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Development of AMR in Europe - National perspectives

Mikael Togeby
Ea Energy Analyses

European Smart Metering Alliance



ESMA PROJECT: EUROPEAN SMART METERING ALLIANCE

Project Objective



ESMA is focused on energy savings related to smart metering:

- To reach consensus on the energy efficiency benefits of smart metering
- To identify and disseminate best practice
- To report on smart metering progress to the European Commission

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ESMA definition of Smart Metering

- Smart Metering has the following features:
 - Provides meaningful and timely consumption information to the relevant actors
 - Supports services that improve the efficiency of the energy consumption and the energy system
 - Automatic processing, transfer, management and utilisation of metering data
 - Two-way data communication with meters

ESMA principles

- The aim is to link smart metering with energy savings
- We will represent the views of all stakeholders
- We are technology-neutral
- The work is evidence-based
- Active link to other issues
 - Demand response
 - Renewables and distributed generation
 - Smart homes

Alliance membership

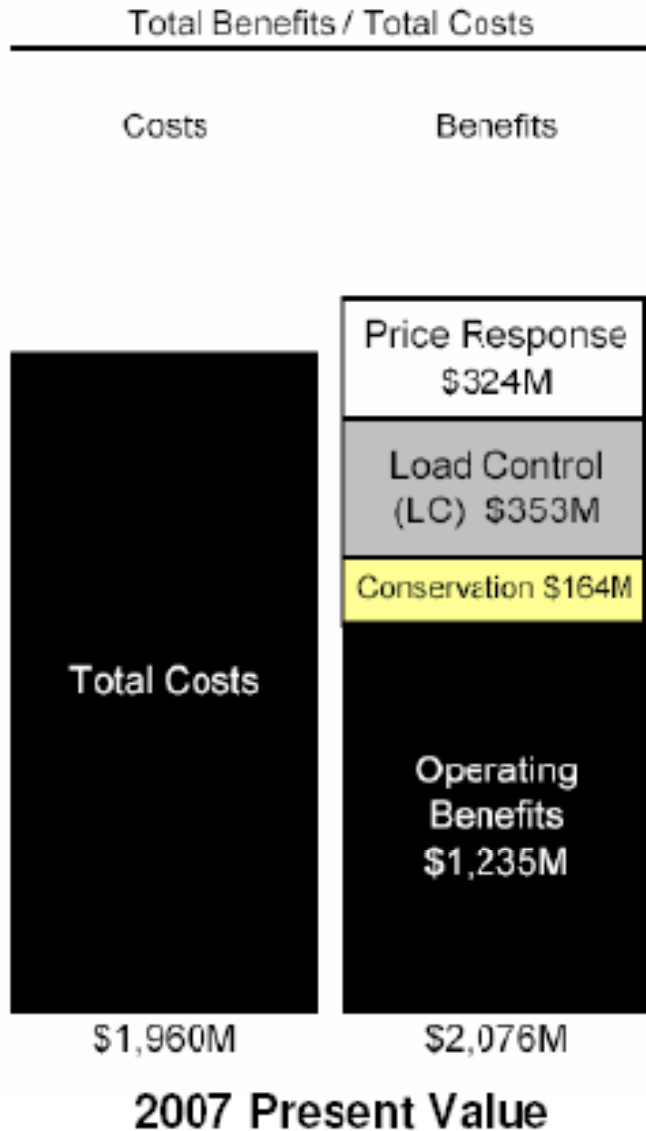
- The Alliance now has over 80 members
 - Membership is €500/year for corporate organisation. Universities etc free
- Drawn from all stakeholder groups
- Drawn from across Europe
- Smart Meter Guidebook will be published by end of June 2008
 - Free for members
- The Alliance is open to all
- Visit www.esma-home.eu

NATIONAL PERSPECTIVES ON SMART METERING

Presentation based on

- Input from
 - Spain:
 - Carmelo Rodríguez Moreno, Endesa Ingeniería
 - The Netherlands:
 - Henk van Elburg, SenterNovem
 - UK:
 - John Parsons, BEAMA, and Nigel Orchard, Pilot Systems
 - Finland:
 - Pekka Koponen, VTT
 - Norway:
 - Andrei Mørch, SINTEF
 - Latvia:
 - Claudio Rochas, Ekodoma

Cost-benefit – an example



- A broad perspective on benefit is needed

- Source:
 - Demand Response Programmes at Southern California Edison, Lawrence Oliva, Stockholm 25. February 2008

Different perspectives

- Regulation is needed if a large-scale roll-out of smart meters is the goal
- Regulators and authorities in different countries deal with smart meters very differently
- It is not only a cost-benefit issue!

Nine countries

- The following presentation is not intended to be a complete description for each country!
 - The tip of the iceberg
- The presentation will highlight differences
 - Presentation is to some degree subjective

Denmark

- No regulation for smart meters
- Smart meters have mainly been discussed as a means to develop demand response
 - Difficult to establish a business case with this limited scope

UK

- 2016 goal
- The most important issue in the UK in relation to smart meters has been energy efficiency and CO₂ reductions
 - Focus on feedback (display systems)
 - Hourly metering in households has been seen as an intrusion of privacy
 - Demand profiles would be maintained even with smart meters
- Metering liberalised
 - Not part of the grid company (monopoly)

Italy

- 30 million smart meters (90% of all)
- One driver for ENEL was the existence of a 3-kW max tariff
 - Households could choose a higher kW-limit, but this would require a manual adjustment of the meter
 - Costly for utility
- ENEL was able to reduce cost because of large volume

The Netherlands

- 2014 goal of complete roll-out
- Drivers:
 - Improving liberalised market
 - Accurate billing

Sweden

- 2009 goal - with monthly readings for all
- One driver was public debate about inaccurate billing

Norway

- 2013 goal
- Drivers:
 - Operational savings
 - Demand response

Finland

- Regulator and government passive
- Drivers:
 - Demand response
 - Energy service directive

Spain

- Complete roll-out in 10 years
- Drivers:
 - More tariff alternatives
 - Better billing
 - Energy savings
 - Operational cost savings

Latvia

- Little interest
- Drivers
 - Providing different tariffs (time-of-use)
 - Better fraud detection

Conclusion

- Important to understand the historical and political tradition in each country
- Support for smart meters can be achieved if a broad view on benefits can be established
 - Operational cost
 - Demand response
 - Energy savings
 - Accurate billing
 - Easy change of supplier
 - Fraud detection