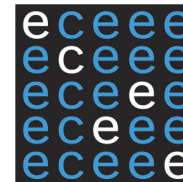


Nearly Zero Energy Buildings: Achieving the EU 2020 Target

Rod Janssen

**European Council for an Energy Efficient
Economy**

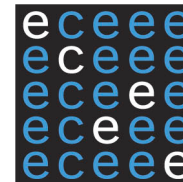
Sustainable Energy Week, April 13, 2011



Starting from Basics: What is a Nearly Zero Energy Building

- A “nearly zero energy building” is a building 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 by energy from renewable sources, including energy from renewable sources produced on-site or nearby.

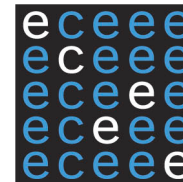
Article 2 (2) of Directive 2010/31/EU on the recast of the EPBD



Starting from Basics: What is the Target

- (a) by 31 December 2020, all new buildings are nearly zero-energy buildings; and
- (b) after 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

From Article 9 of the EPBD recast



Selected Targets in MS

Selected National Targets for New Buildings

Denmark: 75% by 2020 (c.f. base year 2006)

Finland: Passive house standards by 2015

France: By 2020 new buildings are energy-positive

Germany: By 2020 buildings should be operating without fossil fuel

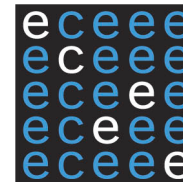
Hungary: Zero emissions by 2020

Ireland: Net zero energy buildings by 2013

Netherlands: Energy-neutral by 2020 (proposed)

Norway: Passive house standards by 2017

UK (England & Wales): Zero carbon as of 2016



Is Zero Energy Achievable?

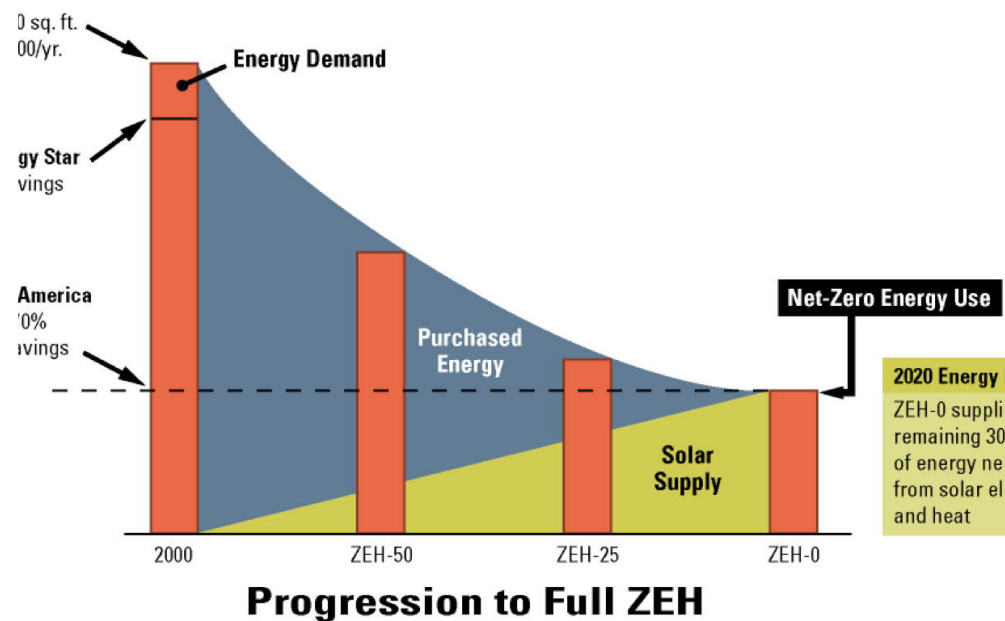
Under the EC's Impact Assessment, several options were assessed, including *Option D4: Setting up EU-wide low or zero energy/carbon buildings/passive house requirements*. Compared to the other options for improving the energy performance of buildings assessed by the Commission, this option gave by far the largest energy and carbon savings and resulted in the largest number of jobs created (240,000-580,000). It also had a low administrative burden.

The Commission felt that such a requirement would pose a significant challenge to the construction industry to build such homes and would increase prices by 7% to 15%.

. . . Therefore, a softer approach was recommended, which was to include an obligation for the development of 'roadmaps,' wherein Member States would show their commitment toward achieving low energy/emission houses in the future and the concrete measures they plan to undertake.

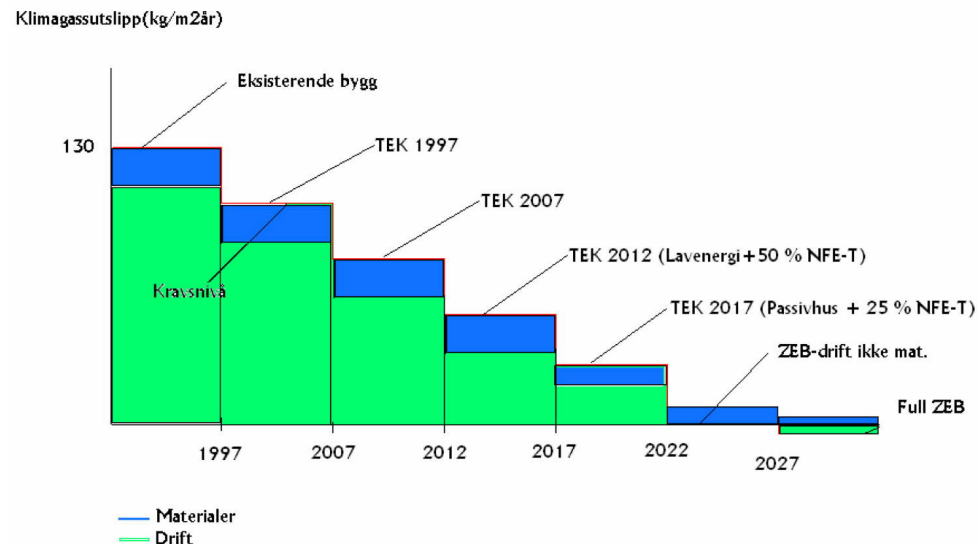
A US Pathway

In the United States, the Government's Building America programme is focused on research and promotion of the drive towards zero energy buildings. The schematic below sets out their pathway



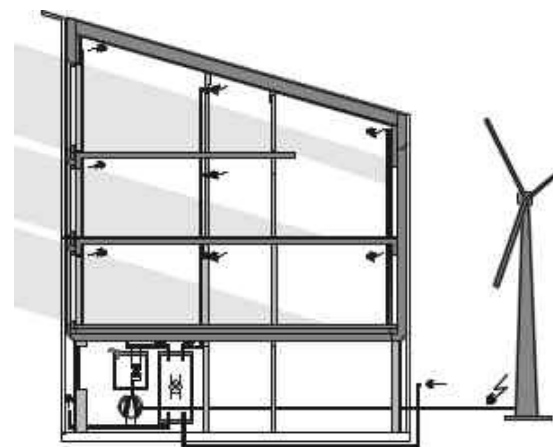
A Norwegian Pathway

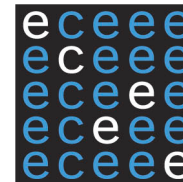
In Norway, the “Low Energy Commission” report of August 2009 proposes a stepwise tightening of the Building Code. The primary objective is to develop solutions for existing and new buildings, both residential and commercial, in order to bring about a breakthrough for buildings with **zero greenhouse gas emissions associated with their construction, operation, and demolition.**



Going down the Path

Article 9 states that Member States shall draw up national plans for increasing the number of nearly zero-energy buildings. These national plans may include targets differentiated according to the category of building.

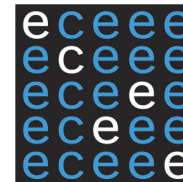




And the path continues . . .

Article 9 further states: “The Commission shall evaluate the national plans referred to in paragraph, notably the adequacy of the measures envisaged by the Member State in relation to the objectives of this Directive. . .

“The Commission shall by 31 December 2012 and every three years thereafter publish a report on the progress of Member States in increasing the number of nearly zero-energy buildings. On the basis of that report the Commission shall develop an action plan and, if necessary, propose measures to increase the number of those buildings and encourage best practices as regards the cost-effective transformation of existing buildings into nearly zero-energy buildings.”



What is needed on the Pathway - 1

Long term policy commitment at national level

Removal of legal, regulatory or administrative barriers

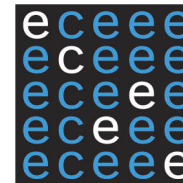
Clear definitions and guidance

Mobilisation of all major players

Benefiting from best practice

Creating awareness of the challenges ahead

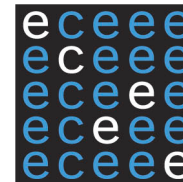
Creating awareness of the benefits of NZEB



What is needed on the Pathway - 2

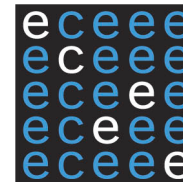
And these are essential:

- qualification of professionals, including training and certification
- mobilising architects and designers
- tightening building codes
- certification of products
- demonstrations now and incentives to retrofit below current new build requirements
- improved compliance
- gearing the public sector for early action
- . . . and probably more . . .



It is necessary to ensure . . .

- national strategies bring all the elements together early so that there is no chance of slipping in target dates
- a long term vision
- stamina!



Follow the Progress . . .

eceee regularly updates its *Steering Through The Maze* document: “Nearly Zero Energy Buildings: Achieving the EU 2020 Target” to follow progress of policy developments at the EU and MS levels

Take note . . .

ecee's sister organisation, the Buildings Performance Institute Europe, currently has a study underway entitled, Principles for Nearly Zero Energy Buildings. It is due to be published in July 2011.

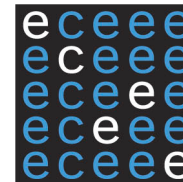
The aim of this study is to significantly contribute to a common and cross-national understanding on:

- the necessity for an ambitious, clear definition and fast uptake of nearly zero-energy buildings in all EU Member States;
- technical specificities and principles of nearly zero energy buildings, both new and existing;
- possible solutions and examples of roadmaps; and
- implications for national building markets, buildings and market players



There is no doubt, it will be a challenge





Thank you.

For more information, please go to:

www.eceee.org

See you at our Summer Study, June 6th to 11th
where there will be many discussions on Nearly
Zero Energy Buildings!

Remember: Energy Efficiency First!