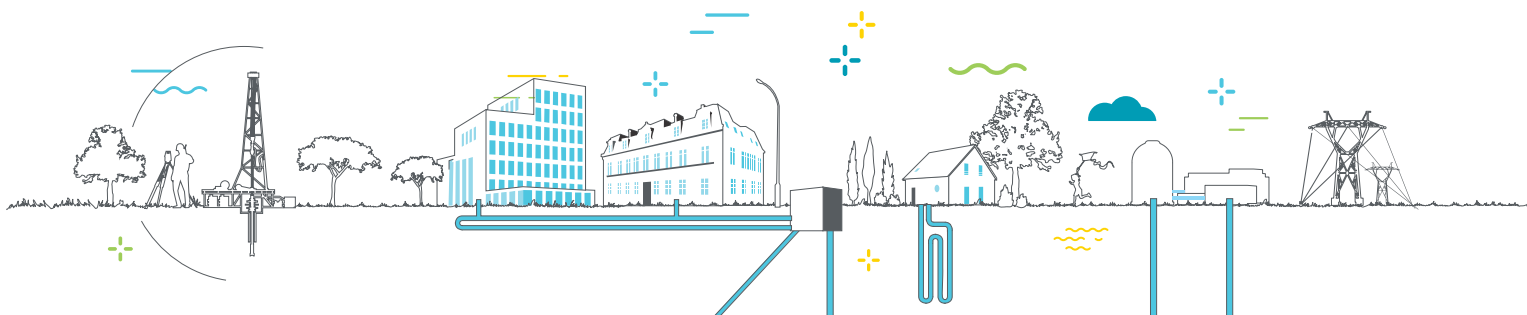


GEODEEP
FRENCH GEOTHERMAL CLUSTER FOR HEAT AND POWER





25 EXPERTS OVER 1300 STAFF



€ 871M REVENUES IN 2021



1 TWh OF GEOTHERMAL HEAT

PRESENTATION - WHO WE ARE

ÉS, an energy company located in Alsace (Eastern France) for more than 120 years, is developing the energy transition of its territory by realizing renewable energies like deep geothermal energy. For this business, ÉS is co-owner of geothermal licenses as well as 2 concessions in geothermal energy: The Soultz-sous-Forêts plant which produces 1.7MWe gross power and the Rittershoffen geothermal heat plant which produces 24MWth for an industrial application in green chemistry.

Both exploit a fractured granite reservoir in which percolates very saline geothermal brines containing significant amount of lithium. On the same territory, ÉS is also the owner of a lithium license and another under instruction. ÉS is also scientifically and technically active in the field of geothermal energy and geothermal lithium thanks to its daughter company ÉS-Géothermie (ESG), a team makes of experts in geosciences or geothermal engineering and a technical staff exploiting the geothermal plants.

THE RITTERSHOFFEN GEOTHERMAL HEAT PLANT

Since 2016, the geothermal plant of Rittershoffen has been commercially operating, with an availability rate higher than 90%. It produces on surface a geothermal brine at 170°C with a production flowrate higher than 70L/s. Thus, this plant produced 24MWth to a biorefinery located 15 km away but connected to the plant via a buried pipeline. During exploitation, a real time induced seismicity monitoring is realized. Hopefully, no induced seismic events have been felt by the local population around the Rittershoffen plant since the start of operations in 2012.

The Rittershoffen plant produces 4 gCO₂-eq/kWh. This is 67 times lower than that of heat from natural gas. The biorefinery plant reduces its greenhouse gas emission over 40 000 tons of CO₂-eq per year. After 6 years in a row, a total of 1 TWh of heat has been produced.

OUR TARGET IN GEOTHERMAL

Our ambition is to be always more efficient, innovative and responsible to support all our customers in Alsace. ÉS is committed to decarbonization through the modernization of its electricity network and has a proactive strategy in the development of renewable resources on its territory like geothermal energy. We constantly maintain the performance of our two geothermal plants in exploitation at Soultz and Rittershoffen for contributing to the region's Energy Transition. ÉS aims to be a key player in geothermal energy in prioritizing the development of current spots.

Our main objectives in geothermal energy aim to maintain the excellence of the exploitation of our geothermal plants with a high level of availability over time (>90%) and to reinforce our expertise for minimizing some environmental impacts like induced seismicity.

TO CONTACT US

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