



KONKURRENCE- OG FORBRUGERSTYRELSEN

31. January 2013

Lauge Rasmussen

***Can the development of a smart grid
increase competition in the retail
market for electricity?***

Smart grid workshop

Agenda

1. *Facts about the Danish retail market for electricity.*
2. *Initiatives are expected to strengthen competition during the next couple of years.*
3. *Will the development of a smart grid increase competition in the retail market for electricity?*



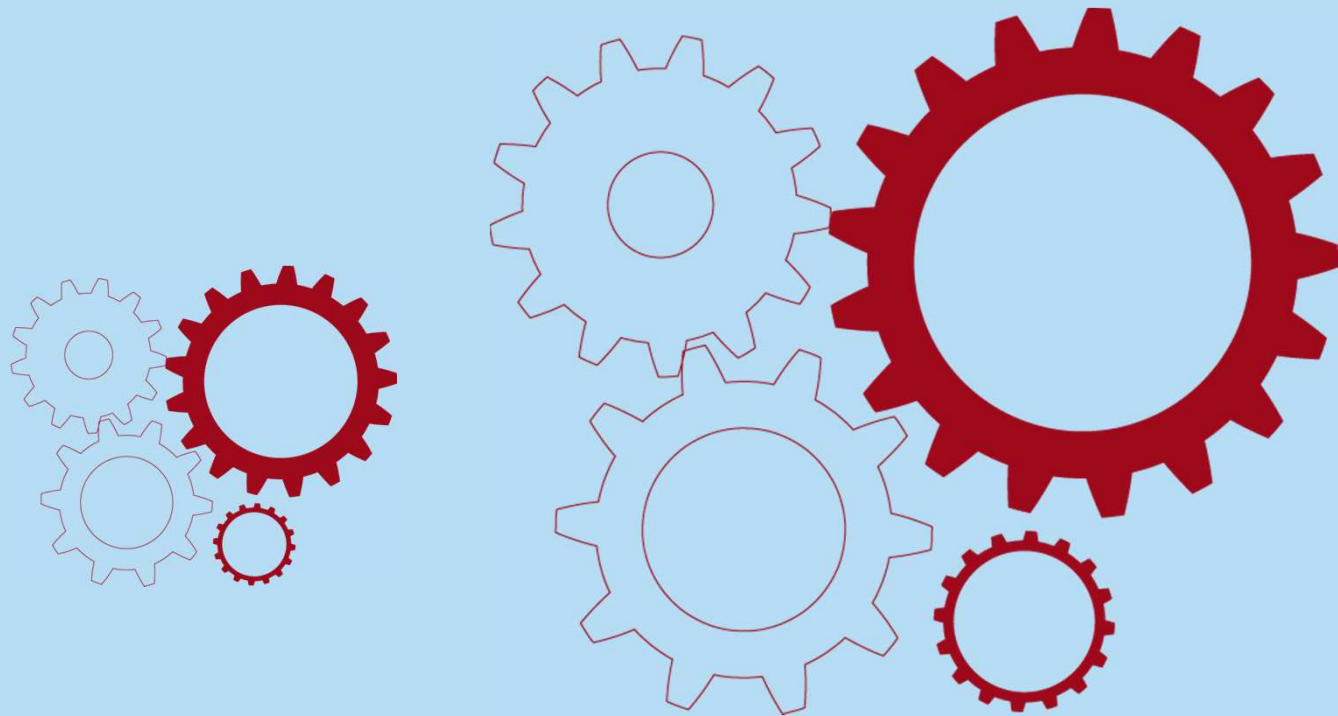
The electricity market is important

- » An average Danish household spends more than EUR 900 per year on electricity.
- » Households and small companies amount to 45 percent of the aggregate Danish consumption of electricity.
- » Electric cars and electric heaters are expected to increase the electricity consumption during the next couple of decades.
- » Consequently, electricity will constitute an increasing share of an average Danish Household's total consumption.



KONKURRENCE- OG FORBRUGERSTYRELSEN

Facts about the Danish retail market for electricity





The liberalisation of the Danish electricity sector has created benefits for Denmark, however, only with a minor effect for the retail market

» Status for the liberalisation:

» The wholesale market was liberalised in 1999.

» After 2003 consumers have been able to switch retail supplier.

» The liberalisation has increased competition in the wholesale market. Large customers have generally obtained a better price for electricity.

» The liberalisation has had a smaller effect for households and small companies.

Strong competition can create large benefits for Denmark

- » The Danish Competition and Consumer Authority has conducted an analysis of the Danish retail market for electricity.
- » The Danish retail market is to a large extent characterised by weak competition and inactive consumers.
- » The analysis concludes that there is a large potential for economic benefits through increased innovation, strengthened competition and a more effective use of the resources in the electricity sector.
- » Current regulation does not allow for a utilization of the potential social benefits.



**Initiatives will increase
competition during the next
couple of years**



A number of initiatives are expected to strengthen competition during the next couple of years

- » Regulation has restrained competition and made consumers inactive:
 - » *The old vertically integrated company has a competitive advantage*
 - » *Regulation of the retail price for electricity (forsyningspligt) has restrained innovation and made customers inactive*
 - » *Customers with an annual consumption of less than 100.000 kWh pay a fixed price for electricity even though the wholesale prices fluctuates.*

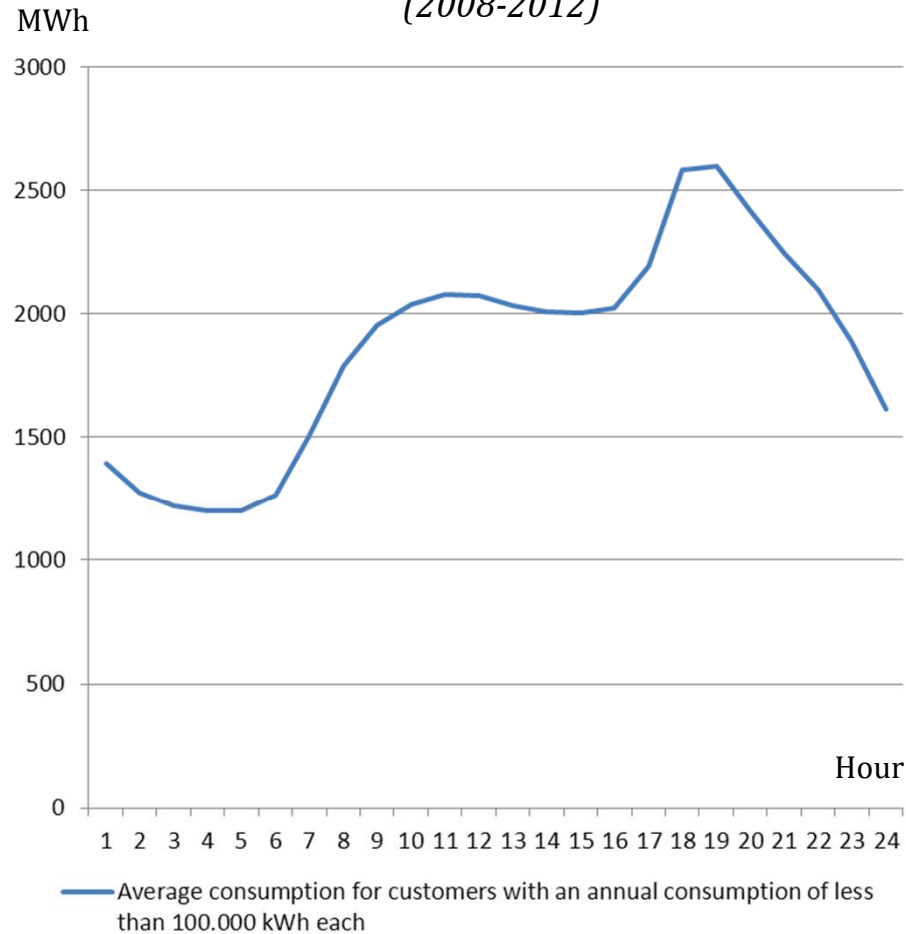
- » Planned initiatives are expected to strengthen competition:
 - » *Consumers have to choose a regulated price*
 - » *Network companies will no longer have a direct interaction with consumers.*
 - » *Smaller customers will probably be able to choose a price that fluctuates with the wholesale price*



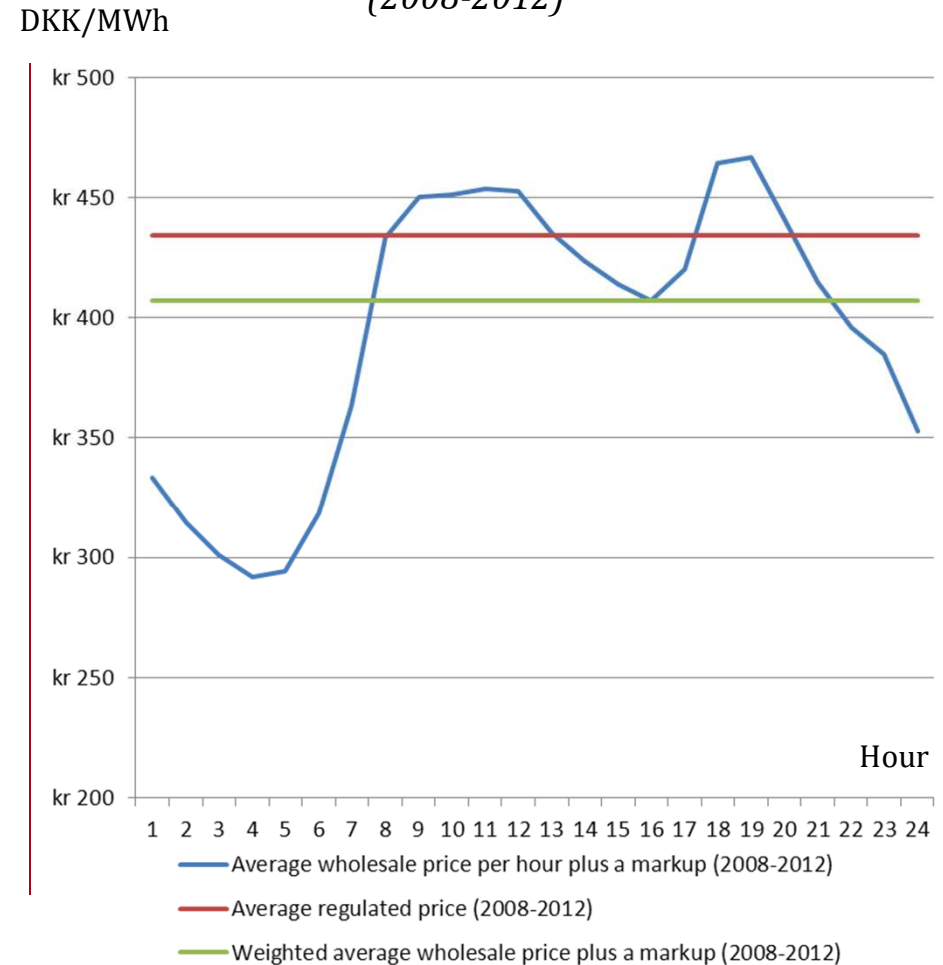
KONKURRENCE- OG FORBRUGERSTYRELSEN

Wholesale price and the retail price for small customers

*Demand for households and small companies
(2008-2012)*

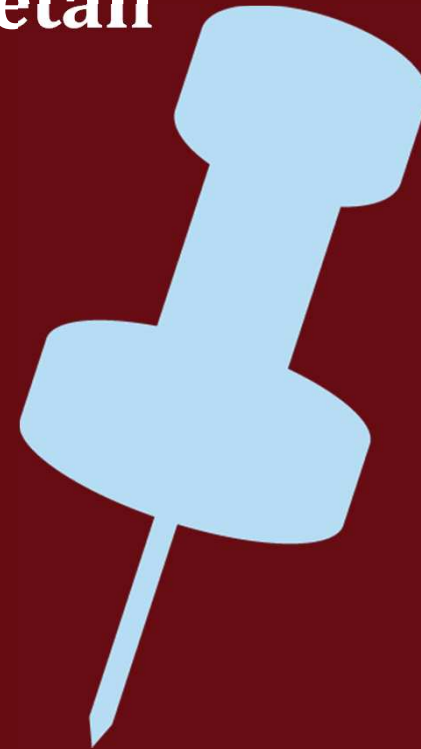


*Average wholesale price and regulated price
(2008-2012)*





The development of a smart grid can increase competition in the retail market for electricity





KONKURRENCE- OG FORBRUGERSTYRELSEN

An investment is required in order to measure consumers' electric consumption on an hourly basis

- » *More than 50 pct. of the Danish consumers have or will get a smart meter installed during the next couple of years.*
- » *Measuring customers' electricity consumption on an hourly basis will amount to a total annual cost of DKK 248 million.*

Grey areas: No plans for installing smart meters





However, the potential benefits from smart meters and dynamic tariffs are larger...

» *Smart meters and dynamic tariffs creates an annual potential net benefit of DKK 440 million.*

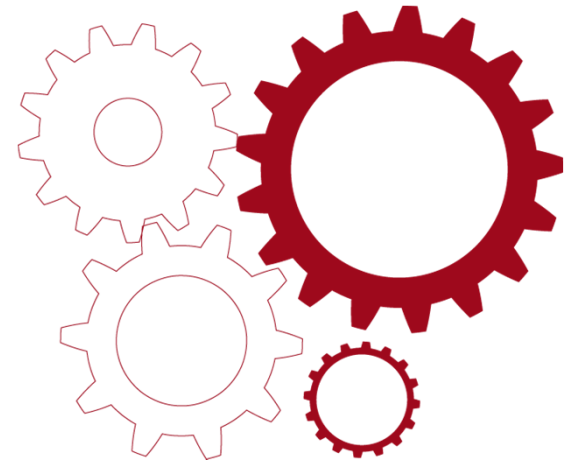
» *In the longer run, dynamic tariffs will also reduce the need for investments in additional production and transportation capacity.*

	DKK Million
Total costs	248
+ Value of load shifting	381
+ Value of reduced consumption	303
+ Reduced network losses	4
Total potential benefit	688
Net potential benefit	440



Strong competition and active customers are necessary in order to utilize the potential for economic benefits for society

- *Smart meters and dynamic tariffs are expected to increase competition in the retail market.*
- *Smart meters will make it easier for customers to switch retail supplier.*
- *Retail companies can offer consumers products that are adjusted to the consumers' individual consumption profile.*
- *Consumers can save money by switching flexible consumption from expensive hours to cheap hours.*





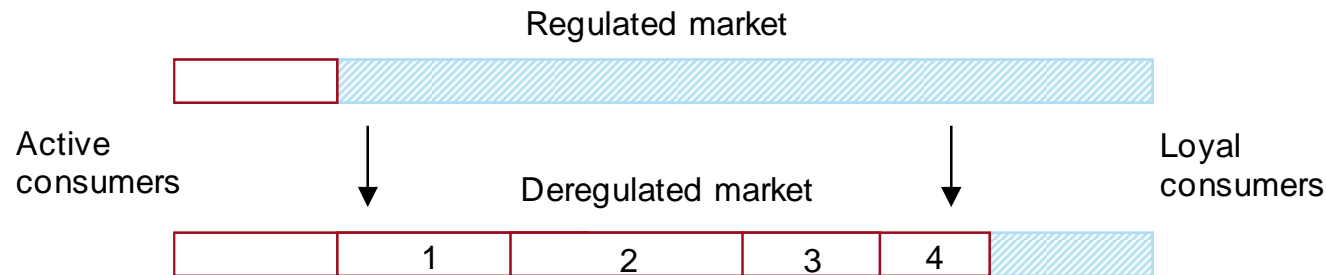
Smart meters and dynamic tariffs are expected to increase competition in the retail market

- *Some customers will prefer to adjust flexible consumption to price fluctuations manually. Other consumers will demand intelligent household products which will adjust flexible consumption automatically.*
- *Consumers are expected to increase their demand for intelligent household products e.g. washing machines , that start automatically during hours with a low electricity price.*
- *Retail companies will have an opportunity to offer customers a combination of intelligent household products and electricity.*





Strong competition is expected to increase innovation and consumers are expected to become more active



- 1: Consumers that switch supplier when the retail market is liberalised.
- 2: Consumers that switch supplier due to intensified price competition.
- 3: Consumers that switch supplier due to new technological products and services.
- 4: Consumers that switch supplier due to other factors, e.g. climate related issues

□ : Active consumers

▨ : Loyal consumers



KONKURRENCE- OG FORBRUGERSTYRELSEN

Thank you