

Increased political focus on demand side flexibility

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Agenda

- Regulations in Norway – A brief description
- Increased political focus
- Why focus on demand flexibility?
- What is necessary to achieve demand response?
- Is regulation necessary?
- Preliminary conclusions

Regulations in Norway

- Compulsory hourly metering of customers with an annual consumption exceeding 400 MWh, 100 MWh from 1 January 2005 - Cost covered by the GridCo
 - The GridCo may require hourly metering of a customer, but must cover all costs
 - The customer may require hourly metering, but must then cover all costs
- The GridCo shall offer interruptible transmission at reduced tariffs where...
 - Capacity conditions are such that there is a particularly high risk of disconnection of customer(s)
 - The customer has operational electric boilers with an optional fuel source available
- To achieve optimal utilisation of the network, interruptible transmission tariffs may be offered to consumers with reduced requirements as to regularity of supply

Increased political focus I

- White paper no. 41 (2002-2003)
 - The Minister's answer to a request from the Parliament regarding development of regulations on tariffs and direct communication
 - No compulsory solution for all customers at this moment
 - Exploit the potential from the 60% with AMR first
 - Technology still under development
 - Only socio-economic profitable projects should be carried out
 - The decision-maker should pay the cost
 - Await for cost/benefit results from research
 - Treated by the Parliament 3rd December 2003
 - Increased focus on AMR and Load Control is required
 - Labour-saving for the customers
 - More easy to implement models for differentiated prices
 - Investment savings – Reduction of peak loads
 - If the research project shows good results...
 - All customers should be offered the technology
 - The Parliament will give it's principled support to a further expansion of AMR and Load Control technology

Increased political focus II

- White paper no. 18 (2003-2004)
 - The Minister's statement to the Parliament regarding the power situation
 - The Government's policy for reduced vulnerability because of water shortage will focus on
 - Increased demand side flexibility
 - » New types of power purchase contracts
 - » AMR and Load Control
 - » More frequent metering and billing during strained water situations
 - To be treated by the Parliament 18th May 2004



Why focus on demand side flexibility?

- Customers' perspective
 - Better information – Better data
 - Better choices
 - Cost minimization
 - Utility maximization
- Transmission and distribution companies' perspective
 - Cost savings – O&M + Investments
 - Better tools for controlling abnormal situations
- System operators' perspective
 - Cost savings – Balancing costs
 - Better tools for controlling abnormal situations
- Suppliers' perspective
 - Reduced settlement risk – Better data
 - Product development – New types of contracts



What is necessary to achieve demand response?

- Technology
 - Communication System
 - Load Control System
- Information
 - Frequent metering data
 - Prices (network tariffs, power purchase prices)
- **Motivation**
 - Customers
 - Suppliers
 - GridCos

Is regulation necessary?

- Hopefully not!
 - Those who benefit should cover the costs
 - Customers, GridCos, Suppliers, System Operator
- Regulators' major concerns are:
 - Efficient power markets
 - Efficient operations and development of grids
 - A reliable T & D system with an acceptable quality of supply
 - Tools for handling strained situations
- Regulations may be necessary if willingness to pay is less than costs
 - Large extent of external effects
 - Large extent of public goods
 - High degree of transaction costs (R. Coase)

Preliminary conclusions

- AMR and Load Control for everybody is probably not socio-economic beneficial
 - Lack of potential
 - Lack of motivation
- The cost/benefit ratio is too uncertain at the moment to take a policy decision about further expansion of technology
 - How much of the potential will be realised?
 - Who benefits, and how much?
 - How much is it going to cost?
- NVE is following up on development of new power purchase contracts
- NVE is awaiting research results
 - Will advise the Ministry by the end of this year



Thank you for your attention!