Article | Sustainable Construction | Low-Carbon Energy Solutions

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Urban Geothermal Energy and Positive Energy Buildings

In Kalasatama in Helsinki, technology and service solutions are combined in an energy-efficient residential building, illustrating their effectiveness in an urban environment. The goal is to develop the concept of a Positive Energy Building, integrating geothermal energy, heat pump technology, solar power and heat, and the HVAC system. The concept aims at the lowest possible ecological footprint in energy solutions for buildings.

The HYBGEO building construction site in Kalasatama, Helsinki. Photo: Bassotalo Oy.

In the HYBGEO project, the building concept and technology are designed to be scalable and easy to choose and deploy in cold climate regions in Finland and globally. The annual energy consumption of the Positive Energy Building (PEB) is equal to or smaller than the building's energy generation.

Helsinki Energy Cooperative

United States

The Helsinki Energy Cooperative in Finland uses geoThermal Cooling System heat pumps to provide heating and cooling to residential and commercial buildings, reducing greenhouse gas emissions and improving energy efficiency.

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