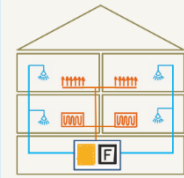


Bivalent Heat Pumps, Switzerland

The heating system in this multi-family housing estate was completely exchanged.



F1.5

Key facts

Buildings

Location	Zurich, Switzerland
Construction	1928
Renovation	2001
Project type	retrofit
Heat distribution	-
Heated space	-
No. of apartments	12 MFHs with 82 dwellings
Level of insulation	-

Heat pump and source

Number of	-
Operation mode	bivalent
Heat source	air, exhaust fumes

Heating system

Heat demand for the whole urban settlement	985 MWh/a
Heating temperature	-

Domestic hot water

Type of system	mix
Max. temperature	-

Other information

Coefficient of Performance	-
Refrigerant	-
Gas boiler	300 kW

Lessons learned



Pictures: Baugenossenschaft Oberstrass

In 2001, the whole heating system of the multi-family housing settlement in the quarter of Oberstrass in Zurich from 1928 was renovated. Instead of simply exchanging the burners, a bivalent heating system, was installed: Now a air/water heat pump provides roughly half of the heat demand for Space Heating and Domestic Hot Water.

During the summer, the heat pump manages to provide all of the Domestic Hot Water demand; during the winter there is an additional gas boiler running. In addition to external air, residual heat from exhaust fumes is used as a heat source.