Energy saving in buildings
- Situation in Denmark

ClearSupport event
Gdansk
8’th July 2009

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Presentation prepared by:
End-use energy efficiency has delivered

More than half of the total energy efficiency improvement originates from end-use efficiency
Energy Efficiency Measures in Denmark

Taxation:
- Energy taxes in households and in the public sector
- CO₂ taxes on energy used in all sectors

Buildings:
- Building codes
- Energy labelling of buildings

Appliances:
- Energy labelling of appliances (EU and GEEA)
- Minimum efficiency standards

Industry:
- Agreements about energy efficiency in industries (CO₂ package)

General:
- The Electricity Saving Trust
- The energy-saving activities carried out by the grid companies (electricity, natural gas, district heating)
- Energy Saving Act
- Different subsidy schemes
Significant savings in space heating
Measures used

- Change of heating systems
  - More district heating and natural gas – heat planning
- Economic incentives
  - Energy Prices
  - Subsidies
- Building codes for new buildings
  - Has been tightened several times
- Energy labelling of existing buildings
- Information and campaigns

Heating supply in Danish Dwellings
Danish Energy Efficiency Action Plan

- Energy-conservation action plan was launched in September 2005
- Acknowledging that despite good achievements there is still a long way to go!
- The energy saving goals were strengthened by policy agreement of Feb. 2008 and is to be further strengthened due to the energy & climate goals

Basic principles:
- Cost-efficiency
- Market-based approach
- Focus on realisation of profitable savings
Danish EE Action Plan
Objectives and targets

Energy Conservation Action Plan of September 2005

- The goal is that total final energy consumption (excluding transport) shall be reduced until 2013
- Actual savings target is 1.7% per year
  - Concrete energy savings, which can be documented, annually (2006-2013)

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Energy savings in buildings

New buildings:

- Building Code:
  - Reduction 25-30 % from 2006
    - Labelling to secure compliance
- Update in 2010 and 2015

Existing buildings:

- Requirements are set in relation to:
  - Major renovations – all buildings
  - Replacements of roofs, windows in a facade, boilers, change in heat supply, etc.
- Mandatory energy labelling/certification schemes
- Help to implementation
  - Utilities – White certificates
  - Make it easy, simple and secure for the consumer
New building code

Will reduce energy demand with 25 - 30 % from 2006
➢ Use Energy Performance

The codes will be renewed in 2010 and 2015

Incentives to build better buildings. Low energy classes are defined: 1=> 50 %, 2=> 75 %
Energy Certification (labelling)

New certification scheme in Denmark from 2006:

- **One-Family Houses:**
  - At sale and renting (Valid for 5 years)

- **Multifamily Houses:**
  - At sale and renting of building & flats
  - Whole building incl. typical flats
  - Regular every 5 years > 1000 m²

- **Trade & Services and Public buildings**
  - Regular every 5 years
  - Trade and service only > 1.000 m²
  - By sale or renting < 1.000 m²
The Public Sector

- Shall take an **exemplary role**
- Implement energy efficient procurement
  - Move the whole market as a big buyer
- **Obligation to realise savings** with reasonable pay-back time (up to 5 years)
  - Energy services companies can play a role
- Make the energy consumption public
  - Electricity consumption on the Internet

- Regulation for all Government institutions is implemented
  - Next step is the municipalities
Recent initiative: Centre for Energy Savings in Buildings

Objective:
ensuring that actors within the building sector get access to more knowledge about energy solutions in buildings and thus increase the realization of energy savings in buildings.

Benefits:

1) Energy savings
2) Improvement of the buildings
3) Jobs

Established due to energy policy agreement of 2008. Hosted at Danish Technological Institute
Facing the barriers

There is lots of knowledge about
• potential, energy efficient technical solutions, retrofittting, barriers, tools

But the actors in the building sector don´t use it !

• No incentives for the developers (bygherrer)
• Missing –easy to use – knowledge and initiatives which ensures that the bulding sector can offer solutions which fulfills the endusers demand of quality, economy and a simpel proces

It has to be safe, cheap and easy to implement the energy savings

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The target group of the centre

Primary target groups

- Handycraft men and installers and advisers
- Energy, environment and operation
- Energy consultants
- Technical advisers
- Small local entreprises
- Suppliers
- Property managers
- Building managers
- (De almennyttige boligselskaber)
- End users of buildings

Secondary target groups

- Responsible for energy, environment and operation
- Dansk Facilities Management Network
- SBS City refurbishing
- Building managers Bygningsforvaltere
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Collection of know how

- Energy saving potentials
- Building process
- Retrofitting/refurbishing
- Barriers and instruments
- Finance
- Legislation

Provision of services

Tools for simplifying the advisory & implementation part of the energy saving activity.

Development of standard and package-solutions targeted at the advisory group and handycraftmen (executing the energy solutions)
Another new initiative: Retrofitting fund scheme

Objective

- Boosting economy and creating jobs (response on financial crisis)
- Secondary to generate energy savings

Buildings owners can apply for:

- 40% grant, max 15,000 DKK (2,000 Euro)
- Incl. energy saving materials up to 10,000 DKK
- Not energy consumption (e.g. no grants for energy consuming measures like spa-bath)
Retrofitting fund scheme (cont’d)

- Open for applications for one month (Spring 09)
- Around 100,000 building owners get access to grants. So far 90,000 applications have been dealt with (by 19’th June 09)
- The renovation fund scheme will provide a boost of at least 6 mia DKK (0.8 billion Euro) for the building sector
- It is assessed that 64% of the measures concern energy savings
Thank you for your attention!

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