

Recommendations on the use of flexibility in distribution networks

Eurelectric recommendations on Article 32 of the Electricity Directive

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We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:

- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

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KEY MESSAGES

With the Clean Energy Package in place, DSOs now have a framework at the European level to use flexibility and optimise network investment decisions, as well as to handle more efficiently the challenge of facilitating the integration of renewables on the electricity networks. DSOs aim at acting as neutral market facilitators, with the goal of decreasing costs for network users, while ensuring secure and stable electricity supply. In this context, a proper implementation of Article 32 (Incentives for the use of flexibility in distribution networks) of the Electricity Directive¹ will help reap all potential benefits flexibility can provide.

Eurelectric calls on policymakers and national regulators to adopt the following approach in the implementation of the Clean Energy Package, in particular when considering Art. 32:

- In the spirit of the Clean Energy Package and in order to empower customers and active market participation, market-based solutions for flexibility procurement are to be sought by default. DSOs should act accordingly within their role as neutral market facilitators. To ensure efficient operation and planning of their network, DSOs need a toolbox comprising different types of solutions for congestion management: market-based procurement solutions, as well as incentives through network tariffs or connection agreements². Next to market-based procurement options, tariff incentives are the basis for market parties to adapt to capacity constraints. Therefore, tariffs should be regarded as an integral element in market procurement of flexibility.
- Market-based procurement should promote an efficient use of resources and services. From this perspective, the flexibility procurement mechanisms for distribution grids should be designed so that any contracted resources can offer services to other parties, DSOs or TSOs, and to any available market, as they may be of value for the whole power system, when the DSOs do not need them. This requires proper coordination at least among system operators. Market-based procurement can be applied within different timeframes, for example through implementation of a competitive tender for long-term provisions or a local flexibility market to address short-term needs. Short-term procurement of flexibility should always be open to all resources, including those that have not been subject to long-term contracts.

¹ See Annex I for the full text of Article 32 of the Directive (EU) 2019/944 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast)

² See <u>TSO-DSO report – An integrated approach to active system management</u>, CEDEC, E.DSO, ENTSO-E, Eurelectric and GEODE; and <u>Flexibility in the energy transition – A toolbox for Electricity DSOs</u>, CEDEC, E.DSO, Eurelectric and GEODE.

- The feasibility of market solutions for procuring flexibility is linked to a transparent forecast of
 the DSO needs. The market solution should be suitable for local specificities in order to avoid
 potential market failures. Local specificities are defined by the availability, in numbers and
 volume, of technologies and services to address the local needs in terms of congestion
 management, which need to be clearly specified.
- In this context, a step-by-step approach carried out in coordination by National Regulatory Authorities (NRAs) and DSOs can help identify use cases where market-based flexibility procurement is not feasible. The outcome of such analysis would help to outline the specificities of the locally applicable market-based solution. In cases where a market-based solution is considered inappropriate, the selected approach should be reconsidered regularly, such as every five years. This continuous reassessment would take into consideration that time is needed for flexibility resources to develop.
- The Member States may start testing market-based flexibility procurement through pilot projects. The pilot projects should test real use cases and consider different forms of procurement taking into account the abovementioned principles. If not already included in national regulation, regulators should allow regulatory sandboxes outside of the current regulation framework. The incurred costs for the DSOs stemming from these pilot activities shall be publicly disclosed, acknowledged and fully recoverable.
- In addition to traditional grid reinforcements, NRAs should acknowledge that there are alternative solutions to efficient provision of network services, for which more tailored remuneration schemes are required. At the current stage of flexibility market development, flexibility procurement might not provide the same systemic benefits in the long term as grid reinforcements do. Any particular risks of opting for flexibility services should be therefore taken into account in the contracting and remuneration scheme to make these alternative solutions viable. It is important to understand the risk from the DSO perspective and implement incentives covering that risk properly. Ideally, all stakeholders should strive towards market-based flexibility procurement mechanisms that provide at least comparable systemic and societal benefits as grid reinforcement.
- However, some remuneration models for system operators might not be adequate as
 incentives to procure flexibility. Different remuneration models can therefore be considered
 taking into account local regulatory frameworks, such as TOTEX or output-based incentives for
 the NRAs to set the DSOs' goals based on parameters that are relevant to a particular
 distribution task.
- Flexibility remuneration for the procurement of services should be determined by the value it provides in each particular network configuration and ideally be defined by a common high level methodology agreed nationally. However, a more general approach can also be justified as being a simpler solution. As an example, transparent and open auctions appear to be a possible mechanism to set the appropriate market price in a fair competition framework, provided there is enough liquidity and potential market failures are avoided.
- In particular, it is key to ensure transparency throughout the whole auction process as well as
 in the selection of technologies and in the selection of activations between service providers
 and/or technologies. However, further investigation is required to tackle the challenges that
 come along with the concept of this auction model.

- The required network development plans for distribution grids at national level shall acknowledge the principles of practicality and visibility. In order to achieve this, these plans should differentiate between different voltage levels DSOs are covering across the EU. Ideally, these asset based plans cover high voltage level by default and, if achievable in practice, also lower voltage levels.
- The consultation requirement for network development plans will allow DSOs to acknowledge
 and communicate when new needs are arising and therefore enable discussions with market
 parties and the TSOs on a level playing field. Furthermore, a more coordinated network
 development planning for both TSOs and DSOs is feasible and desirable in the mid- to longterm

Recommendations on the use of flexibility in distribution networks

The two fundamental goals of the Clean Energy Package are to ensure efficient integration of renewable energy sources through effective operation and appropriate development of networks, as well as to create a market with participation of flexibility providers, including generators, storage, active consumers, local energy communities or aggregators. In this context, flexibility procurement by system operators is a means to achieve both.

This Eurelectric paper aims at developing a set of recommendations for policymakers and national regulators on how to implement Article 32 of the Electricity Directive³. The present paper thus focuses on the procurement of flexibility services for DSOs. The recommendations developed hereafter do not advocate in any way for a nodal pricing scheme, neither do they aim at defining Eurelectric's position on all other issues related to flexibility. These recommendations build on exchanges of best practices among Eurelectric membership. They are grouped within 3 clusters: (i) recommendations on incentives for distribution system operators (DSOs), (ii) recommendations on market-based procurement of flexibility, and (iii) recommendations on network development plans.

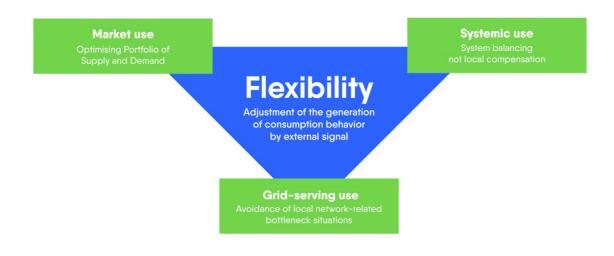
With the Clean Energy Package in place, flexible assets connected to distribution networks and valued within other markets become available for TSOs and DSOs to manage congestions on their networks⁴. For the first time, DSOs have a framework to use flexibility and optimise network investment decisions, as well as to handle more efficiently the challenge of facilitating the integration of renewables on the electricity networks. Flexibility will be a valid option as long as reliable and suitable flexibility resources can be developed and the service is more cost efficient for the society than traditional grid reinforcement. DSOs aim at acting as neutral market facilitators, with the goal of decreasing costs for the network users, while ensuring secure and stable electricity supply.

In this context, a proper implementation of Article 32 of the Electricity Directive will help reap all potential benefits flexibility can provide. Ultimately, it will smooth the integration of larger quantities of renewable energy sources, being aware that these services consist nowadays mostly of curtailment of renewables and therefore have an impact on the amount of renewable energy used.

As illustrated in the figure below, flexibility can be used for the market to optimise the portfolio, for system operators to balance the system as well as for TSOs and DSOs to avoid local congestions. From a grid-serving use perspective, flexibility resources can be used in the day-to-day operation of the network to maintain power quality standards and alleviate grid congestions.

³ See Annex I for the full text of Article 32 of the Directive (EU) 2019/944 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast)

⁴ See <u>TSO-DSO report – An integrated approach to active system management</u>, CEDEC, E.DSO, ENTSO-E, Eurelectric and GEODE



Source: Member's contribution

As a general remark, DSOs' needs should always be communicated properly and in a transparent manner in both the long and short terms. This is needed to allow efficient flexibility procurement and design a market-based procurement approach in dialogue with stakeholders.

A proper use of flexibility will require appropriate equipment and the development of new competencies by the DSOs as well as facilitating DSOs' access to the suitable toolbox. Changes in the planning of future networks will also require the development and use of forecasting tools. Therefore, the impact of flexibility services must be incorporated in the development of network plans.

The present paper focuses on the procurement of flexibility services for DSOs. The following DSOs' needs can be addressed by flexibility as a generic concept:

- (1) To optimise infrastructure investment needs;
- (2) To defer or avoid asset reinforcement;
- (3) To carry out more efficiently planned maintenance, asset replacement, and connection works;
- (4) To deal with unplanned interruptions by mitigating the effect of network outages when they occur, and therefore, minimising the impact on DSOs' customers;
- (5) To improve quality of supply;
- (6) To reduce network implementation timescales
- (7) To optimise infrastructure use; and
- (8) To increase the capacity of the current grid for new renewable generation.

The aforementioned DSOs' needs have different timeframes: they are either short term (e.g. flexibility to carry out more efficiently planned maintenance) or long term (e.g. flexibility to optimise infrastructure use). These different time horizons make the requirements and thus the conditions for market parties very different. In particular, there are clear differences between the use of flexibility to avoid investments in grid reinforcement and the use of flexibility as a bridge to reinforcement of the grid.

Setting the right incentives for DSOs to procure flexibility services

Due to the complexity of the use of flexibility or any other innovation projects, Eurelectric recommends to Member States to adopt the following approach in the implementation of the Clean Energy Package:

- a. Member States may start testing market-based flexibility procurement with pilot projects. These pilot projects should test real use cases and consider different forms of procurement, according to the principles described in the following section on market-procurement;
- b. If not already included in the regulation, regulators should allow regulatory sandboxes outside the current regulation framework to test those pilot projects. Given that it entails high technical and regulatory risks for the DSOs, the incurred costs stemming from these pilot activities for the DSOs shall be publicly disclosed, acknowledged and fully recoverable, as usually guarantee by such regulatory sandboxes;
- c. In the event of already mature, economically and technically feasible solutions, to go straight to the deployment and implementation phase.

In addition to traditional grid reinforcements, National Regulatory Authorities (NRAs) should acknowledge that there are alternative solutions to efficient provision of network services, for which more tailored remuneration schemes are needed. At the current stage of flexibility market development, market-based flexibility procurement might not provide the same systemic benefits in the long term as grid reinforcements do. These alternatives have a different set of benefits and risks whose balance may change over time. Any particular risks of opting for flexibility services should be therefore taken into account in the contracting and remuneration scheme to make these alternative solutions viable. Ideally, all stakeholders should strive towards market-based flexibility procurement mechanisms that provide at least comparable systemic and societal benefits as grid reinforcement.

However, some remuneration models for system operators might not be adequate as incentives to procure flexibility. Taking into account the local regulatory framework, different remuneration models can therefore be considered to incentivise DSOs to make optimal choices, such as:

a. Through a risk incentive, the NRAs should recognise that there could be different levels of risk for DSOs to opt for a service like flexibility rather than traditional grid reinforcement, which is a safer option. Indeed, traditional grid reinforcement has well-known outcomes such as lower losses, greater reliability, ability to quickly connect new loads, provision of rapid increase in capacity, higher short circuit levels and greater voltage regulation. The risk of opting for market-based flexibility services should be therefore taken into account in the contracting and remuneration scheme. In particular, NRAs should consider the transfer from a solution with known expense (CAPEX) to one comprising both capital and operational expenditure with a highly variable expense (flexibility as OPEX)⁵ and that penalties for non-delivery of contracted flexibility may not fully cover the incurred costs in case the provision of flexibility fails. Additionally, market parties also carry a risk in case of a market failure and in such situation the DSO may be forced to invest, thus eliminating any local market options that were anticipated. NRAs should therefore regulate a

⁵ This is highly complex and requires use of real options and solutions to evaluate, or else flexibility will be unduly favoured.

mechanism by which the unavailability of services providers do not impact on the quality of supply.

b. Through an output-based incentive, the NRAs can set the DSOs' goals based on parameters relevant for attaining a particular distribution task. These target parameters could be based on various performance factors, such as, for example, avoided investments or the minimisation of congested time for the network.

When the flexibility procurement scheme results in effective savings for end consumers, and when DSOs succeeded in organising a market-based procurement approach, Eurelectric supports that part of the savings may be returned to the DSOs through specific incentives.

Flexibility remuneration for the procurement of services should be determined by the value it provides in each particular network configuration and ideally be defined by a common high level methodology agreed nationally. However, a more general approach can also be justified as being a simpler solution. As an example, open and transparent auctions appear to be a possible mechanism to set the appropriate market price in a fair competition framework, provided there is enough liquidity and potential market failures are avoided (see also following section on market-based procurement). In particular, it is key to ensure transparency throughout the whole auction process as well as in the selection of technologies and in the selection of activations between service providers and/or technologies. However, further investigations are required to tackle the challenges that come along with the concept of such an auction model.

Each DSO needs to define clearly and in a transparent manner the use cases and the eligible DSO services for which flexibilities are relevant. Indeed, flexibilities need to interface with real-time operations (command-control, processes, etc.). Their value needs to be assessed and compared to other measures or tools, which are ideally based on a nationally agreed methodology. This would aid in ensuring common rules and justifications across the country, reducing costs and complexity for DSOs and flexibility providers. Once the reinforcement needs are clearly defined, DSOs will analyse the measures or tools in place to meet those needs (tariffs, market-based procurement, connection agreements,, network reinforcement, etc.) and, considering the different risk profiles of grid reinforcement versus flexibility procurement, decide on the most cost-efficient and optimal solution.

Market-based procurement of flexibility services

In the spirit of the Clean Energy Package and in order to empower customers and active market participation, market-based solutions for flexibility procurement are to be sought as a default. DSOs should accordingly act in their role as neutral market facilitators. Furthermore, visibility should be given to market parties and DSOs' needs should always be communicated properly and in a transparent manner in both the long and short terms. These are needed to allow efficient flexibility procurement, create a supportive environment and design a market-based procurement approach in dialogue with stakeholders.

To realise efficient operation and planning of their network, DSOs need a toolbox⁶ comprising different types of solutions for undertaking congestion management and procuring flexibility at distribution level, such as incentives through network tariffs, connection agreements and market-based procurement. Market-based procurement of flexibility is a means for incentivising flexibility providers to adapt their behaviour according to where their participation in the optimisation of the electricity system creates the highest overall value to the consumer, the system and the networks.

Flexibility provision can be supported by cost-reflective network tariff structures, providing active consumers and generators with the right price signals for their use of the network. Cost-reflective tariffs incentivise network users to adapt their use of the network according to load and capacity of the network. These tariffs can take many forms and can include aspects such as time, direction, capacity and location. Examples are time-of-use tariffs and – either tariffs that are capacity-based or volumetric based, according to customers' choice. Next to market-based procurement options, tariff incentives are the basis for market parties to adapt to capacity constraints. Therefore, tariffs should be regarded as an integral element in market procurement of flexibility to increase capacity utilisation, lower investment needs in grid reinforcement and thereby pursue integration of renewables and electrification at the lowest societal costs.

A solution for DSOs to manage congestion is to secure flexibility through connection agreements⁷. If the right conditions are applied, these arrangements can help reduce network investments, and create a win-win situation between network users and the DSOs. For example, instead of planning the grid to provide generators and consumers with a firm physical connection to the grid 100% of the time, contractual agreements could introduce conditions for a variable network access or flexible connection agreement for generators or consumers who opted for such an arrangement. Based on financial incentives (e.g. cheaper connection costs or pre-defined conditions for the activation of flexibility) these parties could agree to limited access when the network is constrained. Also, for generators, it may be allowed to connect more capacity than the existing grid can sustain for 100% of the time.

A flexibility market for system operators is a market where several players compete to provide flexibility services to the system operators (DSOs and/or TSOs) being the single buyer. In their offers to the system operators, flexibility providers take into account the value of their flexibility in other market segments (opportunity cost), such as the energy wholesale market or balancing services. Market-based procurement forms should promote an efficient use of resources and services. From this perspective, the flexibility procurement mechanisms on distribution grids should be designed so that any contracted resources have the ability to offer services to other parties, DSO or DSO, and to any available market, as they may be of value for the whole power system, when the DSOs do not need them. This means that the same MW of flexibility could be both available for congestion management at distribution level and to offer services for the market or for TSOs (day ahead, intraday, balancing) or for congestion management at transmission level, when it is technically possible. It is important to avoid that flexibilities contracted for congestion management at DSO level are prevented or discouraged from providing balancing services to the TSOs, as they also may have an important value for the whole power system. This requires coordination between system operators, in particular communication of their needs and real time communication before activation in order to encourage

⁶ See <u>Flexibility in the energy transition – A toolbox for Electricity DSOs</u>, CEDEC, E.DSO, Eurelectric and GEODE.

⁷ They could also be known as flexible connection network agreements.

the use of flexibility at its "best value". For instance, independent flexibility platforms can create the conditions for market places open to multiple buyers (TSOs and DSOs), which are able to coordinate among them. Market-based procurement can be applied in different timeframes, for example through implementation of a competitive tender for long term provisions or a local flexibility market to address short-term needs. Short term procurement of flexibility should always be open to all resources, including those that have not been subject to long term contracts.

In the present paper, and according to the scope of Article 32 of the Electricity Directive, Eurelectric focuses on how to implement flexibility markets at national level. The feasibility of market solutions for procuring flexibility is linked to a transparent forecast of the DSO needs. The market solution should be suited to local specificities to aim to avoid potential market failures. Local specificities are defined by the availability, in numbers and volume, of technologies and services to address the local needs in terms of congestion management, which need to be clearly specified. Market solutions also carry a risk of possible market failure due to high transaction costs or abuse of market power. Therefore, it is of utmost importance that this risk is properly assessed in order to ensure economic efficiency of market-based procurement and avoid market distortions.

Although we anticipate that high voltage levels would typically yield a more positive market cased than possible medium to low voltage levels, markets will more easily develop in areas with a large density of network users – for instance in large urban areas at the level of the distribution network. However, this might be more questionable for rural areas. Time is also needed for flexibility markets to develop.

In this context, Eurelectric believes that a step-by-step approach⁸ carried out in coordination by NRAs and DSOs can help identify the use cases where market-based flexibility procurement is not feasible.

- The first step should aim at defining DSOs' needs in order to identify in which cases there is a use case for market-based flexibility procurement by the DSO. As previously discussed, the needs defined by the DSO may be for the long or short term and should always be defined clearly and in a transparent manner. Grid reinforcement should always be compared with getting flexibility from the resources in the system and the optimal and most cost-efficient solution should be determined. Typically, non-frequent congestion could be more efficiently treated with the contacting of flexibility whereas prolonged or high levels of congestion could call for a system reinforcement.
- If a use case for market-based flexibility procurement is established, the second step should aim at testing the market by assessing the availability of technologies and services in order to identify the use cases where market-based procurement might not deliver. The outcome of such assessment would help outline the specificities of the locally applicable market-based solution. Furthermore, such an approach would allow to take into account DSOs' own needs and risk assessment, as well as ensuring that each solution is suitable to local needs and aligned with national system needs.
 - As discussed above, market-based procurement can be applied in different timeframes: competitive tender can be implemented for long term provisions while a local flexibility market might be a more suitable solution in order to

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⁸ Such a step-by-step approach requires a good visibility on the grid, at all voltage levels.

- address short-term needs, e.g. to address congestions ahead of an already planned grid reinforcement.
- In cases where a short-term flexibility market is considered inappropriate, a tender process should be issued in any case in order to establish bilateral arrangements. The selected approach should be reconsidered regularly, such as every 5 years. This continuous reassessment circle takes into consideration that time is needed for flexibility resources to develop.
- As a third and final step, DSOs will dispatch flexibility services to meet electricity system or network needs.

Network development plans

The required Network Development Plans for distribution grids at national level shall acknowledge the principles of practicability and visibility. In order to achieve this, these plans should differentiate between the various voltage levels DSOs are covering across the EU. Ideally, these asset-based plans cover high voltage level as a default and, if achievable in practise, also lower voltage levels.

The Network Development Plans should be the result of an efficient procedure that gives an overview of grid development in a sufficiently detailed, but also in a summarising and ultimately practical fashion, especially at lower voltage levels. Both the details of the network development and the consultation procedure should be kept as lean as possible. The plans should include an aggregated monetary dimension or macroeconomic outlook of the development of the distribution network at national level in terms of foreseen investment volumes.

Considering the specificities of the networks in each Member State, Eurelectric welcomes the consultation requirement. It will allow DSOs to acknowledge and communicate on where new needs are arising and therefore enable discussions with the transmission system operators (TSOs) and market parties at a level playing field. Some Member States already follow such a process in which DSOs are better able to predefine principles of what such a network plan should contain.

The consultation process shall include the relevant network users and TSOs. Relevant users⁹ shall include all connected flexibility sources, especially the ones that have potential for market uptake. The power capacity limit of the grid will differ in each Member State and should be defined by the respective DSO. The transparency of the medium and long term flexibility services included in the plan should display the potential and opportunities of investment deferral of grid capacity, considering a prior analysis of available and future flexibility resources connected to the local grid.

There are different practices and timeframes in different Member States. Generally, a more coordinated network development planning for both TSOs and DSOs is feasible and desirable in the mid- to long-term, as stipulated in Article 57 of the Electricity Regulation¹⁰. However, a longer timeframe might only give a macro-economic view on projects, which corresponds to such a longer lead time.

⁹ Definition of relevant network users and the process of consultation can differ in different Member States.

¹⁰ See Annex II for the full text of Article 57 of the Regulation (EU) 2019/943 on the internal market for electricity (recast)

Annex I

Art. 32 of the Electricity Directive 'Incentives for the use of flexibility in distribution networks'

- 1. Member States shall provide the necessary regulatory framework to allow and provide incentives to distribution system operators to procure flexibility services, including congestion management in their areas, in order to improve efficiencies in the operation and development of the distribution system. In particular, the regulatory framework shall ensure that distribution system operators are able to procure such services from providers of distributed generation, demand response or energy storage and shall promote the uptake of energy efficiency measures, where such services cost-effectively alleviate the need to upgrade or replace electricity capacity and support the efficient and secure operation of the distribution system. Distribution system operators shall procure such services in accordance with transparent, non-discriminatory and market-based procedures unless the regulatory authorities have established that the procurement of such services is not economically efficient or that such procurement would lead to severe market distortions or to higher congestion.
- 2. Distribution system operators, subject to approval by the regulatory authority, or the regulatory authority itself, shall, in a transparent and participatory process that includes all relevant system users and transmission system operators, establish the specifications for the flexibility services procured and, where appropriate, standardised market products for such services at least at national level. The specifications shall ensure the effective and non-discriminatory participation of all market participants, including market participants offering energy from renewable sources, market participants engaged in demand response, operators of energy storage facilities and market participants engaged in aggregation. Distribution system operators shall exchange all necessary information and shall coordinate with transmission system operators in order to ensure the optimal utilisation of resources, to ensure the secure and efficient operation of the system and to facilitate market development. Distribution system operators shall be adequately remunerated for the procurement of such services to allow them to recover at least their reasonable corresponding costs, including the necessary information and communication technology expenses and infrastructure costs.
- 3. The development of a distribution system shall be based on a transparent network development plan that the distribution system operator shall publish at least every two years and shall submit to the regulatory authority. The network development plan shall provide transparency on the medium and long-term flexibility services needed, and shall set out the planned investments for the next five-to-ten years, with particular emphasis on the main distribution infrastructure, which is required in order to connect new generation capacity and new loads, including recharging points for electric vehicles. The network development plan shall also include the use of demand response, energy efficiency, energy storage facilities or other resources that the distribution system operator is to use as an alternative to system expansion.
- 4. The distribution system operator shall consult all relevant system users and the relevant transmission system operators on the network development plan. The distribution system operator shall publish the results of the consultation process along with the network development plan, and

submit the results of the consultation and the network development plan to the regulatory authority. The regulatory authority may request amendments to the plan.

5. Member States may decide not to apply the obligation set out in paragraph 3 to integrated electricity undertakings which serve less than 100 000 connected customers or which serve small isolated systems.

Annex II

Art. 57 of the Electricity Regulation 'Cooperation between distribution system operators and transmission system operators'

- 1. Distribution system operators and transmission system operators shall cooperate with each other in planning and operating their networks. In particular, distribution system operators and transmission system operators shall exchange all necessary information and data regarding, the performance of generation assets and demand side response, the daily operation of their networks and the long-term planning of network investments, with the view to ensure the cost-efficient, secure and reliable development and operation of their networks.
- 2. Distribution system operators and transmission system operators shall cooperate with each other in order to achieve coordinated access to resources such as distributed generation, energy storage or demand response that may support particular needs of both the distribution system operators and the transmission system operators.

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