Supporting the development and deployment of advanced metering infrastructures in Europe

Smart metering for Europe’s smart(er) households

Presented by: MSc Adela Marcoci, CEIT Alanova, Austria
Smart meters are seen as one of the pillars of the smart grids.

Smart meters will help transition towards active network evolution, massively integrating renewable energy into the grid.
The partners

Third parties:
- EDP Distribuição
- Endesa Distribución
- Enel Distribuzione
- Enel Distributie Muntenia
- ERDF
- Gas Natural Fenosa
- Iberdrola Distribución
- Politecnico di Milano
- Universita Commerciale Bocconi
EU Directives
2009/72/EC electricity
2009/73/EC gas

- MSs shall ensure the implementation of intelligent metering systems that shall assist the active participation of consumers in the energy supply market.

- May be subject to an economic assessment of long-term costs and benefits – by 03.09.2012.

- MSs shall prepare a timetable with a target of up to ten years for the implementation of intelligent metering systems.

- When is assessed positively, the provision for electricity states that at least 80% of consumers shall be equipped with intelligent metering systems by 2020
Roll-out plans

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
<th>Start Year</th>
<th>End Year</th>
</tr>
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<tbody>
<tr>
<td>Sweden</td>
<td>Completed</td>
<td>2003</td>
<td>2009</td>
</tr>
<tr>
<td>Italy</td>
<td>Completed</td>
<td>2008</td>
<td>2011</td>
</tr>
<tr>
<td>Finland</td>
<td>2009</td>
<td>Mandated</td>
<td>2013</td>
</tr>
<tr>
<td>Malta</td>
<td>2010</td>
<td>Mandated</td>
<td>2013</td>
</tr>
<tr>
<td>Spain</td>
<td>2011</td>
<td>Mandated</td>
<td>2018</td>
</tr>
<tr>
<td>Austria</td>
<td>2012</td>
<td>Mandated</td>
<td>2019</td>
</tr>
<tr>
<td>Poland</td>
<td>Under Discussion</td>
<td>2012</td>
<td>2020</td>
</tr>
<tr>
<td>Estonia</td>
<td>2013</td>
<td>Mandated</td>
<td>2017</td>
</tr>
<tr>
<td>France</td>
<td>2013</td>
<td>Mandated (timetable TBC)</td>
<td>2018</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>??</td>
<td>Mandated</td>
<td>2018</td>
</tr>
<tr>
<td>Romania</td>
<td>Under Discussion</td>
<td>2013</td>
<td>2020</td>
</tr>
<tr>
<td>Norway</td>
<td>Mandated</td>
<td>2014</td>
<td>2017</td>
</tr>
<tr>
<td>UK</td>
<td>Mandated</td>
<td>2014</td>
<td>2020</td>
</tr>
<tr>
<td>Netherlands</td>
<td>In Planning Stage (final decision in 2013)</td>
<td>2014</td>
<td>2020</td>
</tr>
<tr>
<td>Denmark</td>
<td>Under Discussion</td>
<td>??</td>
<td>2020</td>
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<tr>
<td>Ireland</td>
<td>Mandated</td>
<td>2015</td>
<td>2019</td>
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# Minimum functionalities

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirements</th>
</tr>
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</table>
| **CONSUMER**                                  | • Provide readings directly to the consumer and/or any 3rd party  
                                                • Update the readings frequently enough to use energy saving schemes                        |
| **METERING OPERATOR**                         | • Allow remote reading by the operator  
                                                • Provide 2-way communication for maintenance and control  
                                                • Allow frequent enough readings to be used for networking planning                      |
| **COMMERCIAL ASPECTS OF SUPPLY**              | • Support advanced tariff system  
                                                • Allow remote ON/OFF control supply and/or flow or power limitation                     |
| **SECURITY AND DATA PROTECTION**             | • Provide secure data communications  
                                                • Fraud prevention and detection                                                           |
| **DISTRIBUTED GENERATION**                    | • Provide import/export and reactive metering                                                                                           |
The project

- collection of information related to smart metering projects;
- analysis of each project according to the identified set of information domains;
- drawing conclusions and recommendations on the way forward based on the lessons learned from the most successful smart metering experiences.

**METER ON** covers ~ 100 million smart meters (2020)
The approach via questionnaires
Collected information

- 14 projects from 10 EU countries (1st stage)
- Various detail of data provided

Type of projects
- 6 roll-out + 1 small-roll-out of E&G (company level)
- 1 demonstration project
- 3 pilot projects
- 2 R&D projects + 1 R&D-pilot

Dimension
- 3 above 1 million meters
- 5 above 100,000 meters
- 3 less or equal to 100,000
- 3 less than 10,000 meters

REAL CORP Rome, 21-05-2013
Customer focus

The recurrent issues vis-à-vis customers and smart metering solutions

- security and privacy related issues
- cost related issues
- energy efficiency
Wrap-up

- 10 countries – 10 “ways of smart metering”

- Deployment strategy needs to involve all stakeholders from the start

- Utilities need to establish a trustful relation with the consumer (ex. Finland)
Invitation in Brussels

EU Sustainable Energy Week
24-28 June

www.eusew.eu
Free registration for many events
High level meetings and EU initiatives

METER ON will have a dedicated conference on 26th of June in the Charlemagne Building
Further info

www.meter-on.eu

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GRAZIE