

Framework Guideline on Demand Response

(Draft for public consultation)

02 June 2022

This Document is the draft Framework Guideline on Demand Response, which the European Union Agency for the Cooperation of Energy Regulators (ACER) has prepared pursuant to Article 59.1(e) of Regulation (EU) 2019/943 ('Electricity Regulation') and based on the request from the European Commission.

EU reference documents

- Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, available at the following link: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32019R0943>
- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0944>
- Commission Implementing Decision (EU) 2020/1479 of 14 October 2020 establishing priority lists for the development of network codes and guidelines for electricity for the period from 2020 to 2023 and for gas in 2020, available at the following link: https://eur-lex.europa.eu/eli/dec_impl/2020/1479/oj
- Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation, available at the following link: <https://eur-lex.europa.eu/eli/reg/2017/1485/oj/eng>
- Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing, available at the following link: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32017R2195>
- Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection, available at the following link: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_2016.223.01.0010.01.ENG
- Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators, available at the following link: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0631>
- Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003, available at the following link: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009R0714>
- All TSOs' proposal for the Key Organisational Requirements, Roles and Responsibilities (KORRR) relating to Data Exchange in accordance with Article 40(6) of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a Guideline on Electricity Transmission System Operation, available at the following link: https://eepublicdownloads.entsoe.eu/clean-documents/nc-tasks/SOGL/SOGL_A40.6_181001_KORRR_181015.pdf (proposal has been approved by

all regulatory authorities (<https://www.ceer.eu/documents/104400/-/-/e35e2077-56f1-a02d-92fb-a836e6ba428b>) on 19 December 2018).

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1 General Provisions

1.1 Aim and applicability of the Framework Guideline on Demand Response

- (1) This Framework Guideline on Demand Response is developed in order to set out clear and objective principles for the development of harmonised rules regarding demand response, including rules on aggregation, energy storage and demand curtailment (hereafter referred to as the “new rules”), pursuant to Article 59(1)(e) of the Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (hereafter referred to as the “Electricity Regulation”), and to contribute to market integration, non-discrimination, effective competition and the efficient functioning of the market pursuant to Article 59(4) of the Electricity Regulation.
- (2) Although demand response and storage are explicitly included in Article 59(1)(e) of the Electricity Regulation, the new rules shall be technology neutral and non-discriminatory and shall thus not favour demand response and storage to the detriment of other resource providers. Therefore, the new rules shall be applicable to all resource providers mentioned or covered in the articles referred to in Article 59(1)(e) of the Electricity Regulation. The new rules shall thus be applicable to load, storage (in particular when combined with load), and distributed generation, aggregated or not (hereafter referred to as “demand response and other relevant resources” or in general “resources”). No resource providers shall be excluded and the main aim of the new rules shall be to ensure access to all electricity markets for all resource providers.
- (3) In a similar way, although some of the articles referred to in Article 59(1)(e) of the Electricity Regulation only refer to DSOs, the new rules shall apply to all SOs (including TSOs), unless a different scope is explicitly mentioned. As concerns SO coordination, the new rules shall apply to DSO-DSO coordination and DSO-TSO coordination and exclude TSO-TSO coordination, as this is already covered sufficiently in the current legislation.
- (4) The principles set out in the new rules shall aim at allowing access of all resources to all electricity markets in accordance with the principles regarding its operation pursuant to Article 3 of the Electricity Regulation and allow the use of all resources by the system operators for operation and planning of the grid. Although electricity markets is a broad term covering all market-based processes related to electricity, including both retail and wholesale markets as well as the market-based procurement of balancing, voltage control and congestion management (hereafter referred to as “SO services”), the assessment of which aspects of them fall in the scope of a European framework is crucial for the new rules. One of the most important criteria for such an assessment is the right balance between the need for European harmonisation, which is required to achieve the aims of the Electricity Regulation, and the Member States’ rights to establish national network codes which do not affect cross-zonal trade, as reflected in Article 58(2) of the Electricity Regulation. Considering that the retail part of the electricity markets relevant for this Framework Guideline is mainly of national relevance, the new rules exclude it, and focus on the rest of the electricity markets. To this end, the Framework Guideline aims at removing all undue barriers for the participation of these resources in all wholesale electricity markets (including those for procuring SO services), and establishing European principles for the assessment of the need for, the procurement of and the use of such services by the system operators. This includes establishing clear and streamlined processes, roles and responsibilities on a European level, where relevant.

- (5) The new rules to be developed based on this Framework Guideline shall respect the principles of non-discrimination and technology neutrality, whilst having due regard to the particularities of demand response, including aggregation, energy storage and demand curtailment and the potential needs resulting thereof for adapting current and future rules. The new rules shall be developed in line with this Framework Guideline and be in line with or complement the relevant European legislation. At no point the new rules shall jeopardize grid security or the well-functioning and integration of electricity markets, and contribute to the aims of the Electricity Regulation as set out in its' Article 1 and in particular Article 1(b).

1.2 Process

- (6) In accordance with Article 59(3) of the Electricity Regulation, Commission Implementing Decision (EU) 2020/1479¹ established a priority list for the development of network codes and guidelines for electricity for the period from 2020 to 2023. Article 1 of this Decision provides for the development of harmonised rules regarding demand side flexibility, including rules on aggregation, energy storage and demand curtailment rules. Subsequently to this decision, the European Commission invited ACER by letter of 21 October 2021, to launch a scoping exercise for the development of a network code based on Article 59(1)(e) of the Electricity Regulation². ACER's results³ of the scoping exercise were sent to the European Commission on 1 February 2022.
- (7) In accordance with Article 59(4) of the Electricity Regulation, the European Commission invited, by a letter sent on 01.06.2022, ACER to submit non-binding framework guidelines setting out clear and objective principles for the development of a network code on demand response, including rules on aggregation, energy storage and demand curtailment within six months from the date of receipt of this letter. This draft Framework Guideline is a response to this letter.
- (8) This Framework Guideline was subject to public consultation for two months pursuant to Article 59(5) of the Electricity Regulation and subsequently submitted to the European Commission in accordance with Article 59(6) of the Electricity Regulation.
- (9) The Framework Guideline aims to ensure coherence with the existing regulatory framework by identifying provisions in the existing network codes and guidelines relevant for the requirements of the new rules; these provisions may have to be amended or extended in the context of the development of the new rules, when drafting the network code on demand response. Throughout the document, the relevant current European legislation that the new rules might complement is provided at the beginning of every Chapter/Section. These provisions should be considered indicative and by no means exhaustive.
- (10) Pursuant to Article 59(11) of the Electricity Regulation, the proposed new rules shall be developed in accordance with this Framework Guideline. In particular, as set out in this Article, ACER shall after receiving the new rules developed, if necessary, revise them to ensure that they comply with this Framework Guideline and contribute to market integration, non-discrimination, effective competition and the efficient functioning of the market.

¹<https://op.europa.eu/en/publication-detail/-/publication/360fd436-0ead-11eb-bc07-01aa75ed71a1/language-en>

²https://extranet.acer.europa.eu/en/The_agency/Organisation/Expert_Groups/Electricity/2021%2010%2019%20scoping%20letter_final.docx%20vv.pdf

³https://extranet.acer.europa.eu/en/The_agency/Organisation/Expert_Groups/Electricity/Letter%20to%20EC%20on%20DSF%20scoping%20results_220201%20-%20Copy.pdf

1.3 Terms used in this document

(11) The following definitions shall apply to this Framework Guideline:

- Definitions in Article 2 of the Electricity Regulation;
- Definitions in Article 2 of Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (hereafter referred to as the “Electricity Directive”); and
- Definitions from all the respective Commission Regulations adopted on the basis of Articles 6(11) and 18(5) of Regulation (EC) No 714/2009.

(12) The following definitions are intended to further clarify the provisions of this Framework Guideline and are without prejudice to the use of the terms in the current legal framework or to the definitions to be included in the new rules:

- ‘all SO proposal’ means a proposal from all the SOs in a MS.
- ‘baseline’ means a counterfactual reference about what the SP’s BRP allocated volume would be in the absence of the activation for the provision of the respective service.
- ‘dispatch limitation’ means a congestion management product whereby a service provider offers to limit the use of the firm connection capacity of a service providing unit or group prior to the determination of its dispatch, i.e. prior to closure of the day-ahead market.
- ‘ex-post verification’ means the process that verifies the compliance of a qualified service provider with the technical requirements set by the SO for the provision of a SO product based on the service delivery and some verification criteria set by the SO.
- ‘local market for SO services’ or ‘local market’ means a market where service providers offer products for congestion management or voltage control services to SOs.
- ‘metering point’ means a physical location where the withdrawal and/or injection of active power is measured.
- ‘prequalification’ means the ex-ante process to verify the compliance of a potential service provider with the technical requirements set by the SO for the provision of a SO product (product prequalification) as well as the process to verify the ability of the grid to technically accept the delivery of such a product (grid prequalification). In the product prequalification the SO may require the potential service provider to overcome some prequalification tests.
- ‘redispatch products’ means a congestion management product which can be activated after the dispatch is communicated to the system operator, i.e. after closure of the day-ahead market.
- ‘service providing unit’ means a single or an aggregation of power generating modules and/or demand units connected to a common connection point fulfilling the requirements to provide SO services.
- ‘service providing group’ means an aggregation of power generating modules, demand units and/or service providing units connected to more than one connection point fulfilling the requirements to provide SO services.

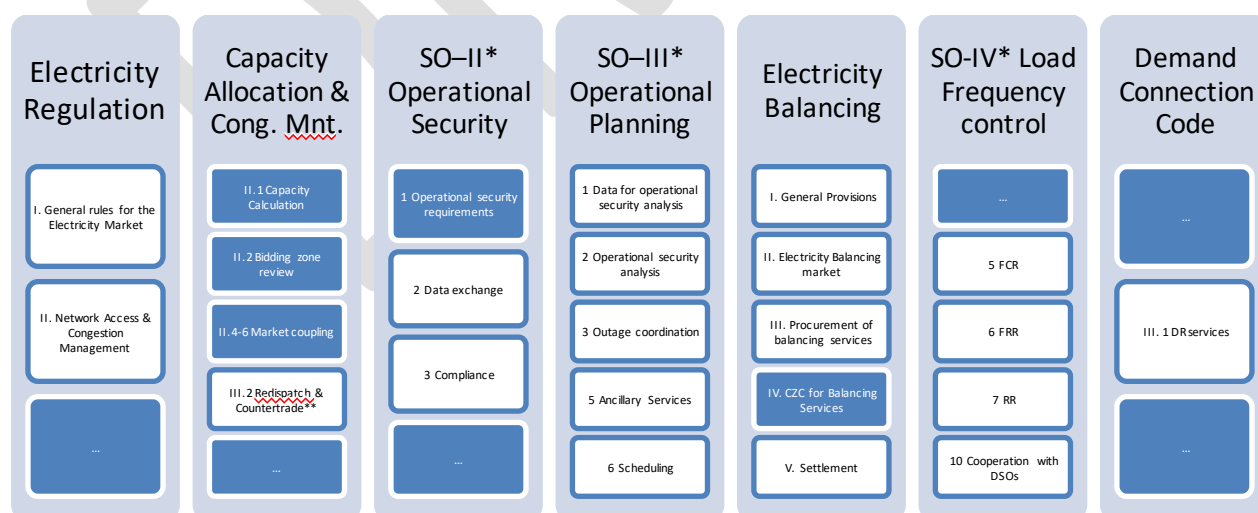
- ‘service provider’ means a legal entity with a legal or contractual obligation to supply SO services from at least one service providing unit or service providing group.
- ‘SO services’ means market-based procurement of balancing, voltage control and congestion management.
- ‘standardised device’ means an equipment that meets all technical requirements set by the SO for the provision of SO product according to the Original Equipment Manufacturer or other official certification authority.

(13) The Definitions in Article 2 of the Electricity Regulation shall apply to the new rules. When a term defined in the Electricity Directive is used in the new rules, the new rules shall include these definitions by including a direct reference to the respective definition in Article 2 of the Electricity Directive for defining the term.

1.4 Links and dependencies with existing legal provisions

(14) At this stage, it is not yet determined whether the development of a European framework based on Article 59(1)(e) of the Electricity Regulation should also include amendments of existing network codes and guidelines. In any case, special attention should be paid to interactions with (and potential amendments of) other codes and regulations, in order to ensure overall coherence and that the European framework as a whole supports the access of demand response and other relevant resources to all electricity markets.

(15) In Figure 1, an overview of the relevant European legislation is provided, indicating in the white boxes the Chapters of each legislation that fall within the scope of the new rules to be developed (the blue boxes indicate other Chapters of the respective Regulations, which were assessed with respect to their relevance to the new rules, but at this point they are excluded from the scope of the new rules). The Regulations included here are: the Electricity Regulation, the CACM Regulation, the SO Regulation, the EB Regulation and the Demand Connection Code. At the beginning of every Chapter/Section in this FG, the Chapter(s) of the respective legislation that is considered to include relevant provisions for the new rules is included. These provisions should be considered indicative and by no means exhaustive.



* = due to the size of the SO regulation it was split into the three main parts II, III and IV in this overview

** = The ACER recommendation on CACM 2.0 proposes to move this Chapter and the provisions on CGM and GLDP to the SO part III on Operational planning

Figure 1: Provisions of the existing legal framework in the scope of the new rules – the white boxes denote the Chapters that are relevant for the provisions that shall be included in the new rules.

- (16) Two important aspects that need to be clarified with respect to the scope of the new rules are related to the topics of prequalification and congestion management. On prequalification, the scope of the new rules covered by this FG included technical requirements set by SOs for the provision of SO services while the technical capabilities of units for grid connection are out of the scope for the new rules. As a consequence, the provisions in the existing rules are in or out of the scope as follows:
- The SO Regulation and EB Regulation regulate product and grid prequalification for TSO balancing services and are in the scope of this FG.
 - The RfG Regulation describes an operational notification procedure and compliance testing or simulation for the connection of new generators to the distribution or transmission networks. The RfG Regulation only describes capabilities that are checked during the connection phase of the unit to the grid and are not directly related to the services that the unit can provide to the SOs. Since the RfG Regulation does not provide any requirements on services to relevant SOs but technical capabilities of new generators, the operational notification procedure and compliance testing/simulation are not considered as a “prequalification process” for services offered to the SOs by generators, thus RfG Regulation is considered out of the scope of this FG.
 - Title III of the DCC Regulation defines the connection of demand units used by a demand facility or a closed distribution system to provide demand response services to SOs. The DCC Regulation describes technical capabilities for the connection of demand units to provide demand response services to SOs, with the exception of some requirements described in Articles 28 to 30 for the demand response services set in Article 27. For the sake of clarify, since the connection to the grid is a different aspect from the provision of services to SOs, this FG recommends carrying over the technical requirements to provide demand response services from the DCC Regulation to the SO Regulation. As a result, the scope of the RfG and DCC Regulations would be limited to capabilities for grid connection while all requirements set in prequalification processes for the provision of SO services would be in the SO Regulation.
- (17) On congestion management the scope of the new rules covered by this FG need to consider that congestion management is a wide topic described in several parts of the existing European legal framework⁴. It is also an important part of this FG. However, the scope of this FG as concerns congestion management is restricted to the procurement and activation by an SO of products for solving local physical congestions within a bidding zone or network area on short term or on long term and either ex ante (preventing the congestion based on a forecast) or ex post (solving a congestion that will occur if not remedied). Thus, other mechanisms for solving structural congestion, such as the allocation of cross zonal capacities and the review of bidding zones, are not to be replaced, but rather complemented, by the processes described in this FG. In this FG, when referring to congestion management we only consider the use of SO services to manage physical congestion, unless something else is explicitly mentioned.

1.5 Abbreviations

BSP – Balancing Service Provider

BRP – Balance Responsible Party

⁴ Most notably in chapter II of the Electricity Regulation on network access and congestion management

CBA – Cost-Benefit Analysis

CDSO – Closed Distribution System Operator

DCC Regulation – COMMISSION REGULATION (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection

DSO – Distribution System Operator

EB Regulation – COMMISSION REGULATION (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing

FCR – Frequency Containment Reserve

FG – Framework Guideline

FRR – Frequency Restoration Reserve

KORRR – All TSOs' proposal for the Key Organisational Requirements, Roles and Responsibilities relating to Data Exchange in accordance with Article 40(6) of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a Guideline on Electricity Transmission System Operation (1/10/20218)

NDP – Network Development Plan

NRA – National Regulatory Authority

RfG Regulation – COMMISSION REGULATION (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators

RR – Replacement Reserve

SGU – Significant Grid User

SO – System Operator

SO Regulation – COMMISSION REGULATION (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation

SP – Service Provider

TCM – Terms & Conditions or Methodology

ToE – Table of Equivalences

TSO – Transmission System Operator

TYNDP – Ten-year Network Development Plan

2 General requirements for market access

- (18) As explained in Section 1.1 the main aim of the new rules shall be to ensure access for demand response and other relevant resources to all electricity wholesale markets. Although in principle and pursuant to the requirements of the Electricity Directive, the participation of demand response and other relevant resources to all electricity markets should be enabled at national level, there are aspects that need to be further specified and clarified at European level, to ensure a level playing field for the participation of these resources in the electricity wholesale markets.
- (19) It is important to note that this FG considers the deployment of smart meters as a prerequisite for enabling the full potential of the participation of these resources in the relevant markets. Where the deployment of the smart meters is delayed, the new rules shall specify the conditions for the usage of sub-meters, in order for the new rules to become effective. Moreover, in order to ensure non-discriminatory access to the markets, the new rules shall specify the different models under which these resources may participate, and clarify the roles and responsibilities under each context. These general requirements, which are considered relevant for ensuring equal access of these resources to all electricity wholesale markets, are included in this Chapter.

2.1 Roles and responsibilities

Chapter II of the Electricity Regulation sets the general rules for the electricity market. More specifically, its Article 5 includes the provisions for balance responsibility and Article 6 the provisions for the balancing market.

Title II of the EB Regulation sets the requirements for the electricity balancing market, and Title III sets the requirements for the procurement of balancing services. Title V of the EB Regulation sets the requirements for the settlement of the balancing services.

- (20) Article 18 of the EB Regulation requires TSOs in coordination with the affected DSOs to develop terms and conditions related to balancing including terms and conditions for balancing service providers ('BSPs') and for balance responsible parties ('BRPs') on a Member State level. The new rules shall require these terms and conditions to specify the processes for all potential market participants to offer balancing services, including those engaged in aggregation as well as demand response and storage. These processes shall include at least the requirements for all market participants, including those engaged in aggregation as well as demand response and storage, for becoming BSPs, for the settlement of balancing services, for the balance responsibility and for the settlement of the imbalances. Moreover, in order to enable access to all balancing markets, the new rules shall reduce the minimum bid granularity to not higher than 0.1 MW and 0.1 MWh for all balancing capacity and energy products, respectively and set a clear timeline for the implementation of this change. In particular, the new rules shall specify the process to verify the provision of balancing energy, including the data that should be exchanged between the TSO and the BSP, and the settlement of the provided balancing energy, by amending the provisions of Title V, Chapter 2, of the EB Regulation, with respect to the balancing energy volume, taking into account the different resource providers, as well as the aggregation models described in the next paragraph.
- (21) Moreover, the new rules shall define, in accordance with the definitions provided in Section 1.3, the terms service providing unit, service providing group, and service provider for any market participant providing any SO services (for any or both the TSO and the DSO), in

particular for congestion management and voltage control – in addition to balancing services, which are already included in the legislative framework as mentioned above. In this context, the new rules shall require TSOs and DSOs to develop terms and conditions related to the SO services on a Member State level. The new rules shall require these terms and conditions to specify the processes – at least for becoming Service Providers and for the settlement of SO services – for all potential market participants to offer these SO services, including those engaged in aggregation as well as demand response and storage. Furthermore, the new rules shall include provisions for assigning or delegating DSO's tasks related to congestion management and/or voltage control, if decided or allowed by the MS or relevant regulatory authority.

- (22) The new rules shall also specify the approval process at MS level for establishing roles, responsibilities and in general for the adoption of the processes described in this FG. This approval process shall set as a prerequisite the development of a proposal, in accordance with the respective national process, by the respective SOs – either TSOs or DSOs or both depending on the requirement included in the new rules – with sufficient consultation with the concerned stakeholders, and a reasonable time limit for the approval by the respective national regulatory authority. The new rules shall require that in each MS, there is a formal process for establishing all SOs proposals, ensuring that all SOs are heard and jointly submit a proposal within a given time limit. In the remainder of this FG, whenever “all SOs” is used, it means all the SOs of a MS. Moreover, in case a load frequency control area expands across more than one MSs, the new rules shall specify that where the relevant regulatory authorities jointly request all SOs of that LFC area to develop common proposals, these SOs submit these common proposals to the relevant regulatory authorities for a coordinated approval.

2.2 Aggregation models

Article 17 of the Electricity Directive sets the requirements for the participation of demand response through aggregation. In particular, Article 17(3) of the Electricity Directive lists the elements that such a regulatory framework should address.

- (23) Although different models may be applied in each MS, a grouping of the different aggregation models can be achieved based on specific parameters: the number of BRPs per connection point and per metering point, as well as the type of the applied compensation mechanism. The new rules, respecting the requirements set in Article 17(3) of the Electricity Directive, shall describe this grouping as an exhaustive list of the possible types of aggregation models that may be applied by the Member States, distinguished based on the number of BRPs per connection point and per metering point, as well as on the basis of the type of the applied compensation mechanism, if a compensation mechanism is applied. In particular, the new rules shall specify the roles, responsibilities and interactions of the market participants under each of the possible types of aggregation models, including the data exchanged with the system operator(s) needed for accessing all electricity wholesale markets, the responsibilities for verifying the provision of the SO service, for informing the BRP(s) after activation of an SO service and for the settlement of the provided SO service. Regarding the settlement, the new rules shall indicate for each type of aggregation model whether the compensation mechanism pursuant to Article 17(4) of the Electricity Directive applies; this compensation is considered to be independent from any correction that is deemed necessary in the volumes attributed to the respective BRP(s) in the context of the imbalance settlement, as described in Section 2.4. The new rules shall ensure that the energy activated

for the provision of the service is not double counted and it is attributed to the respective BRP(s), in line with the requirements of Article 5 of the Electricity Regulation.

- (24) The new rules shall further specify the requirements of Article 17(4) of the Electricity Directive, for the specific types of aggregation models, which include a financial compensation. The new rules shall specify the parties involved in the financial compensation and the direction of the compensation in each aggregation model type. In particular, the new rules shall specify whether the payer of the transaction is the independent aggregator or the final customer, although in both cases the receiver of the compensation is the supplier of the final customer. The new rules shall ensure that the financial compensation is not creating a barrier for market participants engaged in aggregation. In doing so they shall include an exhaustive list of the possible “*resulting costs incurred by the suppliers of participating customers or the suppliers’ balance responsible parties during the activation of demand response*”, which may be different for each aggregation model type, and a description of the “*benefits brought about by the independent aggregators to other market participants*” that may be taken into account.
- (25) The new rules shall also describe a European-wide process for further specifying and harmonising the main elements of the possible types of aggregation models, once more experience is gained in the functioning of the different models, as well as in the operation of the integrated balancing markets. In case distortions are identified, with respect to the level playing field of the SPs, especially in the European or regional integrated markets, due to the application of different types of aggregation models the process shall also aim at reducing the applicable types of aggregation models on a per product/service level. The process shall include an analysis performed by ENTSO-E and the EUDSO entity on the potential options for further specifying and harmonising the main elements of the types of aggregation models (including reducing them), assessing the benefits in achieving the aims of the Electricity Regulation pursuant to its Article 1, and a public consultation on the proposal for amending the list and main elements of the possible types of aggregation models. The analysis and the proposal will be submitted to ACER for approval, by two years after the entry into force of the new rules or by July 2026, whichever comes later.

2.3 Provision of the service: baseline and measurement

Title V of the EB Regulation sets the requirements for the settlement of the balancing services including the provisions for the calculation of balancing energy (Chapter 2).

- (26) It is acknowledged that, in the context of demand response, when the customer is not the service provider (i.e. an aggregator is the service provider), there are two general fields of application of the concept of baseline: one linked to the contractual relationship between the customer and the aggregator, and the other linked to the relationship between the aggregator and the SO. In this FG, the baseline is considered from the perspective of the SO in relation to the service provider, hence only the second case is relevant and the scope is limited to that. Under this assumption, the baseline represents a counterfactual reference about what the SP’s BRP allocated volume would be in the absence of the activation for the provision of the respective service, in order to quantify and measure the actual delivery of the service.
- (27) The new rules shall clarify that the baselining approach for validating the activation is not mandatory and SOs can implement alternatives, such as taking the final position of the SP’s BRP as the baseline, to be used as reference for the delivery of the service⁵. For the models

⁵ This is known as the “buy your baseline” principle.

where the baseline is assumed as reference for checking the delivery, the new rules shall define general principles for its establishment, at national level, to be followed by SOs, but without necessarily setting a harmonised European methodology. A process for achieving further standardisation in the future shall be included, subject to an assessment to evaluate the benefits in achieving the aims of the Electricity Regulation, although the target is not to have one baseline per product and per timeframe. The new rules shall establish the high level principles for the baseline methodology, ensuring that it is technology neutral, easy, transparent and accurate. The principles shall prevent gaming opportunities based on manipulation of the baseline. Preference shall be given to calculation methods that are objective, in order to make the baseline calculated replicable and non-manipulable, but rules shall also allow for other alternatives, such as forecast by the service providers, if there is a procedure for ex-post check of the accuracy. The baseline methodology could be different depending on the products exchanged and the timeframe, in order to adapt the best calculation to the specific case, and the time granularity should be coherent with the one of the relevant products.

- (28) The new rules shall define the minimum content that all SOs must include in terms and conditions for balancing pursuant to Article 18 of the EB regulation, regarding the baseline methodology and the processes for its definition, calculation and validation. The new rules shall provide a clear framework for the validation of the baseline, to ensure that it is as consistent as possible with the actual profile of the resources. This could include ex post analysis by the SOs, ex-ante adjustment coefficients based on real time measurements (e.g. difference between baseline and measurements in the previous time periods).
- (29) If the control of the provision of an SO service is based on measurement, the granularity of the meter needs to be at least equal to 15 min, which is the harmonised imbalance settlement period. The new rules shall describe the conditions for the use of sub-metering for the measurement of the provision of the service. The standardisation of the process for the use of sub-metering is not the aim for now, because experience still need to be gained regarding this topic, but the new rules shall define common principles and provisions to study the need for standardising the process.
- (30) Moreover, the new rules shall ensure consistency among the volumes involved, position of BRPs, imbalance adjustment (taking also into account the requirements of the following Section), service provided, and ensure that there is no uncertainty on measurements and allocation of corrections, especially when the aggregator and the BRP are different entities.

2.4 Imbalance settlement

Articles 5 and 6 of the Electricity Regulation sets the requirements for balance responsibility and balancing markets.

Title V of the EB Regulation sets the requirements for the settlement of the balancing services including the imbalance settlement. In particular, it includes general principles (Chapter 1), provisions for the calculation of balancing energy and the imbalance adjustment (Chapter 2), and the imbalance settlement (Chapter 4).

- (31) The new rules shall facilitate all market participants (including SPs) to develop demand response behind the metering point of a connection point and multiple market participants (including SPs) to be simultaneously active behind the metering point of a connection point, by specifying all the aspects of the imbalance settlement including the calculation of the position, the allocated volume, the imbalance adjustment and the imbalance, for all the activations by the SOs as well as for all the market participant, including all the different

aggregation models. The new rules shall define “metering point” as a physical location where the withdrawal and/or injection of active power is measured. The metering point of a connection allocates withdrawal and/or injection to the BRP responsible for the imbalances on that connection.

- (32) The new rules shall distinguish between the imbalance adjustment of the BRP of the market participants (including SPs) behind the metering point of the connection point, and the adjustments to the allocated volume of the BRP responsible for the imbalances on the connection point, differentiating the respective calculations, depending on the applicable aggregation model, but in any case ensuring consistency among the volumes involved, in order to avoid free riding.

2.5 Frequency containment reserve

Article 6 of the Electricity Regulation sets the requirements for balancing markets, including the procurement of balancing capacity.
Title III of the EB Regulation sets the requirements for the procurement of the balancing service.
Title V of the EB Regulation sets the requirements for the settlement of the balancing services and in particular, it includes the settlement of balancing capacity (Chapter 5).

OPTION A – All SA TSOs CBA for the asymmetric procurement⁶ of FCR

- (33) The new rules shall include the process and a clear timeline for a CBA to be carried out by all TSOs of each synchronous area (SA) to establish the necessary facts regarding the question whether or not an asymmetric FCR product is beneficial for overall welfare, by amending the provisions of Article 32 of the EB Regulation. The CBA shall incorporate general welfare considerations, technical aspects, actor diversity, liquidity and competition and costs, including scenarios for the increase of the share of demand response in the market. It shall also elaborate on the needed steps to switch from a symmetric to an asymmetric FCR product.

OPTION B – Asymmetric procurement of FCR

- (34) The new rules shall include the process and a clear timeline for each TSO to establish the necessary steps for the asymmetric procurement of the FCR product, by amending the provisions of Article 32 of the EB Regulation.

2.6 SO-owned storage facilities

- (35) Articles 36 and 54 of the Electricity Directive establish criteria for SO-owned storage. The new rules shall provide a clear framework that ensures that demand response and other relevant resources are preferred over TSO and DSO-owned storage.
- (36) As described in the Directive (Articles 36.2 and 54.2), SO-owned storage is authorised under conditions that *“other parties, following an open, transparent and non-discriminatory tendering procedure that is subject to review and approval by the regulatory authority have not been awarded a right to own, develop, manage or operate such facilities, or could not deliver those services at a reasonable cost and in a timely manner”*. The new rules shall specify criteria to be fulfilled by the tendering procedure in order to be approved by the NRA, including:

⁶ Asymmetric procurement of balancing capacity means the separate upward and downward procurement of balancing capacity, pursuant to Article 6(9) of the Electricity Regulation.

- Participation conditions shall enable participation of demand response and other relevant resources that can deliver the services needed by the SOs to fulfil their obligations for the efficient, reliable and secure operation of the transmission and/or distribution system, in addition to storage participation;
 - Selection criteria shall be technology-neutral and select the best techno-economic option for each particular case, maximizing social welfare including when comparing to an SO-owned storage facility.
 - Transparency of the selection criteria and the results of the tender;
 - Clear communication on the technical and economic conditions of the tender
- Further criteria to be fulfilled by the tendering procedure shall be defined at national level.

(37) The new rules shall specify that SOs are allowed to own/operate a part of a storage facility (a percentage) if no third party can do so, with the same conditions as announced in the previous paragraph and in articles 36 and 54 of the Electricity Directive. In that case, these conditions shall apply only to the SO-owned part of the storage. A third party should own and operate the rest of the storage freely, after the ownership has been subject to an open, transparent and non-discriminatory tender. The specifications of the tender shall be submitted to public consultation and to NRA approval prior to the tendering process. The new rules shall establish that the ownership and contractual relations (for use of the facilities, distribution of costs etc.) between the SO and the third party are approved by the NRA and made public in a transparent manner.

(38) It is written in the Directive (Article 36.3 and 54.4) that « *The regulatory authorities shall perform, at regular intervals or at least every five years, a public consultation on the existing energy storage facilities in order to assess the potential availability and interest in investing in such facilities. Where the public consultation, as assessed by the regulatory authority, indicates that third parties are able to own, develop, operate or manage such facilities in a cost-effective manner, the regulatory authority shall ensure that the [distribution/transmission] system operators' activities in this regard are phased out within 18 months* ». The new rules shall establish that this condition is fulfilled if:

- the public consultation shows that third parties can, and are willing to, provide the services that the SO needs from the storage facility, be it by taking over the SO-owned storage or by other means, such as demand response or other relevant resources;
- a CBA shows that it is preferable to the phase out of the SO storage and purchase the necessary services from third parties rather than continuing the SO storage activity.

The new rules shall provide guidance for the scope of the abovementioned CBA, ensuring in particular that the scope in time and in topics is broad enough to take into account the potential loss of developing markets for SO services and the consequences thereof.

3 Prequalification

The SO Regulation regulates product and grid prequalification for TSO balancing services. Titles 5, 6 and 7 of Part IV set the prequalification process and the minimum technical requirements for FCR, FRR and RR, respectively. Title 9 of the same part sets the cooperation with DSOs during prequalification of reserve providing units or groups connected to the DSO grid.

3.1 General principles, requirements and processes

- (39) The new rules shall provide that the prequalification process for a SP consists of a **grid prequalification** and a **product prequalification**:
- i. Grid prequalification shall ensure that the service offered to the SO can be delivered in each of the involved grids, including the connecting grid, the grid where the service is to be delivered to and any intermediate grids. The new rules shall describe the assessment criteria for SOs to technically accept the delivery of a service. The new rules shall also clarify the concepts of **conditional or long term grid prequalification and dynamic or short term grid prequalification** and the differences between them. It shall provide principles and define the criteria allowing SO to set limits and re-examine such limits in a conditional and dynamic prequalification respectively. This criteria shall be public, transparent, verifiable and accurate. The new rules shall also define the roles of the different SOs involved in grid prequalification (i.e. connecting SO, intermediate SO(s), etc.).
 - ii. Product prequalification shall ensure that the SP fulfils all technical requirements to deliver a particular product. SOs shall check the technical capabilities of the SP against the technical requirements determined by the specific product and perform a test to make sure that the SP can deliver the requested service, only if technically needed to ensure the system security and grid operation.
- (40) The new rules shall set minimum technical requirements for the provision of **congestion management or voltage control products** and shall set a minimum harmonisation at EU level in the different steps and lead times in the prequalification processes (similarly as Articles 155, 159 and 162 of the SO Regulation for balancing services) taking into account at least the following principles:
- i) The specificities of each **prequalification process and additional technical requirements** shall be defined by all SOs within each Member State according to common national terms and conditions or a methodology for ex-post verification and prequalification processes (hereafter referred to as "TCM") (see Section 3.2).
 - ii) The **prequalification processes** shall be user-friendly, non-discriminatory, fair, objective, transparent, striving to minimise and standardise the different steps when possible.
 - iii) The **prequalification requirements** shall be limited to the technically necessary level to ensure the system security and grid operation and shall lower entry barriers for new and small service providers. The prequalification requirements can vary among different services and products; however they shall be aligned and standardised without upwards harmonisation of technical requirements.
 - iv) When a **prequalification test** is technically needed to ensure the system stability and grid operation, in principle it shall be executed by the contracting SO in cooperation with the connecting SO. If multiple SOs procure the same product, the new rules shall clarify which single SO will execute the test.

- v) The new rules shall set requirements for **delegating the task of conducting the prequalification process and test** (if applicable) to a third party (either other SO or the market operator of a local market) while keeping the responsibility for the contracting SO.
- (41) For the products where an ex-ante prequalification process is technically justified in the national TCMs (see Section 3.2), the new rules shall set a reduction of the lead times in the different steps of these prequalification processes for those SPs who are **already qualified for at least another product and meet some of the technical requirements set in the prequalification processes for these products** according to the Table of Equivalences (see Section 3.3).

3.2 Simplification of the prequalification processes

- (42) For **standard balancing products**, the new rules shall define a **unique and common prequalification process at European level** to be implemented by all TSOs with the same steps, lead times and technical requirements. To define this process, the new rules shall consider the following principles and requirements:
- i) The new rules shall amend the requirements to make **data available in real-time** and supply **real-time measures** set for FCR, FRR and RR in Titles 5, 6 and 7 of the SO Regulation in order to ensure the product prequalification for the provision of standard balancing products allows the participation of small BSPs or BSPs with small units in the connection points.
 - ii) The new rules shall define this prequalification process for different **scenarios** (i.e. prequalification of a BSP for the first time, prequalification after changes in the reserve providing unit or group, transference/switching of a prequalified reserve providing units or groups to another BSP, etc.).
 - iii) The new rules shall avoid that any change in a prequalified reserve providing unit or group always requires to overcome a new prequalification process or test. The new rules shall define a **threshold in the technical requirements or in the capacity or volume of the reserve providing unit or group** that will require to overcome a new prequalification process or test.
 - iv) When a BSP aims to make **multiple changes** in a prequalified reserve providing unit or group, it shall be allowed to submit only one application for all changes through the SO service provision tool (see Section 4.4). The BSP shall indicate whether these changes are expected to impact the technical requirements or the capacity or volume of the reserve providing unit or group beyond the threshold. If so, a new prequalification process or test may be required.
 - v) **Standardised devices** shall be exempt from overcoming any prequalification process or test if they meet all the technical requirements set in the Table of Equivalences for the corresponding product (see Section 3.3). They shall only be required to register in the SO service provision tool.
 - vi) The **prequalification tests** shall be required only when technically needed to ensure system security and grid operation (e.g. as a consequence of changes that may impact the technical requirements or the capacity or volume of the prequalified reserve providing group beyond the threshold set in the new rules). If technically and practically possible for both the SO and the BSP, the prequalification tests shall be required ii) only on the new or changed connection points (i.e. prequalified connection points of a reserve providing group may not be required to re-prequalify) and iii) on the connection points as a whole (i.e. avoiding separate tests per individual connection point).

- vii) In principle, a prequalified reserve providing unit or group shall not lose its “**prequalification status**” while conducting new prequalification processes (or tests, if needed) because of changes in its unit(s) or group(s).
- (43) For **specific balancing, congestion management and voltage control products**, the new rules shall require to perform an **ex-post verification process** by default. The new rules shall define this process considering the following principles and requirements:
- i) As a prerequisite to provide the product, the SOs shall only require a **qualification of the service provider** with the aim of ensuring the SP has a settlement account and financial liabilities, it complies with the legal provisions, etc. No ex-ante product prequalification shall be performed at service providing unit or group level i.e. the capabilities of the unit for grid connection will be taken as a prequalification to provide the service.
 - ii) After the qualification of the SP, the contracting SO shall perform an **ex-post verification based on the service delivery** and some verification criteria. The new rules shall define different options for these ex-post verification criteria including the possibility to verify service delivery based on a minimum number of deliveries. In the national TCMs, all SOs shall agree on the ex-post verification criteria chosen to assess the service delivery. If the SP does not meet the ex-post verification thus failing in the service delivery, it may be subject to a penalty, if set in the national TCMs.
 - iii) This ex-post verification shall not include to perform any **ex-post verification test** at service providing unit/group level. The new rules shall guarantee that if any ex-post verification test is required by the contracting SO, it will shall bear the corresponding costs.
 - iv) The SP shall notify any **change in the service providing units or groups** of its portfolio through the SO service provision tool. The SOs procuring the products will be up to date with all changes and will request additional information if needed through the SO service provision tool (see Section 4.4).
 - v) When a potential service provider aims to participate in **multiple SO products**, it shall be allowed to submit only one application through the SO service provision tool, providing also the geographical distribution of its connection points (see Section 4.4).
- (44) The new rules shall define the technical criteria that will allow SOs to deviate from the ex-post verification process and thus perform an ex-ante prequalification process at service providing unit/group level as a prerequisite to provide the product.
- (45) The new rules shall define the principles and process for all SOs within each Member State to propose common national terms and conditions or a methodology to define all ex-post verification and prequalification processes for SOs services (TCMs) within two years after entry into force of the new rules:
- These TCMs shall aim at simplifying the access to SO services and avoiding duplications when prequalification processes are technically justified according to the new rules.
 - They shall describe the ex-post verification and prequalification processes used for each SO product and define the process to access all SO services through the SO service provision tool (see Section 4.4).
 - They shall define a process and timeline where all SOs within each Member State propose guidelines to **harmonise the IT and communication requirements** in the prequalification processes.
- (46) The new rules shall define principles and requirements striving to minimise the effort, resources and time from the SPs when they are required to perform an **ex-ante prequalification process at service providing unit/group level** as a prerequisite to

provide a product according to the national TCMs. The new rules shall consider at least the following principles and requirements:

- i) The new rules shall require the national TCMs to define the prequalification processes for different **scenarios** (i.e. prequalification of a SP for the first time, prequalification after changes in the service providing unit or group, transference/switching of a prequalified service providing units or groups to another SP, etc.).
 - ii) The national TCMs shall avoid that any change in a prequalified service providing unit or group requires to overcome a new prequalification process or test. In the TCMs, all SOs of each Member State shall agree on a **threshold in the technical requirements included in the ToE or in the capacity or volume of the service providing unit or group** that will require to overcome a new prequalification test. This threshold may be different for each product (e.g. aFRR, mFRR, congestion management, etc.) according to their criticality.
 - iii) When a SP aims to make **multiple changes** in a prequalified service providing unit or group, it shall be allowed to submit only one application for all changes through the SO service provision tool. The SP shall indicate whether these changes are expected to impact the technical requirements or the capacity or volume of the prequalified service providing unit or group beyond the threshold set in the TCM. **Standardised devices** shall be exempt from overcoming a prequalification process if they meet all the technical requirements set in the Table of Equivalences for the corresponding product (see Section 3.3). They shall only be required to register in the SO service provision tool.
 - iv) The **prequalification tests** shall be required only when technically needed to ensure system security and grid operation (e.g. as a consequence of changes that may impact the technical requirements or the capacity or volume of the prequalified service providing group beyond the thresholds set in the TCMs). If technically and practically possible for both the SO and the service provider, the prequalification tests shall be required ii) only on the new or changed connection points (i.e. prequalified connection points of a service providing group may not be required to re-prequalify) and iii) on the connection points as a whole (i.e. avoiding separate tests per individual connection point). If multiple prequalification tests are required, all tests shall be performed simultaneously when technically possible and when undertaken by the same SO.
 - v) In principle, a prequalified service providing unit or group shall not lose its **“prequalification status”** while conducting new prequalification processes (and tests, if needed) because of changes in its unit(s) or group(s).
 - vi) When a potential service provider aims to participate in **multiple SO products**, it shall be allowed to submit only one application for prequalification through the SO service provision tool, providing also the geographical distribution of its connection points (see Section 4.4).
- (47) All SOs within a Member State shall agree on the TCM after taking into account responses received from a public consultation conducted by SOs. The responses to the public consultation shall be made public. The national TCMs shall be approved by the NRA(s) of the Member State who may require amendments. The TCMs shall be made public.
- (48) The new rules shall require ENTSO-E and the EU DSO entity to propose a **European methodology for further harmonisation of the prequalification processes** within three years after the submission of the proposals for the national TCMs. Based on the best practices identified in the prequalification processes across the Member States according to the TCMs, this methodology shall propose how some prequalification requirements and tests (if applicable) can be minimised for each scenario (i.e. prequalification for the first time, prequalification after changes in the service providing unit or group, transference/switching of a prequalified service providing units or groups to another service provider, etc.) while

ensuring system security and grid operation. The European methodology shall include a timeline for implementation of the suggested harmonisation in the national TCMs. Where it concludes that further harmonisation is not relevant, it shall be justified. The process shall include a public consultation on this methodology, which shall be amended by ENTSO-E and the EU DSO entity before submitting the proposal to ACER for approval, together with the contributions to the public consultation. ACER may then, together with the NRAs, approve, require further amendments or reject the methodology. After approval, the final harmonisation points shall become mandatory through the appropriate process.

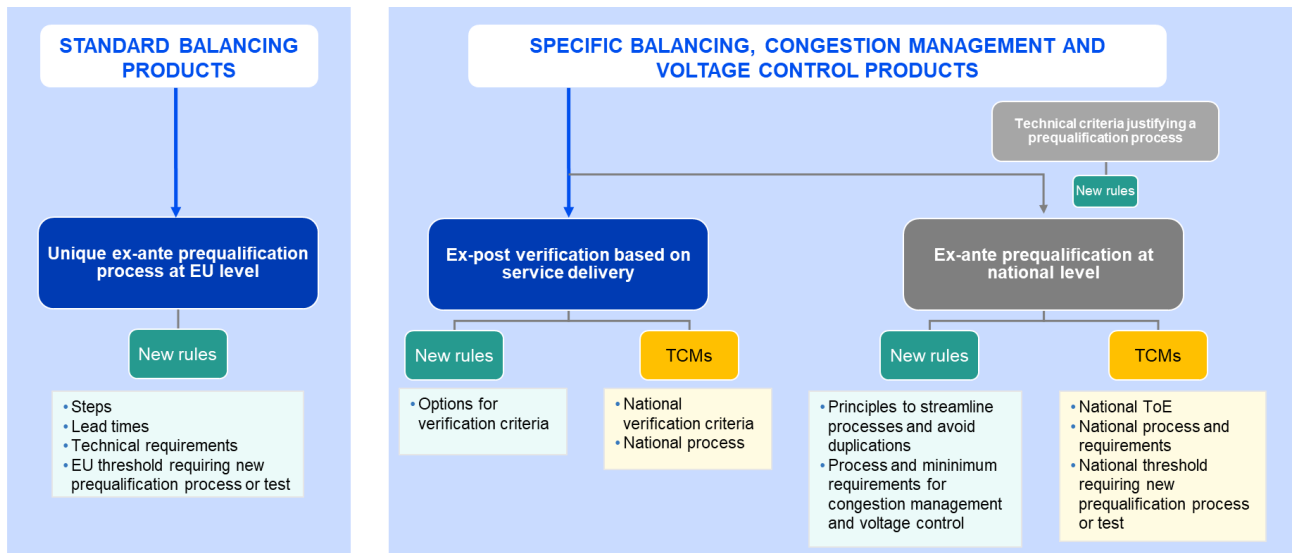


Figure 2 Overview of the ex-ante prequalification and ex-post verification processes proposed to access the different SO products.

3.3 Avoid duplications in prequalification processes

- (49) For the products where an ex-ante prequalification process is technically justified in the national TCMs (see Section 3.2):
- The new rules shall guarantee the product **prequalification to be required only once** if multiple SOs procure the same product.
 - The new rules shall define the principles and requirements for SOs to define a **table of equivalences (ToE)** between the minimum technical requirements of each product requiring a prequalification process and procured within each Member State.
- (50) The new rules shall require the national TCMs to propose the first concept of ToE that will be agreed among all SOs with a Member State.
- i) The ToE shall map **all minimum technical requirements** of the prequalification processes to provide each product.
 - ii) The ToE shall include **common and comparable attributes** determining the minimum technical requirements of each product. While the value of an attribute may be different for each product, they shall be comparable among all products such that they can be ranked against each other (more/less challenging). TSOs and DSOs shall agree on a common list of comparable prequalification attributes for all kind of products requiring a prequalification process in advance to procurement of these products.
 - iii) For the sake of transparency and visibility for potential new service providers, the ToE shall also include the minimum technical requirements that **cannot be comparable or ranked or that are unique for each SO**.

- iv) Based on the equivalences between the minimum technical requirements of different products, the new rules shall define a **procedure to avoid duplicities in prequalification processes** according to at least the following principles:
- The new rules shall provide that an existing prequalification in one product is accepted by the SOs as a prequalification for another product if the ToE indicates that the existing prequalification has more challenging technical requirements in all attributes, both products have similar IT and communication requirements and the SP requests for providing the latter product.
 - The new rules shall provide that already prequalified technical requirements in one product are accepted by the SOs as tested for another product if the ToE indicates that the prequalified technical requirements are more challenging than the corresponding technical requirements of the prequalification process of the latter product.
- v) The new rules shall provide that SOs will **keep the ToE up to date** and will **be public**. When defining a new product with a new prequalification process, the SOs shall include the minimum technical requirements in the ToE and map them to the existing attributes in the ToE or if necessary, add new attributes.

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4 Data exchange and SOs coordination

4.1 Market interaction

Chapter II of the Electricity Regulation sets the general rules for the electricity markets, while the CACM Regulation sets the requirements for congestion management and capacity allocation in day-ahead and intraday markets. Part III, title 6 of the SO regulation regulates scheduling, and Title V of the EB Regulation sets the requirements for settlement in the balancing markets, including the imbalance settlement.

- (51) SO services may be procured in dedicated local markets for SO services as described in Section 4.2, or through locationally tagged bids in wholesale markets, in particular intraday and balancing markets, as described in this Section. In any case, the new rules shall provide that the NRA approves the overall market design in each Member State upon a proposal from all SOs in the MS. The first all SO proposal shall be submitted to the NRA for approval within two years after entry into force of the new rules. The NRA shall approve, reject or amend the proposal within six months after reception. The NRA may ask the SOs to provide an amended version of the approved proposal for the overall market design, whenever it deems it necessary and at least 12 months after the last approval.
- (52) The new rules shall provide principles for the coordination of local markets with wholesale markets, promoting good coordination between TSOs/DSOs and ensuring coherence in the interaction across different markets and different time frames through the scheduling and imbalance settlement process. The overall design of local and wholesale markets in each Member State shall be such that:
- Possibilities for withholding of capacities and market abuse are minimised.
 - Liquidity is maximised in each market.
 - It shall be possible to propose bids that are not procured in one market to another market, given they are qualified for that market.
 - The SO does not unduly distort electricity wholesale markets by procuring SO services.
- (53) The new rules shall provide that if the SO is allowed to procure locationally tagged bids from the wholesale market to use for SO services, the products and pricing mechanism applied for its purchases shall be approved by the NRA as described in chapter 5. The pricing mechanisms may be different from the general pricing mechanism in the wholesale market, and take into account the particularity of the purchaser being interested in locationally tagged bids, contrarily to other buyers in the market.
- (54) The new rules shall provide that the overall market design on national level may include, among others:
- whether and under which conditions bids offered in intraday or balancing markets can be used for local congestion management for distribution and/or transmission grids. In this case, the new rules shall provide the possibility for organising additional local markets, allowing for SOs to procure products others than the ones traded on intraday or balancing markets;
 - whether and under which conditions third party market operators of local markets for SO services may inject bids from SPs, aggregated or not, into wholesale markets;
 - roles, responsibilities and interactions of different entities, such as SOs, wholesale markets and third party operators of local SO markets.

4.2 Operation of local markets for SO services

(55) Within the overall market design approved by the NRA, as described in the previous Section, an SO can procure SO services from a local market operated by:

- the procuring SO itself, alone or together with other SOs
- a different SO or different SOs
- a third party.

The new rules shall specify that the market operator of a local market for SO services develops and maintains an IT solution (platform) for this market, communicates with the potential SPs and provides the clearing and settlement of bids.

(56) The new rules shall establish principles applicable to all operators of local markets for SO services, including:

- The market operator shall be neutral regarding all service providers and technologies and the way their offers are presented to SOs.
- The market shall be accessible to all market participants, including aggregators, and all market participants should be treated equally whatever their technology.
- The market operator shall protect confidential data received from the SPs.
- The SOs shall share all relevant data with market participants through all relevant platforms, including platforms that are neither owned nor operated by or operated on behalf of the SO. Data exchange with other platforms shall enable service providers to participate in several markets.

Further details may be set nationally. The new rules shall provide that the NRA is responsible to ensure compliance with these requirements by operators of local markets for SO services.

(57) In the case where the MS allows for third party operated local markets for SO services, the new rules shall provide that:

- The MS may allow the third party market operator to regroup bids in order to suit the needs of an SO. However, this shall follow the pricing mechanism defined by the national SOs and approved by the NRA. Moreover, the regrouping shall follow specifications given by the SO and that are consistent with European and national congestion management TCMs. By no means, the market operator shall perform any arbitrage in the bid selection, thus the specifications given by the SO shall be detailed enough for the market operator to simply apply them.
- The MS may allow the third party market operator to forward bids to wholesale markets, subject to the SPs consent and when the concerned product is compatible with the concerned wholesale market. Nevertheless, the new rules shall provide appropriate requirements for neutrality and transparency, in particular as concerns pricing mechanism and choice of bids to be forwarded, if such forwarding activity is performed by the market operator of a local market for SO services.

(58) The new rules shall establish that SOs operating local markets for SO services may regroup bids for SOs needs subject to the same conditions. However, SOs operating local markets for SO services shall not forward bids submitted by SPs to wholesale markets.

(59) The new rules shall provide that any third party market operator of local markets for SO services must be independent from all market activities, i.e. supply and demand in electricity markets, with the potential exception of the regrouping of bids mentioned above. As an additional requirement, the SO shall ensure, before procuring congestion management products from a third party market operator, that it is independent and fulfils all regulatory requirements.

4.3 SOs coordination

- (60) The new rules shall require the scope of 'affected TSO' in Article 3(94) of the SO Regulation to be extended to DSOs affected by SOs services used by other SOs. Furthermore, the new rules shall provide definitions for the following terms:
- Requesting SO: the SO requesting data or the activation of a resource connected to its own grid or the grid of another SO, in order to solve an issue (congestion, voltage) on the grid of the requesting SO, or which lies under the responsibility of the requesting SO (i.e. balancing for a TSO).
 - Connecting SO: the DSO responsible for the distribution network or the TSO responsible for the monitoring area to which a service providing unit or group is connected.
 - SO coordination area: the area affected by an existing or forecasted congestion or voltage control issue, in particular with probable and/or recurrent incidence. The SO coordination area shall include all connection points and assets from which the SO may need data in order to forecast and solve the congestion or voltage control issue, and where delivered SO services may contribute to solving the issue. One SO coordination area may cover parts of the grids of several SOs, and overlap with other SO coordination areas linked to different issues if the merging of areas is not relevant for solving the issue. The definition of SO coordination area and affected SO shall be such that the affected SO(s) to be equal to the SO(s) having parts of their grids within the SO coordination area. The definition of a SO coordination area may be aligned with the one of "observability area" as used in the SO Regulation.
 - SO coordination group: the term regroups the requesting SO and affected SO, linked to one or several congestions or voltage control issues.
- (61) The new rules shall provide principles for the requesting SO to establish the SO coordination area according to the definition. When a SO coordination area may include parts of the grid of several SOs, the requesting SO shall include the potentially affected SOs in the assessment. The new rules shall establish that the SO coordination areas shall be assessed regularly by the SOs, and at least when preparing the network development plan every second year as described in Article 32(3) of the Electricity Directive. This shall ensure a dynamic use of SO coordination areas, not on a day-to-day basis but with the aim of establishing coordination when this is necessary for the management of a probable and/or recurrent congestion or voltage control issues in an optimal way.
- (62) The new rules shall establish principles for establishing and selecting different levels of coordination within a SO coordination group, according to the degree to which the different SOs are affected and to the need for coordination. Depending on the coordination level, the SO coordination group shall cooperate at least on the following topics:
- Network development planning as described in Article 32(3) of the Electricity Directive;
 - Grid operation and forecast for grid operation;
 - Data exchange as described hereunder and in section 4.5;
 - Procurement and activation of SO services.
- The new rules shall provide principles for the coordination of these activities.
- (63) The new rules shall establish principles for forecasting congestion and voltage control issues and selecting the most efficient solutions for solving them. The principles shall ensure equal treatment to all SPs, technology neutrality and protection of confidential data from SPs and SOs. The principles shall include the use of data received by the requesting SO from other SOs and SPs, and that these data shall only be used for grid management. The new rules shall provide additional requirements for neutrality, transparency and protection of

confidential data from SPs to be applied to DSOs that are not unbundled according to Article 35 of the Electricity Directive. Further requirements may be provided nationally.

- (64) The new rules shall establish that each SO is responsible for solving congestion and voltage problems on its own grid. This responsibility includes covering the costs, independently of the grid to which the activated resources are connected.
- (65) The new rules shall also provide that
- SOs can procure and activate resources located on each other's grids when these may be useful for more efficient operation of and/or investment (investment deferral) in its own grid or, as concerns the TSO, for balancing.
 - The connecting SO may refuse an activation if the activation endangers operational security. The new rules shall define principles for when an SO may withhold resources and the process to apply in that case. This process should ensure that:
 - o transparency is given to the stakeholders;
 - o the connected SO informs the requesting SOs as soon as it is aware that the resource should not be activated. If necessary and applicable, the local market for SO services where the resource is offered shall also be informed so that the resource is not proposed here;
 - o the SO that denies the activation explains the reasons for the unavailability of the resource to other SOs and be reported regularly to its NRA.

The new rules should provide guidance on how the concerned SP shall be remunerated, including potential measures for mitigating the risk of gaming. The NRA shall be in charge of controlling that the withholding of resources by the SOs are reasonable and in line with the established criteria for withholding. The NRA instructs complaints of SOs regarding unreasonable withholding of resources by an SO.

- (66) The new rules shall ensure that, if the congestion management products activated by an SO creates an open position:
- the open position is closed within reasonable time;
 - the most efficient solution for closing the position is chosen;
 - the cost for closing the position is carried by the congested SO, independently of the localisation of the resources that are used.

In the case where bids from the balancing markets are used to close an open position due to congestion management by an SO, the new rules shall clarify whether these bids should be considered as "activated for internal congestion management" as described in Article 30(1)b of the EB Regulation.

- (67) The new rules shall provide that the SOs of a SO coordination group receive:
- (i) from each other, data similar to those described in Articles 43(3) and 44 of the SO Regulation, for assets within the SO coordination area, and
 - (ii) from the grid users within the SO coordination area, data similar to those described in Articles 48-50 and 53 of the SO Regulation, whose data is needed to forecast and solve the congestion or voltage control issue.

The new rules shall provide principles for identifying the exact data to be provided, and for identifying which grid users shall provide data, in a clear, transparent and non-discriminatory manner. The TSO shall receive all the data exchanged between the grid users and the SOs.

- (68) The principles for establishing SO coordination areas, SO coordination groups and for forecasting and solving congestion and voltage control issues, including rejecting activation by flagging bids as unavailable, shall be further developed in a national TCM for SO coordination in each MS, ensuring that congestion and voltage control issues are dealt with

in a consistent manner throughout each MS independently of whether the issue affects other SOs than the requesting SO or not, and ensuring that the coordination processes in new SO coordination groups is not hampered by different approaches. The national TCM shall be aligned with existing requirements for solving physical congestion, balancing and voltage control issues, in particular the regional (CCR) ROSC methodologies and the EU-wide methodology for coordinating operation security analysis. In particular, it shall ensure that the TSO's balancing actions or other TSO remedial actions do not aggravate congestion or voltage control issues on the distribution grid or regenerate problems that have been solved by actions taken by the DSO. Data exchange requirements shall ensure the TSO receives necessary data in time from the DSO. The national TCM shall ensure optimal use of resources.

- (69) The national SO coordination TCM shall be submitted to NRA approval through an all SOs proposal, previously submitted to public consultation. The NRA may approve, amend or reject the proposal. If and when necessary, the SOs may submit an updated proposal to the NRA. The methodology shall be publicly available.
- (70) The new rules shall require SOs to conduct a biennial revision of the coordination processes on MS level, including data exchange and optimal activation of resources, with the aim of identifying improvements. The results of the revision, including an implementation timeline if relevant, shall take into account responses received from a public consultation conducted by the SOs. The responses to the public consultation shall be made public. The revision shall be approved by the NRA(s) of the Member State who may require amendments.

4.4 Data exchange in the preparation phase

Title 2 of the SO Regulation regulates data exchange with TSOs for TSO-related services. In particular, Chapter 5 regulates data exchange between TSOs, owners of interconnectors or other lines and power generating modules connected to the transmission system and Chapter 6 regulates data exchange between TSOs and demand facilities.

As set in Article 40(7) of the SO Regulation, the KORRR methodology addresses the key roles, requirements and responsibilities of the TSOs, the DSOs, the CDSOs and the SGUs in relation to the data exchange up to real time that is necessary to ensure observability. The roles, requirements and responsibilities developed in KORRR apply to all data exchange provisions in Title 2 of the SO Regulation.

- (71) The new rules shall define a SO service provision tool to support SOs and SPs in the preparation phase (i.e. from long to shorter before real time). This tool shall include at least the following functionalities:
 - i) To **centralise all applications** to participate in different products and services (including at least balancing, congestion management and voltage control) as well as all **prequalification processes**, if applicable.
 - ii) To **register** all service providers that are qualified and can participate in different products and services.
- (72) To define this tool, the new rules shall include the following requirements:
 - i) The definition of **one tool per Member State**.
 - ii) The service providers shall not have **access** to the different products and services without being registered in the tool.
 - iii) The service providing units or groups shall be only required to **register one application to participate in different products or services** in a Member State, noting that

additional information may be required in the future depending on the product/service and the associated prequalification requirements, if applicable. Thus, where applicable, data shall be made **visible and interoperable among existing registers referring to different balancing products**, i.e. service providers shall not register information twice that is already enrolled for the same service providing unit or group.

- (73) The new rules shall guarantee the following:
- i) The tool is **easy-to-implement** and **user-friendly**.
 - ii) When a **prequalification** of the service providing unit or group is required, all the steps of the process will be centralised in the tool. The corresponding service provider will submit all required information electronically through the tool and will be able to track the status of the process (e.g. application submitted, ongoing check of application completeness, TSO/DSO request for additional information (if needed), application complete, ongoing execution of tests, etc.).
 - iii) Data of each service providing unit or group has a **level of granularity** as necessary for each type of product or service. The tool will also allow **aggregating data** as necessary.
- (74) The new rules shall define the **data governance** of the tool to ensure the security and granted data access only to authorized parties to protect the privacy and confidentiality of the different service providers and their corresponding service providing units and groups. This data governance shall take into account the following principles:
- (75) **Data quality:**
- The data provider will be responsible for the data quality and truthfulness.
 - The SO to whose grid the unit is connected stays responsible for the correct representation of the connection data.
- (76) **Responsibilities:**
- After data submission, the tool manager will be responsible for verifying data completeness and format in line with the minimum standards of the tool.
 - The SO(s) procuring each product/service will be responsible for validating the data needed to provide the product/service (e.g. the minimum technical requirements, if prequalification is needed).
 - The data provider will be responsible for the impact of low quality data on the operations or tasks carried out by the users of the tool. The new rules shall define the roles, interactions and requirements of a conflict resolution mechanism in the event of a negative impact caused by low quality data.
 - The tool operator will be responsible for up keeping the IT infrastructure.
 - The entity(ies) who will operate or manage the tool will be decided at national level.
- (77) **Data privacy and confidentiality:**
- The new rules shall guarantee that the tool is realised in a way that respects unbundling principles in order to avoid sharing sensitive data that could favour unwanted emerging opportunities for gaming or market abuse. The new rules shall also ensure that the tool is realised in a way that the SOs who are not effectively unbundled only use the accessible data in the tool for their initial purpose.

- The tool manager shall guarantee privacy and confidentiality when processing data for validation after submission by the data provider and when giving access to third party entities to the data.
- The tool operator shall not have a conflict of interest as it will have access to private or confidential data.
- One service provider shall not be able to see the data from other service providers, unless express consent by the data owner, i.e. the individual grid users of the service providing units or groups of the latter service provider.
- The data related to the service providing unit or group shall be visible only to the TSOs/DSOs to which the resource is prequalified/capable to deliver the relevant products or services (i.e. visible not only to the SO to which the resource is connected to but to all SOs to which the resource can provide the service(s)).

(78) Interoperability:

- The new rules shall set common principles on the fundamental features of the tool to ensure interoperability.
- Multiple up-to-date standards shall be allowed in order to interoperate with the tool. Each standard shall be easy to implement, empower the entities populating the tool and future-proof. It will also protect privacy and security, and strive for harmonisation on a European level.
- The new rules shall include a process where all TSOs and DSOs select and implement at least one modern standard that enables interoperability with each tool in each Member State. All SOs within each Member State shall agree upon the modern standard to be implemented. In doing so, they shall consult stakeholders to determine user requirements and analyse the compatibility of existing modern standards with those requirements, including ease of use, future-proofness, modularity and cost of installation and maintenance. The report containing the results of the analysis and the recommended modern standard to be implemented in the Member State shall be consulted and approved by all relevant NRAs.
- Specific design choices of the tool and how it interacts with existing registers, platforms and tools shall be developed in cooperation between TSO(s) and DSO(s) at national level, involving national authorities.

4.5 Data exchange in the operation phase

- (79) The new rules shall define processes to ensure data exchange between TSOs and DSOs during the operation phase (i.e. shorter before real time till real time) in order to guarantee a coordinated **access to available resources**, an optimal **selection and activation of available resources** and a **joint services management**. In particular, the new rules shall require the TSOs and DSOs to develop a common national process:
- i) To determine **size and location of physical congestions** based on the input of SGUs scheduled data exchange. The physical congestions shall be calculated as close as possible to real time with a granularity as close as possible to the imbalance settlement period in order to accurately reflect real-time system conditions.
 - ii) To exchange the status of the **available volumes** of the service providing units and groups that may be affected by the potential physical congestions in their grid and the activations by the SOs.

- iii) To exchange the **contracted capacities** of the service providing units and groups to provide each product or service.
 - iv) To exchange the **selected energy volumes** of the service providing units or groups for the different products and services.
- (80) The new rules shall provide that if the SOs set any tool to exchange the data above, the **data governance** of the tool shall take into account same principles and requirement as defined for the SO service provision tool in Section 4.4.

4.6 Data exchange in the settlement phase

- (81) The new rules shall include provisions with respect to DSO-related services, covering the data exchange between any SP and the respective SO. More specifically, the new rules shall include provisions for the data exchange between the SP and the SO(s) related to the provision of the service and the validation, including the baseline related data, where this is required, at least for each aggregation model.
- (82) The new rules shall specify what data needs to be communicated after real-time. The data should include at least the activated energy volumes for each service providing units or groups for the different products and services.
- (83) The rules shall include at least the following principles:
- Data aggregation where possible, in order to limit the data to be communicated and ensure a minimum level of privacy for the final consumers taking part in the service provision. The new rules shall require that data regarding the delivery of the service must be communicated on service providing unit or group level. For this purpose, areas shall be defined in which different service providing units or groups compete for the delivery of the service to a DSO or a TSO. The new rules shall set clear boundaries when data on the level of individual demand response, storage, or power generation module level is exchanged.
 - Single point of contact: the new rules must clearly define the entity that receives the data. Two possibilities exist: either the DSO receives the data with an obligation to communicate the same data immediately and directly to the TSO in case the service was delivered to the TSO, or the entity receiving the data is the one requesting the service provision.
 - Transparency and traceability: in case data is communicated, the new rules shall specify how, when, and for what purpose the final customers' data is used, who has the permission and the process through which this information is available to the final customer. All data transfers should be traceable. Consumers should have a complete view of all parties that are involved in the data-sharing flow.
 - Error detection and correction: the new rules shall include provisions in case the communication fails. The entity receiving the data shall ensure real-time validation of the received data and real-time communication to the service provider in case errors (missing data, wrong format, erroneous data) are detected.

5 Congestion management

5.1 Products

- (84) The new rules shall provide requirements to system operators for the definition of products for purposes of congestion management and shall define a common European list of attributes for products used for congestion management that shall be used by SOs when describing the products to be procured.
- (85) The new rules shall provide that SOs define standardised products for congestion management at national level. The new rules shall ensure that different products correspond with the specific needs of system operators, which depend on network topology, the number of service providers in the area, and the size and predictability of congestion, among other things. The new rules shall ensure that when defining the products, the SOs take both current and future system needs, as described in the NDP, into account, as well as current and future service providers' ability to provide the products. If the SOs procure products from the wholesale market, these products shall be included in the list.
- (86) The new rules shall provide that the list of standardised products shall be submitted to the NRA for approval through an all SO proposal. The NRA may approve, amend or reject the proposal. If and when necessary, the SOs may provide an updated proposal to the NRA.
- (87) The new rules shall aim to ensure that the different products are defined in a consistent manner. As such, the congestion management product available to the SO can be prequalified, selected and activated when and where it is most valuable, i.e. in a way that optimises total welfare, facilitates market access and lowers entry and administrative barriers.
- (88) The new rules shall allow for different products, that may consist of active power injections to or withdrawal from the grid, options for the SO requesting the active power injections to or withdrawal from the grid (capacity and activation) or similar products, including both redispatch products and dispatch limitation products. The new rules shall prescribe the conditions under which capacity that is contracted long term by a SO, e.g. in the form of a tender for the procurement of congestion management products as an alternative to grid investment, may also be used for other purposes. Product definition shall facilitate the effective use of congestion management for various SO needs. The new rules shall provide that the definition of products shall ensure equal treatment to all SPs and technology neutrality.

5.2 Procurement and pricing

- (89) The new rules shall provide that when facing congestion, the SO shall always choose the most economically efficient option of the different tools on its hands, such as congestion management, grid investments, non-firm connection agreements or bidding zone review, optimising the resulting social welfare. The new rules shall specify principles for the use of remunerated forms of SO services congestion management products on the one hand, e.g. dispatch limitation and redispatch (market-based and non-market based) and non-firm connection agreements on the other, ensuring that market are not unduly distorted.
- (90) The new rules shall include principles for procurement and pricing applicable to different products, different time horizons and specific features of the local systems. The procurement

and activation shall be market based, through a process that ensures transparency and the selection of the most cost-efficient resource. Market based processes may be different for long/short term procurement and activation, depending on the products and the timeframe.

- (91) The new rules shall set the principles for the regulatory assessment described in Article 32(1) of the Electricity Directive, including at least the frequency and the method (including how and when the assessment should be made locally or nationally, taking into account that conclusions may differ for different parts of the grid within a MS), that could be a market test or a cost benefit analysis.
- (92) The new rules shall describe the alternatives for the procurement of congestion management resources when the NRA assessment concludes that the procurement of such services is not economically efficient, or that such procurement would lead to severe market distortion or to higher congestion. The principles for non-market based procurement alternatives should include requirements for transparency, non-discrimination and technology neutrality. Without prejudice to the general provisions of Article 32 of the Electricity Directive on the derogation to market-based procurement of congestion management services, the new rules shall further clarify when Article 13 of the Electricity Regulation applies for redispatching. The new rules shall provide that long term contracts for congestion management shall only be purchased in a market based way.
- (93) The new rules shall define the minimum content and requirements in SOs' terms and conditions, such as structure, number and clearing of market sessions, gate closure times (where relevant), products procured, SOs' needs. The new rules shall list the abovementioned requirements, and SOs shall design the local markets nationally in compliance with the requirements of the new rules.
- (94) The new rules shall empower SOs to propose pricing mechanisms that ensure fair and competitive procurement and activations and long-term market development. The new rules should allow that prices for the activation of resources could be predetermined in capacity contracted in advance. In such cases, the use of a secondary activation market, allowing for other participants to be selected, should be considered. The pricing mechanisms shall ensure equal treatment to all SPs and technology neutrality.
- (95) The new rules shall provide that the pricing mechanisms shall be submitted to the NRA for approval through an all SO proposal. The NRA may approve, amend or reject the proposal. If and when necessary, the SOs may provide an updated proposal to the NRA. If the SOs procure congestion management products on the wholesale market, the pricing mechanisms applied shall also be submitted to NRA approval.
- (96) The new rules shall provide additional requirements for neutrality and transparency for the procurement of congestion management products by SOs that are not unbundled according to the Article 35 of the Electricity Directive. Further rules applicable to SOs that are not unbundled may be provided nationally.

5.3 Transparency and information to potential providers

- (97) The new rules shall include the following neutrality requirements for the procuring SO:
 - The procuring SO should be required to act in a non-discriminatory manner when procuring and using congestion management products, in particular if the SO is vertically integrated with a SP.

- No exchange of privileged information about congestions should be transferred between SOs and affiliated/parent companies.
- The relation between the procuring SO and SPs should be transparent.

(98) DSOs shall make sure that, at least, the following information is published in their network development plans (NDP):

- the planning methodology to identify network development projects making sure that the provided description is comprehensible for stakeholders. It should explain how the procurement of congestion management products was assessed by the DSO;
- underlying network development scenario(s), which depict plausible prospective developments of the energy system, describing a best estimate of future network development.
- scenario based assessment how medium- and long-term congestion management needs will develop;
- whether a project is based on grid expansion or use of congestion management. Whenever possible and relevant, regarding the size of the project, network development project fundamental data like project status, expected commissioning date(s), costs, expected impacts and benefits. For projects based on congestion management, information about the predicted need of congestion management for different time-scenarios (peak/off-peak, summer/winter, day of the week, time of the day) should be provided and split in upward and downward demand. Information can be provided in aggregated form for lower voltage levels;

The NRA can require DSOs to publish the information on a central publication and communication platform at national level.

(99) SOs shall make sure that, at least, for the procurement and activation of congestion management products, the following information is published:

- the terms and conditions;
- the information related to the requirements for becoming a SP in the respective product including prequalification requirements;
- the necessary data to ensure an economically-efficient functioning of congestion management markets and to provide the same level of information to all interested market parties; this includes information on the area of delivery (network points), forecasts about the expected number of events, timing of events and the resulting need for congestion management, selection criteria, reserve price (if applicable); whenever possible the timing for publication shall be early enough in order to ensure that interested market parties can take them into account;
- market results and activations including information on volumes, prices, bids – if necessary in an aggregated and anonymous format - and bid selection criteria applied while respecting commercial secrets and taking into account potentially market distorting information; timing for publication shall be early enough in order to ensure that interested market parties can take them into account.

New rules should provide guidance on the publication of reserve prices, taking into account effects on liquidity, participation, market power, gaming and potential mitigating measures (e.g. publishing a price range rather than a fixed reserve price). Information about procurement and activation shall be provided in English, at least, and shall be made available in an efficient manner. The data should be made publicly available in easy and accessible formats. The NRA can require DSOs to publish the information on a common platform on national level.

5.4 Network development plans

(100) The new rules shall establish principles for the DSO's NDP, including:

- General principles on the methodology allowing for taking into account particular characteristics at national and DSO level.
- Guidance on how to take into account DR and other relevant resources, including a scenario based assessment on the development of medium- and long term needs for SO services for congestion management or voltage control products.
- On national level, the DSOs shall establish a common methodology, which allows for adaption to the particularities of each grid. This methodology shall be consistent with the planning methodology of the national TSOs for the TYNDP where relevant. It shall give guidance on how to consider congestion management as an alternative to grid reinforcement.
- The NDP shall include underlying network development scenario(s), which depict plausible prospective developments of the energy system, describing a best estimate future network development and taking into account the TYNDP and the underlying scenarios used by the national TSOs, as well as national scenario plans for any sector interacting with the electricity sector. Scenario data and assumptions shall be sufficiently consistent among all DSOs on national level.
- For projects based on congestion management or voltage control provision of SO services, information about the predicted need for such products SO services for different time-scenarios (peak/off-peak, summer/winter, day of the week, time of the day) shall be provided and split in upward and downward demand. Information can be provided in aggregated form for lower voltage levels.

(101) The new rules shall require that the DSOs, after the public consultation required in Article 32(4) of the Electricity Directive, justify how comments and remarks coming from the public consultation have affected NDPs, and if some responses have not led to changes, why this choice have been made.

5.5 Harmonisation process

(102) This part describes a process for harmonisation of features for which further harmonisation may be relevant in the future, depending on the future knowledge level and acquainted experience. The existing of such processes should not in any way be a pretext for not providing the right level of harmonisation in the new rules from the start, but rather be considered as a safety net for future developments.

(103) The new rules shall establish a process for investigating further European harmonisation of at least the following features of congestion management:

- Products – including, but not limited to, the common list of attributes
- Procurement methods, including, but not limited to, coordination of local markets
- Market platforms or other stakeholder interfaces for procurement
- Stakeholder information and transparency on procurement and activation processes and results, future needs of congestion (plans, localisation of the needs for SO services or grid reinforcement)
- Prequalification processes
- SO coordination and national SO coordination TCM

(104) The process shall include the joint publication of ENTSO-E and the EU DSO entity of a report on how the abovementioned points are implemented throughout the member states, and to which extent market based procurement is applied. The report shall provide a comparison of the applied methods and a reasoned view on where further European harmonisation may enhance the overall welfare, and in particular contribute to the aims of the Electricity Regulation, the general aims of Network codes as described in Article 58(2) of the Electricity

Regulation and the aim of the current Framework Guideline as described in Section 1.1, and where no further harmonisation is considered useful at that moment in time. The analysis shall discuss different models for harmonisation and select the preferred one. The analysis shall consider both the pros and cons of harmonising European practices, e.g. potentially enhanced competition for providing congestion management services to the SOs and subsequently lower prices and/or higher available volumes, and the consequences on overall costs and grid security of the considered harmonisation. The report shall include a timeline for implementation of the suggested harmonisation. Where the report concludes that further harmonisation is not relevant, this should also be explained. The process shall include a public consultation on this report, aiming at receiving inputs in particular on the suggested harmonisation points and the suggested timeline, and on the suggested points of non-harmonisation. The report shall then be amended by ENTSO-E and the EU DSO entity before submitting the proposal to ACER for approval, together with the contributions to the public consultation. ACER may then, together with the NRAs, approve, require further amendments or reject the report. After approval, the final harmonisation points shall become mandatory through the appropriate process. The first report will be submitted to ACER for approval, by two years after the entry into force of the new rules.

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6 Voltage control

(105) The new rules shall provide guidance on the market based procurement of voltage control services. Other non-frequency ancillary services shall be dealt with on national level. Voltage services may include both active and reactive power. In the following, only reactive power services are concerned. As concerns active power, the new rules shall provide that the procurement of active power for voltage control shall follow the same rules as for congestion management.

6.1 Products

(106) The new rules shall provide requirements for the definitions of products for voltage control. The products that are to be procured shall be defined by the SO(s) that needs the product, taking into account the technical specificities of the grid and the problem to be solved, but also the specificities of potential providers in order to use the available resources in the best possible way. The new rules shall provide a process for establishing standardised products on national level.

(107) The new rules shall define a common European list of attributes for products used for voltage control that shall be used by SOs when describing the products to be procured. This list shall in no way limit the type of products that may be described by a SO, but strive towards harmonised description when possible.

(108) The new rules shall provide that the products for voltage control shall be asymmetric when possible.

6.2 Procurement

(109) The new rules shall set up common high level principles for the market based procurement of voltage control products. These principles shall include, at least, transparency, technology neutrality and non-discrimination. They shall list information required from the SO to market participants before and after procurement and activation, such as technical requirements for participation in the market, selection criteria etc.

(110) The new rules shall provide that market based procurement is to be preferred, but may be completed by rules based procurement for short term products when and where market based procurement is economically not efficient. The rules based procurement may include compensation or not. In this case, the new rules shall provide guidance to avoid market distortion due to interaction between market based and non-market based procurement. The new rules shall provide that, in particular, market based procurement of long term voltage control services shall be considered when the mandatory capabilities as defined in RfG Regulation and DCC Regulation are not sufficient for the provision of voltage control to satisfy the needs of the SO. In this case, the activation of the procured resources shall follow the same rule as the activation of mandatory capabilities, i.e. rules based activation with a similar compensation scheme as for mandatory resources.

6.3 NRA assessment

(111) The new rules shall set the principles for the regulatory assessment described in Article 32(1) of the Electricity Directive, including at least the frequency and the method (including how and when the assessment should be made locally or nationally, taking into account that conclusions may differ for different parts of the grid within a MS), that could be a market test

or a cost benefit analysis. Derogation to market-based procurement may be granted by relevant NRA, whenever it is demonstrated that market-based approach is not economically efficient or that such procurement would lead to severe market distortions or to higher congestion.

6.4 Reporting

(112) The new rules shall require the ENTSO-E and the EU DSO entity to publish a biennial report on the implementation of procurement of voltage control services, including:

- Information on where market based procurement has been applied or where derogations have been applied for or granted;
- Volumes and types of voltage control services procured; and
- Method of procurement used for different types of products.

The report shall provide a comparison of the applied methods and a reasoned view on points where further European harmonisation is expected to enhance the overall welfare, and in particular contribute to the aims of the Electricity Regulation, the general aims of Network codes as described in Article 58(2) of the Electricity Regulation and the aim of the current Framework Guideline as described in Section 1.1. The process shall include a public consultation on this report, for a period of four weeks. The report shall then be amended by ENTSO-E and the EU DSO entity before submitting the proposal to ACER for approval, together with the contributions to the public consultation. ACER may then, together with the NRAs, approve, require further amendments or reject the report. The first report will be submitted to ACER for approval, by two years after the entry into force of the new rules.

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