



Danish approach to energy efficiency regulation of products

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Product policies and energy efficiency

Danish Climate Policy Energy efficiency is a key factor

- Energy efficiency plays a central role in Danish energy policy
- Energy efficiency of products:
 - Is cost effective
 - Reduces consumers energy costs
 - Increases security of energy supply
 - Enhances competitiveness of industry

Energy efficient products International cooperation a key to results

DK Product policy

- Low priority to national regulation
- International cooperation
- EU-legislation
 - MEPS - minimum energy performance standards
 - Energy labelling
- Ambitious energy requirements on EU level
- Denmark participates actively in EU studies, development of regulations, and negotiations
- Industrial and NGO involvement



Policy measures and market impact

Ban of the less efficient products

- Ecodesign - EU minimum energy performance standards (MEPS)



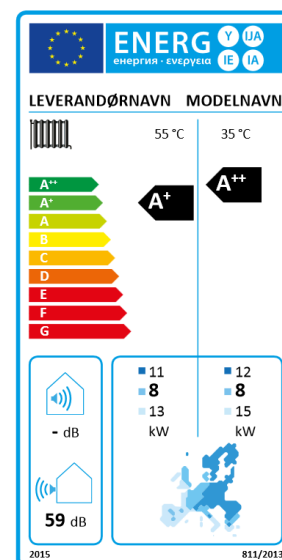
Promotion of the most efficient products

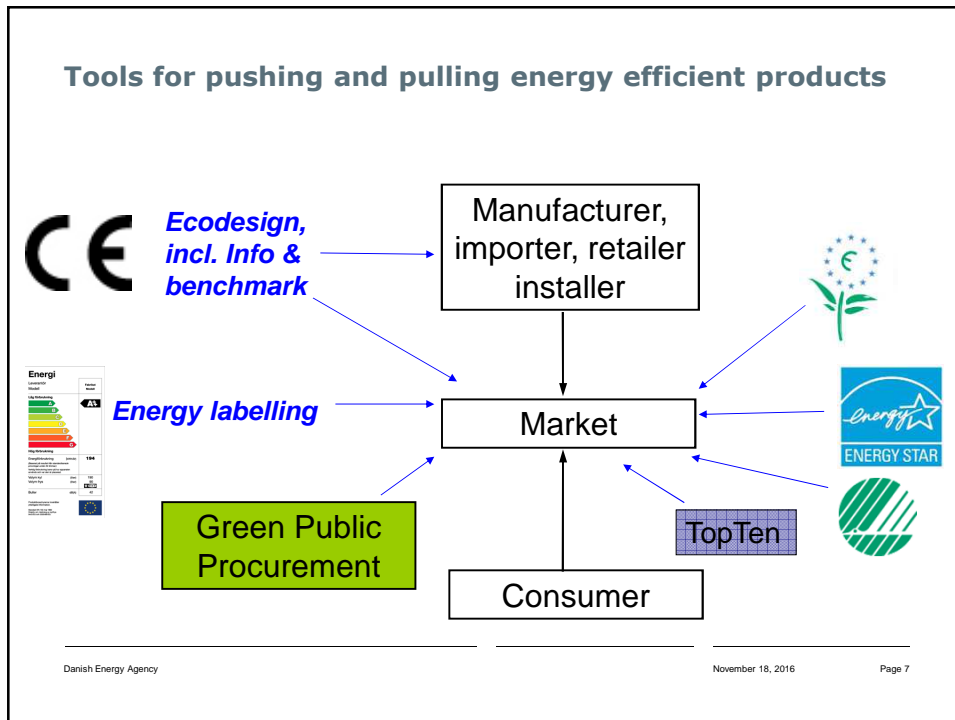
- EU energy labelling
- Energy Star
- Energy efficient procurement (national)



EU Ecodesign and labeling

- Basic: Minimum Energy Performance Standards (MEPS)
- EuP – A highly inertial proces
- Horizontal vs. vertical measures
- Evolution from direct to indirect energy consumption (EuP -> ErP)
- Evolution from appliances to products
- Evolution from energy to resources? Review is going on
- Labeling directive under revision

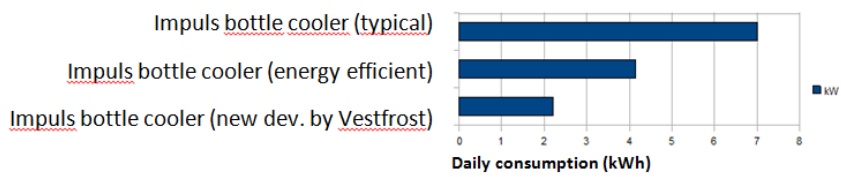
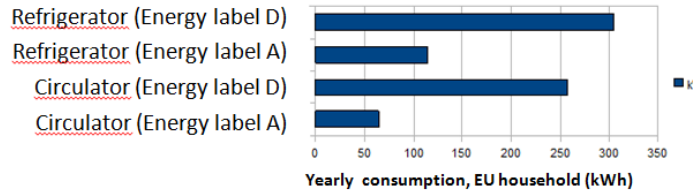




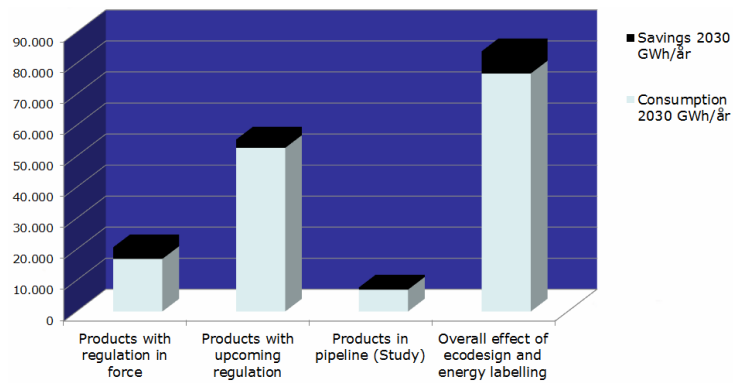
Impact of product regulation

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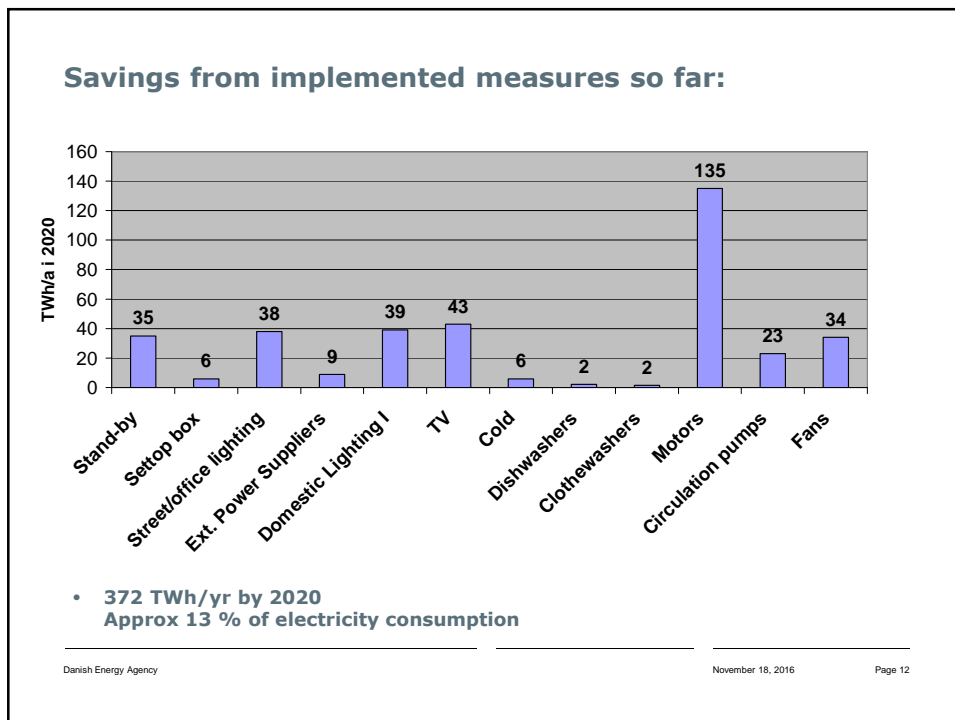
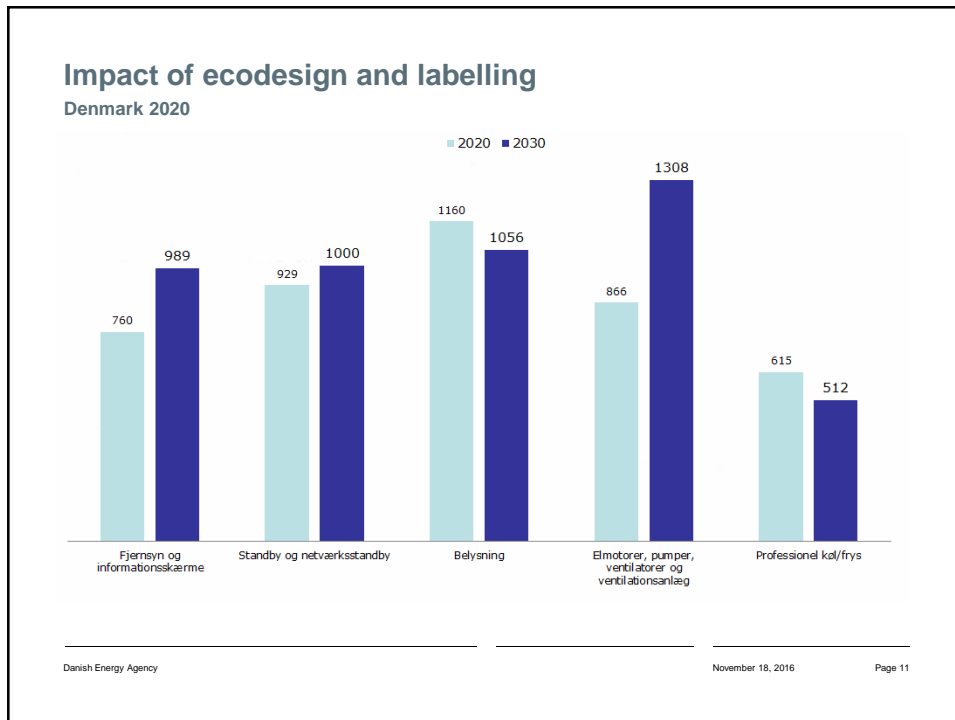
Cases: Selected energy efficient products



Impact of ecodesign and energy labelling by 2020 in Denmark

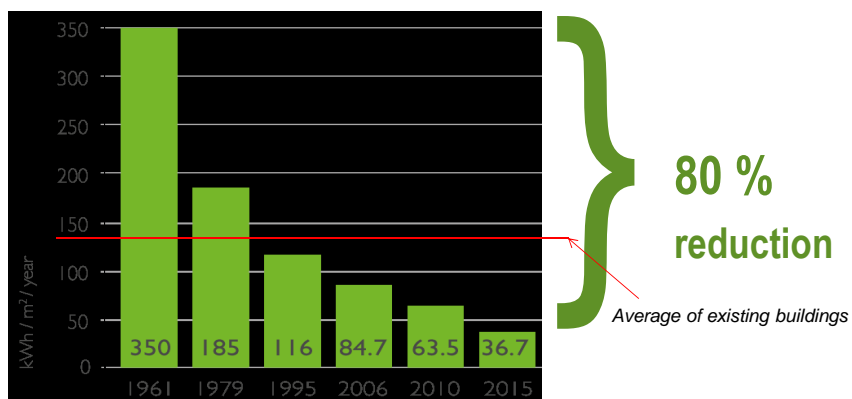


By 2020: Savings amount to 5 % of gross energy consumption (DK)
 Danish Energy Agency 2013



Policies for buildings

Reducing energy demand from buildings



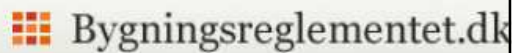
Maximum allowed energy demand per m² heated floor space and per year in a new, 150 m² Danish home.

Policies for existing buildings

- Minimum standards for renovation and retrofits
- Knowledge Centre and EnergyAdvisors
- Information and awareness campaigns
- Savings obligation scheme for energy utilities
- Savings obligations for public buildings
- Energy performance certificates
- “Improve your home”-advisors



Ecodesign and DK building code



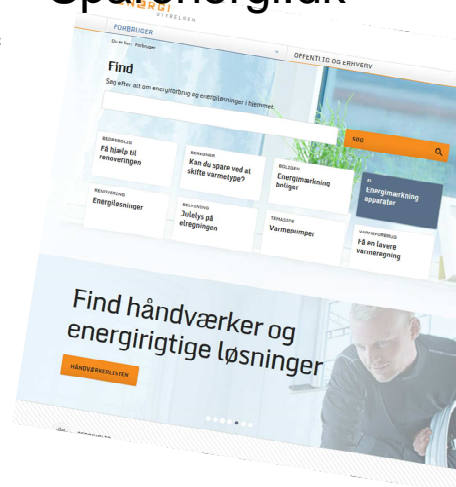
Ecodesign implemented in building code, primarily in chapter 8, Installations eg.

- Chapter 8.2 –: Circulators shall conform to EU regulation 641/2009/EU
- Chapter 8.3 – Ventilations units shall conform to Ecodesign regulation 1253/2014/EU
- Chapter 8.5.1.4 – Boilers for room heating shall conform to Ecodesign regulation 813/2013/EU
- Chapter 8.6.4 – Heat pumps for room heating shall conform to ecodesign regulation 813/2013/EU og 206/2012/EU.

Information of energy consumers about energy efficiency

Information of private consumers Spareenergi.dk

- A vital part of Danish promotion of energy efficient products
- Commitment and cooperation with consumer and trade organizations
- Remember multiple benefits from EE; e.g.
- Use the full supply chain
- Press loves consumer information

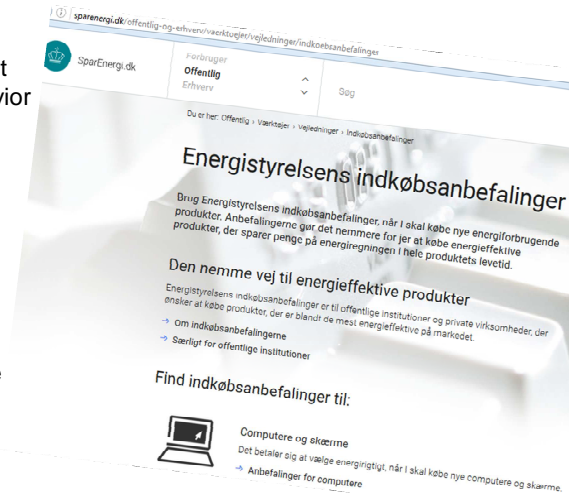


Information of public and business energy consumers

Guidance and tools for product selection and consumer behavior

- Professional refrigeration
- Circulators
- Electric motors
- Fans and ventilation
- Heat pumps
- Servers

Also here: Remember multiple benefits from EE; e.g.



Financial initiatives - Development and discounts

Support of energy efficient products e.g.

- compact fluorescent lamps – energy saving lamp
- 100 € discount if you change your old energy consuming freezer to a new energy efficient product

DK do not do this any more

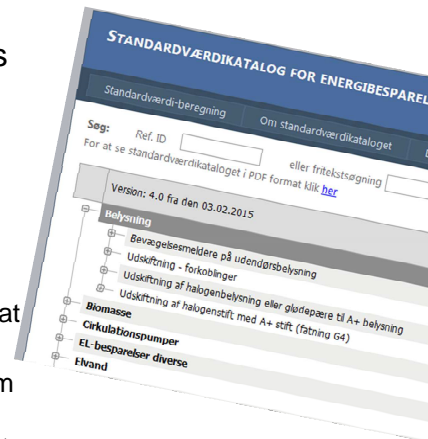
DK do via EUDP support development of energy efficient product technologies

E.g. Bottle cooler

Financial initiatives – Obligations on utility companies

Standard products supported via utility companies obligations

- Insulation
- Efficient heating; from oil to gas or heat pump
- Efficient lighting systems; change from halogen lamps to LED in schools or offices, or from old fluorescent lamps to new efficient LED lamps in offices



Product endorsements - A tool to create consumer awareness of Energy Efficiency

History of product endorsement:

- Recommended by...
 - Go'Energi / Elsparefonden
- Less relevant due to energy labelling



Present product endorsement:

- Heat pump list

Benefits:

- Increased trust and confidence in EE products
- Increased awareness of EE
- Help consumers to understand the language of EE
- Committing supply chain

Implementation and market surveillance

Market surveillance

- Essential to consumers trust
- Essential to ensure level playing field
- Inform about market surveillance results
- Make it simple; EE regulations based on self declaration => documentation!

Market surveillance Efficient enforcement

Energy labelling:

- Correct use of the energy labelling in shops etc.
- Correct energy classification



Ecodesign

- CE-declaration
- Technical documentation
- Compliance with minimum energy efficiency requirements



Document inspection consists of ..



Energy labelling	Common for Energy labelling and Ecodesign	Ecodesign regulations	
Data sheets (product fiche)	Technical documentation	CE declarations	Product information requirements

Cost comparison

Products	Costs for inspection of technical documentation as a percentage of the costs for laboratory testing	Remarks on test costs
Consumer electronics (TV, standby, external power supply)	25 – 30 %	Relatively low test costs.
Household washing machines and dishwasher	< 10 %	High test costs
Household refrigerators and freezers and motors	10 – 20 %	Medium test costs
Household driers and ovens	20 – 25 %	Medium test costs
Heat pumps	< 10 %	High test costs

Costs per inspection of technical documentation compared to the costs per laboratory testing.

- Lab. test costs vary considerably from 700 € up to 20,000 € + administrative costs
- Costs for inspection technical documentation typically vary from 400 € to 600 €

Market surveillance activities 2011 -2013

Product	Document inspections				Laboratory tests				Document inspections and tests
	2011	2012	2013	Total	2011	2012	2013	Total	Total in 2011 to 2013
TV	40	20	-	60	10	-	-	10	70
Standby and off	30	19	15	64	10	-	11	21	85
External power supplies	30	-	12	42	15	-	8	23	65
Electric motors	37	-	-	37	17	24	-	41	78
Heat pumps	58	20	18	96	11	7	6	24	120
Household lamps	-	-	17	17	-	15	-	15	32
Refrigerators/freezers	40	25	14	79	18	10	17	45	124
Washing machines	10	-	10	20	10	-	-	10	30
Dishwashers	20	-	-	20	-	5	3	8	28
Ballasts	-	10	-	10	-	-	-	-	10
Luminaires	-	15	-	15	-	-	-	-	15
Tumble driers	-	-	12	12	5	-	4	9	21
Circulators	-	-	7	7	-	-	8	8	15
Water pumps	-	-	12	12	-	-	5	5	17
Fans driven by motors	-	-	-	0	-	-	5	5	5
Totals	265	109	117	491	96	61	77	224	715

Number of document inspections and laboratory tests in the period 2011 to 2013

Results of document inspections

Product	Percentage of products complying 2011	Percentage of products complying 2012	Percentage of products complying 2013
Standby and off	96 %	83 %	93 %
External power supplies	85 %	-	42 %
Televisions	98 %	100 %	-
Electric motors	93 %	-	-
Heat pumps	41 %	57 %	65 %
Refrigerators/freezers	88 %	68 %	71 %
Washing machines	80 %	-	30 %
Dishwashers	35 %	-	-
Tumble driers	-	-	33 %
Circulators	-	-	100 %
Household lamps	-	-	77 %
Water pumps	-	-	0 %
Luminaires	-	100 %	-
Ballasts	-	100 %	-

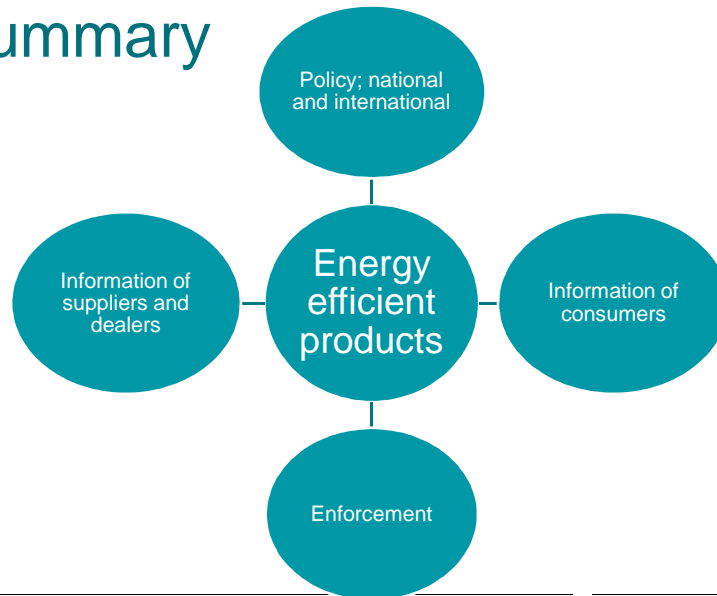
Level of compliance of inspected products.

Guidance – also a part of Danish market surveillance

- Guidance of manufacturers is prioritized in our market surveillance
- Proceeding with legal action is very resourceful – and the outcome is somewhat uncertain
- Less than 5 % of cases where non-compliance is established are assigned for enforcement action to the DEA



Summary



Thank you for your attention!

Questions?

Read more at
www.ens.dk
www.ens.dk/energikrav
Spareenergi.dk

Contact: bjh@ens.dk