

# NORDIC BUILT ACTIVE ROOFS AND FACADES

## A NEW CONCEPT FOR INTEGRATED SOLUTIONS



## ACTIVE ROOFS AND FACADES

In the Nordic market there is a lack of solutions for sustainable renovation that can be integrated in existing buildings with respect to both architecture, comfort and energy efficiency.

Therefore there is a need to showcase integrated prefabricated solutions including the integrated use of solar energy, and show that such solutions has benefits for both building users, owners, renovation companies and advisors.

### **A strong Nordic partnership**

The Nordic Built - Active Roofs and Facades-project, supported by Nordic Innovation, will allow a strong development of leading Nordic competences in the area of building renovation. This is achieved by creating a transnational Public Private Partnership that supports the development of nearly zero energy building solutions and associated performance documentation.

The cooperation to develop models and demonstrate sustainable renovation will create a strong Nordic partnership which also involves companies from the international Active House Alliance.

### **Prefabricated and integrated solutions**

The project will develop a concept for integrated solutions for renovation. The concept will result in prefabricated solutions such as facades or roof elements that will be brought to the building and can be tailored to the specific needs of the building.

The concept will involve the Active House Specifications and follow the ten parameters in the Nordic Built Charter together with the Active Roofs and Facades ideal concept where relevant for the renovation site.

### **Showcased on apartment buildings and schools**

A number of both apartment buildings projects and school projects in the Nordic countries represented in the project will be used as showcases using the concept in a renovation.

A high-level assessment with Performance Documentation will be part of the showcases. The cooperation to develop models and demonstrate sustainable renovation will create a strong Nordic partnership which also involves companies from the international Active House Alliance.



IT IS OUR BELIEF THAT ACTIVE ROOFS AND FACADES WILL BE A NEW TREND FOR THE FUTURE. BY REALISING AND TESTING BEST PRACTICE SOLUTIONS IN THE NORDIC COUNTRIES WE BELIEVE THIS WILL IMPROVE THE IMPLEMENTATION OF THESE SOLUTIONS IN PRACTICE."

PEDER VEJSIG PEDERSEN, CENERGIA

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## Basic idea behind solutions

The idea behind the project is to develop solutions that can be integrated into buildings and support a new way to renovate buildings based upon:

- high-quality insulation without thermal bridges
- active facades with new glazing design and multi-functional windows
- decentralised Heat Recovery Ventilation design integrated into the building envelope and windows
- Building-integrated photovoltaics (BIPV) on the roof and facade
- a smart grid approach for electricity and heating
- integrated daylight solutions, optimising daylight in buildings and reducing energy consumption
- integrated performance documentation focusing on the Nordic Built Charter and the Active House Specifications.

## ABOUT NORDIC BUILT

### ACTIVE ROOFS AND FACADES

The project will showcase integrated prefabricated solutions including the integrated use of solar energy, and show that such solutions has benefits for building users, owners, renovation companies and advisors.

## FINANCING

The project has been funded by Nordic Innovation with NOK 2.273.900, EUDP with NOK 4.963.000 and by the University of Iceland and the Swedish Energy Agency.

## PROJECT PARTNERS

AVENTA, Cenergia, Copenhagen City Properties (KEjd), Demos, Ecovent, FBBB, Gaia Solar, Gate 21, Hoyer Finseth, KAB, Kuben Management, Solar City Denmark, SolarPlan, University of Iceland, VTT, WSP Group and ZED Consulting.

## PROJECT MANAGEMENT

Peder Vejsig Pedersen and Vickie Aagesen, Cenergia

## TIME FRAME

May 2014 - April 2017

## THE PROJECT IS SUPPORTED BY



norden

Nordic Innovation



Energiteknologisk udvikling og demonstration



UNIVERSITY OF ICELAND

## PROJECT PARTNERS



CENERGIA



KØBENHAVNS KOMMUNE  
Økonomiforvaltningen  
Københavns Ejendomme

DEMOS

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FORENINGEN BÆREDYGTIGE  
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UNIVERSITATIS ISLANDIÆ  
UNIVERSITY OF ICELAND



ZED Consulting

## MORE INFORMATION

Peder Vejsig Pedersen  
Cenergia  
Herlev Hovedgade 195 st.  
DK-2730 Herlev  
+45 4466 0099  
pvp@cenergia.dk