

Editorial

Dear reader,

You are reading the first newsletter of the NEXT-Buildings project. This project is one of the four selected for support in the call "Very Low Energy Buildings" in the EU FP7. The project started as of January 1, 2012.

This newsletter gives you an update on recent developments within the first six months of the project.

Enjoy your reading.
Best regards,

Rudy A. Rooth



NEXT-Buildings Introduction

NEXT-Buildings consists of three demonstration projects, located in Amsterdam West in The Netherlands, Lyon in France and Helsingborg in Sweden.

In all demonstrations, the ambition is net zero carbon/energy or better (active or plus-energy houses) in relation to the building operation-bound energy consumption. With that ambition, the project paves the way for large scale implementation and replication of energy neutral buildings/neighborhoods as foreseen in the Energy Performance of Buildings Directive. Focus is on the optimal economic balance between saving energy and integration of local production of renewable energy interacting with the overall energy systems. Common approach is: 1- Reduce demand, 2-Sustainable heat, 3- Local renewables for residual demand.

The set-up of the project ensures that past Concerto experience is brought into the project and that solutions employed are developed and challenged by the presence of dedicated companies and organisations across Europe. The three pilots have a total gross floor area of about 50.000 m² and demonstrate several RES solutions interacting with overall energy systems.

All together, 12 partners are enthusiastically working together to turn their ambition into reality.

Amsterdam Houthaven



Local policy of the city of Amsterdam is that all new developments should be carbon neutral by 2015. Until 2015 Amsterdam aims for carbon neutral development in 40% of the building projects. The Houthaven in Amsterdam West ('Stadsdeel West') is one of the pilot projects that already have the objective to build carbon neutral and set the standard for cost effective carbon neutral development in Amsterdam after 2015.

Houthaven used to be a timber handling area where many wood factories and related companies were located. After a long history of industrial activities, the Houthaven will be transformed into a residential area. In total 7 islands will be developed, providing space for 2200 dwellings, 70 house boats and 50.000 m² facilities. In the NEXT-Buildings project, 30.000 m² of net zero energy buildings will be realized in the area named "Blok 0". Special about Blok 0 is that not real estate developers have the lead in developing this area, but consortia of future residents will have the lead. On June 15th, the Notary selected the consortia who will get the opportunity to develop dwellings on their plot.

Project office Houthaven received in total 28 submissions of consortia and building professionals for one or more plots in Blok 0. Interest overwhelmed the expectation, exceeding the number of available plots. Seven parties got selected to proceed with the next steps: to sign the agreement with Stadsdeel West (August 1) to use the coming year to transform the pre-design into a final design according to local requirements, and to secure funding for their project. Milestones are part of the agreement, with the risk of losing their reservation for the plot to other interested parties, in case milestones aren't met. In total about 250 dwellings are foreseen, as well as about 700m² of other functionalities such as ateliers and studios. A collective car parking will be realized, and additionally parking will be possible at some of the plots. A first impression of the buildings in Blok 0, is shown in the photo below.



Lyon – Confluence



The goal of the P Plot project is to build a 12 000 m² zero energy building in the Lyon-Confluence area in Lyon, France. SPLA Lyon-Confluence, the public company in charge of the Lyon-Confluence urban project, has already been involved in a demonstration project for the construction of the first buildings of this major urban regeneration project (CONCERTO Renaissance project). As this first demonstration project had a significant impact

on the other buildings that have been constructed in this area, SPLA Lyon-Confluence now wants to build a new demonstration building with improved energy efficiency targets. After an international design competition, SPLA Lyon-Confluence has selected a group of real estate developers, Bouygues Immobilier and SLC associated with the Japanese architect Kengo Kuma, that have designed a building called Hikari. This building will also be designed in partnership with NEDO, the New Energy and Industrial Technology Development Organisation of Japan.

Apart from the P plot design process, there is a lot going-on in the Lyon-Confluence area right now: the leisure centre located just in front of P plot on the opposite side of the water place has just been commissioned a few weeks ago and also SPLA Lyon-Confluence has just started to organise the next developer competition, just after P Plot, for another plot for which the energy specifications should be based on the P plot achievements and results.

Helsingborg Grönkullan and Hålan

In Helsingborg there is a very ambitious climate action plan, where the city as a whole has already reduced its CO₂ emission by about 88% compared with 1997 level and the share of fossil fuel is now less than 20%. The goal is to become totally CO₂ neutral or even to export CO₂ neutral energy to neighboring areas. The municipality owned housing company Helsingborgshem, is the major player owning more than 35% of the new buildings coming up in Helsingborg.

In the NEXT-Buildings project, new very low energy buildings will be realized, being the first phase of a huge and very ambitious 311000 m² Ecodistrict development. There will be a mix between new and refurbished buildings, together forming a more sustainable new neighbourhood. The new buildings will be established as fill-in buildings in between the eco-rehabilitated buildings. The new houses will not only be Passive houses or Zero Energy Buildings - they will also be "Active Houses" which are considered the NEXT generation of low energy houses. The space heating demand will be less than 15 kWh/m². Demonstration buildings will be realized, containing new innovative technologies at affordable cost. Active houses are active as they produce electricity (exchange/export of electricity to grid) and heat (exchange/export of solar to district heating). They are also active in user involvement, behavior and demand control etc and have an important role for the development of the total adjacent area



The NEXT step, R&D for even higher energy performance

The three demonstration project in Amsterdam, Lyon and Helsingborg will demonstrate the feasibility of nearly zero energy buildings. New technologies will enable a further increase energy performance of buildings: a further reduction of energy demand, a increase in energy produced locally, easier installation and further increase in control and comfort. In the NEXT-Buildings project three innovative technologies are included: Dual function insulation/photovoltaic building elements. Innovative windows and ICT solution. The dual function building elements will simultaneously optimize insulation and photovoltaic conversion properties, and improve easy handling, aesthetics, and cost-effectiveness. The innovative windows will enable day light steering, based on micro lamellas in the glass, and ICT solutions will optimize the use of locally produced electricity, heat and cooling, an will provide inhabitant feedback based on smart metering and near real time data gathering.

What's NEXT?

In the next issue of our newsletter we will, besides giving an update on the latest developments in our three pilots, elaborate on the innovative technologies in the NEXT-Buildings project.

Partners in the project



NEXT-Buildings is supported by the EeB PPP programme, funded by the European Unions's 7th framework research programme

