



Built-in climate protection

100 climate protection estates in NRW



The project

The „100 Climate Protection Estates in North Rhine-Westphalia“ are intended to achieve a consistent reduction of the heat-related CO₂ emissions in residential estates (new and refurbished housing).

All technologies suitable for cutting back CO₂ can be deployed for this purpose. Planners and investors will thus have the freedom to select innovative building standards and supply variants from a wide range of options. Even though the main aim of the climate protection estates is to avoid CO₂ emissions, they should also have special urban development and social qualities beyond their innovative energy concept.

Features and requirements

- high thermal insulation standard (passive house or three-litre standard)
- minimum size: 20 owner-occupied homes/30 dwelling units in multi-storey buildings/50 care home places
- urban development qualities and sustainable residential estate development

CO₂ limits (for heating, hot water, auxiliary energy, without domestic power)

- 9 kg/m²a in new buildings
- 12–15 kg/m²a in refurbished buildings



Example of new building:

Essen, Dilldorfer Höhe climate protection estate

- 68 rented dwelling units in semi-detached, terraced and multi-family houses
- thermal insulation standard: partly passive houses, partly three-litre standard (15–35 kWh/m²a)
- ventilation systems with heat recovery
- heating and hot water multi-family houses: heat pumps and solar-thermal panels
- heating and hot water semi-detached houses and terraced houses: gas-fired condensing boilers and solar thermal systems
- PV systems on some buildings (36 kW_{peak})
- housing association: Allbau AG, Essen
- realised: spring 2011 to end of 2013

Example of refurbishment:

Hattingen-Südstadt climate protection estate

- refurbishment of 75 dwellings from the 1950s
- extension of an attic development to 82 dwellings
- thermal insulation standard: approx. 20 kWh/m²a
prior to refurbishment: approx. 120–140 kWh/m²a
- central ventilation systems with heat recovery
- heating and hot water: central gas-fired condensing boiler
prior to refurbishment: partly self-contained gas-fired heating systems, partly night storage heating systems
- housing association:
Hattinger Wohnungsgenossenschaft hwg eG
- realised: 2011 to beginning of 2014



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