

# Response to CEER public consultation on Incentives Schemes for regulating DSO

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A EURELECTRIC response paper

May 2017

***EURELECTRIC is the voice of the electricity industry in Europe.***

*We speak for more than 3,500 companies in power generation, distribution, and supply.*

***We Stand For:***

***Carbon-neutral electricity by 2050***

We have committed to making Europe's electricity cleaner. To deliver, we need to make use of **all low-carbon technologies**: more renewables, but also clean coal and gas, and nuclear. Efficient electric technologies in **transport and buildings**, combined with the development of smart grids and a major push in **energy efficiency** play a key role in reducing fossil fuel consumption and making our electricity more sustainable.

***Competitive electricity for our customers***

We support well-functioning, distortion-free **energy and carbon markets** as the best way to produce electricity and reduce emissions cost-efficiently. Integrated EU-wide electricity and gas markets are also crucial to offer our customers the **full benefits of liberalisation**: they ensure the best use of generation resources, improve **security of supply**, allow full EU-wide competition, and increase **customer choice**.

***Continent-wide electricity through a coherent European approach***

Europe's energy and climate challenges can only be solved by **European – or even global – policies**, not incoherent national measures. Such policies should complement, not contradict each other: coherent and integrated approaches reduce costs. This will encourage **effective investment** to ensure a sustainable and reliable electricity supply for Europe's businesses and consumers.

***EURELECTRIC. Electricity for Europe.***

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## KEY MESSAGES

- Security of supply, quality of service and innovation are crucial for both current and future regulatory principles and approaches as they allow DSOs to fulfil their roles and perform their activities in an efficient way and make the necessary investments to ensure a reliable and high quality supply.
- Regulatory frameworks in general should move from a short-term cost-cutting approach to a forward-looking approach, be predictable and stable in the outcome as much as the specific national conditions allow and set feasible targets and outputs for DSOs to meet.
- EURELECTRIC believes that an engagement of the Regulators and stakeholders (DSOs, market operators, customers) in the regulatory process is paramount. Stakeholders are usually the first to be confronted with new situations and changing needs. Furthermore, to ensure a level playing field, the regulatory process should be transparent and public.
- EURELECTRIC welcomes the use of cost benefit analysis and feedback loops as regulatory tools to assess which schemes and mechanisms are the most efficient to meet DSO targets.
- Customers are more and more at the centre of the energy and network system and as such they play an important role in the society. Incentivising DSOs to manage their networks in the smartest and most efficient way would imply that regulations will, by definition, benefit customers as the cost of the network connection and use will be reduced. EURELECTRIC thinks that innovative solutions developed by DSOs should be encouraged and should always bring benefits to the society as a whole.
- EURELECTRIC agrees with CEER that ensuring a coordinated whole system approach should be the guiding principle when developing regulatory frameworks. This approach will identify the net benefit that regulatory decision may bring to the whole electricity system and has the merit to avoid silos effects, lock in results and duplication of investments.

## CONSULTATION QUESTIONS

The aim of this consultation procedure is to collect feedback from stakeholders in order to define Guidelines of Good Practice (GGP) that can provide national regulatory authorities with information and examples.

CEER invited all interested stakeholders to respond to this public consultation by filling in a questionnaire. This section provides a complete list of consultation questions and answers as they appear throughout this paper.

### (A) Current Principles and Regulatory Approaches

#### 1. Is there any regulatory aim that should prevail over other aims?

In their capacity of natural monopolies, DSOs are strongly regulated entities. A well-designed regulation is key to ensure that DSOs perform their roles and activities in an efficient way and make the necessary investments in their network to meet the expectations of network users of a reliable and high-quality supply.

Overall, EURELECTRIC shares the principles and goals for DSO regulation set out in the consultation document and concurs with CEER that regulation should protect customers by causing regulated entities to invest and operate as if they were subject to competition in the market economy and avoid any market distortion. Therefore, the most important regulatory aim should be to answer customers' expectations while preparing for the future. These expectations include both traditional aims (quality of service, security of supply, cost efficiency) and new aims (innovation, renewable energy sources integration, data management, etc.). Hence, EURELECTRIC believes that **security of supply, quality of service and innovation** are crucial for both current and future regulatory principles and approaches.

More globally, the regulatory framework should move from a short-term cost-cutting approach (which is not the highest priority in a time where distribution network are facing important challenges) to a forward-looking approach, be predictable and stable in the outcome as much as the specific national conditions allow and set feasible targets and output for DSOs to meet.

Lastly, EURELECTRIC would like to explicitly highlight that clarity, certainty and visibility of the regulatory framework are fundamental principles of a good regulatory framework for network regulation, in order to improve the investment conditions for operators.

#### 2. What regulatory tools are the most effective to achieve regulatory aims?

Each regulatory tool related to electricity grids has its advantages and drawbacks, as well as the reasons why the relevant NRA prefers to use or not to use it.

In general, regulatory tools should be stable, transparent and allow for a fair rate of return reflecting the company's cost of capital. However, it is well-known that the panorama of distribution companies in Europe is quite differentiated, with more than two thousand DSOs operating very

different networks with different issues. Depending on the specific local features, EURELECTRIC thinks that the **NRA should be able to choose the most suitable regulatory tools in order to pursue the most important objectives**. Considering the specific national experiences, the most important element is not the nature/type of a regulatory tool, but the way it is implemented. Therefore, it is important that the given tool is subject to preliminary impact assessment and during its implementation it is applied timely and sustainably over the regulatory period, giving medium to long-term predictability of the DSOs' business environment. Hence, **the systematic use of cost-benefit analysis and feedback loops seem to be a good tool to assess which schemes and mechanisms are the most efficient to meet DSOs' targets**.

In terms of regulatory tools, it is worth highlighting that output regulation (i.e. incentive regulation) should not be given too much emphasis by the regulators since it is highly dependent on exogenous factors (for instance SAIDI/SAIFI indicators are strongly correlated with extreme meteorological events). Therefore, putting too much weight on them can be detrimental to DSOs. On the other hand, a regulatory scheme based only on a "standardised costs" tool can be ineffective as it takes time to calibrate because of the high amount of data involved. This is why EURELECTRIC recommends a win-win approach based on a mix between output-based and input-based regulation, in order not to hamper DSOs efficiency and innovation.

### **3. Do you have examples of additional important tools in regulation?**

Important additional tools in regulations are specific mechanisms that, in consideration of the transition towards smarter and more sustainable network management, encourage innovation and Research & Development projects. Incentivising innovative operational (OPEX) solutions alongside traditional grid reinforcement options lower costs for all customers, allows the economy to grow through more efficient connections and more effective system management and reduces future electricity bills.

In the EURELECTRIC Report "[Innovation incentives for DSOs](#)" reference is made to nine Members States that have implemented new specific regulatory mechanisms/tools to promote innovation and R&D projects.

In particular, France, Italy, Norway and the UK have set concrete examples on specific schemes that fund R&D and/or innovation for DSOs. Even though they propose different approaches to remunerate R&D or innovation investments, it has been noticed that if a specific mechanism has been implemented, there is a positive impact on investments/costs for innovation/R&D in most cases. However, if the regulatory framework treats these costs as any other investment costs, the system hampers innovation.

Also, a regulation tool that efficiently incentivises DSOs to engage in active system management should consider the changing OPEX and CAPEX structures to find the optimal balance between using distributed generation and building new infrastructure and how to incentivise DSOs to be innovative and find solutions (e.g. for ICT, data handling, but also system services) in-house or through outsourcing.

Examples of countries that have developed incentive tools for smart grid related expenses (both CAPEX and OPEX) are the following:

- In Finland, there are only incentives for OPEX related to R&D projects. CAPEX for R&D and pilot projects are treated as any other costs. OPEX incentives for R&D projects are approved if they do not exceed 1% of the allowed revenues.
- In France, costs for R&D and pilot projects are covered within the distribution network tariff. These costs are not related to the efficiency requirements (pass through costs). On top of that, operational costs related to smart grids (development and primary roll out) and flexibilities can be integrated in the cost trajectory even though they were not forecasted in the tariff, if the project's cost benefit analysis is positive.
- In Ireland, the Regulator can provide OPEX allowances for R&D projects. Separately, there is also an "Innovation OPEX Fund" for projects. If they succeed, they would strategically innovate and change how the DSO operates.
- The RIIO model in the UK does not differentiate between CAPEX and OPEX. OPEX for funded pilot projects will be recognised in the allowed revenues as well.
- In Italy, the Regulator introduced a new output-based mechanism aimed at incentivising the deployment of innovative functionalities in a selective way (i.e. where these are most needed), based on a prior assessment of the costs and benefits of innovative solutions from a societal point of view. This mechanism, called "Smart Distribution Systems" is featured by a holistic view, as investments are incentivized ensuring a coordinated system approach, avoiding any "silo effect".

## **(B) Changing Needs**

### **4. Considering the national and the European regulatory frameworks, what are the main challenges for DSO regulation?**

DSOs face many technological challenges ahead of the maturity of smart grids, when large scale distributed generation will be integrated, with high numbers of electric vehicles on the roads, the growing charging infrastructure connected to the grid and many new actors interacting in the market. In the following years, DSOs will not only be required to fulfil their contractual obligations (optimise network operation, regulate the voltage/power flows, reducing technical power losses, etc.), but also adopt new solutions and roles in this new context. This will be achieved either by owning the solution where a market failure exists or by being allowed by the regulatory framework to procure the new services available. As such, DSOs will have to clearly define their roles and responsibilities as Distribution Operators as new services become available. On the other hand, NRAs should take into account that new attributions to DSOs may increase their operating costs, which represent an economic challenge for both the utility and the Regulator. Such emerging costs should be properly recognized, in particular if an ex ante regulation applies which sets allowed revenues based on costs assessed before the costs related to new activities emerge.

Moreover, more active grids will also require a more advanced monitoring and management of the grid, for which innovation technologies are key. New technologies not only give the opportunity to new players (prosumers, aggregators, ESCOs) to enter the market and to offer new products (shift load, energy efficiency), but also empower customers encouraging them to be active (enabling flexibility and demand response).

Regarding the economic challenges, the risk of DSO's activity has increased due to new prerogatives (flexibilities control, data management, etc.). This is shown by the increased asset beta valuation for the cost of capital in recent regulatory decisions, which should be generalised to avoid hampering DSO's investments.

Lastly, DSOs need stability concerning their long-term investments. Clarifying European principles and the way they are transposed in national legislation and regulation is paramount. DSOs should be given the means to perform the new roles they're given due to energy transition.

## (C) Changing aims and approaches of good practice

### 5. What are the most relevant new issues for DSO regulation?

**New Roles and activities for DSOs:** DSOs play an important role in the implementation of new technologies to reach the European decarbonisation goals. The electrification of heating and mobility, as well as the implementation of flexibilities in the energy supply will depend on the ability of DSOs to develop their new roles and activities. DSOs will need to innovate to make this process a success. DSOs can create additional value by offering/using services to/from different stakeholders in the interest of the entire power system and its users. To serve such purposes, a sound regulatory framework should (and can) support companies in these activities. An adequate assignment of roles and responsibilities in the management of data is vital.

**Innovation Incentives:** The adaption of the energy system towards decarbonisation, electrification and decentralised energy production poses new issues for DSO regulation which require innovative and smart solutions for effective grid operation and flexibility. Smart new technologies require investments and thus a relevant issue for DSOs would be the adequate recovery of such investments. Furthermore, in order to incentivize innovation, some features of the existing framework should be properly reviewed:

- All new costs related to new activities and innovation projects should be properly recognized;
- The rate-of-return of investments of new investments should be increased taking into account the higher technological risk of new innovative solutions;
- Assets regulatory lives should be reduced since technical life of assets in a more digitized environment is shorter.

**Tariff Structure:** Although a certain level of harmonisation is being proposed by the EC in the Clean Energy Package, EURELECTRIC believes that any revision of the tariff structure fostering DSO innovation should take into consideration local circumstances and national specificities in respect of the principle of subsidiarity and judicial accountability already set by the current European Directive (art. 37). National regulators will have the task to set the tariff structure in a way that incentivises the most efficient use of the network while promoting electrification and ensuring a fair and cost-reflective cost allocation.

**Data Management:** DSO regulations should take into account that data will play an important role for the development and operation of the distribution grid. Unrestricted access to smart meter data should be ensured for DSOs without the need for any explicit customer consent, since access to such data is aimed at guaranteeing that the DSOs can perform their duty of network planning and operation in the most effective way.

## 6. What should be the main regulatory goals in the near future?

The DSO business model was formerly a low-risk, low-innovation cost-of-service-regulated infrastructure business. Nowadays such business model is transforming from this pipe-like to a platform-like business model, creating value by facilitating exchanges between interdependent groups: consumers (prosumers), producers, aggregators, EV charging points, etc. These consumers and producers might be considered as 'APPs' to the DSO platform. In the near future, DSOs will no longer be a pipe, but a platform, to which all these different parties can connect to get services by the DSO. DSOs will not only operate the system between these parties, but will be the key players responsible for quality, security of supply, data/communication exchange and the system balance. In this respect EURELECTRIC, building on its DSO strategic vision paper and in line with the goals stated by CEER in its consultation paper, believes that the main regulatory goals in the near future should be:

- Promote quality and security of supply
- Incentivise innovation to bring new technologies in the market

In addition to those, EURELECTRIC supports the promotion of innovation according to the following principles:

- Innovation in DSOs is related to business transformation- new solutions will emerge and adequate remuneration mechanisms should support DSOs' activity transformations;
- The specific regulatory mechanism implemented should be predictable and stable in the outcome and long run and set feasible targets and output for DSOs to meet;
- These mechanisms should be simple, with no or as few bureaucratic obstacles as possible;
- The remuneration of the expenses should be guaranteed;
- Such mechanisms should also include incentives for OPEX since the roll-out of innovative network technologies has the tendency to have a higher share of OPEX;
- In general, the regulatory framework should give the DSO the freedom to choose how to meet the outputs through the most efficient investment (copper vs. smart);
- The implementation of innovation incentives should target the reduction of financial risk for DSOs while increasing their participation in pilot projects and innovative programs;

- Implement a national and/or EU-wide knowledge sharing system of R&D results if possible with additional monetary incentives. Especially smaller DSOs and their customers could also participate and benefit;
- R&D costs should be fully recognized. Calls to realize R&D projects, both at national and European level, should be designed in a way that enable all DSOs to participate. In particular, size of the calls should be designed in a way that attract participation of smaller, but also bigger operators.

Also, due to their human and territorial proximity with customers, DSOs should be on the forefront of implementing the energy transition and empowering customers. In this respect, NRAs should grant DSOs a major role for activities in the regulated perimeter:

- Advice to local authorities on the implementation of their energy policy,
- Data management,
- Advice in energy efficiency schemes,
- Local energy management.

## **7 Do you agree that the regulatory process shall be an interactive process between regulators and stakeholders?**

**EURELECTRIC believes that an engagement of the regulator and stakeholders (DSOs, market operators, customers) is paramount. Stakeholders are usually the first to be confronted with new situations and changing needs. Furthermore, to ensure a level playing field the regulatory process should be transparent and public.**

To this regard Portugal and Finland can be mentioned as examples of best practices. Under the Portuguese and Finnish regulatory framework, regulatory changes include public consultations, where stakeholders (suppliers, utilities and consumer associations, etc.) have the right to share their view on the proposed regulatory changes and provide valuable input to the process. This practice allows for an integrated vision of the electricity system and increases the level of transparency of the Regulator's activity.

## **8 What can be done to allow a more active participation from the stakeholders?**

More active participation from the stakeholders can be triggered by the introduction of more interactive processes between regulators and stakeholders, by imposing more detailed transparency requirements to NRAs (e.g. making available on NRA's websites the documents that support their decisions). EURELECTRIC believes that requiring transparency on regulatory tools and performance indicators seems appropriate and beneficial for both sides (NRAs & stakeholders). Therefore, EURELECTRIC welcomes an open and unbiased monitoring of the effects of regulation conducted by a neutral authority and including the views of DSOs, as well as other stakeholders.

Furthermore, NRA's questionnaires and audits can be too time-consuming and not beneficial. It would be more efficient to have less closed questions, but to add one open question. Focus groups could also be relevant for all stakeholders to express their opinions.

**9 Do you agree that technologically neutral indirect approaches are the most efficient way to promote innovation?**

EURELECTRIC is of the view that technologically neutral indirect approaches are efficient ways to promote innovation. They allow DSOs to assess and choose the most suitable way to achieve innovation according to the current circumstances. The most important condition to enable those approaches is the objective and fair setting of the performance indicators by the respective NRA, which would reflect the particular national specificities.

However, EURELECTRIC thinks that direct approaches are equally important to reduce the risk associated to developing and testing new solutions, which may benefit the whole sector. A combination of direct and indirect is thus probably the best approach.

**10 Do you agree that innovation should be seen from the customers perspective?**

DSOs and network operators work for the purpose of satisfying the expectations of network users. From this perspective, customers are more and more at the centre of the energy transition and network system and so, they play an important role in society. **Incentivising DSOs to manage their networks in the smartest and most efficient way would imply that regulation will by definition benefit customers as the cost of the network connection and use will be reduced.** EURELECTRIC thinks that innovative solutions developed by DSOs should have been encouraged and should always bring benefits to the society as a whole.

**11 Could you provide examples of indirect or direct incentives for innovation which you consider to be effective?**

**Norway:** DSOs can use up to 0.3 % of the capital based towards R&D projects (though the projects have to be approved in advanced). Some DSOs have used this possibility to develop drones to monitor the network and reduce maintenance costs. Others have used this possibility to study how tariffs affect consumers, etc.

**UK:** The GB regulator, developed RIIO (Revenues = Incentives + Innovation + Outputs) to encourage investment in networks to maintain a reliable and secure network at a fair price for consumers. The model puts more emphasis on incentives to drive the innovation needed to deliver a sustainable energy network at value for money. The performance based RIIO model sets out network companies' price controls, which are eight years long, with a provision for a mid-period review of the outputs that companies are required to deliver. The current price control for electricity distribution companies began in 2015 and will end in 2023.

The RIIO Model encourages companies to innovate through two means:

**1. The Innovation Stimulus Package** – Providing partial financing for innovation related to the delivery of a sustainable energy sector through an electricity networks innovation stimulus. Funding is provided through customer bills where DSOs can recover money for innovation through tariffs. However, if companies do not use this money, they lose it.

**2. Stimulating innovation with the price control package** - The longer-term, outputs-led, incentive-based, ex ante price controls will provide their own incentives to innovate, by giving companies commitment around the potential reward that they can earn from successful innovations and committing not to penalise them for unsuccessful innovations. Companies must report their performance for different outputs to the regulator and they will receive higher revenue if they exceed their targets and a lower one if they fail to meet them. The rewards and penalties are specific to each incentive, and designed to reflect the marginal value to customers. For example, if companies solve problems such as grid congestion by using innovation, e.g. demand response, instead of costly grid reinforcements, companies are rewarded with a percentage of these savings.

**Finland:** The Finnish regulatory framework strengthens incentives for investing in R&D by handling such costs as Research and Development pass through costs (not included in the OPEX benchmarking).

**France:** Research and Development operational costs related to the implementation of smart grids demonstration programs are allocated to a specific budget which is not affected by efficiency requirements. However, since OPEX are globally capped, the fact that ENEDIS has to invest in such demonstration programs constitutes an obstacle to allocate money to other areas of network management (e.g. day-to-day operations, maintenance). Thus, this R&D budget has to be limited.

Another example relates to flexibilities and smart grids operational costs that were not anticipated in the cost trajectory. Those costs can be recovered if the cost benefit analysis of each project is positive. Even if this scheme could be made simpler, it's a first step towards taking into account costs that occurred during a given regulatory period.

**Germany (negative example):** In the annex of its consultation paper, CEER mentions the efficiency bonus as a case study. From a DSO perspective, this regulation will not incentivise DSOs to invest into innovative solutions. The super-efficiency bonus is only an incentive for a small group of network operators (100% efficient network operators in the DEA method). Network operators, whose efficiency is derived from the SFA method, as well as all network operators in the simplified procedure, will be excluded.

As the result of the super-efficiency analysis is dependent on the underlying benchmarking model that is adjusted every 5 years (e.g., parameters, outlier analysis, cost driver analysis), the outcome is not foreseeable for network operators with regard to the incentive effect for planned innovation activities. The capping to 5% (1.25% / a) further limits the effect and thus the incentive. The efficiency bonus would therefore stimulate few network operators to initiate such activities as they will lead to short-term efficiency gains in the next base year. Innovative solutions with medium-term to long-term efficiency effects that reduce the conventional investment requirements and lead to higher operating costs would not be included in the efficiency bonus and thus would not be stimulated.

## **12 What do you think about the CEER position on the whole system approach?**

Taking into account the need to strike a balance among conflicting interests of different stakeholders, EURELECTRIC agrees that ensuring a coordinated whole system approach should be the guiding principle when developing regulatory frameworks. This approach will identify the net benefit that regulatory decision may bring to the whole electricity system and has the merit to avoid silos effects, lock in results and duplication of investments.

Adopting a “forward-looking approach” seems favourable as long as roles and responsibilities between DSO and TSO are clarified and coordination among different stakeholders is ensured.

## **13 Could you provide examples of the whole system approach that bring added value?**

In Norway, the Regulator has published a document for consultation which will require local DSOs and regional DSOs to communicate in an attempt to increase collaboration, and as such reduce the amount of investment needed to strengthen or build the network. This is a result of demand response and distributed electricity production (prosumers) playing an increasingly bigger role for the network system.

The new Italian approach of incentivizing smart distribution systems described in the Annex of the above mentioned CEER paper is a good example of how the whole system approach is translated into practice, as it is aimed at incentivising the deployment of innovative functionalities in a selective way (i.e. where these are most needed), based on a prior assessment of the costs and benefits of innovative solutions from a societal point of view, rather than “in silos”.

EURELECTRIC pursues in all its activities the application of the following sustainable development values:

Economic Development

▶ Growth, added-value, efficiency

Environmental Leadership

▶ Commitment, innovation, pro-activeness

Social Responsibility

▶ Transparency, ethics, accountability



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