



Fact sheet on the use of thermal energy from lakes rivers

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Topics: Biodiversity | Ecosystems | Society | Climate Change & Energy

The use of lake and river water to generate heat and cold is constantly increasing. The potential is enormous. Nevertheless, negative impacts on aquatic ecosystems must be avoided. A fact sheet from Eawag lists the key points in this regard.

The population of Geneva has just voted in favour of the expansion of the heating network by almost 80%. The use of Lake Geneva as a heat reservoir is central to this. There are also expansion projects on Lake Lucerne, Lake Biel, Lake Zurich and Lake Constance, or larger plants are already in operation. The thermal use of surface waters is gaining in importance, not least in the context of the new federal energy strategy. It includes heat extraction for heating purposes, but also disposal for cooling purposes. This raises the question of the ecological impacts on the lakes and rivers used. Within the framework of an applied project, Eawag has developed a basis for this. A new fact sheet summarises the key points that need to be taken into account.



Use of thermal energy from lakes and rivers

Thermal use of surface waters (lake and rivers) for heating and cooling is becoming increasingly important – not least as part of Switzerland's energy strategy. But what are the limits of thermal energy? How does it work? To help address this question, Eawag has carried out an applied research project.

The research project was carried out in cooperation with the Swiss Federal Office of Energy (SFOE) and the Swiss Federal Office of the Environment (SFOE). The project was funded by the Swiss Confederation and the cantons of Geneva, Vaud, Valais, and Ticino. The project was carried out from 2019 to 2021. The results of the project are presented in this fact sheet.



Use of thermal energy from lakes and rivers [435 KB]



Video about thermal use of lake Geneva (SRF, Schweiz aktuell, 19th January 2022, in german).



[Website project Thermdis](#)

The Thermdis project was supported by the Federal Office for the Environment (FOEN).

Cover picture: Lakes store large amounts of heat. (Photo: Eawag)

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