

2011 HIGHLIGHTS

SHC Task 47 Renovation of Non-Residential Buildings towards Sustainable Standards

THE ISSUE

The EU Parliament approved in April 2009 a recommendation that member states have to set intermediate goals for existing buildings as a fixed minimum percentage of buildings to be net zero energy by 2015 and 2020.

For the existing non-residential buildings a dramatic reduction in primary energy consumption is crucial to achieve this goal. A few exemplary renovation projects have demonstrated that total primary energy consumption can be drastically reduced together with improvements of the indoor climate. Because most property owners are not even aware that such savings are possible, they set energy targets too conservative. Buildings renovated to mediocre performance can be a lost opportunity for decades. It is therefore important that building owners be aware of such successes and set ambitious targets

OUR WORK

The objectives of this Task are to develop a solid knowledge base on how to renovate non-residential buildings towards the NZEB standards in a sustainable and cost efficient way as well as to identify the most important market and policy issues as well as marketing strategies for such renovations.

This Task will start by analyzing highly successful renovations and develop innovative concepts for the most important market segments.

Equally important, local authorities, companies and planners also need the knowledge how to achieve market penetration of such solutions. Success stories and planning knowledge will be communicated to target audiences to accelerate a market break-through of highly effective renovations in non-residential buildings.

PARTICIPATING COUNTRIES

Australia
Austria
Belgium
Denmark
Germany
Italy
Norway

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Task Leader Fritjof Salvesen, Asplan Viak AS, Norway
Email fritjof.salvesen@asplanviak.no
Website <http://www.iea-shc.org/task47>

KEY RESULTS OF 2011

The Task is in its starting phase and the outcome will be visible from 2012.

However, the participants have during 2011 agreed on a set of criteria for the selection of 47 exemplary renovation projects.

Building types: Office, Educational, Culture, Hotels. Historic and protected buildings are included



Energy: Goal: Towards a NZEB building

- Optimized building envelope and technical installation using the best available technologies/products on the market
- Within the given constraints of the individual building (e.g. for protected / historic buildings)
- At least 60% reduction in the primary energyUbt. demand (heating, cooling, ventilation, lighting, DHW and pumps) (according to the calculation rules given by the EPBD standard or other similar standards)
- The renovated standard should be better than the national standard building code for new buildings
- Embodied energy strategies to be considered

Economics: Marketable solutions

Market potential: Replicable building concepts

An eight pages template for the presentation of exemplary buildings on the public web has been developed. The figure below shows the front page. Several renovation building presentations will be uploaded on the public web-site during 2012.

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| Norwegian Tax Authority - Oslo Norway | |
| 1. INTRODUCTION | |
| PROJECT SUMMARY Year of construction - 1980 None past energy renovations |  |
| SPECIAL FEATURES Main topics in the renovation are: <ul style="list-style-type: none">• High insulated pre fabricated façades• Airtightness 0,6 h-1• Reduced surface to volumen ratio• Energy recovery from data facility / basement of building• High efficiency technical systems, COP cooling systems, efficient heat recovery , and low SFP | |
| ARCHITECT LPO Architects AS, Oslo | |
| Consultant Sweco, Multiconsult, Hembra | |
| Partners ENOVA, Norway, Future built, Norway | |
| OWNER Entra Real Estate Company | |
| Brochure Arne Farland Larsen | |
| Contact | |
|  | |
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