CEDEC

CEER Public Consultation: The future role of DSOs

CEDEC draft answer

13 February 2015

Chapter 1:

1. **Do you agree with these three core principles?**

Principle 1: The DSO must run its business in a way which reflects the reasonable expectations of network users and other stakeholders

Principle 2: The DSO must act as a neutral market facilitator in undertaking its core functions

Principle 3: The DSO must act in the public interest, taking account of costs and benefits

YES, in CEDEC's view these principles are correct.

CEDEC particularly welcomes Principle 3, expliciting that "The DSO must act in the public interest" and that "the supply of energy is an essential service".

2.What challenges would new forms of stakeholders (e.g. community or municipal energy schemes and ESCOs) bring to DSOs and to existing approaches?

The emergence of new activities, actors and markets at local level means that the role of DSOs will evolve to an ever-more active grid manager and market facilitator. This implies the further development of operational approaches that are in place today, as well as some new activities : smart metering, intensified data handling, demand side response, active grid management and storage, EV infrastructure and related system services, and energy efficiency.
Each of these will bring along its challenges, like reconciling market-based demand side management with grid security and constraints, or addressing the investment needs to satisfy the accrued information needs of existing and new actors.

CEER identifies well these activities, their potential opportunities and the need of an adequate support by the regulatory framework in order to use the new paradigm and the new technologies to continue to guarantee security of supply and to foster competition.

Finally, these new developments will lead to a more intense contact with existing and new consumer types, on technical and non-technical issues within the DSO responsibilities and in order to facilitate the market.

3.Do you agree with the proposed logical framework? Are there other important questions which should be included in the framework?

The presented framework could maybe initially be helpful when identifying new activities. However, the proposed framework is one-dimensional (only focused on competition potential) and only for new activities.

Fundamentally, for all types of activity a choice has to be made, new or not, between 3 categories: "core - regulated", "regulated & under specific conditions" and "competition". The question should then be formulated – for every activity - as follows : "Is competition the best solution to guarantee an essential service in the interest of all consumers ?"

An "essential service" (cf. CEER Principle 3) should respond to 3 requirements :

1) Offering infrastructure and/or supplying services to all consumers
2) Covering the whole territory
3) Taking into account short and long term "public interest" (cf. CEER Principle 3) objectives, such as security, privacy, sustainability, innovation.

Even if the answer on the competition question is in principle yes, the second question "Are there special justifications for DSOs to carry out (part of) the activity?" remains valid : if the answer is yes, the activity remains in the regulated domain, albeit under special conditions.

Justifications here might be the disturbing influence on grid operation, the higher overall societal cost if attributed to competition, or tackling the risk of vendor-locking behaviour by commercial actors on the market. The overall societal cost may be reduced amongst others if closely related tasks can be executed by one regulated party , creating possible effects of synergy and scale.

Another element that should be taken into account is how much regulation is needed and how intensively it is to be operated by regulators.

Anyway, a clearer view on "special justifications" and "under conditions" would be crucial, and would be largely dependent on specific national circumstances and national policy choices.

4. Do you agree with the proposed assessment of activities and are there any additional grey areas for DSOs other than those considered?

The different activities that are mentioned are in broad lines correct, although several activities mentioned in 1.3.3 (DSO involvement under conditions) are directly linked to or even covered by activities mentioned in 1.3.1 (DSO core activities).

Concerning the assessment of the different activities, we neither agree on several choices, nor on several elements of the justifications behind them (like contradictions on the necessity of different types of unbundling).

The distinction between "core" activities and activities "under conditions" is often artificial, especially when they are closely interlinked or even identical - like disconnecting in A1 (core) and disconnecting in C2 (under conditions), or network development in A1 (core) and in E2 (under conditions). These activities should simply all be in a single category "core - regulated ".

CEDEC does not agree with CEER's reading of the AFID directive (on public EV recharge infrastructure – E1), nor with its reading of the energy efficiency directive (on DSO energy efficiency actions – G2 / which is in contradiction with the text concerning G3).

Amendents should be foreseen amongst others on the following points:

- Supply of last resort should be qualified as an allowed activity for DSOs : in many Member States DSOs , as a public service obligation, supply customers that cannot find a supplier on the market.
- Activities beyond the meter : where DSOs are responsible for metering activities, they should be allowed , as neutral actor, to perform also sub-metering activities if these data are used for market settlement processes.
- Electric vehicle public charging infrastructure: very close to the core infrastructure activities of the DSOs, with a significant public impact. Here DSO activity should be allowed, possibly depending on EV market uptake and on geographical coverage of public charging infrastructure.
- Activities should be added where a potential market needs to be actively initiated or facilitated by the DSO, like local flexibility market platforms, or calculation of flexibility volumes.
- Flexibility services: when managing (local) congestion, DSOs must be allowed to procure flexibility directly from grid users or to limit the services offered by aggregation service providers.
- Energy Efficiency: DSOs can make valuable contributions to energy efficiency, especially in case of efficiency potentials difficult to reach (for example investments with low return rates and/or long term returns). DSOs in charge of metering can also provide data to the market and add value to these data by calculations..
- Public lighting is a public service obligation imposed on DSOs, and is thus outside the scope of the "conceptual tool" .

No additional grey areas to be mentioned, but several of the grey areas don't belong there and should be in the core area.

5. For activities falling in category II and III (see Figure 1), under which regulatory conditions could DSO intervention be allowed?

The principles laid down in Question 1 (3 core principles) are a good reference for the behaviour framework of DSOs.

6. Do you agree with the assessment of DSO access to data and data management?

No. In contradiction with the text, DSOs are today already responsible in almost all Member States for metering : hence the management of not only technical but also commercial data is already today an important role for DSOs in most countries (and not "can be" in "many" countries).

The DSO as market facilitator model is the one already in place in most Member States. It builds on a neutral DSO, providing data to authorized market parties in a non-discriminatory and efficient way.

To this purpose, the Third Package rules on unbundling already ensure a real separation of DSO activities from other businesses, granting a non-discriminatory management of the activities which are naturally part of the DSO's know-how and experience, such as metering and data handling.

The distinction between technical and commercial data is not relevant where DSO is also responsible for metering, and even less in a smart grid environment where more data (on individual consumption and generation) will determine the decision making process of the DSO in grid operations.

In order to ensure a well-functioning market it's important to avoid hybrid systems in which part of the metering is a responsibility of the DSO and an another part is a responsibility of market players. Hybrid situations for calculations (like for settlement) are also not desirable., certainly not with the vision of integrating all the flexibility in the existing electrical system.

We welcome that CEER agrees that "strict supervision of DSO activities within other (than ownership) unbundling models can also ensure sufficient independence and market confidence." (cf. page 20 of the Public Consultation).

7. Do you agree that the risk of DSOs participating in some of the 'grey areas' (particularly flexibility and DSR) decreases the more separated a DSO's operational activities are from other competitive activities carried out by other companies within the same vertically integrated group?

CEDEC – like CEER - believes that different unbundling models "can ensure transparent and independent decision making and equal treatment of all DSO stakeholders" (cf. page 21 of the Public Consultation), and therefore advocates for a full and speedy implementation of the existing rules foreseen in the third package.
CEDEC believes however that the neutral behavior of a DSO in some grey activities as defined by CEER can be further ensured by robust regulatory monitoring and oversight.

8.Do you agree with first considerations on the de-minimis threshold?

No. "Ensuring that only truly marginal situations are covered" was definitely not at the origin of the directive text on the de-minimis threshold. The reason why the de-minimis rule was introduced, was a cost-benefit analysis of the effects of different forms of unbundling from the perspective of the customer! And which was considered negative in the case of SME-type DSOs.

Moreover, this proposal would inevitably lead to concentration on the supply market, with reduced choice for the customer, and weaker market functioning.

Therefore the proposal for change is not at all in line with the objectives of the directive.

Chapter 2:

9. Do you consider all the activities and topics described in this Chapter relevant to further defining a regulatory framework for DSO-TSO relationship and responsibilities? Are any activities or topics missing in the DSO -TSO relationship discussion?

We consider all activities and topics described in this chapter as relevant in the cooperation between the TSOs and the DSOs and in the possible further development of a regulatory framework for DSO-TSO relationship and responsibilities. The development of this regulatory framework should also be based on experiences from real live experiments, demonstration projects etc. and assess what really works and what does not.

The DSOs see following domains – covered in this chapter – as relevant for the DSO-TSO interface and on which more cooperation is needed in the (near) future:

- forecasting, network planning and development;
- system operation (cf. day-ahead & real-time grid operation, operation in emergency and restoration);
- market related issues (cf. balancing).

With regard to the topic "forecasting, network planning and development", we want to stress that DSOs and TSOs have to commonly aim for network developments that are macro-economically optimal and technically reasonable, i.e. the grid development must take into account a sufficiently long term vision on grid infrastructure at the least total costs.

In many cases, an extra investment by the DSO in e.g. smart infrastructure may lead to cost savings for the TSO, but is not necessarily attractive for the DSO to implement.
In order to guarantee that DSO and TSO do a joint analysis which aims at a macro-economically optimal solution without prejudgments, the TSO-DSO relationship should prevent that either TSO or DSO has an incentive not to invest in a project of mutual interest. Probably, close coordination with the regulators will be needed to ensure this.

Not all DSOs are directly connected to a TSO grid. This aspect should be taken into account in the development of a framework, in the sense that certain obligations should leave room for 'flexible' solutions (according to the one-size-fits-not-all principle). Solutions at the TSO-DSO interface are not necessarily the same at the DSO-DSO interface (e.g. information exchange, reactive power management,…). The DSO-DSO relationship will in this case be of importance and DSO-DSO coordination will be needed.

10. Do you agree with the description of the activities and topics in this Chapter? If not, what is your view on your specific activity or topic that is relevant for the DSO-TSO relationship?

The description of the activities and topics respond quite well to the DSOs' vision on the content of the TSO-DSO interface. It seems that information exchange is at the hart of all these activities, which

enforces the DSOs' view that they have a major role to play in this domain especially if it concerns information from and to grid users connected to the distribution grid.

In relation to this increasing data exchange, DSOs' (and TSOs') IT systems will be more vulnerable to external threats and should be addressed accordingly. Cyber security is a topic which cannot be absent in this regard, but goes of course well beyond the TSO-DSO interface.

Another topic which seems relevant for the TSO-DSO relationship is the introduction in the market model of the so-called "traffic light system" for congestion management.

11. Do you agree with the statement that further regulatory guidelines may be required (in addition to current Network Codes) and if so, which regulatory guidelines do you consider necessary?

The network codes in their current version establish a framework that redraft the technical responsibilities between TSO and DSO, in order to better execute the tasks that were historically the unique domain of the TSO.
The current draft network codes do not always consider DSOs and TSOs as equal partners. In many cases, the network codes simply oblige the DSO to participate in the TSOs obligations and make the DSO is the simple executor of the TSO's orders. The codes do not provide for sufficient 'coordination' (meaning that parties have to agree on things) between TSOs and DSOs.

The draft network code on Emergency and Restoration is a 'good' (read bad) example, where a lot of 'consultation' is provided, but where this consultation (as it is defined in that NC) does not guarantee that the TSO will take into account any of the DSO's concerns or remarks.

The codes also provide elaborate possibilities for the TSOs to collect data from generators and demand connected to the DSO grids and in addition gives them instruction rights. DSOs should at least dispose of the same information for their grid management and question the efficiency of some of the requirements in the network codes on data exchange (specifically the NC on Operational Security). Indeed, increased information exchange is important to ensure that transmission network operation is not in conflict with distribution network operation and vice versa.

Reactive power management at the DSO-TSO interface is another example where the current drafts of network codes on Demand Connection and on Operational Security do not aim for the most (cost) efficient solutions by imposing fixed requirements to all types of DSO-TSO interconnections without taking into account the local situation or the different voltage levels.

In fact the network codes lack a framework which allow the DSO to perform a new role in various domains as a service provider to the TSO. DSOs may be willing to design innovative packages of services for the TSO, with agreed levels of service quality and responsibility, that help the TSO to fulfill its tasks, both technically and as market facilitator,
for example :

- to offer data and calculation services to the TSO for e.g. forecasting or day ahead load flow analysis (link with NC on Operational Security);
- to participate in congestion management (link with NC on Operational Security);

- to offer voltage control services, by investing in own assets or by aggregating reactive power outputs by distributed generators (link with NC on Operational Security);
- to offer more granularity in the controlled disconnection of loads (link with NC on emergency and restoration);
- to play a facilitating role in market products that will continue to be offered to the TSO but where distribution grid users are also concerned, e.g. related to balancing services (link with NC on Electricity Balancing).

Such a framework will give incentives to the TSO to look for the global economic optimum (by investing in own solutions or paying for the service by a DSO).
Such a framework would be a more market oriented approach than the framework established by the network codes at the moment, in which the TSO requires the DSO to perform tasks according to the TSO's specifications and where incurred costs by the DSO will (possibly) be assessed in a direct relation between DSO and its regulator.

If needed, necessary adjustments on the existing framework should be made. Of course, at the same time a limited number of principles on DSO –TSO coordination could help interpret the implementation of the codes and guidelines on National level, to ensure the best and most-efficient collaboration between DSOs and TSOs.

Chapter 3:

12. What, if any, are the particular or incremental risks attached to innovative and non - conventional investments? Do these warrant special recognition by NRAs? To which extent, if any, is this incremental risk borne by DSOs?

i) Technological risks: New technology often implies substantial technological development, leading to decreasing costs and increasing quality and technological features. Therefore, a substantial financial risk occurs that present technology will be out of date in the near future leading to divestments and premature replacement costs. Moreover, there are cyber security related risks. This can generate considerable cost (capex and opex) in term of defense systems and also in terms of damage as a consequence of attack.

ii) Political risks: a number of market developments is partly driven by subsidies and/or tax facilities (wind, solar, electric cars,....). DSOs have to invest in their infrastructure to facilitate these market developments. However, there is a substantial difference between the standard long economic life span of investments in infrastructure (like grid investments – 40 years) and the relatively shorter economic life span of some of these new market developments (like wind generation – 20 years (or less?)). The discrepancy in economic lifespan is relevant since it often lacks alternatives to connect to the infrastructure. For instance, an infrastructure to accommodate wind farms in rural areas doesn't create any value anymore in case the wind farm isn't replaced after its economic life span.

iii) *Financial risks*: Main risk is that the costs are not covered in the regulatory framework. Also, innovations can fail, implying financial risk to DSOs. However, a DSO needs to innovate to become more efficient and meet customer demands.

iv) *Regulatory Risk:* Uncertainty on the evolution of the regulatory schemes. Costs of innovative investments may not be (fully) recognized by NRAs. Investments in innovation can alsohave a short term negative impact on returns if they have no immediate cost-reducing effect.

The incremental risks are borne by the shareholders of the DSO. If the proposed rate of return to investors is perceived too low, DSOs won't be able to attract the necessary funding.

Do these warrant special recognition by NRAs? To which extent, if any, is this incremental risk borne by DSOs?

Yes. NRAs should be aware of the increased risks regarding the economic life span of the innovative as well as conventional investments. Therefore, a specific regulatory approach to encourage innovation needs to be put in place.

When approving revenues, NRA have to recognise these specificities by:

- adopting depreciation rates in line with the effective lifetime of the assets;
- accept write downs and, if any, capital losses of stranded assets;
- accept the principle of WACC+ (increased rate of return in which the higher risk profile of the innovative investment is reflected) to attract capital to finance these investments;
- accept IT investment as an element of the regulatory asset base.

13. Does the conventional focus on rate of return regulation on capital expenditure, and in some cases limited pass through of OPEX, have the effect of discouraging certain smart grid? investments? What alternative approaches help incentivize DSOs to adopt?

Yes, in our opinion the rate of return regulation can have a negative impact on the development of certain smart grid elements. It doesn't fully incentivize to improve efficiency by innovation, but at the same time has the advantage to support stability for innovative projects (which is very relevant for investors).

Currently, limited pass through of OPEX in many Member States can discourage smart grid investment when it is based on historical cost and does not integrate the new costs related to the development and operation of a smart grid (e.g. IT costs). .
Generally, today's focus is on cost efficiency. With a regulated income limited by a revenue cap, DSOs are encouraged to minimize OPEX. On top, DSOs are incentivized to deliver higher quality of service via legislation as well as via output parameters in the formula for regulated income, which leaves no room for short term investment characterized by a higher technological risk that increases OPEX in year one in order to decrease it in the later years. However we believe that smart solutions may be more efficient in the long run.

In any case, the elimination of the time lag of returns on investments will promote technology-neutral investments, which is to be favoured.

In general, a robust regulatory framework leading to a sound investment climate and depreciation periods according to expected economic life span of assets, taking into account the uncertainties of the energy transition, will incentivise smart grids deployment.

14. CEER would welcome views from stakeholders on the pros and cons of output based incentives. Please also define for which regulatory incentives they might be appropriate.

A stronger role for outputs in regulation can provide more incentives to deliver customer satisfaction, smarter networks and long term value for money. As with all kind of models, the output based model will only ever be as good as the specified outputs are. There are real challenges in output based regulation in defining, measuring, and incentivising outputs in ways that are consistent over time and across networks. If incentives are not set with care, they may lead to outcomes that are not efficient. It is essential to be supported by well-chosen KPIs and by mechanisms able to ensure a stable remuneration of basic investments.

Also, the remuneration scheme should make a distinction between tasks related to distribution grid operation where the DSO is able to reduce costs through better performance, and other tasks where the DSO cannot control the total cost (e.g. tasks related to public service obligations). In this second category, the risk should not be borne by the DSO.There may be an issue of administrative burden for the DSO as well as for the regulator. The process of data collection, treatment and control may imply significant adjustment of registration systems, additional FTE's and thus create an additional cost that empties the benefits of the potential incentive. Finally we are in favor of positive output incentives. Fines may lead to a vicious circle in which a DSO not reaching the targets gets fined, sees declining its resources and which makes its even more difficult to reach the targets.Technological developments in DSOs are also grid efficiency driven and therefore not always relevant to the outputs.
Output oriented incentives could be helpful for deliverables to customers, while input-based incentives to accommodate research and development and/or innovation.

The evaluation of an overall application of output based regulation on DSOs should be considered carefully, as the success is largely dependent on the right determination and definition of relevant KPI's

15. Do you agree that to allow timely recover of DSO revenues, assumptions on consumption patterns in tariff models could be updated within price control periods?

The costs of DSOs are largely capacity driven and have long-term effects. DSOs should not be exposed to risks related to events that are not under their control like for example volume risk.

Updating assumptions on consumption patterns in tariff models within price control periods is a way to limit this risk. To generally address this issue, fixed and capacity based elements in tariffs should

be considered in order to cope with the volume risks while at the same time reflecting the real cost structure of the DSOs.

16. How can Time-of-Use network tariffs be coordinated with system energy prices?

Simple static ToU tariffs, such as day and night tariffs (with an identical calendar for DSOs and suppliers) are already implemented in many countries.

Smart meters allow to implement more dynamic ToU tariffs to help reduce new types of challenges (and related costs) that have appeared recently (risk of shortage, congestion, negative prices). These kind of tariffs can remain rather simple and be used only in very specific situations. On the other hand, more complex ToU tariffs (with a different calendar for DSOs and suppliers) appear very challenging (difficult to be implemented and to be interpreted by consumers).

17. Are there circumstances under which suppliers should be required to pass through the distribution tariff signal to customers? - If so, should there be regulation to ensure this happens?

In our opinion the supplier should preferably pass through the network tariff signals to customers, to allow customers to make full benefit of the available information and make the right choice.

18. Do you agree with the above assessment (in Table 2) of different cases when DSOs or other parties should have contracts or agreements with consumers and distributed generators?

No, we do not agree with the assessment, , as in the future energy system there will be many forms of cooperation between DSOs and grid users, and these agreements are part of the core activities (category I).

When a DSO makes a connection agreement with a grid user, this agreement is usually subject to regulatory control.

Pricing signals of DSO are currently and will in the near future be static and known in advance (category I). In the future also more dynamic pricing may be used : in this case, and since we speak of an agreement between DSO and grid users (for which there cannot be “competition”), this is the same category as static ToU, also category I. There is in principle no difference between domestic, industrial or distributed generation customers.

Concerning load capping or load control, it should also be possible to have a contractual agreement (category I). However, this agreement should never be seen as a competition to the market but is merely a means to be used under specific circumstances (grid security or congestion management). The same applies for direct load control. In principle this will be part of real time free market, like domotica linked interventions, but DSO has to be informed; and in the agreements (DSO-grid user) it should be stated that when grid security is threatened, the DSO can steer direct load control (under regulated conditions).

DSO has no interest in commercial activities and only wants to use DSR for grid purposes, linked with the connection agreement. In that case, it is not clear what the column 2 means.

On the other hand, DSO should be able to use services offered by third parties in order to improve grid management. In this perspective, DSO is not a market player but a customer. It is not clear why columns 3. and 4. seem to suggest that DSO is in competition witch commercial actors.

For activities that focus on managing the grid , the role of the DSO should not be restricted. A DSO should be able to independently perform/handle all these activities to increase network efficiency. Therefore, also columns 3 and 4 should be part of the core activities (Category I).

19. Which type of regulatory controls should be adopted by NRAs for DSOs, in cases of contractual arrangements falling under categories II and III?