

Regulatory approaches today for tomorrow's smarter electricity networks

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Outline

- Performance-based regulatory approaches focussed on **network outputs**:
 - Continuity of Supply (CoS) indicators and incentive regulation
 - Review of other potential performance indicators
- Regulatory approaches to **encourage an adequate level of innovation**

These are two priorities for regulation identified in the Smart Grids Conclusion Paper:

http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/Smart%20Grids

Regulation of network outputs - 1

- Typical example of performance-based regulation of network outputs: **Continuity of Supply (CoS)**
- Initial results (from the 5th CEER Benchmarking Report):
 - 15 CEER countries use CoS indicators as a revenue driver for distribution. 11 countries use CoS indicators or system availability indicators as a revenue driver for transmission.
 - 6 other countries are introducing CoS incentive schemes.
 - The continuity of supply **improvement** tends to become **stable**: around half of the countries show a decreasing duration of interruptions; in the other countries (characterised by good continuity levels) the duration is almost of the same value.

Regulation of network outputs - 2

- The CEER status review on smart electricity grids analyses 9 other potential **performance indicators**:
 - Hosting capacity for distributed energy resources
 - Allowable maximum injection of power without congestion
 - Energy not withdrawn from renewable sources
 - Measured satisfaction of grid users for the services they receive
 - Level of **losses** in networks (**revenue driver in 12 countries**)
 - Actual availability of network capacity with respect to its value
 - Ratio between interconnection capacity and electricity demand
 - Exploitation of interconnection capacity
 - Time for licensing/authorisation of a new infrastructure

Regulation of network outputs - 3

- A significant number of countries use some of the 34 performance indicators proposed in the Smart Grids Conclusions Paper, either:
 - for **monitoring purposes**;
 - as a **minimum requirement**; or
 - as a **revenue driver**.
- The experience of CEER members shows **differences in the calculation** of performance indicators and the way they are (or can be) used as a revenue driver.

Encouraging innovative solutions in networks - 1

- Various approaches to encouraging innovation in electricity networks through different regulatory regimes:
 - Different incentive mechanisms to encourage network companies to pursue innovation/demonstration projects are already in place or planned (2+4 countries)
 - Some countries rely on current approaches which do not necessarily contradict innovative solutions

Approach 1 in place:

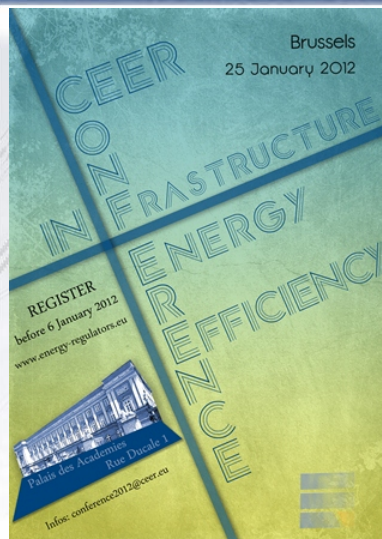
- 7 years of innovation incentives
- Recent funding of projects sponsored by distribution network operators through a Tier for small scale projects and a Second Tier on a competition-like basis for a small number of projects
- Requirements for dissemination

Approach 2 in place:

- Competitive selection process of demonstration projects in distribution medium voltage (1-35 kV) networks
- Tariff incentive through 2% - 12 years extra-remuneration of capital expenditures
- Selection ranking based on benefit/cost
- Requirements for dissemination

Encouraging innovative solutions in networks - 2

- About dissemination of the results and lessons learned from the demonstration projects:
 - 9 countries with no guarantees in place
 - 7 countries said there are guarantees and generally there are **clear rules to ensure dissemination**
- CEER recommends **ensuring dissemination of the results and lessons learned** from the demonstration projects.



Thank you for your attention!

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