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Distribution Systems Working Group

Flexibility Use at Distribution Level

A CEER Conclusions Paper

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INFORMATION PAGE

Abstract

This document (Ref: C18-DS-42-04) presents CEER's conclusions arising from our public consultation on Guidelines of Good Practice for Flexibility Use at Distribution Level. It also contains our reflections on the consultation responses and helpful input received at the CEER's March 2018 Workshop on Flexibility Use at DSO Level.

The CEER position on main goals relating to the use of flexibility at distribution level following the public consultation concern the following key areas:

- The regulatory framework for DSOs;
- Enabling the development of a full range of possible flexibility services;
- Treating all sources of flexibility in a non-discriminatory manner;
- Giving DSOs the ability to access and use flexibility services provided by grid users for managing the distribution network;
- That details on the roles and responsibilities of DSOs should be determined at national level; and
- That it is pivotal to differentiate between the use of flexibility by market actors and the use of flexibility that benefits the grid by the DSO.

Target Audience

European Commission, energy suppliers, distribution system operators, other network operators, traders, electricity/gas customers, electricity/gas industry, consumer representative groups, Member States, academics and other interested parties.

Keywords

Flexibility, Distribution networks, Regulation, Goals, Aims, Electricity, Incentives, Innovation.

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Related Documents

ACER/CEER documents

- Incentives Schemes for regulating DSOs, including for Innovation: A CEER Conclusions Paper, Ref. C17-DS-37-05, 19 February 2018.
- European Energy Regulators (ACER-CEER) White Paper #3 Facilitating Flexibility, 22 May 2017.
- CEER White Paper (no. I) on the Distribution and Transmission Network Tariffs and Incentives, 11 May 2017.
- European Energy Regulators (ACER-CEER) White Paper #2 Role of the DSO, 15 May 2017.
- Guidelines of Good Practice for Flexibility Use at Distribution Level - Consultation Paper, Ref. C16-DS-29-03, 14 March 2017.
- CEER Report on Incentives Schemes for regulating DSOs, including for Innovation: A CEER Consultation Paper, Ref. C16-DS-28-03, 24 January 2017
- CEER Guidelines of Good Practice on Electricity Distribution Network Tariffs, Ref. C16-DS-27-03, 23 January 2017.
- Final CEER 2017 Work Programme, Ref. C16-WPDC-28-06, 5 January 2017.
- CEER Position Paper on the Future DSO and TSO Relationship, Ref. C16-DS-26-04, 21 September 2016.
- CEER Position Paper on Principles for Valuation of Flexibility, Ref. C16-FTF-09-03, 12 July 2016
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Table of Contents

EXECUTIVE SUMMARY

Significant changes in the European energy system over the last decade have been driven by increasing deployment of intermittent renewable generation, decarbonisation, and digitalisation. One way of managing these changes and ensuring secure system operation is through improving system flexibility.

The topic of flexibility is of increasing interest and importance across the entire energy value chain and a holistic view is necessary. European regulators have published a series of papers relating to flexibility over the past four years. In the spring of 2017, CEER consulted on the distribution component of this, in the Public Consultation on Guidelines of Good Practice for Flexibility Use at Distribution Level. In this, CEER set out views on:

- the Distribution System Operators' (DSOs') role in accessing flexibility services and enabling an environment for the provision of flexibility; and
- the regulatory framework, including tools and principles to enable flexibility use at the distribution level.

CEER invited participants to comment on the above-mentioned views in order to help develop high-level guideline principles for National Regulatory Authorities (NRAs), with the ultimate goals of enabling flexibility use at distribution level and delivering benefits to consumers.

CEER received responses from a wide range of stakeholders and thanks all respondents for their useful input. CEER also held a workshop to discuss this topic, bringing together different stakeholders to debate issues and showcase different viewpoints. This document summarises the key feedback from the consultation and the workshop and develops this further from a CEER perspective.

In terms of the guiding principles – the main purpose of this consultation – stakeholders were supportive of our approach and the principles proposed.

In view of the consultation and ongoing work in the relevant areas, CEER has agreed to the following high-level guiding principles for NRAs in terms of flexibility use at distribution level:

Guiding principles
The **regulatory framework for DSOs should be non-discriminatory and not hinder or unduly disincentivise DSOs from facilitating** the development of flexibility.
The **regulatory framework should enable the development of a full range of possible flexibility services**, while also ensuring that it is robust enough to deliver the best outcomes for consumers and the system as a whole (to the extent that this is within the scope of NRA's responsibilities in each country). NRAs should ensure that no options are prematurely ruled out.
All sources of flexibility that benefit the grid, including generators, storage, and demand side response, **should be treated in a non-discriminatory manner** when procured by network operators. Regulatory incentives should avoid any bias towards specific technologies that deliver flexibility.
DSOs should be able, under the relevant regulatory frameworks, **to access and use flexibility services** provided by grid users for **managing the distribution network**, where the use of this flexibility is considered to be the most economical solution and avoids undue distortion to markets and competition.
Within the framework set by the relevant European legislation, the details on the roles and responsibilities of DSOs **should be determined at national level,** given the diversity of situations, legislation and needs across EU Member States and the varying nature of DSOs (e.g. size and location).
It is vital to **differentiate between the use of flexibility by market actors and the use of flexibility that benefits the grid by the DSO**. This distinction is due to their different competitive, technical and regulatory conditions. The source of flexibility may be the same, the purpose is different.
Intensify the discussion on principles and roles and responsibilities regarding **DSO-TSO coordination in the field of flexibility**.

1 Introduction

Energy systems have been impacted by significant structural and market developments which have altered the characteristics of electricity distribution activities. In its Clean Energy for All Europeans package[1], the European Commission also recognises structural changes in the market and the changing role of DSOs. European regulators have published a series of papers relating to flexibility over the past four years[2]. For example, the general principles regarding valuation of flexibility, e.g. the right of the owner of the flexibility (consumer) to have the opportunity to choose where to valuate his flexibility, are outlined in the July 2016 "CEER Position Paper on Principles for Valuation of Flexibility". And, the need to have a holistic approach to support market flexibility is described is described in European Energy Regulators' White Paper # 3 "Facilitating Flexibility" (22 May 2017), along with general recommendations.

In order to focus more on the issue of flexibility in distribution networks, European energy regulators have committed themselves to develop guiding principles for NRAs on facilitating flexibility use at the distribution level of the electricity network where it is deemed economically viable, and where it does not unduly distort markets and competition. European energy regulators (CEER) discussed the changes needed in this area in our Public Consultation on Guidelines for Good Practice for Flexibility Use at Distribution Level (henceforth, "the Consultation").

To further assess the concept of flexibility, the respondents were asked to define flexibility in the Consultation. A number of respondents referenced the definition used in Eurelectric's report on Flexibility and Aggregation (2014) and in the Regulatory Recommendations for the Deployment of Flexibility of the European Commission Smart Grids Taskforce Expert Group 3 (2015). The definition includes the following aspects:

- *The modification of generation injection and/or consumption patterns, on an individual or aggregated level, in reaction to an external signal (price signal/network tariff activation etc.) or in order to provide a service within the energy system or to benefit the grid.*

- *The parameters used to characterize flexibility can include: the amount of (active) power modulation, the duration, the rate of change, the response time, and the location."*

[1] https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans

[2] The topic of flexibility in the energy transition has been discussed in several events and in related reports. Some of these documents are listed in the section "External documents".

CEER recognises that the above captures a number of relevant aspects of flexibility. However, the wording seems in some parts unnecessarily narrow as, for example, signals may not only be external. In addition to this, the purpose of the use of flexibility could be further clarified. The definition proposed in the Consultation[3] refers to a wider range of potential sources and uses of flexibility in the electricity system, i.e. both in the market and in the network. CEER considers that the acknowledgement of the use of flexibility in the market and in the network are both important, and the definition thus captures well the focus of the Consultation. The use of flexibility in the network is also referred to as flexibility that benefits the grid.

Given the importance of the topic, CEER also organised a Workshop on Flexibility Use at DSO Level on 1 March 2018.

In this CEER Conclusions paper, following the Consultation and taking into account the conclusions of the CEER Workshop on Flexibility Use at DSO level, CEER reviews the key outcomes of the Consultation and discusses the guiding principles found in the Executive Summary and Conclusion.

Please note that this Conclusions Paper does not consider flexibility for gas networks. Flexibility for electricity transmission networks and markets has to be considered in the light of the energy transition and an overarching view is indispensable. In any case, undue distortions should be avoided.

2 Key Outcomes of the Consultation

In this Chapter, the key outcomes from the Consultation on Guidelines for Best Practices in Flexibility Use at Distribution Level are discussed.

2.1 DSOs and Flexibility

Flexibility is not an end in itself, but a means to deliver a more affordable, secure and efficient whole power system. In addition to the benefits that flexibility would bring to electricity customers, to which CEER has referred in the Consultation paper, the use of flexibility would also be beneficial for the whole power system. At distribution level, the need for the use of flexibility to benefit the grid will increase as a result of the ongoing energy and electricity system transition. In a power system in which much more than half of the generated quantity comes from intermittent RES, active congestion management is becoming increasingly important.

In the Consultation, the respondents had wide agreement about this development and the evolving needs in distribution network operation to maintain efficiency and reliability of supply and improve operational management of the distribution networks.

[3] "Flexibility is the capacity of the electricity system to respond to changes that may affect the balance of supply and demand at all times." p. 3.

In the Consultation, CEER gathered examples on the possible uses of flexibility in distribution network operation in order to maximise the security of supply and quality of service in the most efficient way. Flexibility services were seen to enable:

- The alleviation of insufficient transfer capacity in the network by means of active congestion management at the DSO level, allowing alternatives to curtailment;
- The reduction or shifting of demand to flatten the load shape;
- DSOs to address power quality issues, such as those relating to harmonics, flicker, voltage rises/drops, and asymmetry in the network to alleviate the stress on the system.

Due to the small number of answers to questions about the additional uses of flexibility in distribution network operation, CEER assumes that the most important possibilities were captured in the Consultation. CEER acknowledges that there may be need for a mechanism to solve network congestion caused by other parties using flexibility services at distribution level to preserve safe and secure grid operation. These flexibility options may encompass generation units (conventional and RES), flexible loads and storage.

2.2 Level Playing Field for Flexibility

In Chapter 2 of the Consultation, the role of the DSO in relation to flexibility provision was explored. It was stated by CEER that DSOs should be able to access grid-user flexibility where the use of this flexibility benefits the grid and is considered to be the most economical solution for operating the distribution network. Simultaneously, undue distortions to markets and competition should be avoided. CEER emphasises that DSOs should be neutral market facilitators, which enable flexibility services and products to develop but do not distort the markets.

In order to avoid market distortions, it remains essential that DSOs are neutral when performing their tasks and are sufficiently unbundled from the interests of flexibility providers. As stated in the CEER White Paper on Facilitating Flexibility, "…the greater the responsibilities given to the DSOs, and the more DSOs are involved in non-core activities, the greater the need for regulatory control or effective unbundling"[4].

In CEER's view, flexibility products should be developed in the markets, and the role of the DSOs would be as user of flexibility that benefits the grids, i.e. the DSO purchases flexibility from third parties, but does not provide it. In this context, the DSO might be in a situation of monopsony, and therefore, complex regulatory questions arise. In the first place, it is important to clarify to what extent the DSO should have negotiating scope concerning a market-based procurement of flexibility that benefits the grid – notably in relation to congestion management. Alternatively, the DSO may change the behaviour of the provider of network-benefiting flexibility through operational control for which the provider could make a claim for compensation.

[4] Pp. 5-6.

The respondents generally agreed with CEER that DSOs should be allowed to use flexibility services, especially to solve local constraints in their networks and to defer reinforcements of the grid when the use of flexibility is the most efficient means. CEER notes that this should be conducted within the conditions mentioned above. In addition, the guiding factor in DSO regulation should be the efficiency of the network operation, also taking into account the evolving needs of network operation and long-term benefits for the power system.

The level playing field for different kinds of flexibility options should ensure technology neutrality, i.e. the different sources of flexibility, varying from demand response to storage and generation, should be given equal possibilities to provide arrangements for the provision of flexibility. Simultaneously, market participants should be able to provide their flexibility to different users in the power system: not only to the network operators but also market participants. In principle, this would require that customers are not bound, for example, to a network operator by a long-term contract. CEER recognises that the lack of liquidity in the flexibility services market may lead to the situation where long-term contracts may still be needed in some cases. However, the contractual arrangements should always be non-discriminatory and not unduly distort the market, and compliance with existing law and especially the unbundling rules should be ensured.

2.3 Models enabling DSOs to access flexibility

It is important to differentiate amongst the models which describe the coordination mechanisms for the DSO's access to flexibility. These may vary significantly among Member States. CEER divided the models enabling DSOs to access flexibility into four categories:

- **Rules-Based Approach** – codes and rules, which impose detailed flexibility requirements.
- **Network Tariffs** – tariff structures may be designed to encourage network users to alter their behaviour for a more efficient use of the distribution network.
- **Connection Agreements** – DSOs could reach arrangements with customers for the provision of flexibility where a Member State considers this an appropriate measure.
- **Market-Based Procurement** – DSOs can explicitly procure flexibility that benefits the grid services from the market(s). The flexibility could be procured via (bilateral) contracts or in a short-term market, e.g. via a platform or other forms of interfaces, given there is enough liquidity and arrangements for the market-based procurement do not unduly distort markets and comply with unbundling rules.

In examining these different models, CEER agrees with many respondents that market-based procurement is the preferred option because the procurement of flexibility on a competitive basis would be efficient as long as markets for the provision of flexibility that benefit the network are liquid and comply with unbundling rules. Clear requirements for the bilateral contracts need to be defined so as to limit the potential for abuse by the network operators. In any case, all models should not unduly distort the markets and comply with unbundling rules.

However, CEER does not consider that this would exclude the use of other coordination mechanisms, e.g. incentivising network tariffs simultaneously. Codes and rules, which impose detailed flexibility requirements, network tariffs, connection agreements details and rules for market-based procurement should not be defined at EU-level but should be defined by the Member State or the NRA and be consistent with national provisions and national practices (principle of subsidiarity). Regarding the rules-based approach, CEER prefers to leave the design of coordination mechanisms for flexibility at national level due to the wide variety of specific national regulations. The principle of subsidiarity must be preserved.

2.4 Findings from the CEER Workshop on Flexibility Use at DSO Level

The CEER Workshop on Flexibility Use at DSO Level took place on 1 March 2018. The topics covered included the need for flexibility, barriers to offering flexibility, DSO/TSO cooperation, and potential solutions for congestion management on the grid. A wide range of stakeholders attended, including the European Commission, regulators, academics and industry specialists representing TSOs, DSOs and aggregators as well as organisations representing consumers. A key objective was to bring together views from different perspectives.

The discussion during the workshop highlighted a number of useful, thought-provoking ideas. Some of the points most relevant to this paper are highlighted below.

- DSO-TSO coordination is vital. Discussions also need to include other affected parties, for example, flexibility providers. This collaboration is needed to be able to look at issues through different lenses and make use of relevant expertise to achieve the most efficient outcome. Discussions should first focus on what the needs are before leaping to procurement design. There was general agreement that solutions are likely to differ across countries.

- To make sure that markets are effective, more data transparency and clarity on the type of information that is needed are required. Building confidence in the market is also key, including confidence in the parties involved and in the revenue streams.

- It is vital that national regulatory frameworks ensure the right incentives and that the right market rules are put in place: to allow and enable the use of flexibility, to encourage coordination, and to send coherent signals (for example signals sent through network tariffs should not act as a barrier to flexibility). There was support for a regulatory framework to enable a range of models for DSO's to access flexibility (as described in section 2.3) It was also noted that it is important to monitor the development of the market and gather information from trials (e.g. a "regulatory sandbox") to aid in defining and designing solutions for efficient use of flexibility.

When addressing barriers, conformity with any existing legal act must be ensured (e.g. Electricity Balancing Guideline (EB GL) and Guideline on electricity transmission System Operation (SO GL)).

2.5 Regulatory Framework and Guiding Principles

CEER notes that a strong message arising from the Consultation responses and the Workshop is that the national and even regional differences in the conditions of distribution network operation should be taken into account in the regulatory framework. CEER concurs that circumstances in each Member State are at present varied (for instance: availability of smart metering or the voltage level operated by the DSO, growing or declining network use, etc.) and thus the most suitable regulatory tools, or mix of them, can vary amongst the Member States. The efficient use of flexibility resources may change in accordance with these national or regional differences. Against this backdrop, CEER recommends that the details of roles and responsibilities of DSOs are defined at the national level, because there is no one-size-fits-all solution. However, CEER considers that the guiding principles discussed below should be respected, even though the details are left to national consideration.

In consideration of different regulatory tools, the Consultation respondents' views varied. Many of the respondents emphasised that the framework should leave sufficient possibilities for DSOs to choose the most efficient options to keep the system costs as low as possible while taking into account that the options chosen do not distort the market or increase costs there. Regulatory tools such as Price or Revenue Control, Economic Incentive Schemes for DSO, Smart Metering, Regulatory Framework for Tariff Structures and Contractual Arrangements were considered by the workshop participants as useful to remove barriers and facilitate the use of flexibility at distribution level. CEER agrees that the DSOs should be incentivised to choose the most efficient solution when developing their networks. Furthermore, CEER thinks that new (regulatory) arrangements may need to be developed, e.g. concerning active congestion management at the DSO level or the coordination between DSO and TSO.

3 Conclusion

CEER has taken into consideration that a balance must be kept between creating common principles and allowing for enough leeway to address potential specificities in Member States and existing European legislation. Following broad support from stakeholders, CEER recommends to NRAs the national frameworks should take into account the following high-level principles:

- The **regulatory framework for DSOs should be non-discriminatory and not hinder or unduly disincentivise DSOs from facilitating** the development of flexibility.

- The **regulatory framework should enable the development of a full range of possible flexibility services**, while also ensuring that it is robust enough to deliver the best outcomes for consumers and the system as a whole (to the extent that this is within

the scope of NRA's responsibilities in each country). NRAs should ensure that no options are prematurely ruled out.

- **All sources of flexibility that benefit the grid, including generators, storage, and demand side response, should be treated in a non-discriminatory manner** when procured by network operators. Regulatory incentives should avoid any bias towards specific technologies that deliver flexibility.

- **DSOs should be able**, under the relevant regulatory frameworks**, to access and use flexibility services** provided by grid users **for managing the distribution network**, where the use of this flexibility is considered to be the most economical solution and avoids undue distortion to markets and competition.

- **Within the framework set by the relevant European legislation, the details** on the roles and responsibilities of DSOs **should be determined at national level**, given the diversity of situations, legislation and needs across EU Member States and the varying nature of DSOs (e.g. size and location).

- It is vital to **differentiate between the use of flexibility by market actors and the use of flexibility that benefits the grid by the DSO**. This distinction is due to their different competitive, technical and regulatory conditions. The source of flexibility may be the same, the purpose is different.

- Intensify the discussion on principles and roles and responsibilities regarding **DSO-TSO coordination in the field of flexibility**.

To conclude, European Energy Regulators advocate that DSOs must act as neutral market facilitators in the flexibility market performing regulated core activities and not activities that can efficiently and practicably be left to a competitive market. In order to not unduly distort markets, the DSO's role must remain limited to activities that are not, and cannot be, performed by market players. The role of the DSOs would be as a user of flexibility that benefits the grids, i.e. the DSO purchases flexibility from third parties, but does not provide it. A level playing field for flexibility is vital.

Since there is no one-size-fits-all-model because of national and regional differences (even between the DSOs in the same Member State) a framework based on common principles, therefore, seems preferable.

In its future activities, CEER plans, amongst other issues, to further elaborate on the procurement of flexibility, DSO-TSO coordination and the relevant regulatory arrangements/incentives.

Annex 1 – List of abbreviations

Abbreviation	Definition
ACER	Agency for Cooperation of Energy Regulators
BRP	Balance Responsible Parties
CAPEX	Capital expenditure
CEER	Council of European Energy Regulators
DSO	Distribution System Operator
EC	European Commission
NRA	National Regulatory Authority
OPEX	operational expenditure
RES	renewable energy sources
TOTEX	total expenditure
TSO	Transmission System Operator

Annex 2 – Evaluation of responses to the CEER Public Consultation on Guidelines of Good Practice for Flexibility Use at Distribution Level[5]

Public consultation question	Summary of responses	CEER Position

Question 1: What are, in your opinion, the main drivers for flexibility use by DSOs going to be in the coming years?	There is a certain consensus among the participants that the following elements are to be seen as key drivers. They often correspond to the energy transition, which, apart from entailing the integration of renewable energy and the minimisation of conventional energy, include:
	• Efficiency and reliability of supply have to be maintained and the operational management of the distribution networks must be improved.
	• The new customer behaviour will require more flexibility: Customers will be
	  ○ Empowered by smart meters and demand response;
	  ○ Actively involved and change their behaviour due to technical changes (electro mobility, heat pumps, P2X, electrification of the heating and transport sector, Blockchain etc.).
	• Distribution network reinforcement needs (especially because of new consumers such as electro mobility and higher demand-simultaneities): combined grid constraints may arise – the grid might be pushed to its limits. Hence, demand response and incentivising the domestic sector (e.g. flexibly reacting to market prices) is another driver for flexibility.
	Other often-mentioned examples include: regulatory pressure for increasing system efficiency, climate change targets, alternatives to traditional network reinforcement, local congestion and voltage control, more time allowance to develop networks or
		- CEER agrees that energy systems have seen significant change over the last decade – this will continue, driven by wide-scale deployment of renewable generation of an intermittent nature (e. g. wind and solar) of which a significant share is connected at distribution level; the changes in how energy is consumed, e. g. electric vehicles or heat-pumps, combined with enablers like smart meters and technological progress in the ICT sector, such as electricity storage an home automation; and a decline in availability of some traditional sources.
		- CEER thinks that it is pivotal to differentiate between the use of flexibility in the market and the use of flexibility in the network. This distinction is due to the different competitive, technical and regulatory conditions found in each.

[5] CEER received 39 responses, including DSOs (more than the third part of them, including a joint response paper from the main European associations), producers, the European Network of Transmission System Operators (ENTSO-E), associations, suppliers and other interested parties.

	new mechanisms to allow controlled islanding (regional network reconstruction) in case of incidents or the decreasing amount of inertia in the grid due to a declining number of large centralised power plants on the transmission grid. Altogether, the identified main drivers result from the ongoing Energy Transition and from the changing behaviour and role of the customer.	
Public consultation question	**Summary of responses**	**CEER Position**
<u>Question 2: Please provide any alternative definitions for flexibility that you think capture the focus of this paper.</u>	Most participants agreed with the following two definitions. The first is the definition of the consultation paper provided by CEER: *"Flexibility is the capacity of the electricity system to respond to changes that may affect the balance of supply and demand at all times."* The second alternative is the definition used in Eurelectric's report on Flexibility and Aggregation (2014) and, with very minor changes, in the Regulatory Recommendations for the deployment of flexibility of the EU Com. Smart Grids Taskforce Expert Group 3 (2015). *"Flexibility could be defined as: the modification of generation injection and/or consumption patterns, in reaction to an external signal (price signal or activation) in order to provide a service within the energy system. The parameters used to characterize flexibility can include: the amount of power modulation, the duration, the rate of change, the response time, and the location. The delivered service should be reliable and contribute to the security of the system."* Further definitions mentioned in the questionnaire can be broadly subsumed under one of the two alternatives. Both definitions represent different approaches on the topic of flexibility: the first definition represents a top-down approach which defines flexibility more as a feature of an efficient and secure power system, while the second definition represents a bottom-up approach referring to the capability of end-users to react in a flexible way.	- CEER recognises that Eurelectric's definition captures a number of relevant aspects of flexibility. However, the wording seems in some parts unnecessarily narrow as, e.g. signals may not only be external. In addition to this, the purpose of the use of flexibility could be further clarified. The suggested definition in the Consultation refers to a wider range of potential sources and uses of flexibility in the electricity system, i.e. both in the market and in the network. CEER considers that the acknowledgement of the use of flexibility in the market and in the network are both important, and the suggested definition thus captures well the focus of the Consultation. The use of flexibility in the network is also referred to as flexibility that benefits the grid.

Public consultation question	Summary of responses	CEER Position
Question 3: Should DSOs be encouraged to use flexibility to manage the distribution network where this is more efficient than reinforcing the network? Please provide an explanation.	Almost all respondents, including DSOs, as well as others, agreed that DSOs should be allowed to use flexibility services to solve local constraints in the grid and to defer grid reinforcement, if it is the most efficient option. Therefore, a suitable regulatory framework must be established, so that the DSO chooses the most efficient option. Some of them mentioned that the incentive to invest in CAPEX is too high. Only one of the respondents (from Finland) saw the use of flexibility services only as a short-term measure. Some added that there should not be additional incentives for the DSO, only two respondents stated that incentives for innovative solutions would be helpful. A few added that there should be a CBA in advance. Two stated that the precondition is unbundling and a smart grid. Some emphasised that grid reinforcement and extension will still be necessary and cannot be fully replaced by the use of flexibility services, and, in any case, security of supply must remain in focus.	- CEER thinks that economic viability should be the guiding factor for network operators when dimensioning their networks. If alternatives to network expansion provide a less-expensive solution, they must be rewarded by appropriate incentives. Alternatives to network expansion must be non-discriminatory, transparent and compliant with unbundling rules.
Public consultation question	**Summary of responses**	**CEER Position**
Question 4: Should all sources of flexibility be treated equally in the market and by system operators?	All eight participants that provided an answer here supported the idea that all flexibility resources (flexible generation, storage and demand side management) should compete on a level-playing field. Some participants emphasised that this level playing field for the market should also apply to the competition that presents options other than flexibility to help DSOs to optimally carry out their tasks. That means the system operator should be allowed to decide whether to procure flexibility services or invest in cables/lines.	- CEER's opinion is that under incentive-based regulation, all expenditures on flexibility that benefit the network should be subject to efficiency targets in order to create a level playing field for all types of incentives.
Public consultation question	**Summary of responses**	**CEER Position**

Question 5: Are there any uses for flexibility that you think we have missed and should be considered? If yes, please provide an explanation.	There were seven replies to this question, which included different types of respondents. Therefore, it is assumed that the majority sees no additional use for flexibility besides that which was considered in the consultation document. A DSO underlined that voluntary curtailment of renewables should not be considered as a problem to be solved through the activation of flexibility resources but they should be rather included in the list of flexibility resources. One respondent highlighted that the case where the DSO has to manage the impacts and congestion caused by the activation of flexibility by other parties has not been included, and the extent to which a DSO is allowed to publish a market restriction should be clarified [by regulators]. It was also noted that flexibility services located in the distribution grid can be used for the provision of system services. Local flexibility services can serve multiple purposes.	- CEER believes that the main uses for flexibility are mentioned in the consultation document. CEER agrees that flexibility services located in the distribution grid can serve the whole system. Flexibility services by other parties which lead to congestion must be restricted to preserve the efficiency and stability of the grid.
Public consultation question		
Question 6: Do you think it is important for Member States to establish standardised EU definitions of the various flexibility products, to facilitate market participation in flexibility use at distribution level?	Eight of the nine participants on this question stated that caution is particularly advised when considering an EU-wide standardisation of products. Some participants limited the usefulness of such standardisation to the event that aggregators or suppliers might want to offer services across different EU Member States (in consideration of all national specifics) whilst others saw the need for DSOs to identify the nature of their needs as a first step before harmonising practices at EU level, categorically calling for prudence to prevent market distortion or suggesting to limit the standardisation to some common principles/guidelines. Four participants stated that an EU-wide harmonisation on this point would also require the harmonisation of a wide range of regulatory issues (e.g. the flexibility of generation and consumption, incentives for demand response, tariffs, storage rules, etc.). They averred that this would be time consuming and complex. These four participants also advised agreement on a common definition of the “traffic light concept” and saw the necessity that DSOs be allowed to own, manage and operate storage facilities for grid-related purposes. One of the respondents thought that the	- CEER believes that flexibility products should be developed in the market. CEER thinks that a level playing field is pivotal to facilitate market participation in flexibility use at distribution level. - CEER believes with regard to the establishment of standardised EU definitions – like most of the participants – that there is no ‘one-size-fits-all’ approach. - CEER recognises that there are different national characteristics which should not be ignored by an EU-wide standardisation. Again, a one-size-fits-all-approach would not be the right solution, and benefits from different options need to be considered.

	activation of decentralised resources should be open to both the TSO and the DSO through a single platform (coordination would be required). Only one respondent supported the idea of standardised definitions unconditionally and supported the idea that standardised definitions might be helpful. The others stated that there is no 'one-size-fits-all' approach.	
Public consultation question	**Summary of responses**	**CEER Position**
7. Should regulators seek a regulatory framework that can accommodate a range of models that would enable DSOs to access and use flexibility, while ensuring that competition and markets are not distorted?	Almost all respondents agreed with CEER's view that regulators should seek a regulatory framework that can accommodate a range of models that would enable DSOs to access and use flexibility, while ensuring that competition and markets are not distorted. Many mentioned that although some basic principles can be defined at European level, the detailed regulatory framework for the access and use of flexibility should vary across member States to reflect national specificities. However, one considered, in contradistinction to the others, that the flexibility market should not be fragmented: therefore, a flexibility framework at European level would be the best; and a TSO-wide framework would be second best. This respondent considered that a flexibility framework at DSO level would not be manageable.	- CEER maintains its position that the different starting points and the differences between DSOs and distribution systems among Member States, as highlighted in the introduction of the public consultation document, mean that the deployment of flexibility is likely to vary from one distribution system to the next. - Therefore, CEER considers that general principles should be tackled at the European level (competition, efficiency, non-distortion), but that enough margin must be left to adapt flexibility schemes to local situations.
Public consultation question	**Summary of responses**	**CEER Position**
8. What do you consider to be the key benefits and key risks of particular models (rules-based, network tariffs, connection agreements, and market-based)?	Most respondents considered that a market-based approach should be privileged, but that other models may be useful in particular situations. **Rule-Based Approach**: many respondents pointed out the risk of inefficiency with a rule-based approach. Flexibility could be requested in a place and time where it is not needed; at worst, the set of rules may even make flexibility providers unable to bid in other flexibility markets. They also noted that, as a rule, providing flexibility should be voluntary. One respondent also noted that such an approach could negatively impact the business model of flexibility providers already in place. But some respondents considered that in some cases, a rule-based approach is	- CEER shares the view that market-based procurement is the preferred option because the procurement of flexibility on a competitive basis would be efficient as long as markets for the provision of flexibility that benefit the network are liquid and comply with unbundling rules. - **Rule-Based Approach**: CEER shares the view that the rule-based approach should be limited to specific and exceptional situations and specific regulations at national level where

	justified: • To introduce and/or harmonise some technical requirements applicable to network users, for instance, for requiring grid users to inform DSOs about the flexibility they have to sell; • In situations where market-based tools do not work (very specific flexibility products, with no competition to provide them; • In emergency situations, as a last resort to avoid a black-out – it is difficult to decide about compensation levels here, though. **Network Tariffs**: Many respondents noted that network tariffs should incentivise consumers to use the network in the most economically-efficient way. In particular, some mentioned that the introduction of time-of-use and critical peak pricing tariff structures applied to transmission and distribution tariffs at all voltage level are important. However, most considered that network tariffs cannot have sufficient granularity to send price signals corresponding to the exact local flexibility need. Therefore, tariffs can only be one instrument, but must be complemented by the procurement of flexibility services by DSOs. On that subject, one respondent remarked that local critical peak pricing would be entirely efficient, but admitted that it is not [yet] technically feasible On the contrary, one respondent favoured a capacity-based tariff, in order to leave more economic space for a flexibility market. A few respondents also wondered about the consumer's ability to react to network tariffs, which are not always passed-on by the supplier, especially if they compensated by changes in energy prices. **Connection Agreement:** While many respondents considered that connection agreements can have their use, in combination with other tools, they pointed out many risks, which must be tackled by the regulatory framework. • Risk of discrimination in access to the network: a DSO should not be able to use connection agreements to deny access to the network. Therefore, network users should stay entitled to a "full" connection, if they are willing to pay the standard price for it.	the market is not the best way to provide flexibility (for instance reactive power regulation depending on actual measured voltage). - **Network Tariffs**: CEER maintains its view that network tariff structure should indeed reflect the cost related to the network, and therefore, incentivise customers to limit withdrawals at peak time. In contrast, the electricity price should reflect scarcities in the generation market. The interaction of both scarcity signals should induce the reaction and behaviour of the generation and demand side. Adjustments to the tariff design should be easy to administer and must not hamper non-discriminatory competition. - **Connection Agreement**: CEER maintains its view that a connection agreement area is a legitimate way for a DSO to access flexibility, but that the framework should ensure that it will not bring discrimination in access to the network or flexibility markets. The limitation mentioned about availability and lack of flexibility makes it advisable, when applicable, to use connection agreements in combination with other schemes, in order not to restrain the flexibility pool. CEER believes that DSOs could only reach arrangements with customers for the provision of flexibility where a Member State considers this an appropriate measure. - **Market-Based Approach**: CEER considers that, since it allows DSOs to procure flexibility on a competitive basis, a market-based

	• Risk of discrimination in the flexibility market: the DSO should select flexibility based on economic merit, without favouring users with a connection agreement. Therefore, some respondents considered that a DSO should not manage directly customer flexibility, but interact with flexibility providers. And clauses attached to connection agreements should not prevent flexibility to be bid on in other markets. • A finite amount of available flexibility through new connections: the DSO should retain the possibility of contracting flexibility through other means. • Lack of flexibility: connection agreements are long-term contracts, which lack flexibility. They are, therefore, not adapted to tackle constraints that are uncertain. **Market-Based Approach**: It was generally considered by respondents as the most cost-effective way of procuring flexibility, as it will make several commercial players compete to provide the most efficient solutions to the DSO. Some respondents added that this approach has also the greatest potential to trigger innovation. Many respondents pointed out that in order to set up a transparent flexibility market, a DSO must clearly define and publish its flexibility needs. Only this will ensure that every market player (consumer, producers, aggregators…) can participate. A few respondents thought that DSOs should systematically provide data on the network situation, even when no flexibility need is expected. Lastly, many respondents mentioned that market-based approach is only possible if there is some liquidity, which will not always be the case, especially for flexibility needed within a small area. In those cases, other tools should be used.	approach is highly efficient. However, it notes that "market-based approach" covers a large range of schemes (cf. question 9), which will bring various advantages and disadvantages, depending of the type of flexibility needed. The degree of liquidity and of data availability, will, for instance, influence the type of market-based approach chosen. CEER highlights the importance that Network Codes and rules (which impose detailed flexibility requirements), Network Tariffs, connection agreements details and rules for market-based procurement should not be defined at EU-level but shall be defined by the Member State or the NRA and should be consistent with national provisions and national practices (principle of subsidiarity).
Public consultation question	**Summary of responses**	**CEER Position**
9. What are the relative merits of a contracting strategy (competitive or	The majority of respondents considered that a real-time market is theoretically better, but not always practically feasible. The main constraints listed were: • lack of liquidity	- CEER considers that a real-time market approach would, in theory, give a DSO more flexibility when buying flexibility, and restrict it to only purchasing what it really needs.

otherwise) versus a real-time market approach to procurement of flexibility? Is the latter approach practicable?	• lack of technical tools (smart-metering, hourly measurement, real time monitoring), which however, could be more generally available in a few years However, a large number of them also considered that both a contracting strategy and real-time approach are interesting: • A few considered that contracting should be used for securing the availability of flexibility over the long term, while a real-time market could be used for activation; • One considered that contracting should be used for flexibility needed within a smaller geographic area (where short-term liquidity is highly improbable), and that a real-time market could be used in larger ones. • One respondent also noted that if contracting is decided upon, the DSO should at least ensure that contracting periods are not too long in order to allow flexibility reallocation if needed. Lastly, a few respondents considered that contracting should be favoured: • contracting gives visibility, which is needed when financing large assets • a real-time market should only be used for emergency activation	- However, in practice, there will be few situations when close-to-real-time liquidity will be sufficient to make a market feasible, let alone efficient. - In most cases, the lack of liquidity will make long-term contracting more advisable as it ensures the availability of flexibility, even if it brings the concomitant risk of over-contracting and liquidity being withdrawn from the market.
Public consultation question	**Summary of responses**	**CEER Position**
10. Are there any models that would enable DSOs to improve system flexibility that you think we have missed and should be considered?	Most respondents believed that CEER had covered all flexibility models. However, three alternative possibilities were suggested: • Model 1: Trading transport capacity (amongst industrial customers) which has the advantage that transport assets will only be developed if they have a positive value for customers, who will calculate the trade-off between investment in additional network capacity and keeping up with the shortage in capacity. The disadvantage is an increase in complexity and different	- CEER appreciates the variety of the proposed models and recommends considering the merits and drawbacks of these flexibility models further.

	treatment of customers in different areas, partly caused by historic decisions of the DSO. • Model 2: Lowering load in the congested area while at the exact same time compensating for this load reduction by an increased load (also market-based) in another non-congested area. This enables DSOs and TSOs to work together efficiently. The limitation of this method is that it can only be used in (almost) real-time or it should be combined with market restrictions well in advance. • Model 3: A tariff model in which different tariffs are used between "basic grid use" (existing) and "add-on grid use" (e.g. for electric vehicle charging and distributed generation feed-in). This would accommodate market parties to develop application-specific proposals, while at the same time DSOs have an (explicit or implicit) incentive mechanism for peak shifting and/or load reduction specific for these applications only. This would reduce complexity and also protect vulnerable customers.	
Public consultation question	**Summary of responses**	**CEER Position**
11. Are there case study examples of approaches to improve flexibility on the system that you think should be considered in this work? If so, please provide a summary of the key information and findings.	A few respondents mentioned case studies that could interest CEER. Among the case studies mentioned are: • Smart grid experiments • Current practices of procuring balancing power by TSOs (such as frequency containment reserves, frequency restoration reserves and replacement reserves)	- CEER appreciates the richness and variety of examples provided by respondents, and will examine them further.
Public consultation question	**Summary of responses**	**CEER Position**

Question 12: Beyond impartial provision of data to market participants, do you consider that there are any other tasks for DSOs to carry out to enable the competitive provision of and access to flexibility by others?	There was a near-consensus among respondents that core tasks for a DSO for the enabling the competitive provision of and access to flexibility by others includes: • Having a sufficient level of observability in the DSO's network; • Engaging in appropriate and efficient data sharing, while taking into account data privacy and security; • Transferring data in a transparent and non-discriminatory manner; • Implementing a certain degree of harmonisation of data transmission; and • Having adequate system monitoring to understand flexibility needs. Many of those who answered presented additional tasks having to do with data, including that DSOs should provide data about the energy mix, make measurement data available to end users and have reciprocal data provision between DSOs and TSOs. Several responders commented that they did not agree with CEER's suggestion that there be an independent data management coordinator – they felt that DSOs could do the necessary tasks without such an entity. A few associations encouraged entrusting to DSOs a systematic validation activity of dispatching orders of distributed resources given by TSOs, in order to ensure the respect of local operational constraints and to avoid critical issues for safe grid operation. Some also said that DSOs should take part in the design, implementation and operation of processes leading to oversight of sources of flexibility of resources in their network. ENTSO-E suggested that DSOs should avoid situations where the distributed energy resource (DER) interacts only with its corresponding DSO and can only exchange bids and activations through this DSO. They also suggested that DSOs should be able to perform dynamic congestion demand forecasts to help with flexibility. The Horizon 2020 Project 'Smartnet' proposed five new models for the role that a DSO plays that could enhance its ability to enable the competitive provision of and access to flexibility by others, differing in their access to the flexibility (centralised,	- In general, CEER maintains the position that impartial division of data to market participants is important. - CEER considers that this includes other tasks or aspects such as having a sufficient level of observability in the DSO's network and transferring data in a transparent and non-discriminatory manner. - CEER also agrees that the provision of data needs to be done in an appropriate and efficient way, with a certain degree of harmonisation and taking into account data privacy and security.

	local, shared, TSO-DSO in common or integrated). One company asserted that the definition of significance thresholds will be required in order to strike the right balance between the efficiency gains deriving from relying on grid users' availability and flexibility procurement. Finally, some respondents emphasised more typical DSO responsibilities: being responsible for facilitating distribution-connected flexible energy resources so as to be able to call upon these services to more cost-effectively manage their networks; undertaking actions to ensure that the network remains within technical limits; coordinating the provision of services up to the national system operator; and ensuring that no conflicts take place.	
Public consultation question	**Summary of responses**	**CEER Position**
Question 13: Do you think that there are situations where DSOs should be allowed to provide flexibility beyond the distribution network component, where economically efficient to do so? Please provide an explanation.	The majority of respondents thought that DSOs should not be allowed to provide flexibility beyond the distribution network component. There was a general consensus that flexibility is not their role and that DSOs should remain as neutral market facilitators. There were concerns that if they engage in such market activities this could cause market distortion, so there should remain a clear separation of tasks between regulated parties and market operators. Those who were open to the idea of providing further flexibility emphasised that it should be done in a way that would not violate basic rules and principles with respect to unbundling and would not have a negative impact on competition. Note there were eight respondents from Austria (associations, energy companies and network operators) who gave a copied answer, saying that DSOs could be allowed to provide flexibility but without engaging in any commercial activity. Another respondent said that examples which involve multiple customers, such as distributed generation or storage and microgrids, could be more economically deployed as part of the network than at a customer facility.	- CEER agrees that this question must be carefully considered, because that there was a general consensus that flexibility is not the role of DSOs and they should remain as neutral market facilitators. If DSOs provide flexibility, this could cause market distortions. - The role of the DSOs would be as users of flexibility that benefits the grids, i.e. the DSO purchases flexibility from third parties, but does not provide it. A level playing field for flexibility is pivotal.
Public consultation question	**Summary of responses**	**CEER Position**

Question 14: Are there other examples where the DSO could provide flexibility to help to reduce the overall costs of the system?	The majority (21) of respondents said that yes, there are examples of where the DSO could provide flexibility to help reduce the overall costs of the system. Note that 11 of these are nearly-identical answers from Austria (associations, energy companies and network operators) who said that DSOs should be allowed to own and operate flexibility in the form of storage facilities for security and technical purposes, but only without entering into commercial activities. They suggested that in some situations, activating flexibility on the demand side or generation side might be cost-efficient. For other respondents who answered yes, the trend was for them to believe that there is potential to provide benefits such as: transmission system issues being solved more efficiently by action on the distribution network; cost reductions to contribute to reductions in overall system costs; and increased real-time liquidity of the flexibility market. These were considered acceptable so long as the whole system impact is kept in mind to ensure that core objectives are met. Respondents (10) who replied that are none such examples believe that DSOs should never be allowed to become a participant in the flexibility market because it would blur the lines between market operations and network monopoly, affecting transparency and competition in a negative way. One of these respondents said that whilst their answer was no, they welcome the guiding principle in the consultation paper that "…the regulatory framework should enable the development of a full range of possible flexibility services." Another respondent said that their only exception to their answer would be in remote areas, like islands, where DSOs might provide services where a market does not exist.	- CEER recognises that there are examples of where DSOs could provide flexibility to reduce the overall costs of the system, e.g. transmission system issues being solved more efficiently; cost reductions to contribute to reductions in overall system costs; and increased real-time liquidity. However, DSOs may only provide flexibility as non-frequency ancillary services within the network without unduly distorting the market. The DSO may not itself provide flexibility to the market.
Public consultation question	**Summary of responses**	**CEER Position**
Question 15: In principle, can the regulatory tools listed be used by regulators to remove barriers and facilitate the use of flexibility	Most of the respondents agreed that the regulatory tools listed can be used by regulators to remove barriers and facilitate the use of flexibility at distribution level. It was highlighted in many answers that the framework should leave sufficient possibilities for DSOs to choose the most efficient options to keep system costs as low as possible. It was also noted that there are different circumstances in different Member States and it depends on the given circumstances what the most suitable tools for different	- CEER notes that most of the respondents agreed with the listed principles. - CEER agrees that circumstances in each Member State are currently varied, thus, the most suitable regulatory tools, or mix of them, may vary between the Member States. Accordingly, CEER agrees that the details of roles and responsibilities of DSOs should be

at distribution level?	countries are. It was considered important that the use of regulatory tools does not disturb the markets and that the tools are neutral with respect to all flexibility options. In a few answers, it was pointed out as important that the output of DSO activities can be measured in order to define efficient operation and to set benchmarks. The DSO-related respondents mainly agreed with the listed regulatory tools. Economic incentives for the use of flexibility – when that flexibility is efficient – were considered important (for example from CAPEX and TOTEX to OPEX and from CAPEX to TOTEX).	determined at national level. - As CEER has stated in the Consultation document, NRAs need to ensure that the regulatory framework does not hinder or disincentivise DSOs from facilitating the development of flexibility at distribution level or from using flexibility services for managing the distribution network, where it is economic and efficient to do so, while simultaneously ensuring that markets and competition are not unduly distorted. CEER also agrees with the respondents that all sources of flexibility should be treated without undue bias in the regulatory tools. - As discussed in its "Incentives Schemes for regulating DSOs, including for innovation" paper CEER recognises the advantages of output-based regulation.
Public consultation question	**Summary of responses**	**CEER Position**
Question 16: Are there particular tools that you think would be the most effective in achieving flexibility use at distribution level? Please provide reasoning for your answer.	All the outlined tools from price or revenue control to contractual arrangements were mentioned by the respondents. In several answers, the different circumstances in the Member States were seen to affect the best selection of regulatory tools. It was also suggested that regulatory revenue schemes should treat all sources of flexibility equally, leaving the choice of the most cost-efficient option to DSOs. Neutrality in regard to technology was also addressed in many answers. Incentives for the DSOs and/or their customers were considered as useful tools by several respondents; the DSOs could be incentivised by economic incentive schemes and price or revenue control models, and their customers by advanced tariffs. Smart metering was seen as enabling the use of advanced tariff structures. In addition, market platforms for flexibility, as well as local tenders organised by DSOs were considered by some respondents as efficient measures to encourage	- CEER notes that the opinions regarding the most effective solution varied. Again, CEER agrees that national differences may affect the selection of the most effective regulatory tools. Regulatory incentives should avoid any bias towards specific technologies that deliver flexibility. CEER agrees that the DSOs should be allowed to choose the most efficient solution when developing their networks. - CEER maintains its position that DSOs should procure flexibility services, wherever possible, through competitive tendering or exchange/ platform based procurement. Bilateral contracts may still be needed, but the contractual arrangements should not unduly distort the market and compliance with

	procurement of flexibility. The potential need of DSOs to use bilateral contractual arrangements was also recognised in many answers. Many DSO-related respondents emphasised that DSOs should be able to choose the most cost-efficient solution in network development and operation. The technology-neutral treatment of different solutions by the regulatory tools was also highlighted. Economic incentive schemes as well as incentivising tariffs were seen important for the development of flexibility. In addition, output-based regulatory framework and impact assessment of regulatory tools were examples suggested in single answers.	unbundling rules should be ensured.
Public consultation question	**Summary of responses**	**CEER Position**
Question 17: Are there any other regulatory tools that have not been included and should be considered?	Many respondents emphasised that storage facilities should be considered in the kit of regulatory tools and that barriers for storage facilities should be removed. In general, it was thought that storage should remain as a market-based activity but DSOs should be allowed to use and operate storage facilities for grid purposes without entering the markets. Also, new innovations and pilot projects were recognised as a means to find new technologies and techniques for facilitating flexibility. Funding of these projects was considered important. Some DSO-related respondents suggested that the barriers for storage use in grid operation should be removed, and DSOs should be allowed to own and operate storage for security and technical purposes. In these answers, it was mentioned that DSOs should decide themselves on the investments on financial basis. In some answers, funding of innovations as well as the importance of pilot and demonstration projects was noted. An obligation for DSOs to present a report on alternatives to traditional investments; new tariff structures; and coordination and standardisation were mentioned in single answers.	- As stated in the CEER White Paper "The Role of the DSO" (May 2017), CEER maintains its position that DSOs should not own or operate energy storage facilities. If derogations from this main rule are allowed, on an exceptional basis, as proposed in the Clean Energy package, the conditions for the derogation should be clearly defined. - Regarding support of innovations and pilot and demonstration projects, CEER refers to the possibilities as well as challenges discussed in the "Conclusions Paper on Incentives Schemes for regulating DSOs, including for innovation".
Public consultation question	**Summary of responses**	**CEER Position**

Question 18: Should the regulatory framework allow different solutions and combinations of tools to address the specific needs of the network?	All respondents strongly agreed that different solutions should be allowed. Many of the respondents pointed out that there are significant variations between DSOs, and that the regulatory framework should be technology neutral. They averred that DSOs should be able to choose the most cost-effective strategy, or combination of strategies, irrespective of technology. Many DSOs, in particular, pointed out that they should be allowed to use network reinforcement if it is the most cost-effective option. A couple of responses argued that the regulatory framework should focus on the final results rather than the methods, while a few responses said that all allowed methods should be defined in the regulatory framework. DSO-related respondents stated that DSOs should be able to choose the most efficient solutions among different options. Technological neutrality was emphasised again by some respondents. Many of the respondents would include storage facilities as amongst possible solutions.	- CEER agrees that national differences, and also varying conditions for DSOs in different areas, may affect the selection of the most effective regulatory tools. As stated in the Consultation document, CEER thinks that the regulatory framework must support the development of efficient network solutions, assuming that they are economically viable. CEER agrees that the use of flexibility is not the end itself but a means to deliver a more affordable, secure and efficient whole power system.
Public consultation question	**Summary of responses**	**CEER Position**
Question 19: Is a principles-based approach (rather than one-size-fits-all) the correct one for national regulators developing a framework for facilitating flexibility use by DSOs at distribution level?	In general, respondents agreed that a principle-based approach is more suitable than one-size-fits-all to define a common European framework to facilitate flexibility use by DSOs. Many respondents emphasised that the diversity of distribution networks and the different needs/issues associated with distributed resources and flexibility services make it necessary to adopt an approach that recognises these differences. In most responses it was highlighted that, due to the fact that differences across Member States may lead to distinct arrangements and implementation details, it should be left to the national regulators to decide what the best solutions for flexibility are. In this sense, respondents considered that European regulators should at most develop overlying principles for the use of flexibility and leave the details to the national regulators in order to follow the principle of subsidiarity. Many respondents also emphasised that a principles-based approach gives more space to actors to develop efficiently their functions, whereas a too-rigid framework could stifle innovation and flexibility. Related to this, several respondents asserted that all principles must support market-based solutions and that they should be	- In general, CEER maintains its aims as presented in the consultation document, related to the development of high-level guiding principles for NRAs on facilitating flexibility at the distribution level, where it is economically viable and does not distort markets and competition. - In this sense, CEER agrees that there is no one-size-fits-all approach for the development of a framework for flexibility use by DSOs at distribution level and recommends that take into account characteristics of national context when developing the regulatory framework related to flexibility. - CEER agrees that an appropriate market framework should be developed by TSOs, DSOs, regulators and market parties, taking

	sufficiently detailed, so that market-distorting solutions cannot be introduced. One of the responses also brought up the need for new forms of cooperation between network owners and the grid operator due to the DSOs' obligation to contribute to an increased flexibility. On the other hand, a few respondents remarked that although a principles-based approach could be used in an early stage, it is important to keep in mind that a stronger harmonisation could be necessary in later years as frameworks develop. In this sense, they considered that starting with the same model which is, at the same time, versatile enough to be adapted to Member States' specific needs is much more efficient, but it will take great leadership and political encouragement to go in this direction.	into account particularities at national level, with a coherent set of market rules to efficiently procure flexible resources in a way that supports prosumers' active participation in wholesale markets.
Public consultation question	Summary of responses	**CEER Position**
Question 20: Are the principles outlined appropriate? Are there any fundamental principles that you think are missing in order to deliver maximum benefit to customers?	Respondents mainly agreed with the principles (proposed in the Consultation) that should underpin the regulatory framework for the use of flexibility at distribution level. However, several responses emphasised certain ones or include some comments about their content. The main comments are included below: • In the third principle[6], a phrase such as "and promote" should be added after enable. The role of regulators is crucial, merely creating an enabling framework without a proactive element to drive change will be inadequate to change the considerations of DSOs across Europe. Others remarked that there should be no principles prescribing the use of particular regulatory tools. • Regarding the fourth principle[7], one respondent pointed out that each source has its specificities, thus they cannot be considered as "perfect substitutes". DSOs, in order to guarantee a safe grid operation, are best positioned to	- CEER agrees that the regulatory framework should enable the development of different services related to flexibility, but always ensuring the use of cost-effective solutions with clear benefits for consumers. - As established in the sixth principle, details on the roles and responsibilities of DSOs should be determined at national level, including the selection of sources which best matches their specific needs. - CEER thinks that consideration of the principle on transparency could be beneficial for having greater visibility of network needs, but data privacy and cybersecurity measures should be

[6] The third principle, as included in the Consultation Document was: The regulatory framework should enable the development of a full range of possible flexibility services, while also ensuring that it is robust enough to deliver the best outcomes for consumers. NRAs should ensure that no options are prematurely ruled out.

[7] The fourth principle, as included in the Consultation Document was: All sources of flexibility, including generators, storage, and demand side response, should be treated equally by network operators. Regulatory incentives should avoid any bias towards specific technologies that deliver flexibility.

	evaluate how each source matches their specific needs. Based on this, the respondent welcomed the principle set out by the Art. 32.1 of the Electricity Directive of the Clean Energy package to entrust to the DSO the definition of standardised products to procure services from the market. • Related to the seventh principle[8], one response remarked that DSO regulation should refrain from being excessively focused on cost-efficiency. A future-proof regulation instead should aim at ensuring an investments' remuneration framework that, on the one hand maintains guaranteed security of supply and high quality of service at least cost, while on the other hand can promote innovation and digitalisation. Other respondents remarked that, in general, the regulatory framework should focus on incentivising DSOs to use the most effective solution, and not specifically incentivise the use of flexibility. • Regarding the operation and ownership of flexibility assets[9], a division of opinions can be highlighted. For example, regarding storage facilities, whereas a few respondents indicated that DSOs could be able to own storages, some others stated that the flexibility assets should be mainly operated and owned by market actors. Finally, below one can find the main additional principles proposed by respondents: • The focus should be on creating a fair and efficient market place for flexibility means, where parties such as BRP, DSOs and TSOs can buy flexibility for different needs. This should be the common rule for all actors. • It would be useful to provide a principle on transparency. Greater visibility of network needs would be very helpful in enabling other users to propose flexible solutions. • Flexibility markets are far from being mature; indeed, they are quite nascent. Therefore, the regulatory framework should include temporal/kick-off measures to trigger these markets and facilitate/enable the use of flexibility	taken into account. - CEER agrees that there is a need for the elaboration of principles relating to the future relation of DSOs and TSOs regarding the implementation of flexibility services in the distribution system. - CEER believes that NRAs should contribute to the removal of barriers and facilitate flexibility use at distribution level. - Finally, CEER agrees that security of supply and quality of the service should remain the priority of regulators and DSOs and should be the leading principle of their actions.

[8] The seventh principle, as included in the Consultation Document was: NRAs must have the necessary human, technical and financial resources available to review and modify the existing regulatory framework to remove barriers and facilitate flexibility use at distribution level

[9] The sixth principle of the Consultation Document established that details on the roles and responsibilities of DSOs should be determined at national level, given the diversity of situations, legislation and needs across EU Member States and the varying nature of DSOs

	by network operators. • Development of certain flexibility assets by network operators is currently occurring (shunts, capacitor banks and diesel generators). This situation should not change if the provision of equivalent flexibility services by third parties does not provide the same level of reliability as that provided by the DSO assets. • Regarding a whole system approach, the DSO is in charge of the system operation of its network. Other actors like the TSO should not be allowed to intervene in distribution system operation. If the TSOs require the activation of flexibility in the distribution system, DSOs and TSOs should together determine the way to execute it. • Additionally, security of supply and quality of the service should remain the priority of regulators and DSOs and should be the leading principle of their actions, especially when considering flexibility on the demand side. At the same time, the activation of flexibility in distribution systems should not distort system operation. • With respect to the use of flexibility by DSOs for congestion management: offering flexibility is voluntary; DSOs can procure it from different markets; offers need to contain sufficient locational information and need to be correct; and market restriction must be possible.	

Annex 3 – About CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national regulators of electricity and gas at EU and international level. CEER's members and observers (from 36 European countries) are the statutory bodies responsible for energy regulation at national level.

One of CEER's key objectives is to facilitate the creation of a single, competitive, efficient and sustainable EU internal energy market that works in the public interest. CEER actively promotes an investment-friendly and harmonised regulatory environment, and consistent application of existing EU legislation. Moreover, CEER champions consumer issues in our belief that a competitive and secure EU single energy market is not a goal in itself, but should deliver benefits for energy consumers.

CEER, based in Brussels, deals with a broad range of energy issues including retail markets and consumers; distribution networks; smart grids; flexibility; sustainability; and international cooperation. European energy regulators are committed to a holistic approach to energy regulation in Europe. Through CEER, NRAs cooperate and develop common position papers, advice and forward-thinking recommendations to improve the electricity and gas markets for the benefit of consumers and businesses.

The work of CEER is structured according to a number of working groups and task forces, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat. This report was prepared by CEER's Distribution System Working Group.

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More information at www.ceer.eu.