

D4 HIGH ENERGY-PERFORMANCE BUILDINGS FOR NEW HOUSING



SYNOPSIS

300 new eco-building dwellings, with a high percentage of social housing, are constructed in the new housing area of Harnaschpolder, Delft.

BACKGROUND

In 2003 the City council of Delft approved the Delft Climate Plan. One of the most important projects of this plan has been the realisation of the Delft District Heating Company, using low temperature residual (industrial) heat for the heating of new and existing dwellings and utilities. Combined with high energy efficiency goals for the new housing area of Harnaschpolder and the renovation of the Poptahof neighbourhood the path was paved to participate in the SESAC project.

OBJECTIVES

Build 300 new energy-saving dwellings in Delft:

- These dwellings show high energy-performance and are connected to low temperature sourced district heating.
- The aim is to reach an average of the energy demand for space heating of 18-20%. 70% of the heat demand is supplied by Renewable Energy Sources.

PROJECT DESCRIPTION

In the newly built Harnaschpolder area in Delft, about 1,300 new dwellings are to be built in the period 2009-2015. The building programme contains 30% of social housing, equally divided by social rental end social-occupied property. The first 274 dwellings of the Harnaschpolder have been built during the SESAC project. They show high energy savings through high insulation measures and connection to the low temperature district heating sources.



RESULTS

The energy performance coefficient is 20% beyond Dutch legislation.

Insulation specifications:

- Façade/wall 0.27 W/(m².K)
- Roof 0.19 W/(m².K)
- Ground floor 0.24 W/(m².K)
- Windows 1.1 W/(m².K) for glazing
- Ventilation rate 0.9 (dm³/s)/m²

The monitoring and evaluation is done by EREA, the local energy agency.

NEXT STEPS

As a spin-off of the SESAC project, the Vidomes housing association decided to enlarge the sustainable character of the dwellings by adding a solar system of 58 kWp. As owners of the properties, housing associations are also working out a way to continue the feedback through behavioural campaigns.

RECOMMENDATIONS

Accept that different partners have different points of view. Discuss them in the beginning of the project and keep them in mind during the hard periods of the project.

FURTHER INFORMATION

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