



Highest living comfort and exemplary energy efficiency

Residential building in Berlin's City West
 50 residential units, 5,700 m² heat surface
 Completed in: 2016

Geo-En service
 Planning, construction and management

GeoHybrid energy system
 Heat pump, probe field, CHP,
 building foundation storage
 210 kW heating, 80 kW cooling



Geo-En has built an energy system for the high-quality new building near Berlin's Kurfürstendamm, which is marked by increased comfort and exemplary energy efficiency. In order to offer high-quality cooling service at noon, a geothermal energy system has been implemented for passive cooling and the foundation plate is activated thermally. The 80-cm thick foundation plate is used as storage which cools at night. This way the geothermal energy system and the foundation plate act as cooling sources at noon and fulfil the requirement together. A hybrid of a heat pump and CHP is used to produce heat. The CHP provides electricity for the heat pump, this almost no main voltage is required. The heat pump injects the environmental energy in to the system and produces approximately four units of heat from one unit of electricity. In extreme frost periods, a heat pump and CHP are supported by a condensing gas boiler. This way an optimal result is obtained in terms of cost effectiveness and energy efficiency.

