Calculation methods for single-sided natural ventilation - simplified or detailed?

Larsen, Tine Steen; Plesner, Christoffer; Leprince, Valérie

Published in:
CLIMA 2016

Publication date:
2016

Document Version
Version created as part of publication process; publisher's layout; not normally made publicly available

Link to publication from Aalborg University

Citation for published version (APA):
DEEP ENERGY RENOVATION AND ONE-STOP-SHOP SOLUTIONS
FOR PRIVATE HOME OWNERS

Tine Steen Larsen, associate professor, Aalborg University

CLIMA 2016 – WS28 Cost-effective deep renovation of buildings
24.05.2016

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 649865

The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither EASME nor the European Commission are responsible for any use that may be made of the information contained therein.
About the project

• Inspire homeowners to carry out deep energy renovations
• Achieve 50-80% reduction in energy use
• Easy, economical and efficient
• Bridging demand and supply side
• One-Stop-Shop
About the project

• Focus on ‘deep renovation’
• Push the market of energy renovation in existing buildings even further
• The project builds on existing knowledge and best practice
• Is funded with 2 mio. € by Horizon2020
13 partners in 6 EU countries

- Local authorities
- Local companies
- Knowledge institutions

From Belgium, the Netherlands, Germany, Slovenia, Estonia, Denmark
Drivers and barriers for deep renovation

Depend on

• The dweller (income, age, family pattern, young family, empty nesters, convinced energy savers, just moved in)

• The dwelling (type, condition, energy bill)
Drivers & barriers in different stages of the decision making process

Source: Christian A. Klöckner, NTNU, Norway, 2013
Technical drivers and barriers

Technical drivers and barriers are linked with the dwelling characteristics and the challenge to renovate to NZEB.

**DRIVERS:**
- Urgency for renovation & lock-ins
- Availability of tailormade stepwise approach for NZEB-renovation
- Inconveniences and defects in the house

**BARRIERS:**
- Inconvenience linked to the renovation
- Technical possibilities
Financial drivers and barriers

Financial drivers and barriers are linked with the financial possibilities of the dweller and the cost of the NZEB-renovation.

**DRIVERS:**
- Subsidies, financial incentives, etc.
- Energy bill
- Return on investment

**BARRIERS:**
- Feel secure about investment
- Cost for NZEB-renovation

**BOTH:**
- Availability of financial possibilities to invest
- Willingness to invest in energy efficiency / competing products

---

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 649863
Social and behavioural drivers and barriers are linked with the decision making process of the dweller.

**DRIVERS:**
- Renovation needs & intentions: increase comfort level, cosiness, personalization, taste, adjust architectural concept...
- Advice, unburdening & guidance
- Awareness of energy saving potential
- Accurate, reliable & tailor-made information
- General knowledge level
- Neighbourhood action, group action

**BARRIERS:**
- Decision making, self-reliance & empowerment

**BOTH:**
- Momentums for renovation (why now?)
- Availability of time to manage renovation project
• Bridging demand and supply side
• Mapping of the supply side
• Mapping all the different technical solutions that fit consumer needs

One-stop-shop concept
One-stop-shop concept

Holistic approach to the renovation process by combining technology combinations and improved communication between the house-owner and the supplier

- Local partnerships
- Local energy solutions
- Closeness to consumers in the participating countries
- Simplifies the possibilities and gives an overview
- Prioritizes the investment
- Provides a compelling offer
Tailormade solutions
Best case examples from 6 EU countries will inspire home owners to take action
http://go-refurb.eu/
deep home energy renovation exceeding borders and regions