



Discovering ...

CANTON OF GENEVA:

**First concrete achievement of the research programme « Geothermal Energy 2020 »:
an entire district heated thanks to the discovery of an underground water table**

Geothermal energy is a source of local energy that is clean, renewable and continuously available enabling many thermal and electrical applications. Located in an area with a favourable geological context, rich in aquifers, the Canton of Geneva made the development of geothermal energy the priority objective of its energy policy and launched as early 2014, in partnership with the Services industriels de Genève (SIG), a programme of underground exploration s: « Geothermal Energy 2020 ». Detailed 3D mapping of the Geneva subsoil could thus begin. Thanks to this work, the programme is this year entering its concrete phase. The discovery of a water table 60 metres below the surface is in fact going to enable heating to be provided for the entire La Concorde district, in Châtelaine. The geothermal drilling started at the end of March.

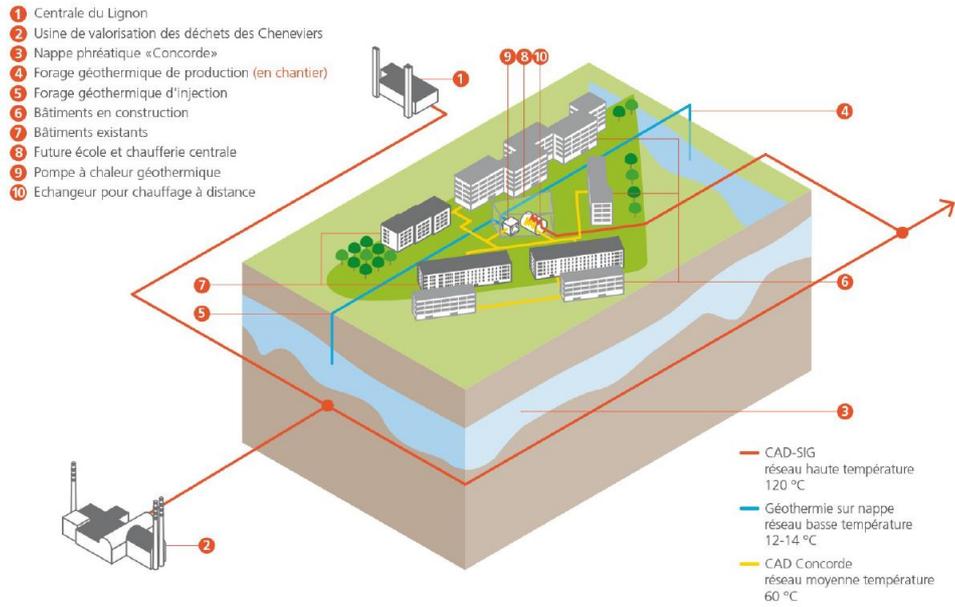
Located in the communes of Geneva and Vernier, la Concorde is a district covering an area of around thirty hectares. A real estate complex comprising a thousand housing units and a school is going to be built there during the coming years. According to Antonio Hodgers, the Councillor of State in charge of the Department of Spatial planning, Housing and Energy (DALE), "developers and local authorities strongly committed themselves to seeking energy solutions enhancing the value of the local renewable resources, in order to minimize the carbon footprint of this new urban complex."

So, the geothermal energy avenue was examined and a detailed study of the subsoil of the area concerned was launched in 2016 in the context of the GEothermal Energy 2020 programme. "This prospecting work enabled the discovery, thanks in particular to four exploratory drillings, of the presence of an underground water table so far unmapped. Located at a depth of 60 metres, it has a temperature of approximately 14° and flows suitable for geothermal energy exploitation", detailed Luc Barthassat, the Councillor of State in charge of the Department of the Environment, Transport and Agriculture (DETA).

Thanks to this discovery the State of Geneva and SIG conceived an innovative energy system to supply the La Concorde district with heating and hot water thanks to a remote heating network fed by three complementary resources:

- geothermal energy from a shallow water table via a heat pump;
- the urban waste via the Les Chenevières incineration plant;
- natural gas via the Le Lignon boiler.

The share of these different energies will vary from one season to another. In winter geothermal energy will cover the major part of the heating requirements. In summer hot water will be provided solely by the incineration of waste. As for natural gas, it will be used to supply any additional needs. Ultimately 65% of the heating supply for the La Concorde district will come from non-fossil energy sources.



Two buildings could be connected in the autumn of 2017 once they have been built. The network will gradually be rolled out in the La Concorde district by the end of 2018. The new and existing buildings will thus have the possibility of connecting up to the network.

For more information, go to the website of the [Republic and Canton of Geneva](#).

[Back to the home page of the Energy Conference website](#)