

The Role of DSOs on Smart Grids and Energy Efficiency

A EURELECTRIC position paper



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The Role of DSOs on Smart Grids and Energy Efficiency

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TABLE OF CONTENTS

Introduction.....	5
Our vision	6
1. Our principles	6
2. Our recommendations on the Energy Efficiency Directive Proposal.....	7
§ 2: EURELECTRIC supports National Action Plans on Smart Grids.....	9
§ 4: EURELECTRIC recognises that future grid tariffs might increasingly rely on capacity .	10
Annex XI.....	10

The Role of DSOs on Smart Grids and Energy Efficiency

Introduction

Energy efficiency is one of the most cost-effective way of meeting the EU's key strategic policy objectives of addressing climate change, ensuring security of supply and enhancing competitiveness, while creating jobs and contributing to affordability for customers. It is a core element of the 20/20/20 objectives. A well-designed energy efficiency policy can indeed significantly contribute to the reduction of carbon emissions (for example in the transport sector) and it is clear from EURELECTRIC's *Power Choices* and the European Union's low-carbon roadmap that energy efficiency plays a crucial role in Europe's energy future.

Recently, the European Commission has made a legislative proposal on Energy Efficiency on 22nd June, in an attempt to put this topic higher on the policy agenda.

EURELECTRIC, as the voice of European electricity generators, suppliers and Distribution System Operators (DSOs), takes the opportunity to present its views on the role of DSOs in the promotion of Smart Grids and Energy Efficiency¹.

Currently, the role of DSOs on energy efficiency is clearly defined by the Directive 2009/72/EC's article 25 § 1:

“The distribution system operator shall be responsible for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity, for operating, maintaining and developing under economic conditions a secure, reliable and efficient electricity distribution system in its area with due regard for the environment and energy efficiency”.

However, what does this provision mean in practice and how will the DSO mission evolve in a future characterised by a stronger reliance on new technologies such as Smart Grids?

In this context of distribution grid modernization, EURELECTRIC DSOs felt the need to clarify these aspects by outlining its general vision and principles on energy efficiency, whilst contributing in a constructive way to the current discussion of the Energy Efficiency Directive.

¹ This policy paper – focussing on the DSO aspects of the Directive - follows and complements the general [EURELECTRIC response](#) published on 4 October 2011.

Our vision²

EURELECTRIC sees Smart Grids as a key enabler for achieving the EU's ambitious energy targets, in particular integrating the Renewable Energy Sources – which, to a large extent are connected to distribution grids - and meeting the energy efficiency targets. Smart Grids are therefore a key instrument to move towards a low-carbon society.

Smart Grids imply the evolution towards Smart Energy Systems in which generators, DSOs, suppliers and customers will all be key players of a more energy-efficient system, for example, in the form of Smart Cities.

Smart Grids should hence be perceived as more than a technical infrastructure operated by DSOs. Once in place, this platform will enable suppliers to offer new products and services to the benefit of customers. Customers will increasingly manage and adjust their consumption throughout the day, responding to more dynamic price signals.

DSOs will be a central player of this new system. They will be both in charge of reliable operation of the distribution grid and acting as a neutral facilitator for generators and suppliers. As such, they will neutrally facilitate the provision, by competitive players, of energy efficiency services.

1. Our principles

- DSOs strongly believe that energy efficiency should be driven by the market on business terms and the political/regulatory framework should be designed accordingly.
- DSOs being a regulated business, their action are strictly determined (and hence limited) by the regulatory framework that determines the conditions of their revenues through grid usage fees and expenditures. These frameworks – set by national energy regulators – often lack due regard to innovation including the facilitation of energy efficiency objectives and often focus only on cost reduction.
- Further to the above, DSOs favour a move towards network tariffs more supportive for better management of the grid in the larger context of a large scale integration of renewables generation.
- DSOs consider that Smart Grids is aiming to support the take-off of a demand response market with smart meters, where suppliers will be able to offer innovative services and products based on customers' real consumption and more advanced price offers (e.g. dynamic pricing, critical peak pricing) and will at the same time allow for a smarter network management by DSOs.

² EURELECTRIC's vision on Smart Grids has been laid down and further developed in our recent publications "[10 Steps to Smart Grids](#)" and "[Views on Demand Side Participation](#)".

- DSOs believe that Smart Grids will encourage existing and new market players active on the electricity markets to develop new thinking and new business models, including on energy efficiency.
- As part of their market facilitation task, DSOs will promote and implement tools to be used for third parties, mainly as information enablers.

2. Our recommendations on the Energy Efficiency Directive Proposal

- **On article 6 concerning energy saving obligations**

Electricity companies have an interest and, importantly, expertise in developing a robust market for energy efficiency services. This market is very specific, tailored to local circumstances.

EURELECTRIC believes that obligation schemes are just one of many tools to promote energy services. We therefore welcome the possibility for member states to develop and implement measures that best suit their circumstances.

Where member states wish to introduce obligation schemes, it should be noted that electricity companies need to have the right instruments to guarantee specific savings (i.e. 1.5%) as they have limited influence over customer behaviour and lifestyle. Therefore it is of great importance that electricity companies fulfil their obligation without economic risk and DSOs are able to cover the associated costs (e.g. through grid tariffs).

- **On article 8 concerning billing & metering**

EURELECTRIC fully supports the framework set in the Third Energy Package and believes that Smart Meters will become part of the electricity infrastructure where proven reasonable and economic by Member States' Cost-Benefits-Analyses (CBAs), as mandated by the Annex I of Directive 2009/72/EC.

EURELECTRIC views on Smart Metering

The EURELECTRIC report Regulation for Smart Grids³ clearly shows that the roll-out of smart meters in Europe is currently hampered by two factors at member state level: the lack of clarity of the mandate (on whom will the roll-out obligation fall) and uncertain cost-recovery conditions. To ensure a smooth and quick roll-out of smart meters in Europe, sound and forward-looking grid tariff models (which are set by national energy regulators) should be established. Laying down a stricter timeline without addressing these two main barriers will not deliver a smoother roll-out of smart meters in Europe.

We support a DSO-led roll-out⁴ with clear payback through regulated grid tariffs for reasons linked to economies of scale and to operational simplicity.

³ EURELECTRIC [Report on Regulation for Smart Grids](http://www.eurelectric.org), February 2011, <http://www.eurelectric.org>

⁴ This applies to those countries where metering operation is solely performed by DSOs.

We have concerns about specific provisions in the legislative proposal on Energy Efficiency that appear to be in conflict with the ongoing liberalisation process and do not serve the interests of our customers, as they create additional costs without delivering additional benefits. In particular:

- Distribution System Operators⁵ are already engaged in the roll-out of smart meters according to timelines defined by the 3rd Electricity Directive (Directive 2009/72/EC) and the associated national regulation, i.e. 80% of customers who have been positively assessed by a cost-benefit analysis must be equipped with smart meters by 2020. The new directive should not jeopardise ongoing investment plans. The financial and operational challenges linked to a large-scale roll-out of smart meters need to be carefully taken in consideration by the Commission. New obligations of a partial roll-out to specific customers with above average electricity consumption risk undermining the economies of scale benefits of a planned and cost-effective roll-out.
- To provide investors with the legal certainty needed to undertake these significant investments (worth several billion euros), EURELECTRIC recommend that the EU shows consistency with existing legal obligations and sticks to the timeframe foreseen by the 3rd Electricity Directive adopted two years ago. For the sake of clarity and legal certainty, double regulation of the same topics in different directives has to be avoided. Issues of billing and smart metering should therefore only be regulated within the 3rd Electricity Directive.
- The proposal's foreseen deadline of 1 January 2015 does not comply with constraints of logistical reality and should hence be removed from the Directive.

- **On article 12 concerning transmission and distribution**

Smart Grids investments are currently hampered by a lack of political leadership and appropriate regulatory framework among most Member States to allow for distribution grid investments (including innovative and ICT-based investments) that would give system operators the tools to cope with the 20/20/20 objectives.

EURELECTRIC strongly supports the Commission's proposal in article 12 paragraph 1 to introduce regulatory incentives for Smart Grids and energy efficiency. EURELECTRIC considers that tariff schemes developed by National Regulatory Authorities (NRAs) should stimulate investment in future technologies that can improve the networks.

EURELECTRIC welcomes and supports the formulation where Member States have the obligation to ensure that national energy regulatory authorities pay due regard to energy efficiency in their decisions on the operation of the gas and electricity infrastructure.

EURELECTRIC considers the obligation in paragraph 1 providing for establishment of efficiency analysis and plans as not appropriate. Independent measurement, control and verification systems would mean a significant amount of bureaucracy. The core mission of DSOs is to develop, maintain and operate their networks in an efficient manner and secure the reliability of distribution taking into account several operational parameters including

⁵ Except in the UK, where this is the responsibility of the supplier

efficiency. Energy efficiency is a main element of economic grid operation and development but can not be an additional target put on DSOs by itself.

DSOs should encourage the efficient use of electricity by investing in smart meters and smart grids in a framework where national regulations provide incentives for DSOs to invest. This ultimately will make it possible for suppliers and service providers to help customers to benefit from energy efficiency improvement measures.

We consider that the adoption of the proposed Energy Efficiency Directive should usher in positive regulatory and tariff incentives – designed by National Regulatory Agencies – that will put DSOs in the best position to neutrally facilitate demand side participation to the benefit of customers.⁶

As far as the proposed provision related to the *“incentives for grid operators to offer system services to network users”* is concerned, we would like to underline that such system services should not be provided by network operators but to network operators by market actors. On the other hand, data provision by DSOs will be technically conditioned by the functionalities of new technologies such as smart meters.

EURELECTRIC would hence welcome further clarity in the wording of article 12 and Annex XI and would like to underline that smart meters will be an absolute requirement if DSOs are to provide information to network users at a high level of granularity. Here again, we believe that the 3rd Electricity Directive is currently determining the exact conditions of the roll-out of smart meters in the EU.

§ 2: EURELECTRIC supports National Action Plans on Smart Grids

As part of the obligation falling on Member States to identify *“concrete measures and investments for the introduction of cost-effective energy efficiency improvements in the network infrastructure”*, EURELECTRIC supports the development - at Member State level - of National Roadmaps/Action Plans on Smart Grids.

The Plans should in particular specify the positive incentives and policy measures undertaken by Member States to lift regulatory barriers and encourage investments in Smart Grids by DSOs. The European Commission should monitor progress of the Plans and encourage best practices.

The European Commission Communication on Smart Grids (published on 14 April 2011) stated that *“the Commission will request Member States to produce action plans with targets for the implementation of Smart Grids”*. The Energy Efficiency Directive proposal could be more explicit in this regard.

⁶ [EURELECTRIC Views on Demand Side Participation](#), August 2011

§ 4: EURELECTRIC recognises that future grid tariffs might increasingly rely on capacity, we are convinced of the necessity to fully assess all the implications of such a move and its likely impact on DSOs and their customers

Along with the development of smart grids the greater part of cost of energy distribution is based on capacity not volume. The tariff structure is hence likely to progressively reflect the cost structure of net operations.

More capacity-oriented forms of tariffs shouldn't however, hinder the net operators to develop their tariff structure to more cost based and fair direction.

Annex XI

EURELECTRIC suggests some technical improvements to the wording, to make the Annex more effective and clear to all stakeholders

Principally, EURELECTRIC believes that the role of network operators should be to act as neutral facilitators by providing behind-the-scene demand side measures whilst services will be provided to the customers by ESCOs, suppliers and load aggregators. In this regard, we would appreciate if this approach would be made more explicit in the wording of Annex XI.

The Directive should, therefore, strengthen the dual role of the network operator; both as the agent in charge of reliability and as market facilitator to enhance the market dynamics driven by the liberalisation process.

More specifically, many of the services listed in Annex XI are currently provided or could in the future be provided by market actors. If these services were to be provided by network operators, this would contradict the unbundling requirements under Directive 2009/72/EC on the internal electricity market, and would not provide cost effective provision of the services listed. Services will be provided most efficiently when there is an adequate market price signal and free choice for customers so they only pay for the services they want.



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