



English

**GEOTHERMIE**  
SCHWEIZ SUISSE SVIZZERA

**connect**

Forum 2021

Geothermal Forum | 21.09.2021 | Fribourg | [www.connect4geothermal.ch](http://www.connect4geothermal.ch)

# Programme

**Dynamically moving forward**

## We want to use it – the geothermal energy!

The potential lies at our feet, climate-friendly, reliable, locally available, and competitive. But apart from geothermal probes, this gigantic heat pool has hardly been tapped in our country.

The Swiss underground has enormous development potential – for heat supply, electricity, storage or as an innovation laboratory. The fact that it is still insufficiently exploited today is incomprehensible in view of the Federal Council's climate goal of a CO<sub>2</sub>-neutral Switzerland by 2050.

Studies show that by 2050 a quarter of Switzerland's total heat demand can be covered by geothermal energy. This corresponds to a saving of 4.5 million tons of CO<sub>2</sub> per year. To achieve this goal, ten new hydrothermal plants will have to be put into operation every year from 2025.

That may seem ambitious. But we need that ambition to move forward. Compared

to the high expectations – also from national politics – the pace is too slow today. It is to be hoped that the momentum that has developed in western Switzerland will accelerate and spread to the whole country. The Geothermal Forum 2021 «Connect» should also contribute to this, provide information, facilitate contacts, create networks, and stimulate the development of the geothermal sector – so that things can move forward!

We **must** use it – the geothermal energy. And for that we need you!

Thank you and I wish you an exciting day.



*Nathalie Andenmatten Berthoud*  
President Géothermie-Suisse

A handwritten signature in black ink, appearing to read "Nathalie Andenmatten Berthoud".

# Agenda

Plenary Session

Parallel Session

Break, Energizer, Networking, Exhibition

1:1 Meetings

08:00- 09:15	Registration – Energizer (juice and coffee), Networking, Exhibition	08:25 – 09:10 1:1 meetings   Session 1
09:15- 10:20	Opening – Energy, CO <sub>2</sub> , Environment – Potential geothermal energy	
10:30- 12:00	Geothermal energy: a wide range of applications	Innovation: power generation, lithium extraction, CO <sub>2</sub> -storage
		Heat and cold storage with geothermal energy
12:00- 13:45	Lunchbreak, Networking, Exhibition	12:40 – 13:40 1:1 meetings   Session 2
13:45- 15:15	Geothermal heating and cooling for the decarbonisation of cities	Underground as a resource: Knowing, protecting and using it better
		Heating and cooling in industry: possibilities with geothermal energy
15:15- 16:30	Break – Energizer (juice and coffee), Networking, Exhibition	15:25 – 16:25 1:1 meetings   Session 3
16:30- 17:45	Conclusions and appeal for decarbonisation: joining forces for all applications of geothermal energy	
17:45- 19:00	Apero riche with geothermal beer, Networking, Exhibition	17:55 – 18:40 1:1 meetings   Session 4

Plenary Session

⌚ 09:15 – 10:20

## Opening – Energy, CO<sub>2</sub>, Environment – Potential geothermal energy



### **Welcoming address**

*Nathalie Andenmatten Berthoud*  
Géothermie-Suisse – Canton of Geneva



### **Energy transition in the cantons and opportunities with geothermal energy**

*Serge Boschung*  
Energie Service Canton of Fribourg



### **Switzerland's energy goals and measures for implementation**

*Frank Rutschmann*  
Swiss Federal Office of Energy FOEN



### **Heating and cooling strategy of a municipal utility – the role of geothermal energy**

*Christian Brunier*  
Services Industriels de Genève (SIG)



### **The Decade of Geothermal Energy – Contributing to the Decarbonisation of Society**

*Marit Brommer*  
International Geothermal Association

### **Wrap up / invitation to the sessions**

*Nathalie Andenmatten Berthoud*

Parallel Session

⌚ 10:30 – 12:00

## Geothermal energy: a wide range of applications



### Introduction / moderation

*Vincent Badoux*

Géothermie-Suisse – Geotest



### Possibilities, requirements and energetic potentials of different geothermal systems in Switzerland, examples

*Katharina Link*

Géothermie-Suisse – Geo-Future GmbH



### Optimal integration of heat pumps into a system with geothermal energy – high capacity and reversibility

*Fabrice Rognon*

CSD Engineers, Swiss Heat Pump Association



### Success in Riehen, hope in la Côte, potential in Switzerland: examples and determining factors

*Karl-Heinz Schädle, Géothermie-Suisse – Schädle GmbH*

*Daniel Clément, EnergeÖ*

### Facilitating the start for a hydrothermal geothermal project in Switzerland

*Fabienne Sierro*

ZHAW Zürcher Hochschule für angewandte Wissenschaften, Project Transfer



### Risk minimisation and financing

*Nicole Lopi*

Swiss Federal Office of Energy FOEN

### Wrap up / invitation to the sessions

*Vincent Badoux*

Parallel Session

⌚ 10:30 – 12:00

## Innovation: power generation, lithium extraction, CO<sub>2</sub>-storage



### Introduction / moderation

*Benoît Valley*

Université Neuchâtel



### Geothermal energy systems, overview and state of the art

*Martin Saar*

Swiss Federal Institute of Technology ETH Zurich



### Innovation for EGS projects, first results from the Bedretto Underground Laboratory

*Olivier Zingg*

GeoEnergie Suisse



### Parallel lithium extraction with geothermal energy, opportunities and challenges

*Jean-Jacques Graff*

Association Française des Professionnels de la Géothermie AFPG



### Eavor-Loop – Deep geothermal energy using closed loop system

*Daniel Moelk*

Eavor



### Tension field: innovation – risk – social acceptance

*Matthias Holenstein*

Stiftung Risiko-Dialog

### Discussion, wrap up / invitation to networking

*Benoît Valley*

Parallel Session

⌚ 10:30 – 12:00

## Heat and cold storage with geothermal energy



### Introduction / moderation

*Joachim Poppei*

CSD Ingenieure



### Possibilities and potential of energy storage with geothermal exchanges

*Luca Guglielmetti & Fleury de Oliveira*

Université de Genève

L. Guglielmetti

F. de Oliveira



### Pilot project Geostorage Bern

*Martin Jutzeler*

ewb Energie Wasser Bern



### Complementarity of solar panels, geothermal probes and anergy networks for heat storage and cooling, examples

*Florian Ruesch*

SPF Institute for Solar Technology



### CERN's heat for 20,000 people with the anergy network of the industrial zone

**Ferney-Genève**

*Gilles Bouvard*

Terrinnov



### Energetic geostructures – potential of subsurface geotechnical and structural engineering for storing and extracting energy

*Alessandro Rotta Loria*

GEOEG

### Discussion, wrap up / invitation to networking

*Joachim Poppei*

Parallel Session

⌚ 13:45 – 15:15

## Geothermal heating and cooling for the decarbonisation of cities



### Introduction / moderation

*Michel Meyer*

Géothermie-Suisse – Services Industriels de Genève (SIG)



### Demand for CO<sub>2</sub>-neutral heating and cooling in urban areas, contribution of geothermal energy

*Martin Jakob*

Tep Energy GmbH



### Scenarios for the use of geothermal energy in district heating networks

*Andreas Hurni*

Fernwärme Schweiz



### Geothermal energy implementation strategy in the city of Lausanne

*Niels Giroud*

Services industriels de Lausanne (SIL)



### The energy transition of Basel and the role of geothermal energy

*Evelyn Rubli*

IWB Industrielle Werke Basel



### Hydrothermal Energy for the city of Davos

*Stephan Bolay*

Geotest

### Discussion, wrap up / invitation to networking

*Michel Meyer*

Parallel Session

⌚ 13:45 – 15:15

## Underground as a resource: Knowing, protecting and using it better



### Introduction / moderation

*Olivier Lateltin*

Swisstopo



### Knowledge of the deep underground in Switzerland and obstacles for geothermal and other uses

*Gunter Siddiqi*

Ret'd



### Nagra Site Investigations – Data and Findings

*Bernd Frieg*

Nagra



### Minimum data for exploratory drilling – proposal of a standard

*Maximilian Keim*

Geothermie-Allianz Bayern



*N. Clerc*



*F. Mirjolet*

### Knowing your underground to better protect and enhance it – the current Geneva 3D seismic campaign

*Nicolas Clerc, Canton of Geneva*

*Frédéric Mirjolet, Services Industriels de Genève (SIG)*



### The underground, its resources and various expectations – elements for sustainable management

*Laurent Vulliet*

Eidgenössische Geologische Fachkommission

### Discussion, wrap up / invitation to networking

*Olivier Lateltin*

Parallel Session

⌚ 13:45 – 15:15

## Heating and cooling in industry: possibilities with geothermal energy



### Introduction / moderation

*Karl-Heinz Schädle*

Géothermie-Suisse – Schädle GmbH



### Use of geothermal energy in greenhouses, examples and trends from the Netherlands

*Dio Verbiest*

Geothermie Nederland



### Tomatoes with CO<sub>2</sub>-neutral energy from the region: Malm Energie Naturelle in Yverdon

*Roland Stoll*

Stoll Group



### Geothermal energy for life science, biotech and ICT in the BaselLink innovation hub

*Martin Dietler*

Primeo Energie



### Heat utilisation of data centres and cooling of computers: the Friesenberg Zurich energy network

*Matthias Kolb*

Anex Ingenieure AG

### Discussion, wrap up / invitation to networking

*Karl-Heinz Schädle*

Plenary Session

⌚ 16:30 – 17:45

## Conclusions and appeal for decarbonisation: joining forces for all applications of geothermal energy

### Panel discussion



Session Chair  
Cédric Höllmüller  
Géothermie-Suisse

#### Recommendations for action from the sessions



*Nathalie Andenmatten Berthoud*  
Géothermie-Suisse – Canton of Geneva



*Vincent Badoux*  
Géothermie-Suisse – Geotest



*Joachim Poppei*  
CSD Engineers



*Benoît Valley*  
Université Neuchâtel



*Michel Meyer*  
Géothermie-Suisse – Services Industriels de Genève (SIG)



*Karl-Heinz Schädle*  
Géothermie-Suisse – Schädle GmbH



*Olivier Lateltin*  
Swisstopo

#### Joining forces to unleash the potential of geothermal energy



*Nathalie Andenmatten Berthoud*  
Géothermie-Suisse – Canton of Geneva



*David Stickelberger*  
Swissolar



*Gianni Opero*  
AEE Suisse



*Ronny Kaufmann*  
Swisspower



*Andreas Hurni*  
Fernwärme Schweiz



*Stephan Peterhans*  
Swiss Heat Pump Association



*Philippe Dumas*  
European Geothermal Energy Council EGEC

# Our partners

Exclusive Partner



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Western Switzerland Cleantech Cluster



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This project has received funding from the European Union's Horizon 2020 research and innovation programme.

Network Partners

