

# **European Distribution System Operators for Smart Grids**

EDSO position paper on the Clean Energy Package

*March 2017*

## Key messages

EDSO welcomes the European Commission's Clean Energy Package together with its renewed focus on acknowledging and enhancing the roles of distribution system operators (DSOs) as a cornerstone to address global climate change through reinforcement of the energy transition in several key areas:

1. **DSOs should continue to act as neutral market facilitators empowering customers and ensuring security of supply**

The focus on active customers is welcome, as DSOs can foster customer engagement through an increased use of flexibility and data provision. Cooperation between DSOs, market participants and customers can help unlock key flexibility potential.

2. **Incentivising DSOs to use flexibility on a system level, and to adequately recover their costs facilitates DSO innovation**

DSOs should be able to procure flexibility through market-based solutions or use other direct flexibility alternatives if needed to ensure security and quality of supply. The obligation for network development plans should be limited to high-voltage only.

3. **Integrating renewables and prosumers requires cost-reflective network tariffs that consider local grid conditions and avoid free riding**

Network tariffs and grid access conditions need to be defined according to local grid conditions on a national level. Distribution tariffs should become more capacity based particularly at lower voltage levels, and cost socialisation must be avoided.

4. **Allowing DSOs to deploy and operate own storage facilities without interfering in the market is key for security and quality of supply**

Storage services remain a market activity. Nevertheless DSOs must be able to deploy, own and operate grid-scale storage facilities for an efficient grid management and technical purposes, without directly engaging in commercial storage services.

5. **Ensuring DSOs' access to all necessary data, as well as handling it, when applicable on behalf of customers, is central to fulfilling core DSO tasks**

DSOs need to keep having access to all data necessary to fulfil their regulated obligations and their neutral market facilitator role, respecting data privacy and security. Costs of a common EU data format should be assessed against its benefits.

6. **Clarifying roles and responsibilities of all new market entities ensures their fair participation to network charges and system optimisation**

DSOs are willing to engage with all new market participants (i.e. energy communities, aggregators) that are fully part of the electricity legislation. Setting up privileged network infrastructures should be prevented to avoid discrimination of grid users.

## 7. The creation of a new DSO entity is welcome as it reinforces the evolving roles the DSOs will continue to play in the future

EDSO is ready to proactively contribute and take part in the setting-up of the new DSO entity. This should initially focus on proposing new technical rules on grid management, on enhancing EU-level cooperation between TSOs and DSO, as well as on clarifying roles with the emerging new market actors.

### I. Introduction

DSOs stand at the forefront of the energy transition as key enablers of electricity markets and smarter energy systems. In this regard, EDSO welcomes the publication of the European Commission's Clean Energy Package<sup>1</sup>, particularly in view of the enhanced visibility and recognition of new roles and capabilities given to Distribution System Operators (DSOs). We particularly support the proposals' move to formally integrate DSOs at the EU level through a single DSO entity for electricity, and recognise their much-needed flexibility needs for an efficient system operation.

EDSO, representing the largest DSOs across Europe, and providing services to over 75% of the electricity distribution market with a customer base of about 350 million European citizens, is pleased with the EU's ambition for more DSO innovation in the new electricity market design.

EDSO agrees that DSOs are therefore not only responsible for developing, maintaining and operating the electricity network infrastructure through an active and continuous system management, but they also play a key role as neutral market facilitators and managers of metering and consumption data. Moreover, EDSO members are increasingly steering the digital evolution through deploying smart grids technologies and smart metering with the ultimate goal of benefiting customers.

With the ongoing energy transition, DSOs' competences and responsibilities are continuously increasing alongside fast evolving technological innovations. This comprises extended data management and congestion management in the local DSO grids, as well as the use of grid-scale storage and other flexibility solutions. In this way, the DSOs will be able to successfully fulfil their neutral market facilitating roles while retaining quality and security of supply.

This paper sets out EDSO's views on the Clean Energy Package draft proposals with a view of making recommendations for specific articles.

### II. Enhance new DSOs roles in line with real-life implementation

EDSO supports the European Commission's enhancement and the new visibility given to the DSO in the market design proposals. European legislation should focus on defining fundamental common principles, whereas member states should be more closely involved in laying down detailed regulations with respect to the heterogeneous national frameworks, standards and market processes. If deemed

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<sup>1</sup> Recast Electricity Directive, Electricity Regulation, Energy Efficiency Directive, Energy Performance of Buildings, Renewables Directive, Risk Preparedness Regulation

necessary to harmonise rules at a European level, the respective issues need to be clearly specified in the market design legislation.

## DSOs' access to grid data for a safe and secure grid operation

A central part of the DSOs' neutral market facilitator role is data management. DSOs have been, and remain major providers of grid and metering data today and in the future. DSOs are trusted, neutral and regulated parties that are fully responsible for all the actions that relate to data collection, processing and delivery. In a clear majority of member states, they provide the data in a secure, cost-effective and neutral way to authorised market parties either through data hubs or other means.

Data needs to be made available in a timely manner, and access to grid and metering data is critical for fulfilling DSOs' core tasks in ensuring system stability and security of supply. EDSO believes that data collection and handling constitutes a critical tool to fulfilling DSOs' regulated tasks, most crucially for maintaining security and quality of supply, and for neutral market facilitation needed to be administered by the DSOs.

While we generally agree with the European Commission's proposal that customers' consent should be sought after when making data available to third parties (**Article 23, Electricity Directive**),

**EDSO cautions that this should not prevent the DSOs from accessing necessary data not only for a safe grid operation, but also for continuing to promote real market facilitation.**

To that end, **EDSO recommends that DSOs be allowed to access all data needed to fulfil their grid obligations.**

Customers' consent for DSOs to provide suppliers with consumption data should be arranged in standard contracts, and any delivery of information to third-parties will only be carried out based on explicit customers' consent. Data security is a key concern for the DSOs.

On data formats (**Article 24, Electricity Directive**), an EU-wide retail market for electricity should develop in harmony with existing national data models, whereas harmonisation of data management at the European level could prove a costly endeavour. Different data hubs and formats have been, and are currently being implemented across member states.

**The setting-up of a common European data format would be very costly to implement given the heterogeneous national frameworks, standards and market processes, and its costs should be assessed according to its net benefits. Alternatively, evaluate whether the common data format should be limited to a 'minimum content'.**

## DSO storage ownership for an efficient grid management

Concerning the rules on storage ownership and operation, while we agree that the market must be involved, the Commission's proposal (**Article 36, Electricity Directive**) should seek the right balance between promoting a market-based approach and not excluding DSOs' rights to storage ownership and operation. The latter includes the use of storage for technical purposes, including emergency situations, maintenance, voltage limits, reactive power control.

DSOs, who must ensure security of supply and quality of service at the least societal cost, must be able to own and operate storage facilities whenever this proves efficient.

**EDSO thus advocates DSOs' rights to deploy and operate their own grid-scale network storage assets as an important grid management tool crucial for an efficient network operation. This should be used for network management purposes only, and not to engage in providing commercial storage services which is clearly a market activity.**

Excluding the situation of grid-scale storage installations at the DSO level, we do however agree that storage should in principle remain a market-based activity.

### DSOs as enablers of electro-mobility services

The operation of public charging stations for electric vehicles is generally seen as a market activity. DSOs should however be able to own and operate under certain circumstances, and stranded DSO costs should be avoided in any way. EDSO believes that any regulation on electro-mobility should reflect DSOs' needs to take part in the development and the planning of public recharging stations, including smart charging capabilities. This should also allow DSOs to deploy and operate infrastructure in those member states where it is so desired by national or local authorities. (*Article 33, Electricity Directive*)

**As for the provisions given in the *Buildings Directive*<sup>2</sup> (*Article 8*), EDSO suggests including that member states shall ensure that all new buildings and buildings undergoing major renovations include interoperable infrastructure supported by open technical standards for recharging points for electric vehicles for every parking space without re-intervention on the building structure.**

### Clarify roles and responsibilities of new entities

Local energy communities (*Article 16, Electricity Directive*) represent a positive development for Europe's citizens to organise themselves at small scale. DSOs are willing to support and engage with these new entities that must take fully part in the electricity legislation.

EDSO suggests that if they own and operate networks, energy communities should be constituted as DSOs, thereby complying to the same rights and duties as regulated DSOs. However, if they act as parallel infrastructures connected to the DSOs' grids, they should contribute in a cost reflective and fair manner to network charges and policy costs. Their rights and duties should be established in their agreement and cooperation with DSOs.

**In case local energy communities need support from the DSOs, these are willing to provide adequate services to them. EDSO recommends that the proposed Directive should further clarify its exact structure, size and obligations.**

**It is equally important to make sure that the microgrid structures associated with local energy communities are not resulting in unfair distribution of benefits at the expense of the connected customers. DSOs must nevertheless not be forced to lease their networks.**

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<sup>2</sup> Proposal for a directive of the European Parliament and the Council amending Directive 2010/31/EU on the energy performance of buildings COM (2016) 765 final

### III. DSOs are enablers of flexibility for a smarter system operation

Future regulation needs to enable sufficient flexibility at the system and market level, and equip the DSO with the necessary tools to perform its system operation and neutral market facilitator roles. With most of the distributed energy resources connected at the distribution level, DSOs will play a growing role in facilitating the activation of flexibility resources.

#### Incentivize flexibility use by the DSOs on a system level

The new DSOs' roles as envisaged in the package are closely interlinked with their needs for increased use of flexibility. **The provision that national regulatory authorities should incentivise DSOs to procure system flexibility services is crucial to improve the efficiency of distribution system operation (Article 32, Electricity Directive).** However, regulatory frameworks should give sufficient leeway for different forms of network regulation and flexible contracts. DSOs should be able to procure flexibility through market-based solutions or use other direct flexibility alternatives, including grid reinforcements, if needed to ensure security and quality of supply.

**Therefore, EDSO advocates that Article 32, Electricity Directive should be changed to include several options that the DSOs can use to procure flexibility services, including both contracting local flexibility directly or from market players through either flexible tariffs and/or contractual agreements.**

The 'procurement' of such flexibility directly contracted with customers who are physically close to the distribution grid can be achieved through network charges or other flexible contracts. DSOs must be allowed to procure system flexibility services in all timescales, and to recover their costs in an appropriate manner.

**Also, Article 32 should ensure that standardization of market products does not preclude a dynamic product development by market players.**

Moreover, networks development plans for all voltage levels are unnecessary and would result in onerous costs and administrative burden of little additional value, overlapping with current regulations ensuring quality of supply.

**EDSO recommends limiting the obligation for network development plans to high-voltage networks only, where grid planning timeframes match development plans and their costs might be appropriate in relation to the benefits.**

#### Redesign network tariff in line with local specificities

Whereas defining certain high-level guidelines and common principles can be positive, a major EU regulatory overhaul of network tariffs is not advisable. EDSO supports the proposals to establish common principles ensuring that network tariffs are non-discriminatory, reflect network costs associated with the use of the system, and consider the ratio of tariffs applied to producers and consumers. Also, distribution tariffs should be more capacity based where necessary, to follow costs in a fairer way, thereby limiting revenue uncertainty for the DSOs (**Article 16, Electricity Regulation.**)

**However, EDSO is critical of a too detailed harmonisation of distribution tariff structures at the EU level (Article 16, Electricity Regulation.)** Tariff structures vary widely across Europe, and heterogeneity is beneficial insofar as it reflects local grid conditions and consumer needs.

Any policy implementation in this area could lead to costs that can largely outweigh the benefits, and must respect subsidiarity. Time-differentiated network tariffs for flexibility must be set out on a member state level in recognition of local grid conditions. Moreover, their implementation will also depend on the level of smart meter deployment.

**Article 16(1), Electricity Regulation network tariffs should adequately reflect the costs incurred by those connecting to and using the network, for example by differentiating between connections at different voltage levels, as costs on the DSO level can be different from costs on TSO level.**

**Also, Article 16(2), Electricity Regulation should be rephrased to state that DSO efficiency is incentivised by the NRAs, instead of by tariffs.**

Network tariffs should incentivise customers to efficiently use the network. Energy efficiency could be incentivised by other means, such as energy taxes.

In most countries today, remuneration schemes rather focused on reducing costs instead of incentivising DSO innovation.

**We recommend that both the proposed Electricity Directive's Article 59 and the proposed Regulation's Article 16 should encourage national regulators to include mechanisms to foster innovation in general, and to encourage DSOs to comply in the best possible way. Regulators should consider the trade-off between OPEX/CAPEX when incentivising innovation.**

### Better engage active customers

Customers' right to self-consumption (**Article 15, Electricity Directive**) is a positive development. However, network tariffs paid by customers who increasingly self-generate their energy must be fair and cost-reflective. EDSO welcomes the provisions preventing net metering to avoid that the costs of self-generation are being transferred to other grid users.

### Make smart metering easy to implement

Smart meters deployment will be completed in some member states by the time the Electricity Directive enters force. Therefore, if already deployed smart meters were obliged to comply with all the minimum functionalities (**Article 20, Electricity Directive**), a robust cost-benefit analysis should be performed by national regulations to offset the cost of upgrading/replacing metering equipment.

Moreover, we support the need to give transparent and easily available information to customers. Developing near-real time visualisation needs to be provided in a cost-efficient way. DSOs are steadily committed in following technological developments of their assets and the deployment of a single digital market.

**We recommend that already existing smart meters should not be required to comply with all the minimum functionalities required by Article 20, Electricity Directive, as its costs may outweigh its benefits. Should the directive ask for the switch to be one of the minimum requirements, we recommend this decision should be left to the member states to decide.**

## IV. Foster the DSO representation at the EU level through flexible and inclusive regulation

### EU DSO body for electricity

EDSO supports the creation of an EU DSO entity (**Article 49, Electricity Regulation**) fully representing the electricity distribution industry, and with a membership structure ensuring the direct representation of DSOs. Any future decision as to its exact structure, statutes and rules of procedures should fully involve all the DSOs concerned.

EDSO believes the new entity should initially focus on proposing new technical rules on grid management, on enhancing EU-level cooperation between TSOs and DSO, as well as on clarifying roles with the emerging new market actors while ensuring a level playing field with stakeholders on system design, operation and governance. Later, regulatory issues could be addressed, which however should be clearly specified in the draft electricity Regulation. A central task of the DSO entity should be to propose and decide on new network codes. To that end, the entity should work on a transparent and exhaustive list and definition of new network codes.

### Enhance TSO/DSO cooperation

Also, we welcome the more focused approach given to the future cooperation between TSOs and DSOs (**Article 53, Electricity Regulation**). Regulatory frameworks should set out clear responsibilities about grid planning and operations by considering the specific regional needs of TSO/DSOs cooperation. However, EDSO remarks that data transfers between TSOs and DSOs should be designed in accordance with the principles of data parsimony and EU data protection regulation and adhere to the cascading principle which assigns responsibility for all data and control flows to the connecting grid operator.

**Article 53, Electricity Regulation should include a clause to ensure conformity with subsidiarity and communication cascade which is needed for an efficient and effective coordination among TSOs and DSOs.**

### Role of ACER

Enhancing **the role of ACER in new DSO areas**, including its oversight over the new DSO entity is positive insofar as it calls for a proper involvement and consultation of DSOs. When revising network codes, we would like to include that DSOs are fully involved before ACER submits its proposal to the European Commission (**ACER Regulation; Recital 43, Electricity Regulation**).

**As previously signalled, we have serious reservations about ACER's recommendations on distribution tariffs harmonisation (Article 16 (9), Electricity Regulation).**

Moreover, whereas we agree with the clauses in the **Electricity Directive, Article 59 (8)** on the obligation to disclose the tariff methodology, transparency related to the individual cost components should be achieved vis-à-vis the regulatory authority, but not vis-à-vis all market participants.

## V. More renewables and energy efficiency call for smarter distribution grids

Connecting DERs implies smarter grids and the use of intelligent solutions. EDSO would therefore like to ask for clear and transparent rules to be included in the Renewables Directive that relate to network expansion and reinforcements caused by new RES installations.

### Simplify and accelerate administrative procedures for network developments

The Clean Energy Package fosters a simplified permit granting process to build and operate plants and associated transmission and distribution network infrastructures to produce energy from renewable energy sources (**Article 16, Renewable Energy Directive.**)

Considering that distribution networks are becoming a cornerstone of the future Energy Union, EDSO believes that the permit granting process associated to network infrastructures, that are used by residential, commercial and industrial customers (and not only by private investors in RES) should also be facilitated and accelerated.

**We believe that for demonstration projects and installations with an electricity capacity of less than 50 kW a simplified grid access procedure could be established.**

But, administrative simplicity must be achieved while complying with technical grid codes and safety legislation. Thus, installations must only connect to the grid under the supervision of the DSO, who must grant network capacity and safety approvals prior to it, as well as the right technical interface.

**Therefore, we disagree with the proposed *Renewables Directive's Article 17* that certain installations can connect to the grid following a notification to the DSO, which omits the aforementioned two key steps, and consequently implies high technical and safety risks.**

Finally, about the draft *Electricity Regulation, Article 12* should be changed to read that network planning should consider **limited curtailment and redispatching which does not exceed 5% of the transported energy, instead of installed capacities.**

### Facilitate renewable self-consumers and consumption

**Article 21 of the Renewables Directive** entitles customers to **self-consume** while being remunerated for the electricity they feed into the grid. However, jointly engaging in self-consumption should not be an option to evade regulated charges that legitimately apply in a non-discriminatory basis to all grid users connected to it.

The need for introducing **renewable energy communities (Article 22, Renewables Directive)** and their impact on rules and conditions remains unclear. To that end, we would like to ask on the European Commission to further clarify what are the arguments behind the criteria used to set up the renewables communities, and to which extent companies can participate in the new entities.

## VI. Recognise DSOs' roles on risk preparedness to best guarantee security of supply

### Security of supply is a core DSO task

EDSO welcomes the draft Risk Preparedness regulation's proposal for a common approach to preventing and managing crisis situations going beyond only looking at the national level. Member states should work closely together to prevent and manage outages or blackouts, but we regret to see that the proposed regulation is largely overlooking the local dimension to security of supply.

Security of supply is a core competence of DSOs, particularly given their role in local system management and neutral market facilitation, in the context of a more decentralised energy system that needs to be supported by a critical and cyber-secure infrastructure.

**We thus recommend to fully recognise DSOs' roles in managing risks as the distribution level, and closely involve them in the definition of national risk preparedness plans. Designating an existing national organisation would be more appropriate than introducing an additional regulator for coordinating security of supply issues.**

**Furthermore, in the event of the Electricity Coordination Group being considered an appropriate forum to peer review the plans, we should expect it to open its membership to DSO representatives.**



*EDSO for Smart Grids is a European association gathering leading electricity distribution system operators (DSOs), cooperating to bring smart grids from vision to reality.*

**[www.edsoforsmartgrids.eu](http://www.edsoforsmartgrids.eu)**