



Image source: Casa-Vita/Frefel Holzbau AG

Project report

GERO[®]therm energy piles

New construction of the Fennenwis apartment building
Mollis/GL



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- 1) Impressive both above and below ground level; the modern building layout is combined with the advanced heating technology.
- 2) Functional diagram of the energy pile (HakaGerodur AG)
- 3) Borehole for the energy pile (photo: HakaGerodur AG)
- 4) Insertion of the reinforcement for the concrete piles (photo: HakaGerodur AG)
- 5) Construction site overview with the Glarus panorama (photo: HakaGerodur AG)
- 6) Insertion of the GEROtherm® energy pile (photo: HakaGerodur AG)

Image source: Casa-Vita/Frefel Holzbau AG

There is an extraordinary energy concept for an apartment building made of wood in the alluvial area of the Linth.

A thick layer of clay-like molasse can be found at the site where the apartment building is being constructed. It naturally offers a high energy and storage capacity. This advantage is harnessed to store solar energy in the ground in the summer and to recover it in the winter. This is why 26 energy piles, which also provide a foundation and therefore offer a major additional benefit, are set into the ground together with the heat pump.

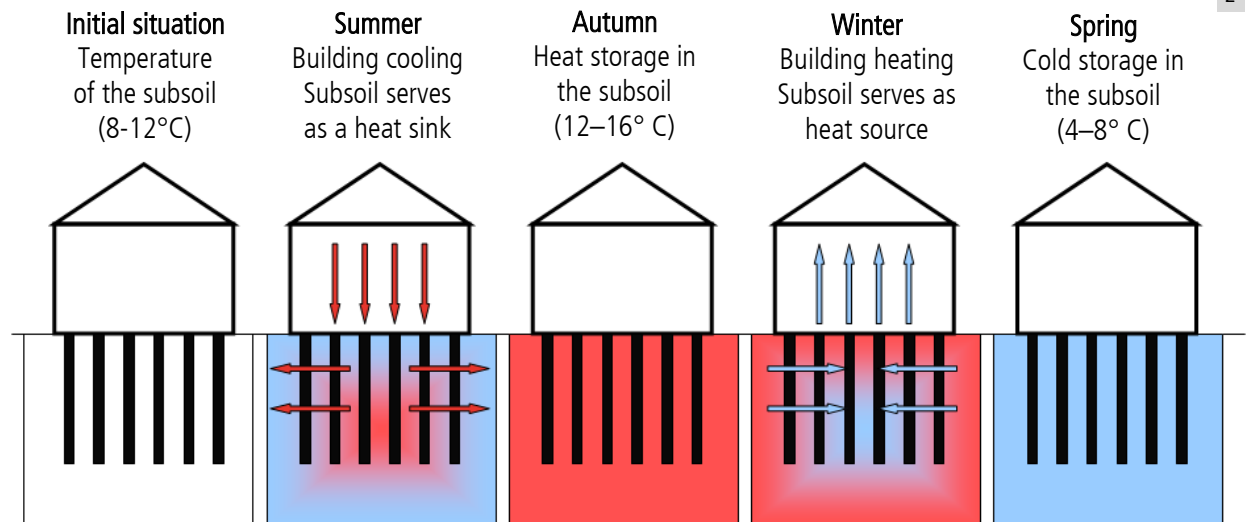
The building site used as a "battery"

Solar energy is harnessed by thermal solar collectors on the roof

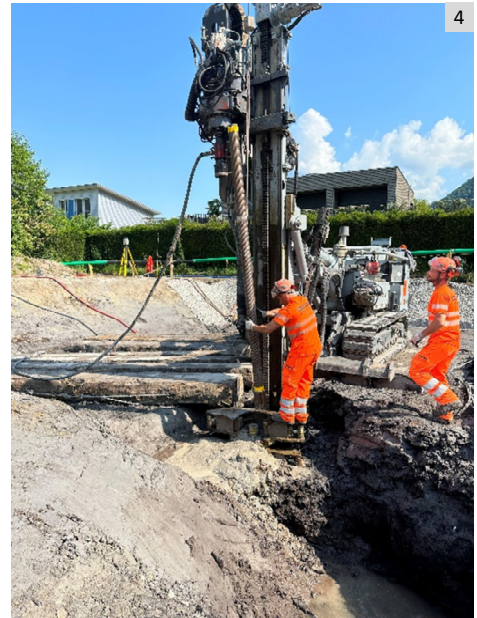
during the summer months and therefore at the time of year when there is an abundance of energy. It is channelled into the ground via the energy piles and stored there in a natural way. "The ideal building site in this context serves as a battery." Another brilliant additional benefit is that the system is reversed in summer. "A minor amount of effective cooling can be provided to the rooms via the energy piles. This is achieved by taking advantage of the difference between the ambient temperature in summer and the temperature of the ground." This measure has a striking influence on comfort – which is primarily achieved through comfort ventilation – and on living comfort. A photovoltaic system on the roof

generates the electricity to ensure that these two components are not compromised one bit and that energy can be saved at the same time. The Fennenwis residential building sets a new standard for Casa-Vita/Frefel Holzbau AG, which lives and breathes the motto "Wood wins". "The energy concept with energy piles is the first of its kind in the canton of Glarus."

The fact that Casa-Vita/Frefel Holzbau AG consistently relies on the use of natural materials and an effective, holistic, economical energy concept is impressive. This gives living in harmony with nature an added meaning.



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Project data

Construction site

New construction
Fennenwis apartment building
8753 Mollis

From **architecture** to **planning** and **construction management** through to the complete implementation of a building project in timber construction, Casa-Vita/Frefel Holzbau AG covers everything with experienced specialists



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Executing company

ENERCRET
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Products used

26 GEROtherm® energy piles
made of PE 100RC 25 × 2.3 mm, PN 16



Packing and delivery of the energy piles



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