

Energy Performance Certificates

Organizational setup for EPCs in Denmark

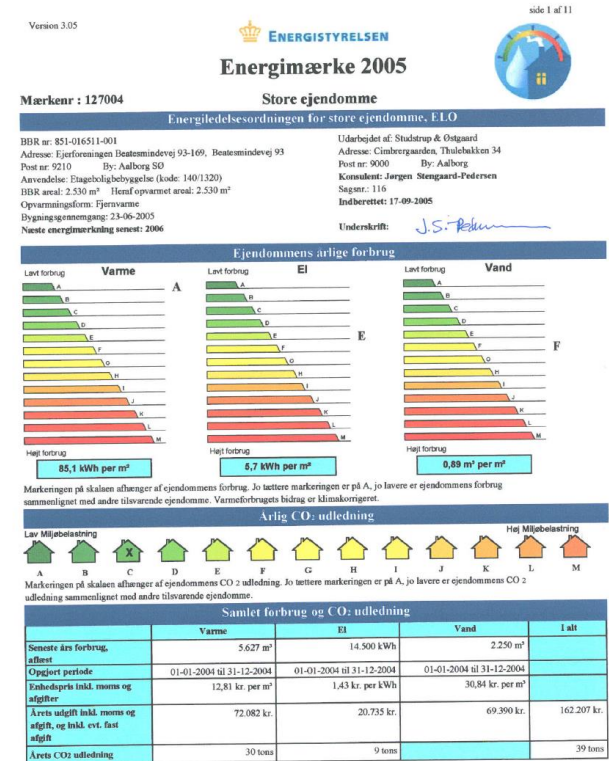
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Advisor, MSc

Background

1997: Energy labelling starts in Denmark

2002: EU directive. All member states obliged to start energy labelling of buildings

(EPBD: Energy Performance Buildings Directive)



Background

2006: New scheme for energy labelling in Denmark

2010: Mandatory to show the energy label in sales ads

Energimærkning SIDE 1 AF 12

Energimærkning for følgende ejendom:

Adresse: Amaliegade 44
Postnr./by: 1468 København K
BBR-nr.: 101-574938-001
Energimærkning nr.: 200014094
Cyldigt 5 år fra: 26-05-2009
Energikonsulent: Michael Jensen **Firma:** Moe & Brødsgaard A/S

Energimærkningen oplyser om ejendommens energiforbrug og mulighederne for at opnå besparelser. Mærkningen er lovpligtig og skal udføres af et certificeret firma eller en beskikket særegkspnsulent, som har godkendelse til at energimærke bygninger til handel og service samt offentlige bygninger.

Oplyst varmeforbrug

• **Udgift inkl. moms og afgifter:** 400.074 kr./år

• **Forbrug:** 656,11 MWh fjernvarme

• **Oplyst for perioden:** Fjernvarme: 01-01-2008 - 31-12-2008

Ejendommens oplyste forbrug og udgifter er klimakorrigerede af energikonsulenten, så det udtrykker forbrug og udgifter for et gennemsnitligt år rent temperaturmæssigt.

Energimærke

• **Lavt forbrug**
 A
 B
 C
 D
 E
 F
 G
 • **Højt forbrug**

Besparelsesforslag

Energikonsulenten foreslår forbedringerne nedenfor. Der kan være flere forslag på side Se mere om forslagene i afsnittet "Energikonsulentens bygningsgenngang".

Forslag til forbedring	Årlig besparelse i energienheder	Årlig besparelse i kr.inkl.moms	Støtt invester inkl.mo
1 Etablering af tidsstyring på varmeladepumpe	631 kWh el	1.300 kr.	2.000
2 Montering af ny cirkulationspumpe på brugsvandsanlæg	695 kWh el 1.740 kWh fjernvarme	2.400 kr.	6.000
3 Isolering af brugsvandsrør og cirkulationsledning i centralvarmerum	-7 kWh el -480 kWh fjernvarme	300 kr.	900 k
4 Udskiftning af fordelingspumper	11.171 kWh el	22.400 kr.	210.000

Bemærk: Forslagene bygger på det beregnede energiforbrug. Der er taget hensyn til den faktiske bygningen, herunder driftstider m.v. for installationer og for bygningen som helhed.

Det kan forekomme at et forslag sparer penge, men ikke energi – fx hvis dyr el erstattes fjernvarme eller hvis udgifter til vand reduceres.

SPAR PÅ ENERGIEN I DIN BYGNING
 - status og forbedringer

Energimærkningsrapport
 Granvej 10
 4100 Ringsted



Bygningens energimærke:

A A A B C D E F G

Gyldig fra 26. maj 2014
 Til den 26. maj 2021.

Energimærkningsnummer 311064256

ENERGI
 STYRELSEN

Denne rapport er udskrevet fra www.boligejer.dk, og er derfor tilgængelig for offentligheden. Det faktiske energiforbrug i bygningen fremgår ikke af rapporten, da denne oplysning er fortrykt for enfamilieuse.

The primary aim of energy labelling:

1. To declare the energy consumption of the building and make this visible when a building is for sale or for rent



2. To give the building owner an overview of possible energy savings if the building is refurbished (when labelling existing buildings).



Requirements for issuing energy performance certificates

- ISO 9001 certified company
- Energy consultant with a valid education (brush up courses every 3 years)
- ~ 200 registered, certified energy labelling companies



Two types of energy consultants:

- Energy consultants with a license to label single dwelling houses and multifamily houses up to 500 m²
- Energy consultants with a license to label multifamily houses above 500 m² as well as commercial buildings



It is possible to have a license for both types

3 types of EPC's for existing buildings:

EPC is needed:

- * *Sale*
- * *Buildings/apartment for rent*
- * *Regular EPF for buildings larger than 1.000 m² (every 7 or 10 years)*



- a) Based on an on-site registration of the building and afterwards a calculation in a software for energy labelling
- b) Based on the building's year of construction (< 25 years prior to the date of the EPC) and type of heat supply.
- c) Based on measured values of the energy consumption as well as on-site registration of the building.

Energy performance certificate of a new building:

EPC is a demand for new building in the building code

- A check to see if the building is complying with the building permit and the building code. Special focus on the **energy frame** and energy related requirements of the building code
- The EPC is sent to the building authority at the time when the building is done
- No suggestions for possible energy savings

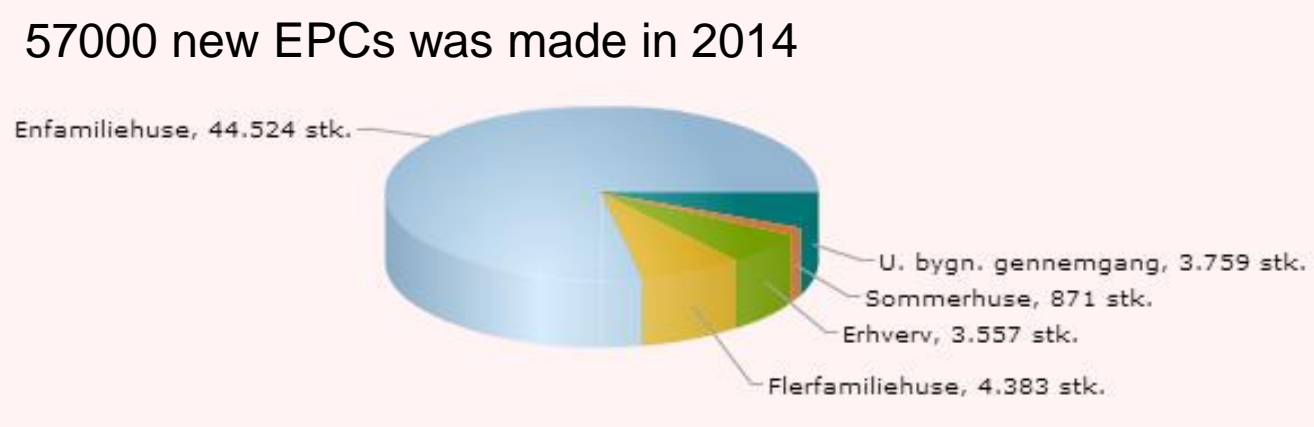


On site registration and calculation of the EPC

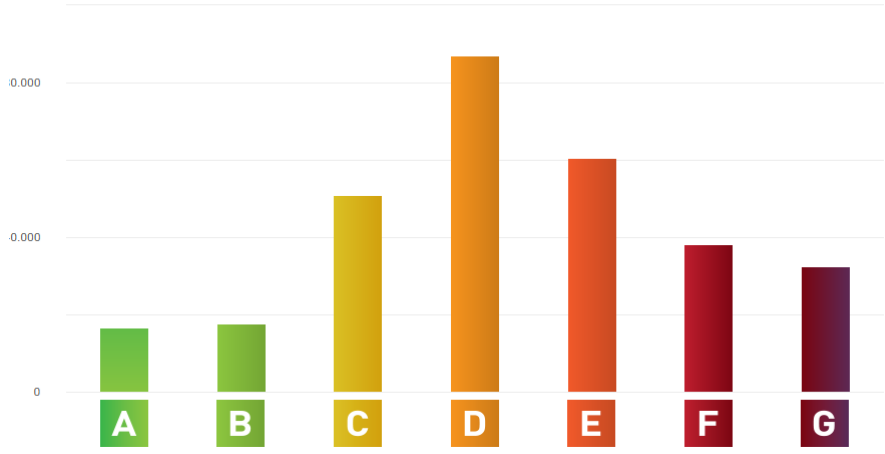
- Building envelope (type of constructions, amount of insulation (U-value), measuring areas etc.)
- Installations (heat supply, boiler (effects, efficiency), ventilation systems etc.)
- Potential for energy savings in the building envelope and/or the installations
- The energy label is based on the calculated yearly consumption of kWh pr. m² heated area.
- Calculation of the EPC is based on the registrations on site.
- Standard assumptions apply. Calculation is independent of the building users behaviour



Amounts of EPC and energy label distribution

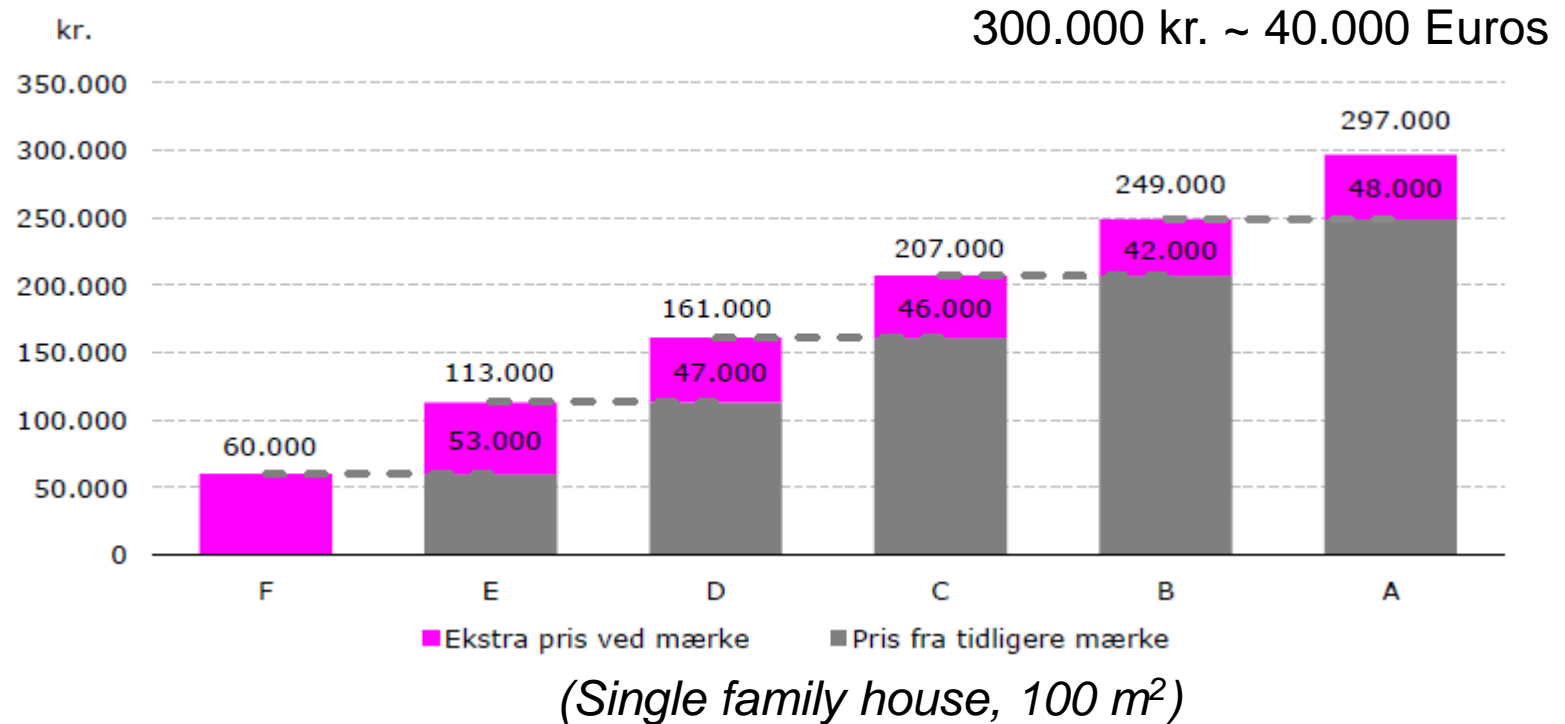


Existing building stock in Denmark is ~ 2.5 million buildings



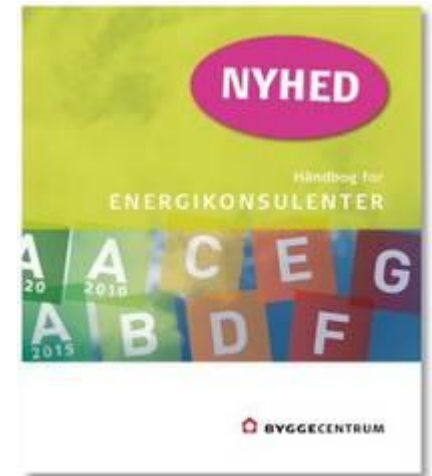
Single family house energy label distribution

The energy label and the sales price of a building is connected



The Danish Energy Agency: daily work with the EPCs

- Fee financed
- Registration of energy consultants and certified companies
- Education of energy consultants is outsourced
- Dialogue with the associations of the companies in the business
- DEA sets the guidelines for the EPC's and the work of the energy labelling companies and energy consultants (in accordance with the EBPD)



The Danish Energy Agency: daily work with the EPCs

- Maintaining websites and systems for filing in the EPCs
- Quality control
- Complaints about the EPC from building owners
- Answering questions from energy consultants and building owners
- Projects: i.e. better use of EPC's for municipalities, digital services
- The team: 3 Engineers (MSc), 1 Cand.jur, 1 IT, 3 administrative officers, 1 team leader



The Danish Energy Agency: daily work with the EPCs

Control and complaints

- 150-200 yearly field controls (random)
~ 40 complaints a year
- The EPC is controlled by another energy consultant, including a complete building registration
- A report is made to DEA
- DEA will decide if any sanctions to the company are needed (correction, remark, public criticism)



What do the owners complain about?



- The EPC claims my wall is a cavity wall, but there is no cavity at all
- I don't believe the label is correct, my energy consumption is much less than calculated
- The EPC says I have standard double glazing windows but they are infact energy efficient windows
- And many other things

- DEA determines if the EPC is faulty and shall be corrected
- DEA does NOT decide if the energy consultant is liable in damages
-> civil action

Thank you for your attention

Questions ?