

Energy solutions for residential buildings (renovation)

Reference examples

Use of river water for the Webermühle Neuenhof development, Aargau

The Webermühle housing development was built in the '70s and '80s following the closure of local weaving and spinning mills. It includes five buildings, over 360 apartments and an energy reference area of around 28,300 m².

Following the renovation and in line with the historic use of river water on the site, heat is now supplied via the environmentally friendly method of river water heat pumps. The river water is fed into the heating plant, and the heat is then transferred to an intermediate circuit via a heat exchanger. A heat pump produces the hot water, which is then distributed to the substations in the residential buildings.

As part of the renovation project, ewz was responsible for the planning, financing, implementation and subsequent operation of the entire heat supply. Our energy solution enables users to enjoy comfortable heating and offers the operators a full service package on attractive financial terms.

These days, waterways are often too warm for flora and fauna. The cantonal environmental authorities therefore welcome measures to extract heat from the water. The system meets all environmental protection regulations and covers 70 per cent of the development's heating requirements – carbon-free.



Technical specifications

Scope of supply	Heating solution
Services	Planning, financing, construction and operation
Heat generation	Bivalent using heat pump (river water) and natural gas for redundancy and to meet peak demand
Heat required	3,000 MWh/a 70% carbon-free
CO ₂ reduction	around 650 t/a
Commissioning	2016

ewz
Energy Solutions
Tramstrasse 35
8050 Zurich

energysolutions@ewz.ch
www.ewz.ch/en/energysolutions
058 319 47 12



Baugenossenschaft des eidgenössischen Personals (BEP)

Bändlistrasse 37 to 65, Zurich



Technical specifications

Scope of supply	Heating solution for 15 buildings with 152 apartments and photovoltaic solution
Services	Planning, financing, construction and operation
Heat generation	Heat pump (groundwater)
Heat required	1,750 MWh/a 95% carbon-free
CO ₂ reduction	around 500 t/a
Commissioning	2013

Benziwil complex

Emmenbrücke (LU)



Technical specifications

Scope of supply	Heating solution for 900 apartments
Services	Planning, financing, construction and operation
Heat generation	Wood chip heating. Natural gas for redundancy and to meet peak demand
Heat required	8,400 MWh/a 80% carbon-free
CO ₂ reduction	around 1,500 t/a
Commissioning	2014

Isengrind energy network

Zurich-Affoltern



Technical specifications

Scope of supply	Heating solution for: residential development, school, nursery school, retirement centre (with additional cooling solution) and retirement apartments
Services	Planning, financing, construction and operation
Heat generation	Heat pump (geothermal). Natural gas for redundancy and peak demand. Heat pump (air/water) for hot water in the summer
Heat required	3,000 MWh/a 80% carbon-free
CO ₂ reduction	around 620 t/a
Commissioning	2019