Client-driven resource efficiency: the nearly Zero Energy Hotel Experience

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Sustainable Buildings and Cities: Supporting climate mitigation through resource efficiency

Villes et bâtiments durables : l’économie des ressources au service de la lutte contre les changements climatiques

25-26 June 2015 - Nice
Nearly Zero Energy Hotels

The IEE project NEZEH

www.nezeh.eu

Contract: IEE/12/829/SI2.644758
Project duration: 01/05/2013 - 30/04/2016
Background

• Buildings account for ≈40% of total energy consumption and 36% of GHG emissions in EU
• Ambitious EU targets for 2020 and even more for 2050; 90% reduction in domestic GHG emissions by 2050 compared to 1990 levels
• National roadmaps include measures to challenge nZEBs
• Large cost saving potential for energy improvements - Retrofit enables 20-50% energy and operating cost savings
• nZEB concept not well developed in EU; low awareness among the building and hotel sectors’ stakeholders about potential and benefits or about suitable technologies
• Limited experience on the design and implementation of nZEB projects; Limited examples in the private sector to be used as prototype
• Increasing challenges for energy consumption reduction and competiveness for the hotels industry
• Barriers in the bankability of such investments, especially in MS under economic crisis.
The neZEH project objectives

To accelerate the rate of refurbishment of existing hotels into Nearly Zero Energy Buildings (nZEB):

- providing technical advice to hoteliers for nZEB renovations
- demonstrating the competitive advantages and sustainability of nZEB projects
- challenging further large scale renovations through capacity building activities
- showcasing best practices and promoting front runners

Area of implementation: Greece, Spain, Italy, Sweden, Romania, Croatia, France, EU level intervention
NEZEH supports EU policy and targets

NEZEH mainly addresses to the EPBD Recast (Art. 9), contributing directly to the EU 2020 targets:

- after 31 December 2020, all new buildings are nZEB; and
- after 31 December 2018, new public buildings are nZEB.
- MS shall draw up national plans for increasing the No of nZEB and will develop policies / measures to stimulate the transformation of buildings into nZEB.

- National plans should include:
  - detailed application of the nZEB definition, including a numerical indicator of primary energy use in kWh/m² per year.
  - intermediate targets for improving the energy performance of new buildings, by 2015
  - information on policies and financial or other measures adopted for the promotion of nZEB including measures concerning the use of RES (Article 13(4) of 2009/28/EC and Articles 6 and 7.

nZEB = very high energy performance + on-site renewables
What is a neZEH hotel

A nearly Zero-Energy Hotel (neZEH) is a hotel that has a very high energy performance. The nearly zero or very low amount of energy required should be covered to a very significant extent from renewable sources, including energy from renewable sources produced on-site or nearby.

Following the EPBD recast
The Challenge

• Promote widely the nZEB concept; inspire and involve stakeholders of the nZEB value chain

• Support SME hotel owners in their investment decisions towards nZEB, providing technical assistance and practical tools

• Demonstrate successful replicable examples; prove the feasibility and sustainability of neZEH projects

• Help hoteliers to reduce operational costs, to improve their image and services, so as to enhance their competitiveness

• Trigger further large scale renovations in the hotels industry, but also stimulate new nZEB constructions

• Contribute the EU efforts for the GHG emissions reduction.
Steps

- Insights of good examples
- Decide on the neZEH targets
- Ranking of technologies-practical tools
- Capacity building
- Build on real examples
- Front Runners
- Policy recommendation
- Capitalisation of results – Roadmap forward

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Expected results 1/2

**An EU level neZEH network**, facilitating exchanges between the supply (building professionals) and the demand side (SME hotel owners)

**A practical e-tool**, to empower SME hoteliers to assess their energy profile and to choose best technical solutions in order to reach an nZE level. *Consortium will upgrade the HES tool.*

**10-14 pilot projects**, in 7 countries, to act as “living examples” challenging much more SMEs to invest in neZEH projects

**15,000+ hotel owners informed** and gained access to the project results in EU level

Tailor made **marketing guidelines and a set of promotional tools** to help front runners to communicate efficiently and to widely promote their business to potential customers and tour operators.
Expected Results 2/2

Long term neZEH will:

- Benefit the European hospitality sector, helping hoteliers to reduce operational costs, to improve their image and services and so as to enhance their competiveness.

- Help Member States to reduce CO₂ emissions by 2020:
  - Primary energy savings: 8.977 toe/year
  - Reduction of GHG emissions: 17.787 tCO₂e/year
## NEZEH Consortium

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<td>Technical University of Crete, Renewable and Sustainable Energy Systems Lab (ENV/TUC)</td>
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JOIN THE neZEH NETWORK: www.nezeh.eu

Training and Capacity Building
- Training courses for hotel owners and staff.
- Technical guides, practical informational material.
- Access to experts' advice.

E-toolkit
- Assess your energy performance.
- Find out solutions to minimize your hotel's energy cost and to reach neZEH status.
- Get an estimate of cost and return on investment.

Marketing tools
- Tailor made marketing guidelines and promotional tools for nearly zero energy hotels.
- Visibility at European and national level.

neZEH community
- Be part of a European network.
- Exchange experiences and know-how with other hotel owners.
- Link hoteliers with building professionals and energy companies.

info.nezeh.eu
Thank you for your attention

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