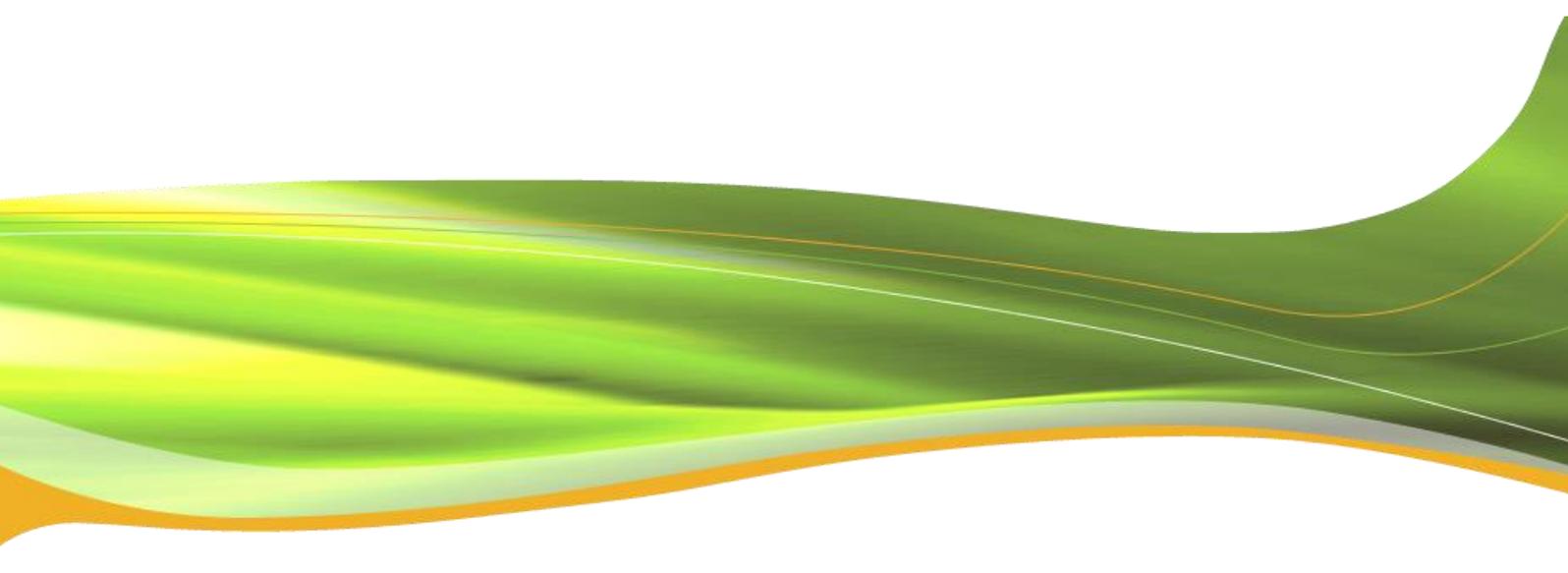


European Distribution System Operators for Smart Grids

Response to CEER consultation on incentives
schemes for regulating DSOs, including for
Innovation

May 2017



As set out in the European Commission's Clean Energy Package, DSOs' roles are set to grow in the future, alongside the deployment of smart grid solutions needed to accommodate the more decentralised and distributed energy resources. The new demand and supply patterns, as well as growing customers' roles are affecting distribution grids in an unprecedented way.

All this change will require distribution system operators to carry out significant investments to ensure their networks will be able to keep up with the innovation pace required. To enable innovative investments however, regulation too must be innovative. Regulators should help DSOs, customers and society to be able to switch from the 'connect and forget' to the 'connect and manage' approach.

Several barriers stand in the way of more effective regulation and investments. DSOs are currently facing lower investment decisions as a result of higher regulatory risks associated with smart grid investments. At the same time, DSOs are being asked to improve efficiencies of network operations and development, and maintain lower grid costs and tariffs.

In a majority of member states, there is no specific innovation scheme that can allow for a reasonable remuneration on R&D expenditure, and promote the development of innovative investments. This overall lack of adequate funding is holding back investments in smarter distribution grids.

DSOs regulation should move away from rewarding cost-efficiency only to ensuring an adequate investment framework that can guarantee security and quality of supply at least societal cost while promoting innovation and digitalisation.

EDSO calls on regulators to adhere to the following principles when reviewing regulatory models:

- **Develop regulatory schemes that** gives DSOs the choice to implement the best possible and the most cost-efficient solution that supports their changing roles.
- **Create attractive conditions for innovation** by offsetting regulatory risks and shifting away from cost-reductions only regulation.
- **Enhance the remuneration toolbox** by making funds available for R&D and innovation decoupled from ordinary BAU allowances.
- **Set up dedicated innovation incentive schemes** that can include costs for smart grid projects or promote DSOs' increasing roles as neutral market facilitators.
- **Include incentives for OPEX** in order to reflect on the growing needs for OPEX related to flexibility in distribution networks.
- **Ensure stable and clear regulatory frameworks** that allow DSOs to develop both short-term and long-term innovation needed for system transformation.

(A) Current principles and regulatory approaches

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

We believe that the principles and goals outlined by CEER strike a good balance when designing incentives schemes for DSOs. Given the diversity of distribution networks across Europe, there are various ways in which regulatory models can approach investments depending on the specific particularities of DSO grids. The results that DSOs must achieve depend on the specific context and their own management and performance against the outputs and incentives set by the NRAs.

Whereas regulation mostly focused on promoting cost efficiency for the DSOs so far, a shift towards more schemes that reward both innovation as well as quality and security of service, which will become even more important in the future for a secure system operation, should prevail. This should support the changing DSO roles and growing challenges that call for more flexibility in distribution networks, which will be needed to locally balance supply and demand, and keep the energy system safe.

Regulation should therefore leave enough choice for the DSOs to choose the most effective solution in order to keep the system costs as low as possible, and to meet the new innovation requirements in the new decentralised energy system. A holistic view is welcome insofar as it focuses on promoting societal benefits from a system perspective, however further clarity in defining this concept is needed.

DSO regulation should continue to be based on a level-playing field allowing for a fair participation of all actors, including their responsibilities for the costs they induce on the system. These should include all options for accessing flexibility by the DSOs, which will be needed more than ever to meet their growing market facilitating roles without affecting quality of supply, including also the option of reinforcing the network when necessary. DSOs should be able to choose the most cost-efficient option.

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

Bigger risks taken by the DSOs to meet the energy transition challenges should translate into adequate support from the regulators, notably through a capital remuneration in line with this increased risk. While regulatory authorities should pave the way for neutral targets and objectives, DSOs should be able to make their own decisions on investments, and on how to achieve those targets by finding an optimal balance between operational and capital expenditure.

Thus, it is important that regulatory systems avoid micromanagement by using special incentives to promote certain technologies or procedures. There are two reasons for this. One is that general rules that provide detailed guidance for the DSOs' actions may not always result in sufficient flexibility for specific DSO decisions, and are certain to lead to inefficient solutions in some cases. The other is that case-by-case decisions by the regulators may require very large amounts of data for accurate results, which can result in high costs and inefficient actions.

Another major focus for regulation is to remove the obstacles preventing DSOs from making optimal investment decisions resulting from the remuneration of CAPEX (usually through a regulated rate of return) and OPEX (which is in some MS treated as a pass through). We thus encourage regulators to start discussions and explore corresponding solutions that can effectively solve this issue.

Moreover, we call on regulators to take into account the following forward-looking regulatory goals when considering the most appropriate tools at the national level. In considering these goals above however, quality and security of supply should remain a leading principle for regulators, and any detailed regulation on specific incentives should be left to the national regulatory authorities to pursue the most important objectives according to the different network needs in each country.

- Make DSO innovation possible by establishing separate innovation funds from the ordinary business-as-usual (BAU) allowances. Such incentive schemes should remain technology-neutral, and favour the spending of R&D OPEX while avoiding situations of ‘ringfenced’ budgets limiting the amount of OPEX spent elsewhere on the grid.
- Additionally, as DSOs are expected to play more than ever a ‘neutral market facilitating role’, regulators could also include this principle among their goals. Regulators could incentivise DSOs to deliver on this growing role by setting up a ‘market facilitation’ incentive, which would mean transforming an obligation into an opportunity. Such scheme could help to positively evaluate how DSOs can help facilitate markets in the smarter energy system.
- Set up a cost recovery guarantee through which DSOs can have the possibility to derisk projects from being subject to stranded assets or insufficient allowances.
- Link the allowed rate of return to the degree of risk associated with the concerned innovative investments. The use of cost-plus instead of price-cap regulation for OPEX related innovation tends to be more predictable.
- Innovation schemes should be decoupled from ordinary price reviews to ensure a faster performance of mechanisms, and avoid lengthy processes between the investment costs and its recovery through tariffs.
- Allow for knowledge sharing and adoption of best practices, and avoid duplication of efforts.
- EU R&D frameworks should continue to prioritise financing options which are needed to accelerate smart grids implementation across Europe. The revision of the Projects of Common Interest should secure the inclusion of smart grids projects with a significant societal value, thereby reducing the bias for large corridors at the expense of small to medium-sized projects.

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

Regulators should set appropriate incentives by including specific mechanisms to encourage innovation and DSOs’ compliance in the best possible way. Building on the extensive list of CEER’s overview of different regulatory tools (chapter 1.2), it is important that regulators establish separate funds to innovate from the ordinary BAU allowances. In addition, regulation should incentivise DSOs to include investments from EU grants, national funds and other financial resources in their regulated asset base where it is efficient today (see annex).

The establishment of dedicated innovation funds should make possible the separation of operational costs for smart grids demonstration projects from being treated as any other regular costs. Costs of demonstration and pilot projects should not be treated as costs under an efficiency incentive but under dedicated innovation/demonstration and pilot projects incentive.

(B) Changing needs

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

The key challenge for DSO regulation is the ability of national and European regulators to be agile enough to adapt regulation in a timely and efficiently manner that is able to fully exploit the potential of smart grids and the associated changes that these imply. These are closely related to the challenges that the DSOs are facing in coping with increasing amounts of distributed generation and electric vehicles, as well as DSOs' needs to use own grid-scale storage for grid management purposes.

In many member states (MS), the traditional approach to grid access and use is still the only regulatory or legal option in place, although DSOs have demonstrated they may already build and operate a more flexible and smarter grid. Regulators should therefore urgently adapt grid connection and operation codes to facilitate this. Regulation should be not only more agile, but it should also be flexible and innovative, and quickly react to changes that are happening in the network. These changes include the evolving DSO roles and responsibilities, the facilitation of new services, options and business models.

DSOs are regulated entities that have to cover their costs through regulated revenues only, which are collected via network tariffs. Cost recovery through regulated revenues may imply a low financial risks for the DSOs, but also very low incentives to innovate. But the ongoing changes and the more active role of the DSOs associated with smart grids investments means that DSO need to take bigger risks.

Yet the strong focus on operational cost reductions which has been the case with regulation today has limited DSOs' potential for innovative investments. The current regulation (i.e. revenue or price cap regulation) often provides DSOs with little incentives to improve system operation costs by delaying network investments. In that case, innovation risks in being considered an additional cost that can easily be removed to avoid a loss in profitability. This has led to a lack of incentive mechanisms for expenditure related to R&D and/or pilot projects, whose costs are treated as any other costs.

In a majority of MS¹, DSOs do not receive a return on capital for network assets financed by public funds and other subsidies (e.g. EU and national funds or other non-refundable sources). This is often due to the calculation method of the RAB from which the value of the subsidy is subtracted. Partially

¹ See table in the annex. In 14 out of 17 countries, network assets financed with non-refundable funds are not included in the RAB. Some exceptions are in Spain (investments by EU funding adds to 10% of RAB), Austria (there is an exception for refundable funds such as EIB financing), and Sweden (as it does not distinguish between subsidized costs).

including investments financed by non-refundable funds in the RAB would provide additional incentives for the DSO to use such funding opportunities. In the case of Spain, there is an exception for EU funding incentivising the DSO in this area, which amounts to 10% of the regulated asset base.

Moreover, as grid extension implies investments (CAPEX) the implementation of smart grids may increase the weight of OPEX in distribution costs. This effect becomes even more critical if smart grids demand that investments should be replaced more frequently by OPEX e.g. for the use of contracted flexibility at the distribution level. Regulation should therefore incentivise DSOs to reach the most efficient outcome by accounting both for the changing OPEX and CAPEX structures.

Finally, current network tariffs may also represent an impediment for the changing DSO needs. If the current tariff systems do not plan for the changes in customer behaviour and electricity network flows, DSOs revenues and cost recovery may be at risk. NRAs should aim to set tariffs ensuring a timely cost recovery for the DSOs, and a fair allocation of costs amongst all grid users. Tariffs should reflect more on costs that are mainly driven by capacity installed, and incentivise a system-friendly behaviour. Any future changes in tariff methodologies should however be left to the national regulatory authorities, as network tariffs highly depend on local features, with minimal impact on cross-border trade.

(C) Changing aims and approaches of good practice

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

Several aspects are impacting on DSO regulation mainly due to the effects of the energy transition:

-The first one relates to the DSOs' use of flexibility as an alternative to grid expansion where needed, from sources including demand response, storage or electric vehicles. DSOs must be involved in the planning, technical operation and maintenance of recharging infrastructure which will be central to the efficient integration of electric vehicles into the distribution grid. Moreover, DSOs' use of own storage facilities is critical to guaranteeing a safe, reliable and secure operation of the distribution system, without having the DSOs interfering in the market.

-Second, improving reliability and optimisation of the system, by maintaining the required quality of supply and service will grow in importance. Ageing assets reaching the end of their investment cycles ask for an increased need for network reinforcements in a smart and an efficient way.

-Third, DSOs' responsibility as neutral market facilitators is being affected by emerging customers' roles (prosumers, local energy communities) and new actors in the electricity system. Regulation should encourage DSOs to engage in a smart way with existing and new customers, and the new entrants.

-Fourth, the magnitude of the investments required and the new roles makes innovation imperative. To that end, DSO innovation asks for smarter regulation that enables the remuneration of the DSOs as neutral market facilitators, and deviates from the mainstream framework for new and temporal tasks.

-Fifth, an integrated approach to regulation that does incorporate energy and infrastructure, as well as the need for different products and technologies is needed.

-Sixth, whereas a certain degree of common functionalities and principles may be needed with regard to network tariffs, EU-wide harmonisation of tariff systems is not advisable. Any revision of tariff structures that can incentivise DSO innovation should account for the respective national differences.

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

The realities of the specific differences in member states when setting regulatory aims and corresponding incentives schemes need to be carefully considered by regulators. Regulators should encourage innovative investments by giving DSOs enough space to adopt the most efficient solution and level of incentive needed to support their changing roles.

In the future, DSOs’ business plans should include a smart grid and an innovation strategy that can grant DSOs’ adequate revenues to cover their costs and better perform their tasks. Based on our response in question 2, separate innovation funds may put strong incentives in place to encourage effective and efficient innovation in the best interest of customers. The main challenge for the regulators is to define consistent and measurable outputs, and to define proportional and just rewards and penalties.

Output based regulation may also encourage companies to achieve regulatory aims in an efficient manner. Main outputs that regulators could focus on may include: safety, reliability, customer service, social obligations, connections and environment. Regulators may set objectives and targets for DSOs in these categories while taking into account the overall country averages. However, these outputs would need to be carefully assessed according to their timeframe of implementation, and consistency with wider incentives. Moreover, it is fundamental that they are supported by adequate metrics and that targets are controllable and achievable.

The table below shows three levels of innovation strengths that the regulators may implement.

Type of regulation	Characteristics	Strengths and weaknesses
 <p>1. Base remuneration framework</p>	Revenues depend on allowed costs (based on rate of return). Normally efficiency incentives for incentivising CAPEX or OPEX allow to keep represents 50 – 100% of the savings.	BAU situation. Experience has demonstrated that this incentive is not enough to foster sufficient innovation. Only very specific cases may be justified.
<p>2. Output based incentives (Additional to 1)</p>	Allowed revenues are linked to measurable outputs like Quality of Service, customer related, time to connect, etc. through specific reward/penalty schemes.	An output based methodology might take time to implement. Incentives are bigger for DSO than in 1) but they are mainly focused in certain business areas and depend on the concrete scheme regulation.

3. Explicit innovation funding mechanism (Additional to 1 & 2)	Funding available besides ordinary TOTEX allowances. Managed by regulators under competitive schemes.	Regulators award the money to the DSOs with the most robust project. Proven to be very successful. Transparent and facilitates knowledge sharing.
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7. Do you agree that the regulatory process shall be an interactive process between regulators and stakeholders?

We believe that any future regulation should closely involve the different stakeholders at stake, including DSOs, customers, market operators and other parties. This should be an inclusive and unbiased process whereby each parties' needs and interests are carefully assessed to best achieve a common societal value. All stakeholders need to be committed to the future energy system, and be involved both at the national and the EU level.

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

We agree that it is important to base regulators' decisions on a well-designed, participative and transparent consultation process. More involvement through targeted workshops where stakeholders can openly express and share their views can be an useful way for encouraging participation. Questionnaires can also prove useful, but take care not to overly increase or duplicate work. Focus on a more restricted, targeted number of questions backed by data requests and numbers as deemed relevant.

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

Technologically neutral approaches are the most efficient way to promote innovation. Stimulating certain specific technologies in one area can lead to silo- approaches and lock-in effects. Moreover, it is usually challenging to asses ex-ante the best technology needed for the most cost-efficient investment. Whether indirect or direct approaches, the decisions should be left to the emerging circumstances, which can heavily depend on how eagerly policymakers want to achieve a certain goal. Therefore, regulatory regimes should not give preference for any particular type of technology but should rather focus on paving the way for the most cost-efficient solution for the DSOs with the highest societal value for consumers.

10. Do you agree that innovation should be seen from the costumers perspective?

This depends on the degree of innovation expected, and the type of customers involved (small, industrial, prosumers, local energy communities). Innovation will cover a broad spectrum from technology improvements, costs reductions, new business models and services, all benefiting end-users and society at large. Innovation should, by default, be best considered from the perspective of society. Customers are an important part of this, but a broader perspective is more desirable.

Incentivising DSOs' to manage their networks in the smartest and most efficient way means that regulation will by default benefit customers, as the costs of network connections will be reduced.

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

The UK RIIO mechanism based on a performance-based approach where revenues and investments are linked to different output targets provides a good example for incentivising DSO innovation. Ofgem has established an allowance specifically for innovation trials to encourage ongoing development. But at the same time, tight targets have been set for DNOs to achieve smart grids benefits. In summary, outputs and incentives give DNOs some discretion by using innovation to deliver the necessary output whilst allowing them to be innovative in how they achieve this e.g. using alternative approaches to manage increased network loading other than grid reinforcements.

In Finland, there has been a specific innovation incentive since 2012. The current regulatory methodology for 2016 – 2019, and the one for 2020 – 2023, envisage that R&D-costs of up to 1 % from the annual turnover can be treated as a pass-through cost. Only OPEX can be utilized in this incentive (not CAPEX). The regulator has given some instructions in advance on what type of costs can be seen as R&D-costs, but the final interpretation will be received only afterwards, after the regulatory period. R&D-OPEX which can be included in the incentive should be related to the creation of totally new information, technology or products for electricity network business (e.g. smart-solutions related pilot projects). The results from the projects should also be publicly available.

In France, R&D Opex are put in a specific envelope which does not have efficiency requirements. This allows to have a budget dedicated to smart grids. However, this budget cannot be spend elsewhere on the grid which leads to a situation where the DSO is forced to decrease the amount of money spent on the general operation of the network. Thus, this envelope should be limited to remain efficient.

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

EDSO agrees that adopting a 'holistic view' to designing incentives schemes for DSOs when tackling the new regulatory challenges may be useful. Clarifying DSO/TSO roles is critical in this regard, as benefits in distribution systems have an impact on transmission systems, and vice-versa. DSOs are already taking a system approach to their networks operations, as they must ensure the best quality of service to all network users, and security of supply for the whole distribution system.

The growing dynamic and interactions between TSOs, DSOs, market parties and prosumers at both low voltage and higher levels makes the coordination at these different systems all the more necessary.

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

Heating in the built environment as part of the energy transition is a huge challenge. Depending on the local situation (type of buildings, available energy sources) municipalities will choose between full electrification, constructing heat networks, and hybrid systems (electricity/heat, electricity/renewable gas). This development is currently partly frustrated by the different methods of regulation for electricity, gas and heat, and by the impossibility to cancel out avoided costs of one infrastructure (for instance cancelling replacement investments in the gas network) against higher costs of another infrastructure (for instance expansion investments in the electricity network)

An example of such integration is proposed in the Roadmap Next Economy (RNE) – Energy Delta of the Rotterdam The Hague Metropolitan Area (MRDH). Within de context of a long term strategy, a Smart Multi Commodity Grid is planned. It is described as the next generation energy network: a new, smart energy network, supported by ICT, which makes it possible to connect all future energy suppliers and to switch between different energy suppliers and sources. It links all conceivable energy sources and enables us to use our energy as efficiently as possible.

ANNEX 1 – Table on investments in network assets financed by non-refundable sources



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

Annex 1 : Short and urgent question about EU funds vs. DSO's Tariffs

COUNTRY	Do the investments in network assets financed by non-refundable funds (EU funds, national funds and other subsidies) are eliminated from RAB? Please explain which ones.	Does this elimination affect the DSOs' financial results eg.: EBITDA (earnings before interest, taxes, depreciation and amortization) or NET PROFIT?	Please describe the existing methodology. Do you have any others mechanisms of return on capital employed of network assets financed from EU funds, National funds and other non-refundable financial sources?	Excluding investments financed by non-refundable funds from the RAB means that DSOs are not sufficiently motivated to use such funding opportunities, translating into the higher fees for customers. Is this an issue for your company? Do you have any mechanism in place that can improve efficiency in the use of public funds?	Can you give example of other mechanisms that you consider important for DSO innovation?	Does the implementation of this mechanism in your country require a decision by the regulator or the government?	Can you give information how much of the EU/national funds did your company receive in 2014-2016 (only those concerning regulated activity)?
AUSTRIA	no, for refundable funds (f.e. EIB financing) yes, for non-refundable funds	Yes, lower EBITDA because of lower CAPEX (rate of return on RAB).	a) methodology for refundable funds (f.e. EIB) The national regulatory authority (E-Control Austria) uses the following methodology for refundable funds : 50% of the advantage concerning financing network assets with loans from the European Investment Bank (EIB) are given through a reduction of the cost basis to the customers. This is currently under discussion and will be examined on court. Calculation formula: (interest rate for debts according WACC - interest rate according EIB)*50%* current credit amount EIB b) methodology for non-refundable funds Network assets financed with subsidies or non-refundable funds are included in RAB, but the corresponding value of the subsidies or non-refundable funds is deducted. Therefore network assets financed with non-refundable funds are not included in the RAB.	To implement an incentive scheme for using or rather seeking for non-refundable funds, the regulatory authority should recognize approximately 25 up to 50% of the investments financed by non-refundable funds additional in the RAB	R&D OPEX for DSO innovations should be considered as "non influence able-costs". Therefore annual recognition in the cost basis is necessary. In Addition R&D costs should not be part of the regulatory benchmarking and therefore not part of the annual adjustment of the cost basis with general und individual productivity factors. To implement an incentive scheme also for R&D OPEX-corresponding to the CAPEX mechanism - revenues from non-refundable funds or subsidies should not be fully deducted from cost basis. The DSO must have - for the implementation of an incentive scheme - a benefit from the seeking for non-refundable funds in the amount of approximately 25 up to 50%.	General the implementation of such mechanism requires regulator decision. Maybe further additional changes in energy law are necessary, for the implementation of incentive scheme concerning the use of non-refundable funds for financing network assets.	75 M€ (EIB financing) 0,25 M€ (non refundable funds)
BELGIUM	Yes		No, we have no others incentives.	We don't have any mechanism in place but anyway we try to catch funding when possible because every funding we receive gives us the opportunity to use our own fundings for other investments.		The regulator could decide for a mechanism as it exists fe in Spain	less than 1Mio€
CZECH REPUBLIC	Yes		The position of NRA has completely eliminated distribution of the subsidies for the national R&D schemes. Finally, the authority in charge of the EU funds will have to reallocate the relevant resources to other purposes.				
FINLAND	Yes		The DSO may receive subsidies or other compensation for investing in the network, for example, from the Finnish state or the European Union. Components funded with the subsidies or compensation received for building the network are not included in adjusted net present value of the electricity network assets, i.e. no reasonable return is obtained on them. However, components funded with subsidies or compensation are taken into account in the adjusted replacement value of the electricity network assets when calculating adjusted straight-line depreciations of the electricity network assets from it in the investment incentive (6.1.1). The DSO must provide an account of the amount of subsidies and other compensation it has received in connection with delivering the network structure data. The account must describe the components, for the construction of which they have been used and how they are handled in the DSO's financial statements. The DSO must annually calculate the net present value for all components built with the subsidies according to the methods and provide the calculation data in the account. The account must state the remaining imputed net present value with respect to all components built with the subsidies. The DSO must calculate this net present value annually and deliver it to the Energy Authority in connection with the structure data until the net present value is zero euros with respect to the components built with the subsidies. The net present value of components built with the subsidies is deducted annually from the net present value of the entire network until the amount of subsidies has been completely eliminated. The Energy Authority provides further instructions with respect to reporting the subsidies, if necessary.				

COUNTRY	Do the investments in network assets financed by non-refundable funds (EU funds, national funds and other subsidies) are eliminated from RAB? Please explain which ones.	Does this elimination affect the DSOs' financial results eg.: EBITDA (earnings before interest, taxes, depreciation and amortization) or NET PROFIT?	Please describe the existing methodology. Do you have any others mechanisms of return on capital employed of network assets financed from EU funds, National funds and other non-refundable financial sources?	Excluding investments financed by non-refundable funds from the RAB means that DSOs are not sufficiently motivated to use such funding opportunities, translating into the higher fees for customers. Is this an issue for your company? Do you have any mechanism in place that can improve efficiency in the use of public funds?	Can you give example of other mechanisms that you consider important for DSO innovation?	Does the implementation of this mechanism in your country require a decision by the regulator or the government?	Can you give information how much of the EU/national funds did your company receive in 2014-2016 (only those concerning regulated activity)?
FRANCE	Yes						
GERMANY	Yes		In German regulation, DSO (and TSO) of course don't earn any returns for assets that are financed by public funds.				
GERMANY	Yes, such funds are treated like interest-free capital, which are subtracted from the RAB	Yes, in principle. But only if you believe that assets financed with non-refundable funds should be part of the RAB - which we do not.	If a system operator conducts an R&E-project, which is funded by German federal funds, he can apply to receive a part of the project costs to be granted as allowed revenues. In particular, he can receive 50% of the project costs subtracted by the federal fund money (§25a ARegV). This is only possible if the project is not already included in the system operator's allowed revenues by means of other mechanisms.		In general, costs that are considered in a benchmark should all be treated equally, so that DSOs are rewarded for applying the cheapest option (technologically neutral approach). If certain investments should be promoted, it is possible to treat their costs as pass-through costs, which are not subject to a benchmark.	Yes, it would require changes of the German incentive regulation (ARegV)	
GREECE	Yes						
HUNGARY	Yes	Yes, lower EBITDA.	No regulatory (RAB) recognition of investments financed by EU/non-refundable sources	Lower fees is a topic but not sufficiently motivating to use EU-funding; Additional incentives would be appreciated; Main motivation to use EU-funding is research and development	Investments and Costs for innovation should be treated separately from the normal efficiency regulation; existing incentive: Smart Grid investments receive a 1.1 multiplier in the RAB		
ITALY	Yes	Yes, the elimination results in a lower EBITDA, since the funding decreases the Regulatory Asset Base and the DSO has a lower tariff revenue	Limited to the amount of the funding. According to the current regulation, DSOs do not receive return on capital (WACC) on financed network assets. However, from 2016 the Italian Energy Regulator (AEEGSI) introduced a specific mechanism to recognize a maximum of 10% public funds during three years through depreciation remuneration. <u>DSO's consider this mechanism not enough incentive.</u>	Yes, it can be an issue since it is more convenient for DSOs to use own funds that get RAB remuneration instead of public funds that do not get remuneration. As regards mechanisms in place, the only actual mechanism is the one in place in the Quality of service regulation. The investments done also with public fund, if they improve the quality of service of some territories they contribute to the bonus the DSO earns.	Innovative investments in Italy are not linked to extra remuneration of the RAB, but they can be incentivized through output based mechanisms: investments can receive an extra remuneration (price) if the DSO can demonstrate the benefit the investment can generate	These mechanisms are defined by the Italian Energy Regulatory Authority (AEEGSI)	about €70 Millions (2014-2016)
LATVIA	Yes		Also excluded financial investments, debtors, financial securities.				

COUNTRY	Do the investments in network assets financed by non-refundable funds (EU funds, national funds and other subsidies) are eliminated from RAB? Please explain which ones.	Does this elimination affect the DSOs' financial results eg.: EBITDA (earnings before interest, taxes, depreciation and amortization) or NET PROFIT?	Please describe the existing methodology. Do you have any others mechanisms of return on capital employed of network assets financed from EU funds, National funds and other non-refundable financial sources?	Excluding investments financed by non-refundable funds from the RAB means that DSOs are not sufficiently motivated to use such funding opportunities, translating into the higher fees for customers. Is this an issue for your company? Do you have any mechanism in place that can improve efficiency in the use of public funds?	Can you give example of other mechanisms that you consider important for DSO innovation?	Does the implementation of this mechanism in your country require a decision by the regulator or the government?	Can you give information how much of the EU/national funds did your company receive in 2014-2016 (only those concerning regulated activity)?
NETHERLANDS	Yes		The value of the subsidy is subtracted from the RAB or from the Operational Costs. In the Netherlands are net investments included in the RAB. The net investments are calculated as the gross investments minus contributions from customers, subsidies or other sources.				
POLAND	Yes	Yes, lower EBITDA. We have in Poland Revenue Price Tariff Model. In Tariff we have earnings from RAB. Lower RAB = lower EBITDA. EBITDA is the most important factor on the basis of which we are assessed by stock market analysts.	No, we have no others incentives. According to the current regulation based on the document: "Method of Determining Regulatory Value of Assets and Return on Equity", DSOs shall not receive return on capital employed on network assets financed by non-repayable financial resources. This is due to the RAB calculation method, and investments funded by subsidies are not included in the annual update of the RAB.	We have strong expectation from our government/owners to improve our financial results. In the same time, the Government push us to consume EU and national funds. Every mechanism which will neutralise negative impact on the EBITDA will be very useful. The Spanish mechanism is very interesting and we would like copy this in Polish regulation. Additional 10-20% to the RAB (from investments financed by funds)		Currently, we need only Regulator decision. This is not comfortable for us because this is not a stable solution. We recommend processing this by the governmental way (changes in energy law)	ca €10M (2014-2016)
PORTUGAL	Yes	Yes, lower EBITDA, assuming that the investment would occur anyway, which might not be always the case.	No other incentives in place.		Having a mechanism that makes ROI from funded projects more attractive than conventional investments would incentivise innovation through EU cooperation	The mechanism could be implemented by either changes to the national regulatory model or EU funding rules.	ca €4M
ROMANIA	Yes	Yes, lower EBITDA.	According to the specific tariffs methodologies for natural gas and electricity distribution - assets that aren't financed from own DSO sources are not recognized in RAB. So, fixed assets financed by financial contributions, whatever their source, are not included in the RAB. In case an asset is financed both from DSO's own funds and from financial contributions, the value recognized in RAB = expenditure financed from DSO's own sources.	Lower fees is a topic but not sufficiently motivating to use EU-funding; Additional incentives would be appreciated; Main motivation to use EU-funding is research and development	Rewarding improvement of operative performance indicators, e.g. SAIDI/SAIFI, grid losses	Yes	
SLOVAKIA	Yes	Yes, lower EBITDA.	Till now, no regulatory clarity of recognition of investments financed by EU/non-refundable sources	Main motivation to use EU-funding is research and development	Investments and Costs for innovation should be treated separately from the normal efficiency regulation		
SPAIN	not all		In Spain investment financed by third parties don't add to RAB, but there is an exception for UE funding, which add 10% of their value to RAB, so companies still have the incentive to seek them. For example, if DSOs get UE funds for 100, only 10 is added into the RAB.				
SWEDEN	Neutral	Yes, lower EBITDA.	In Sweden an EU-funded investment project would be treated as any other funded project. The investment would increase the RAB but the fund itself would be treated as a revenue which means it reduces the revenue cap. So the increase of the RAB is more or less used by the fund, it is neutral.	Lower fees is a topic but not sufficiently motivating to use EU-funding; Additional incentives would be appreciated; Main motivation to use EU-funding is research and development	Investments and Costs for innovation should be treated separately from the normal efficiency regulation		

COUNTRY	Do the investments in network assets financed by non-refundable funds (EU funds, national funds and other subsidies) are eliminated from RAB? Please explain which ones.	Does this elimination affect the DSOs' financial results eg.: EBITDA (earnings before interest, taxes, depreciation and amortization) or NET PROFIT?	Please describe the existing methodology. Do you have any others mechanisms of return on capital employed of network assets financed from EU funds, National funds and other non-refundable financial sources?	Excluding investments financed by non-refundable funds from the RAB means that DSOs are not sufficiently motivated to use such funding opportunities, translating into the higher fees for customers. Is this an issue for your company? Do you have any mechanism in place that can improve efficiency in the use of public funds?	Can you give example of other mechanisms that you consider important for DSO innovation?	Does the implementation of this mechanism in your country require a decision by the regulator or the government?	Can you give information how much of the EU/national funds did your company receive in 2014-2016 (only those concerning regulated activity)?
SWEDEN	No (with some exceptions)		<p>In Sweden all assets that are used and needed in the network business are included in the RAB. The absolute majority of assets are owned of course, but even if we rent them they are included in the RAB. When it comes to financing, it doesn't matter if they are financed by subsidies.</p> <p>However!!! When we report the outcome of our revenues for a regulation period (which are to be compared with the revenue cap) all kinds of revenues are included. Mainly they consist of revenues from the tariffs for distribution and connection, but every other kind of revenues in the regulated business are included as well. And of importance in this context, even all kind of subsidies are seen as revenues. This means that subsidies fill up a part of the revenue cap and reduces the possibility for "ordinary" revenues.</p> <p>In addition to this, we have experienced that these "ordinary mechanisms" may not always rule. Our major project this far financed partly by EU-funds (€1M), has been classified by the regulator as non regulated business. The reason is that it is a large scale project with a character of a pilot project. involving new technological solutions.</p>		<p>In Sweden there are already incentives in the regulation model for quality/security of supply and for efficient utilization of the power grid. The later one focus on reducing network losses and improving the load factor. These kind of bonus/malus system is a good ambition but need to be developed to really give us the incentives wanted. There is an ongoing project at the regulator to develop these incentives.</p>	<p>The kind of mechanisms described can and have been decided by the regulator.</p>	<p>Approx. €2M (2014-2016)</p>