	63	Developing smart monitoring technologies with optical fiber of wells or steam lines,
	64	Developing smart monitoring technologies with nano-based surface measurement sensors
	65	

A2 – Close-to-market demonstration of competitive deep geothermal electricity and heating/cooling

EGS	66	EGS - Doublet tracing method and modelisation improvement
	67	Multi drain EGS doublet in 2 differents geological layers (limestone and sandstone)