



Energy Saving obligations and Saving Center in Denmark

Chief adviser Peter Bach

Workshop in Berlin
10 December 2009

Objectives and targets

- Reasons for energy efficiency
 - Climate change
 - Energy Security
 - Competitiveness
- EU targets on
 - CO2 – non-ETS sectors
 - Renewable – also transport
- National
 - Long term: Independent of fossil fuels
 - 4 pct. reduction of primary energy in 2020
 - Annual savings: 1,5 pct. of final consumption

A cost-effective strategy

A combination of

- Measures
 - Normative, economic (incentives), information, R&D, help to implementation, etc.
- Actors
 - EU, national governments, regional and local authorities, energy utilities, producers, green organisations, etc.
- Target groups
 - Consumers, producers, installers, developers, etc.

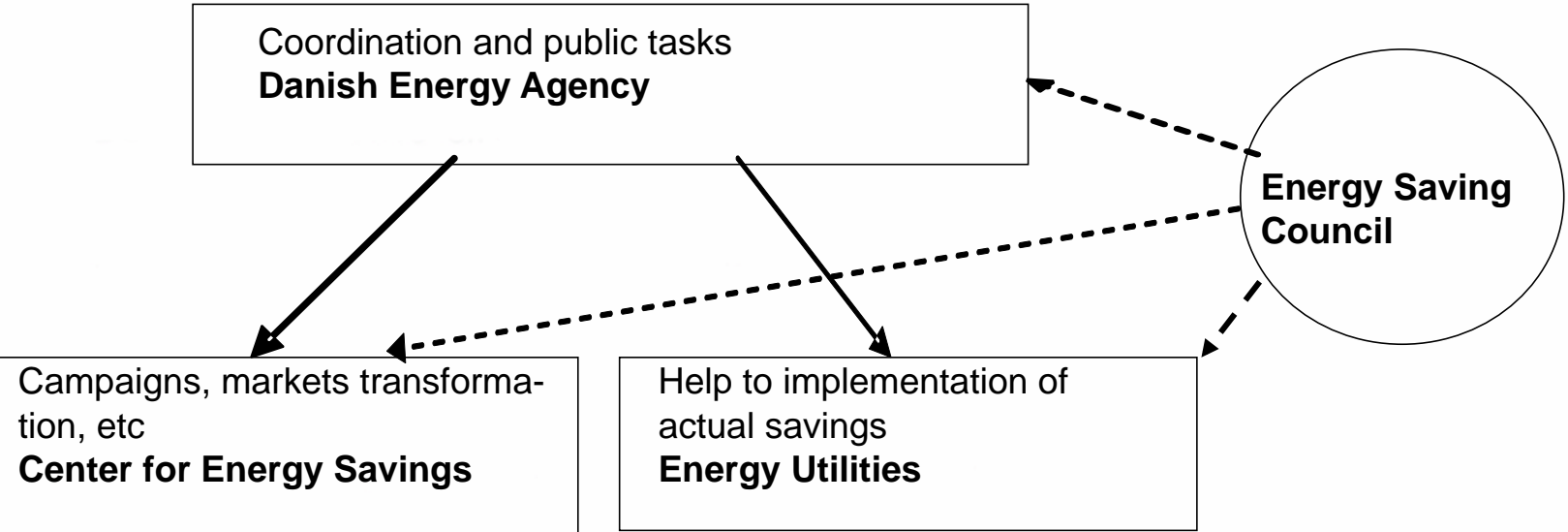
Important types of measures

- Taxes on energy and CO2
 - Incentives to reduce consumption
- Efficiency obligations, standards, norms, etc.
 - Both at EU and national level
 - Especial buildings and products
- Campaigns, market transformation, voluntary agreements , etc.
- Help to realization of savings
 - Especial existing buildings and private enterprises

New Danish organisation

- Tasks for the public authorities
 - Regulation, including EU initiatives
 - Incentives, taxes, etc.
 - Follow-up, monitoring, evaluation etc.
 - Primary Danish Energy Agency
- Campaigns etc. – General tasks
 - All sectors and end-uses, except transport
 - New Center for Energy Saving
- Help to implementation
 - Primarily energy distribution companies
- Coordination
 - New Energy Saving Council
 - Danish Energy Agency

New organisering



Electricity Saving Trust

- Independent unit in the Ministry of Climate and Energy
- Electricity Savings in households and the public sector
- Campaigns, market transformation, pull-push
- Financed by a special tax on electricity
 - 0,08 Euro cent per kWh
- Will be transformed to a Energy Saving Center
 - Cover all sectors and end-uses (except transport)
- More focus on coordination with other measures

Involvement of energy utilities

- First DSM obligation for electricity utilities were introduced in 1995
- Natural gas and district heating included from 2000
- Focus on free advice, campaigns, etc.
- Industries and other private enterprises one of the main target groups
- Obligation with annual targets were introduced in 2006
- Higher target and new rules from 2010

Utilities saving obligations

- Cover electricity, natural gas, district heating and oil
- Set by law (not oil)
- But implemented by a voluntary agreement
- Grid and distribution companies
- Danish Energy Agency take care of the basic administration

Main principles

- Annual saving target
 - In the agreement for the sectors as a whole
- Large freedom to deliver in the best way
- Only count savings where the direct or indirect are involved in the implementation
 - Additionalitet is a difficult issue
- Involvement can be advice, energy audit, subsidies, etc.
- Agreement whole way from utility to customer before savings are implemented

Target

- The main principle:
 - First year savings – not cumulative.
 - Final energy
- 2006-2009:
 - 0,7 pct. of consumption in the sectors included
- 2010-2012 (2020):
 - 1,2 pct. of final consumption in the sectors included
- From 2011:
 - Simple weighting factor will be introduced
 - Will reflect lifetime, primary energy, CO2/non-ETS

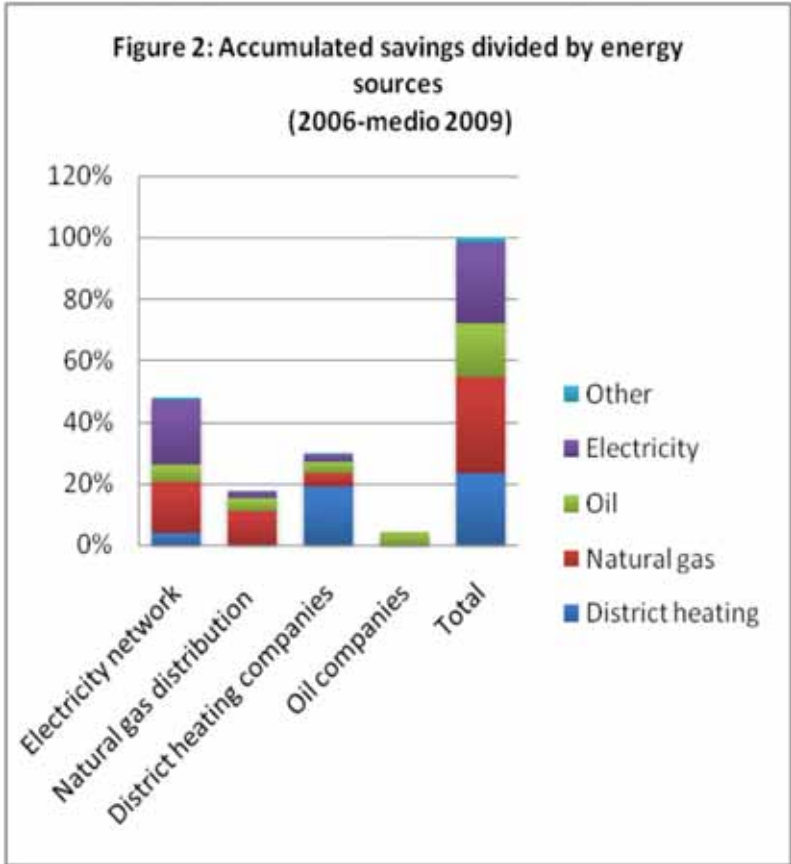
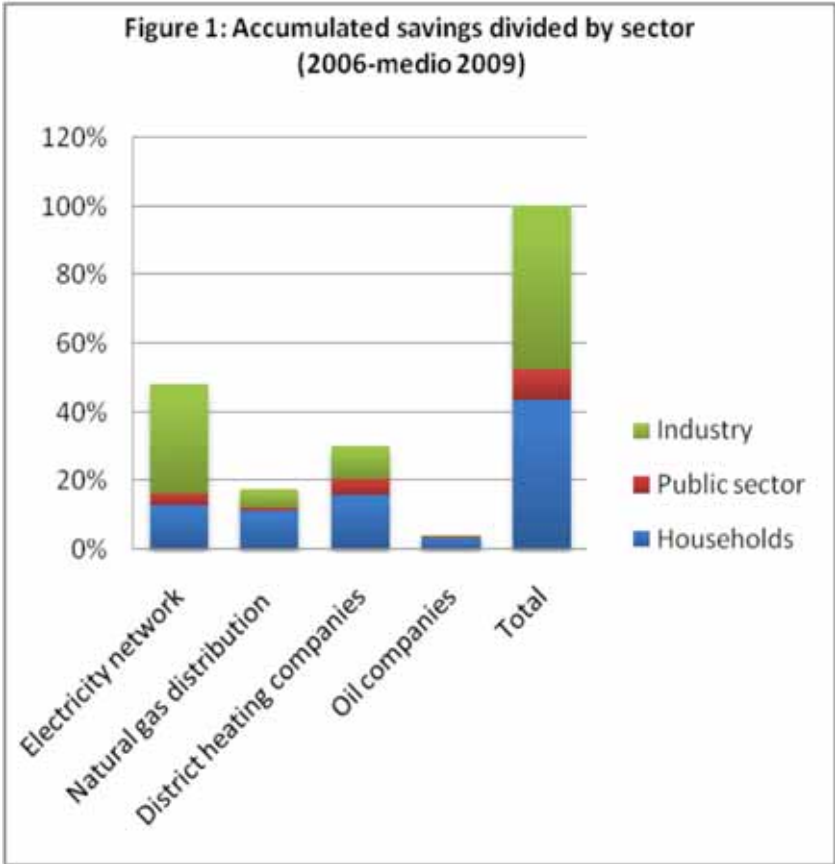
Delivered savings

	Savings compared with target 2006 - medio 2009
Electricity companies	112 %
Natural gas companies	115 %
District heating companies	109 %
Oil companies	103 %
Total	111 %

Savings – Where?

- Final energy consumption in all sectors except transport
 - All end-uses
 - Include local renewable
 - Also consumers covered by ETS
- Loses in grids – especial district heating pipes
- Not efficiency improvement in district heating and power plants
 - But thermal solar plants are allowed

Distribution of savings



Source: Danish Energy Agency

Measurement of saving

Two main methods

- Standard values
 - Average saving are calculated for standard activities
 - Primarily used in households
- Specific calculation – engineering methods
 - Used for all big project
 - Especial industries, public sector etc.
- Change of behavior, information and market transformation will almost disappear from 2010

Verification

- Main principle:
 - The utilities are responsible for verification, documentation and reporting
 - Independent audit and quality control are required
 - DEA can do special control of the documentation
- Standard values are approved by DEA
- Utilities are responsible for specific calculations

Who do the job?

- The distribution companies are not allowed to do very much by themselves
 - Regulated monopoly companies
- Have to involve an actor
 - Can be an other company in the same group
 - But is very often a private engineering company or a plumber
- There can be several links from the utility to the customer

Costs

- Average utility cost 2006-2009:
 - Approx. 4,5 Euro cents per kWh first year savings
 - 0,45 Euro cent with an average lifetime on 10 years
- Evaluation shows that is very cost effective
- Administrative cost in DEA is very low
 - Verification etc. by the utilities
 - Only 2-3 persons in DEA

Development

- Will be more market oriented
- A market price on savings will come
- External actors will be more involved
 - Utilities role will more be to make the right contracts
- Subsidies or financial incentives will be more important
- The main focus areas will be existing buildings and private enterprises

Conclusions

- A clear organisation with distribution of tasks and coordination is important
- Campaigns etc. to support implementation is import
- Energy utilities can play an important role
 - Way to raise money
 - Make the rules simple
- Thank you for your attention