EUDSO Entity and ENTSO-E DRAFT Proposal for a Network Code on Demand Response

For public consultation

COMMISSION REGULATION (EU) 202x/xxxx
of xx Month 202x
establishing a Network Code on Demand Response
(Text with EEA relevance)

THE EUROPEAN COMMISSION,
Having regard to the Treaty on the Functioning of the European Union,
Having regard to Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (1), and in particular Article 59(1)(e) thereof,
Having regard to 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 (2) and in particular Articles 17, 31, 32, 36, 40 and 54 thereof,

Whereas :

(a) This Regulation helps to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of renewable electricity sources, and to facilitate Union-wide trade in electricity.

(b) This Regulation respects 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.

TITLE II:

(c) As regards the settlement of balancing services, TSOs shall establish a procedure, if not already existing, pursuant to Chapter 2 of Regulation (EU) 2017/2195.

(d) The minimum bid size of standard balancing products is defined as 1.0 MW for: standard products for balancing capacity for frequency restoration reserves and replacement reserves in accordance with Article 25(2) of Regulation (EU) 2017/2195, and for standard products for balancing energy for (automatic and manual) frequency restoration reserves and replacement reserves in accordance with Articles 19(1) and 19(3)(i), Articles 20(1) and 20(3(i), and Articles 21(1) and 20(3)(i) of Regulation (EU) 2017/2195. This Regulation requires an evolution of the bid granularity of standard balancing products intended to facilitate the participation of smaller resources in balancing services by means of aggregation.

TITLE III:

(e) Systems operators should ensure that the administrative burden associated with the requirements for the prequalification processes is proportionate with the size of SPU or SPG and its impact on the system security and grid operation in case of non-delivery. The product prequalification requirements should be limited to the technically necessary level to ensure system security and safe grid operation and should not create

unreasonable entry barriers for SPUs and SPGs consisting of only small controllable units. Systems operators should avoid any unnecessary duplications of prequalification processes.

(f) Systems operators should ensure that the application processes enable mobile technical resources to participate in the provision of services.

(g) The establishment of a ‘common front-door' as referred to in Article 34 (Principles and requirements for SP register modules) should not pre-empt the data management approach used to realise the uniform set of procedures. Depending on existing national practices for energy data management, it might be better to establish single or multiple SP register modules and single or multiple CU register modules acting in a co-ordinated and standardised manner.

(h) All requirements and procedures provisioned in this Regulation should aim to be made available in the form of a fully digitalised, secure, machine-accessible and easily integrable infrastructure and ensuring the cybersecurity requirements.

(i) When developing the procedures for product prequalification processes, they should be as simple as possible, user-friendly, technologically neutral, non-discriminatory, fair, objective, transparent and striving to minimise and standardise the different steps when possible. Specific approaches should be considered to lower the integration barriers for mass-produced standardised devices across Europe through the establishing of dedicated standardised market interfaces for both pan-European and national balancing, congestion management or voltage control products.

(j) Specific approaches should be considered to lower the integration barrier of mass-produced standardised device across Europe through the establishing of dedicated standardised market interfaces for both pan European and national flexibility products.

(k) When setting procedures for product prequalification processes, systems operators should consult market participants and consider the real-world experiences to update the requirements and processes in the future.

(l) Subject to the approval by the competent national regulation authority, systems operators may entrust a third party with conducting the qualification process for service providers in accordance with the national terms and conditions for service providers.

(m) The purpose of the Table of Equivalences (‘”ToEq”) is to introduce comparable ‘product requirements’ and data exchange requirements to enable the service providers (“ SP”) and product prequalifying responsible (“PPR”) to avoid duplications and optimization of registration and product prequalification processes.

(n) The ToEq should particularly simplify value stacking for service providers.

(o) The ToEq does not cover technical onboarding requirements, activation tests or communication tests to particular platforms or market places. For instance, if a TSO requires activation tests for aFRR towards a particular national platform, and a DSO

requires different steps for the onboarding to critical local congestion management services, these steps may neither be unifiable nor comparable. The implementation of the flexibility services should provide experience to further improve the definition and implementation of the ToEq.

(p) When the national regulatory authority is approving additional product attributes for congestion management according to the national terms and conditions, the process should be simple, fast and transparent and should not limit the development of new products and services.

(q) Conditions, under which activation tests for Service Providing Units ("SPU") consisting only of small Controllable Units ("CU") or Service Providing Groups ("SPG") consisting only of small controllable units are required may vary. For example, this can be the failure of several failed activations of the small controllable units by service provider, or a location in critical grid areas.

(r) The topic of interoperability and standardisation to facilitate the Switching of Controllable Units as provisioned in Article 27 is covered by the mandate to the Commission following Article 24 of Directive (EU) 2019/944 to establish interoperability of energy services across the Union. The Commission should – in co-operation with ENTSO-E and EU DSO Entity - publish non-discriminatory requirements and procedures to ensure interoperability rules for the data exchange between controllable units and service providers for the provision of systems operators services. This is important to ensure that new service providers can control controllable units switched over from old service providers and may ease the fulfilment of the requirements expressed by Article 27. In the case that a controllable unit is controlled by an oCUO, this might be easier. However, in this case, it must be ensured that the owner of the controllable unit is not bound to the oCUO and that a later switch is possible. Article 43 (CU module procedures) provides the requirements for procedures done by the service provider on behalf of final customers. It is important that final customers have the opportunity to express their consent or their rejection of some of these actions. In order to cope with an expectedly high number of these activities, CU register modules, or – if applicable – SPs should foresee efficient digital consent management possibilities.

(s) The solutions introduced by this Regulation should create conditions for a significant participation of final customers in flexibility markets and therefore should ensure easy access to these markets. This will be the basic condition for strengthening the position of the final customer, which is consistent with the main objective of the winter package, the effect of which is i.a. new network code. Therefore, Article 45(10) (Principles for national implementation) defines the requirements for TC for SPs regarding the definition by the final customer of its flexibility potential and creating the possibility of establishing cooperation between the final customer and the aggregator (service

provider). Such a solution developed at the national level will give the final customer initiative and contribute to the development of the flexibility market.

TITLE IV:

(t) This Network Code aims at enabling an efficient use of demand response in power systems by facilitating the creation of markets for congestion management and voltage control services including congestion management, which should be interoperable with existing markets.

(u) Congestion management is to a large extent ruled by Article 13 of Regulation (EU) 2019/943, and Member states have implemented options considered nationally suitable. The applicability and implementation of the Regulation (EU) 2019/943 shall only be affected where necessary to reach the goals of this Regulation.

(v) When we in this Regulation are referring to procurement it means the entire process which leads to the purchase of balancing, congestion management and voltage control services. This includes various steps, such as: identifying requirements for a service, tendering/call for bids (in an exchange-like market-place or without one), necessary contracts etc.

(w) Market-based procurement is understood as a mechanism whereby a service is procured by soliciting market participants to place an offer for the service. The market participants choose the amount they are offering and the prices (potentially limited by price caps). The remuneration may be determined by a market-mechanism (supply vs demand) pay as bid or pay as cleared. Examples, which may be labelled "market-based" based on assessment of national regulatory authority in Member State: Marketplace/Exchange for service (includes service specific market or taking offers from another market such as Energy-only-markets, balancing).

(x) Market-based pricing is understood as a pricing and remuneration mechanism determined through a market-mechanism by means of demand and supply. The quantity of the demand may be fixed in advance, or be determined by a mechanism.

(y) Member States, through national applicable law, prescribe how distribution and transmission system operators should connect customers or group of customers. This includes connection conditions applicable to the access to network capacity, as conditions for guaranteed capacity or firm connection.

(z) Following applicable national rules, transmission and distribution system operators may have or may have not a series of options to handle congestions and voltage issues, e.g. network reinforcement, market-based procurement of congestion management and voltage control services, non-firm connection agreements or simply a limitation to the connection of customers affecting both transmission and distribution customers. Limits to the connection in a certain DSO grid may be due to congestion and voltage issue in over-laying grids and may be set through contractual agreements between systems

operators.

(aa) If transmission and distribution system operators are nationally enabled to connect more customers than supported by their grid capacity or their contractual agreements with overlaying system operators, they assess the effective and efficient solution at their hands in line with the national applicable rules, as for example non-firm connection agreements or the procurement of congestion management and voltage control services.

(bb) In this context, this Regulation states the need and the rules for transmission and distribution system operators to assess and choose the most effective and economically efficient option or combination of options at its hands, pursuant to the applicable regulatory framework, to solve existing and forecasted grid problems.

(cc) Third party access to the network is implemented nationally by Member States pursuant to Article 6 of Directive (EU) 2019/944. When so nationally decided, customers or group of customers may be connected with non-firm access conditions, in particular in case of insufficient network capacity, that are further developed by national regulatory authority pursuant to Article 59(7) of Directive (EU) 2019/944. Consequently, transmission and distribution network operators may develop non-firm connection agreements following the national applicable framework. When implemented at national level, Member States may decide a possible compensation to customers affected by non-firm access conditions.

(dd) The framework for the applicability of non-firm connection agreement to grid users being regulated at national level, this network code develops high level principles to transmission and distribution system operators on the use non-firm connection agreements to ensure that markets are not unduly distorted.

(ee) When solving congestions and voltage issues, transmission and distribution system operators can apply grid technical measures, like topological manoeuvres, transformer tap-changes, modifying set-points of grid elements, switching on and off capacitors, scheduling unavailability of grid elements or others measures. These measures may be costly or non-costly for systems operators. If they are costly, the cost associated to these measures is typically covered as part of the operational costs of systems operators such as costs for works and maintenance crews, shortened maintenance period or earlier renewal of assets induced by increased manoeuvres or others.

(ff) Market participants can trade their volumes in long-term, day-ahead, intraday or continuous market process, pursuant to Regulation (EU) 2015/1222 and Regulation (EU) 2016/1719; which are also known as ‘wholesale markets’. Additionally, market participants may become service providers in balancing markets developed pursuant to Regulation (EU) 2017/2195. This Regulation states principles applicable for the use of bids and for the coordination for those wholesale and balancing markets and for the local markets for congestion management and voltage control.

TITLE VI:

(gg) Fulfilling the Article 32 of Directive (EU) 2019/944, distribution system operators have to cost-efficiently integrate new electricity generation, especially installations generating electricity from renewable sources, and new loads. For that purpose, distribution system operators, at national level, shall introduce transparent DNDP, including methodology and scenarios and/or assumptions to identify network development projects making sure that the provided description is comprehensible for stakeholders. For projects based on congestion management and voltage control services, all available information about the predicted need for such services that may be of use for current and future service providers shall be provided, including when, where and which volumes are assumed to be needed. The DNDP shall be consulted with all relevant system users and the relevant transmission and distribution system operators in a transparent manner.

TITLE VII:

(hh) In the Regulation (EU) 2017/1485, "observability areas" are defined for TSO. In this Regulation, "DSO observability areas" are defined for the purpose of clarifying data exchange scope and scope of coordination. "DSO observability areas" include the own DSO grid and also necessary parts of other operator grids with a significant influence.

(ii) In this regulation, Article 76(1) from (EU) 2017/1485 from international processes is considered to solve congestions at TSO level, and in the implementation of the national processes.

TITLE IX:

(jj) In each Member State, grid users have a set mandatory technical requirements for the voltage control, including reactive power capacities.

(kk) Mandatory reactive power capacities include the set of capacities and requirements for grid users concerning the ability to consume/produce reactive power to provide voltage control as are defined in the national implementation of Regulation (EU) 2016/631, Regulation (EU) 2016/1447, and Regulation (EU) 2016/1388, or other national codes/requirements or the connection agreement. The mandatory capacities might or not include an economic compensation, and they are out of the scope of this Regulation. The management of mandatory reactive power capacities should not have significant impact on the active power provided from SPUs.

(ll) In each Member State, grid users have a set mandatory technical requirements for the voltage control, including reactive power capacities, whose procurement might be under ruled or market-based mechanisms. Mandatory requirements and the coordination between TSO-DSO pursuant to Regulation (EU) 2017/1485 are out of scope of this

Regulation.

(mm) In the low voltage grids, an efficient solution for voltage control issues (overvoltages, undervoltages) is through the modulation of the active power flows. In the medium voltage grids, voltage control might be solved by either the modulation of the active or the reactive power, depending on the voltage, grid topology and the casuistry.

(nn) System operators shall ensure that reactive power exchanges on TSO-DSO points remain within boundaries in accordance with Article 15 of Regulation (EU) 2016/1388 and article 29 Regulation (EU) 2017/1485.

TITLE I

GENERAL PROVISIONS

Article 1
Subject matter

1. This Regulation establishes a network code which lays down the requirements in relation to demand response, including rules on aggregation, energy storage, and demand curtailment rules, to contribute to market integration, non-discrimination, effective competition and the efficient functioning of the market pursuant to Article 59(1) of Regulation (EU) 2019/943.
2. This Regulation also lays down the obligations for ensuring that the systems operators have access to energy resources of all the electricity markets in accordance with the principles regarding the operation of electricity markets pursuant to Article 3 of Regulation (EU) 2019/943, and allow the use of energy resources by the systems operators for the operation and planning of the Union electricity network.
3. Where system operators have different roles and responsibilities in a Member State in such a way that they may not properly fulfil one or more obligations under this Regulation, Member States may provide that the responsibility to comply with those obligations is assigned to one or more specific systems operators.

Article 2
Definitions

For the purposes of this Regulation, the definitions in Article 2 of Directive (EU) 2019/944 of the European Parliament and of the Council, Article 2 of Regulation (EU) 2019/943, Article 2 of Commission Regulation (EU) 2015/1222, Article 2 of Commission Regulation (EU) 2016/631, Article 2 of Commission Regulation (EU) 2016/1388, Article 3 of Commission Regulation (EU) 2017/1485, Article 2 of Commission Regulation (EU) 2017/2195, and Article 2 of Commission Implementing Regulation (EU) 2023/1162 and the definitions stemming from the implementing acts pursuant to article 24 of Directive (EU) 2019/944 shall apply.

In addition, the following definitions shall apply:

(1) ‘Metering point’ means a physical location where the withdrawal or injection of electrical quantities is measured or calculated.

(2) ‘Submeter’ means a metering device on customer's side, without its own connection agreement, which is placed behind the meter of the connection point with the transmission or distribution system operator as is defined in the connection agreement.

(3) ‘Baseline’ means a counterfactual reference about the electrical quantities that would have

been withdrawn or injected if there had been no activation of any balancing or congestion management and voltage control services.

(4) ‘Connection point’ means an interface as defined in Article 2 (15) of Regulation (EU) 2016/631.

(5) ‘Imbalance adjustment’ means an energy volume as defined in Article 2 (14) of Regulation (EU) 2017/2195.

(6) ‘Metered Data Administrator’ or MDA refers to Commission Implementing Regulation (EU 2023/1162 on Interoperability Requirements and non-discriminatory and transparent procedures for access to metering and consumption data.

(7) ‘Congestion issue’ means a situation when the electric current flows through a physical asset exceeds operational limits.

(8) ‘Voltage issue’ means a situation when voltage is above or below operational limits.

(9) ’DSO observability areas’ means the area constituted by the grid elements, grid users that might significantly affect existing or forecasted congestion issues or voltage issues in the DSO network. One DSO observability areas may cover parts of the grids from other systems operators, and overlap with other DSO observability areas linked to different issues.

(10)‘Grid user’ means generator, consumer or a storage installation connected to systems operators’ network.

(11)‘Connecting system operator’ means in this Network Code the DSO or TSO responsible for the grid to which a grid user or controllable unit is connected.

(12)‘Requesting system operator’ means the DSO or TSO requesting data for detecting, forecasting and/or solving an issue (congestion, voltage or balancing,) on its own grid to initiate actions to solve those issues.

(13)‘Procuring system operator’ means the DSO or TSO procuring balancing or congestion management and voltage control services.

(14)‘Affected system operator’ means any DSO or TSO significantly affected by congestion or voltage issues on the grid of another systems operator, or whose grid may provide solutions to these issues or that data on the grid or the grid users are necessary to forecast, detect or solve such issues.

(15)‘Intermediate system operator’ means a DSO with an electrical connection whose network is between the requesting or procuring system operator and affected system operator.

(16)‘Non-firm connection agreement means a connection agreement where the grid user has not been granted with a firm access to f capacity for parts or the entirety of the grid connection.

(17)'Flexibility Register' means an information system consisting of one or multiple and

diverse platforms operated by one or multiple national actors to support the registration and prequalification for the provision of balancing, congestion management and voltage control services.

(18)‘CU module’ means a functional building block of a ‘flexibility register’ that contains, manages and makes available data about controllable units.

(19)‘SP module’ means a functional building block of a ‘flexibility register’ that contains, manages and makes available data about SPs, SPGs, SPUs, and technical aggregators.

(20) ‘common front-door’ means an online application as the single access point per Member State for service providers for the registration and prequalification.

(21)‘Small controllable unit’ means a controllable unit connected below 1000 V with an installed capacity lower than a predefined threshold set at national level.

(22)‘Controllable unit’ or ‘CU’, means a single technical resource or an ensemble of technical resources behind the same single connection point, if these technical resources are commonly controlled.

(23)‘Technical resource’ means an individual power generating module of type A, B, or C as defined according to Regulation (EU) 2016/631 connected to the distribution system, individual energy storage unit, demand units according to Commission Regulation (EU) 2016/1388 or any other consumption device.

(24)‘Service provider’ or ‘SP’, means a market participant with a legal or contractual obligation to supply local or balancing services from at least one SPU or SPG.

(25)‘SP qualification’ means the process aiming at verifying the service provider’s capability to deliver a service fulfilling the criteria for market access.

(26)‘Full Delivery Time’ or ’FDT’, means the time period between the receipt of an activation request setting of a new delivery or set point value and the corresponding full delivery of the relevant product by the SPU or SPG.

(27)‘Re-configuration’ of an SPU or an SPG, means a change in the structure of the controllable units belonging to an SPU or an SPG; This may occur due to addition or removal of controllable units, and also due to change of attributes of single or multiple controllable units.

(28)‘Service providing unit’ or ‘SPU’, means a single controllable unit or an ensemble of controllable units connected to the same single connection point. SPU is defined by the service provider to provide balancing, congestion management and voltage control services.

(29)‘Service providing group’ or ‘SPG’, means an aggregation of controllable units connected to more than one connection point. SPG is defined by the service provider to provide balancing, congestion management and voltage control services.

(30)‘Grid prequalification’ means the process to verify by the connecting and intermediate

systems operators the compatibility of a CU, an SPU or an SPG with the safety and operational conditions of connecting and intermediate grids.

(31)‘Locational information’ means geographical or topological information about the location of the accounting point or connection point in the grid.

(32)‘Product prequalification’ means the process, prior to participation of a potential SPU or SPG in balancing or congestion management or voltage control market, to verify the compliance of a potential SPU or SPG with the technical and data exchange requirements for the provision of a balancing, congestion management or voltage control product. In the product prequalification the PPR may require the potential SPU or SPG to pass an activation test.

(33)‘Product verification’ means the process after the delivery of specific balancing, congestion management or voltage control services to verify the compliance of an SPU or SPG with the technical and data exchange requirements for the provision of a of specific balancing, congestion management or voltage control product.

(34) SP qualifying responsible’ means a party responsible for qualifying a service provider for the delivery of a balancing, congestion management and voltage control product procured by systems operators. There shall only be one SP qualifying responsible per service provider and each product.

(35)‘Product prequalifying responsible’ or “PPR” means a party responsible for qualifying a SPU or SPG for the delivery of a particular product to the balancing, congestion management or voltage control market.

(36)‘Online application’, means an electronic application that can be accessed and used over the internet through a web browser or dedicated application.

(37)‘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.

(38)‘Redispatch products’ means a congestion management product which can be activated after closure of the day-ahead market.

(39)‘Standardized device’ means a controllable unit that consists of a mass-produced technical unit. All technical units of that model fulfil the technical and communication requirements for the provision of a given product. This compliance is declared by the Original Equipment Manufacturer and confirmed by a ‘conformity assessment body’ accredited in accordance with the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 for a limited amount of devices;

(40)‘Table of equivalences’ or ‘ToEq’, means a mechanism defined in the national terms and conditions for service providers to simplify the participation of SPUs and SPGs in multiple markets. It provides a single national point of reference to store a common list of

‘comparable qualification attributes’ and defines how to make necessary data available to systems operators and market platform operators in the process of registering new SPUs or SPGs for the provision of particular products.

(41)‘Comparable qualification attribute’, means requirements that SPUs and SPGs need to fulfil to be eligible for the provision of a product by its PPR. A comparable qualification attribute is used as a criterion for qualification by two or more national products.

(42)‘Activation test' means a test whereby the requesting systems operators sends or simulates an activation signal to the service provider during normal operating conditions to ensure that in case of need the SPU or SPG can actually be activated, its capabilities meet the product requirements and the relevant data can be exchanged.

(43)‘Training test’ means an optional end-to-end test that can be requested by the service provider from the procuring systems operators or by the procuring systems operators from the service provider to ensure a correct end-to-end operation of the systems in place. Training tests can be performed either one-time, periodically or on occasion.

(44)‘Communication test’ means a test whereby SP qualifying responsible sends test signals to the service provider under test conditions in order to verify service provider’s compliance with the communication requirements.

(45)‘Standard balancing product’ means standard product as defined in Article 2 (28) of Regulation (EU) 2017/2195.

(46)‘Specific balancing product’ means specific product as defined in Article 2 (36) of Regulation (EU) 2017/2195.

(47)‘Rebound effect’ means the alteration of generation or /consumption of an activated technical resource before or after the time frame of its delivery due to the provision of a local or balancing service product.

(48)‘Compensation effect’ means the alteration of generation or /consumption of other non-activated technical resources in the time frame of a delivery of a local or balancing product, that compensate for the effects that the activation implies.

(49)‘Temporary qualification’ means the preliminary status granted to a SPU or SPG for provision of specific balancing or congestion management or voltage control services to allow their participation on the market until the product verification process is concluded.

(50)‘CU Operator’ means a party responsible for controlling a CU. This can either be the final customer itself or a third party.

(51)‘Technical aggregator’ means a third party, delegated by the final customer, who combines and controls multiple CUs and interacts with a SP.

Article 3
Scope of application

1. The requirements set out in this Regulation shall apply to transmission system operators ('TSOs'), distribution system operators ('DSOs') including closed distribution system operators, regulatory authorities and other designated entities, the Agency for the Cooperation of Energy Regulators ('the Agency'), the European Network of Transmission System Operators for Electricity ('ENTSO-E'), the European Distribution System Operators Entity ('EU DSO Entity'),third parties to whom responsibilities have been delegated or assigned and other market participants, including customers and resource providers for demand response including load, storage and distributed generation whether aggregated or not.
2. The requirements set out in this Regulation shall apply to the cooperation and coordination between transmission system operators and distribution system operators related to [to be updated with the final proposal], and between distribution system operators related to [to be updated with the final proposal], in case it is not already covered by the applicable Union legislation.

Article 4
Objectives and regulatory aspects

1. This Regulation aims at:
   (a) setting out clear and objective principles for the development of rules regarding demand response, including rules on aggregation, energy storage and demand curtailment.
2. Respecting 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.
3. Contributing to market integration, non-discrimination, effective competition and the efficient functioning of the market.
4. ensuring access of all resources to all electricity markets in accordance with the principles regarding its operation pursuant to Article 3 of the Regulation (EU) 2019/943 and allowing the use of all resources by the systems operators for operation and planning of the grid:
   (a) removing all undue barriers for the participation of these resources in all wholesale electricity markets (including those for procuring systems operators services), and establishing European principles for the assessment of the need for, the procurement of and the use of local systems operators services;
   (b) establishing clear and streamlined processes, roles and responsibilities on a European level, where relevant;
   (c) being in line with or complementing the relevant European legislation.

5. When applying the provisions of this Regulation, Member States, designated entities/regulatory authorities and systems operators shall:
   (a) apply the principles of proportionality and non-discrimination;
   (b) ensure transparency;
   (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
   (d) respect the tasks and responsibility assigned to the systems operators;
   (e) consult with relevant stakeholders and take account of potential impacts on their system; and
   (f) take into consideration the European standards and European technical specifications.

Article 5

National process to develop national terms and conditions

1. By three months following the entry into force of this Regulation, all systems operators shall jointly submit to the competent national regulatory authority a proposal for a national process to develop national terms and conditions referred to in Article 6 (Common national terms and conditions). This is without prejudice to the right of the Member State or NRAs to define the national process on how systems operators jointly develop national terms and conditions pursuant to this Regulation.
2. If the systems operators fail to jointly submit a proposal for the national process to develop national terms and conditions pursuant to paragraph 1, the competent national regulatory authority shall decide how to proceed based on the relevant national law in order to approve the national process pursuant to paragraph 1.
3. The competent national regulatory authority shall revise the proposal for a national process to develop national terms and conditions where necessary, after consulting all systems operators, and approve the national process referred to in paragraph 1 within one month of its submission.
4. The national process to develop national terms and conditions shall specify at least the following:
   (a) the roles and responsibilities for the development and the amendment of the proposals for national terms and conditions referred to in Article 6 (Common national terms and conditions) and Article 8 (Amendments to common national terms and conditions);
   (b) the process to follow if all systems operators do not reach an agreement or fail to jointly submit an initial or amended common proposal for national terms and conditions to the competent national regulatory authority in accordance with Article 6 (Common national terms and conditions) and Article 8 (Amendments to common national terms and conditions) within the deadlines set out in this Regulation;

(c) the process to involve the relevant stakeholders during the development of the common proposals for national terms and conditions referred to in Article 6 (Common national terms and conditions) and Article 8 (Amendments to common national terms and conditions);

(d) when no consensus can be reached, the voting rules that all systems operators shall follow to approve for joint submission the common proposals for national terms and conditions referred to in Article 6 (Common national terms and conditions) and Article 8 (Amendments to common national terms and conditions).

5. The national process to develop national terms and conditions shall also contain a procedure to amend the national process referred to in this Article.

Article 6

Common national terms and conditions

1. All systems operators shall develop common proposals for the national terms and conditions required by this Regulation and jointly submit them for approval to the competent national regulatory authority within the respective deadlines set out in this Regulation.
2. All systems operators shall closely cooperate and follow the national process to develop national terms and conditions pursuant to Article 5 (National process to develop national terms and conditions).

Article 7

Approval of common national terms and conditions

1. The competent national regulatory authority shall be responsible for approving the common national terms and conditions referred to in paragraph 2. Before approving the common national terms and conditions, the competent national regulatory authority shall revise the proposals where necessary, after consulting all systems operators, in order to ensure that they are in line with the purpose of this Regulation.
2. The proposals for the following common national terms and conditions and any amendments thereof shall be subject to approval by the competent national regulatory authority in each of the Member States, or where applicable, by another entity designated by the Member State:

(a) the terms and conditions for service providers in accordance with Article 38 (Principles for national implementation);

(b) the terms and conditions for the market design for congestion management and voltage control services in accordance with Article 48(4) (National terms and conditions for

market design for congestion management and voltage control services through active power); and

(c) the terms and conditions for TSO-DSO and DSO-DSO coordination in accordance with Article 69 (National implementation and condition for coordination).

3. The common proposals for national terms and conditions shall include a proposed timescale for their implementation and shall be accompanied by description of their expected impact on the objectives of this Regulation.
4. The competent national regulatory authority shall take decisions concerning the submitted national terms and conditions in accordance with paragraph 2 within six months following the receipt of the national terms and conditions. The period shall begin on the day following that on which the proposal was jointly submitted by all systems operators to the competent national regulatory authority in accordance with paragraph 2.

Article 8

Amendments to common national terms and conditions

1. In the event that the competent national regulatory authority requests an amendment to the common national terms and conditions submitted in accordance with Article 6(1) (Common national terms and conditions), all systems operators shall jointly submit a common proposal for amended terms and conditions within six months following the request from the competent national regulatory authority. The competent national regulatory authority shall decide on the amended national terms and conditions within two months following their submission.
2. All systems operators responsible for developing a joint proposal for common national terms and conditions may propose amendments to the competent national regulatory authority.
3. The proposals for amendment to the common national terms and conditions shall be submitted to consultation in accordance with the procedure set out in Article 13 (Public consultation for common national terms and conditions) and approved in accordance with Article 7 (Approval of common national terms and conditions).

Article 9

Union-wide terms and conditions or methodologies

1. ENTSO-E and EU DSO Entity shall develop the Union-wide terms and conditions or methodologies, in case the relevant monitoring report produced pursuant to Article 77 (Harmonisation – title X) identifies the need for harmonisation. ENTSO-E and EU DSO Entity shall submit them for approval to the Agency.
2. Without prejudice to paragraph 1, All TSOs may develop a Union-wide proposal for the

harmonisation of processes for prequalification of standard balancing products pursuant to Article 29.

3. ENTSO-E and EU DSO Entity responsible for developing proposals for Union-wide terms and conditions or methodologies pursuant to this Regulation shall closely cooperate. ENTSO-E and EU DSO Entity shall regularly inform the Agency about the progress of developing the Union-wide terms and conditions or methodologies pursuant to this Regulation.
4. If ENTSO-E and the EU DSO entity do not reach an agreement or fail to submit an initial or amended proposal for Union-wide terms and conditions or methodologies to the Agency in accordance with Article 10(2) (Approval of Union-wide terms and conditions or methodologies) within the deadlines set out in this Regulation, they shall provide to the Agency with the relevant drafts of the proposals for the Union-wide terms and conditions or methodologies and explain what has prevented an agreement. The Agency shall take the appropriate steps for the adoption of the required European terms and conditions or methodologies in accordance with Article 10(2) (Approval of Union-wide terms and conditions or methodologies), for instance by requesting amendments or revising and completing the drafts pursuant to this paragraph, including where no drafts have been submitted.

Article 10

Approval of Union-wide terms and conditions or methodologies

1. The Agency shall be responsible for approving the Union-wide terms and conditions or methodologies referred to in paragraphs 2. Before approving the Union-wide terms and conditions or methodologies, the Agency shall revise the proposals where necessary, after consulting ENTSO-E and EU DSO Entity, or for paragraph 2.c all TSOs, in order to ensure that they are in line with the purpose of this Regulation.
2. The proposals for the following Union-wide terms and conditions or methodologies and any amendments thereof shall be subject to approval by the Agency, when ENTSO-E and the EU DSO entity, or where applicable All TSOs, identify the need for harmonisation deem it of interest in the light of recommendations issued in monitoring reports:
   (a) the proposal for a harmonised aggregation models in accordance with Article 84 (Harmonisation);
   (b) the proposal for simplified product prequalification processes, including the identification of cases where product prequalification can be replaced by ex-post verification in accordance with Article 84 (Harmonisation);
   (c) the proposal for the harmonisation of processes for prequalification of standard balancing products in accordance with Article 29; and
   (d) the proposal for attributes of local products in accordance with Article 51.

3. The proposals for Union-wide terms and conditions or methodologies shall include a proposed timescale for their implementation and shall be accompanied by a description of their expected impact on the objectives of this Regulation.
4. The Agency shall take decisions concerning the submitted Union-wide terms and conditions or methodologies in accordance with paragraphs 2 within 6 months following the receipt of the Union-wide terms and conditions or methodologies. The period shall begin on the day following that on which the proposal was submitted to the Agency in accordance with paragraph 2.

Article 11

Amendments to Union-wide terms and conditions or methodologies

1. In the event that the Agency requests an amendment to approve the Union-wide terms and conditions or methodologies submitted in accordance with Article 10(2) (Approval of Union-wide terms and conditions or methodologies), ENTSO-E and EU DSO Entity shall submit a proposal for amended terms and conditions or methodologies for approval within 6 months following the request from the Agency. The Agency shall decide on the amended terms and conditions or methodologies within 2 months following their submission.
2. ENTSO-E and EU DSO Entity responsible for developing a proposal for Union-wide terms and conditions or methodologies may propose amendments to the Agency.
3. The proposals for amendment to the Union-wide terms and conditions or methodologies shall be submitted to consultation in accordance with the procedure set out in Article 14 (Public consultation for Union-wide terms and conditions or methodologies) and approved in accordance with Article 10 (Approval of Union-wide terms and conditions or methodologies).

Article 12

Publication of Union-wide terms and conditions or methodologies on the internet

1. ENTSO-E and EU DSO Entity responsible for developing proposals for Union-wide terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the Agency.

Article 13

Public consultation for common national terms and conditions

1. All systems operators responsible for jointly submitting proposals for the common national terms and conditions or their amendments in accordance with this Regulation

shall consult stakeholders, including the relevant authorities of the Member State, on the draft proposals for common national terms and conditions set out in this Regulation. The consultation shall last for a period of not less than one month.

2. The proposals for the common national terms and conditions or their amendments in accordance with this Regulation shall be published and submitted to consultation at least at Member State level.
3. All systems operators, responsible for developing the joint proposal for the common national terms and conditions shall duly consider the views of stakeholders resulting from the consultations prior to its submission for regulatory approval. In all cases, a justification for including or not the views resulting from the consultation shall be provided together with the submission of the proposal and published in a timely manner before, or simultaneously with the publication of the proposal for terms and conditions.

Article 14

Public consultation for Union-wide terms and conditions or methodologies

1. ENTSO-E and the EU DSO Entity responsible or where relevant All TSOs for submitting proposals for the Union-wide terms and conditions or methodologies or their amendments in accordance with this Regulation shall consult stakeholders, including the relevant authorities of each Member State, on the draft proposals for the Union-wide terms and conditions or methodologies listed in Article 10(2) (Approval of Union-wide terms and conditions or methodologies). The consultation shall last for a period of not less than 1 month.
2. The jointly submitted proposals for Union-wide terms and conditions or methodologies by ENTSO-E and the EU DSO Entity shall be published and submitted to public consultation at Union level.
3. ENTSO-E and the EU DSO Entity responsible for developing the proposal for the Union-wide terms and conditions or methodologies shall duly take into account the views of stakeholders resulting from the consultations prior to its submission for regulatory approval. In all cases, a sound justification for including or not including the views resulting from the consultation shall be provided together with the submission of the proposal and published in a timely manner before, or simultaneously with the publication of the proposal for the Union-wide terms and conditions or methodologies.

Article 15

Stakeholder involvement

1. The Agency, in close cooperation with EU DSO Entity and ENTSO-E, shall organise stakeholder involvement regarding secure system operation and other aspects of the amendments and implementation of this Regulation. Such involvement shall include regular meetings with stakeholders to identity problems and propose improvements notably related to the areas covered in this Regulation.

Article 16
Delegation and assignments of tasks

1. Transmission system operators and distribution system operators may delegate all or part of any tasks with which it is entrusted under this Regulation to one or more third parties or system operators in case they can carry out the respective function at least as effectively as the delegating DSO and/or TSO. The delegating system operator shall remain responsible for ensuring compliance with the obligations under this Regulation, including ensuring access to information necessary for monitoring by the relevant regulatory authorities in accordance with Article 59(1b) of Directive (EU) 2019/944.
2. Prior to the delegation, the delegated party shall demonstrate to the delegating system operator its ability to meet the tasks to be delegated.
3. In the event that all or part of any tasks specified in this Regulation are delegated to another party, the delegating system operator shall ensure that suitable confidentiality agreements in accordance with the confidentiality obligations of the delegating system operator have been put in place prior to the delegation. After delegating all or part of any tasks to another party, the delegating system operator must inform the relevant regulatory authority and publish this decision on the internet.
4. Without prejudice to the tasks entrusted to systems operators pursuant to Directive (EU) 2019/944, a Member State, or where applicable a relevant regulatory authority, may assign tasks or obligations entrusted to systems operators under this Regulation to one or more assigned parties, including a TSO or a DSO. Prior to the assignment, the party concerned shall demonstrate to the Member State, or where applicable the relevant regulatory authority, its ability to meet the task to be assigned.
5. In the event that tasks and obligations are assigned to a third party or a transmission or distribution system operator by a Member State, or a regulatory authority, references to systems operators in this Regulation shall be understood as referring to the delegated party. The relevant regulatory authority shall ensure regulatory oversight of the delegated party in respect of the assigned tasks and obligations.

Article 17
Recovery of Costs

1. The costs borne by the relevant transmission system operators and distribution system

operators and closed distribution system operators where relevant, subject to network tariff regulation and stemming from the obligations laid down in this Regulation shall be assessed by the relevant regulatory authorities. Costs assessed as reasonable, efficient and proportionate shall be recovered through network tariffs or other appropriate mechanisms.

2. If requested by the relevant regulatory authorities, the transmission system operators and distribution system operators referred to in paragraph 1 shall, within three months of the request, provide the information necessary to facilitate assessment of the costs incurred.

Article 18
Confidentiality Obligations

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.
2. The obligation of professional secrecy shall apply to any persons subject to the provisions of this Regulation.
3. Confidential information received by the persons or regulatory authorities referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, without prejudice to cases covered by national law, the other provisions of this Regulation or other relevant Union law.
4. Without prejudice to cases covered by national or Union law, regulatory authorities, bodies or persons who receive confidential information pursuant to this Regulation may use it only for the purpose of carrying out their duties under this Regulation.

TITLE II

GENERAL REQUIREMENTS FOR MARKET ACCESS

CHAPTER 1
Aggregation models

Article 19

Aggregation models

1. The aggregation models that are described below aim at defining how the participation of service providers is allowed, based on the configuration of the meter equipment and by the relationships established between the BRPs and market entities present at and behind any connection point.
2. Member States shall allow the aggregation models defined in the Articles 13(6) and 13(7) for each balancing or congestion management and voltage control services in the scope of this regulation, either one or the other or the combination of both.
3. The aggregation model will depend on whether the controllable unit has a measurement equipment [according to the MID/EMD].
4. For each model, the service provider can either take his balance responsibility or contractually delegate his balance responsibility to an entity that is not the BRP of the supplier, in line with the national terms and conditions, or the service provider can contractually delegate its balance responsibility to the supplier's BRP (according to Article 17(3) of Directive (EU) 2019/944 and Art. 5(1) of Regulation (EU) 2019/943).
5. Each technical resource assigned to a controllable unit shall be allocated to the same supplier, the same BRP and, where applicable, to the same balance group.
6. The aggregation model A prescribes all the following requirements:
   (d) the performance of the controllable units involved in providing the balancing, congestion management and voltage control services is assessed only through the metering equipment at the connection point;
   (e) the only metering equipment is the smart meter at the connection point, which is the only meter to perform measurements of the energy injected or withdrawn used by both the supplier(s) and by the service provider(s); and
   (f) there must only be one BRP responsible for the activations of any service provider for each ISP, even if there are multiple service providers behind a connection point.
7. The aggregation model B prescribes all the following requirements:
   (a) there is an additional metering equipment, being either a submeter or a dedicated measurement device (DMD, as considered in the EMDR), for the controllable units which are involved in providing the balancing, congestion management and voltage control services. The metering equipment of the controllable units measures the

withdrawals and/or the injections of the controllable units involved in the provision of such services; and

(b) the metering equipment at the connection point can be a conventional meter or smart meter;

8. The aggregation models A and B defined in paragraphs 6 and 7 are the basic models. For simplification purposes, a simple version is assumed but the possibility of multiple suppliers and service providers behind the connection point providing balance or congestion management and voltage control services from different controllable units is possible. When multiple suppliers are active at the connection point, the allocation of imbalance between different BRPs of multiple suppliers is performed following national rules. The configurations and the responsibilities shall remain as they are in the simple version.
9. The interactions and data exchange remain the same in case of several service providers as it is in the simple version. Direct interaction and data exchange between the service providers are not envisaged.[1]

Article 20

Energy allocation, balance responsibility in each aggregation model category and imbalance adjustments

1. When model A applies, the delivery of the service provider may be validated by comparing the baseline for the controllable units involved in the connection point and the measurements provided by the metering equipment installed at the connection point, after having applied one of the approaches described in Article 28(4) [Imbalance Settlement] for the consideration of the requested activation.
2. When model B applies:
   (a) the delivery of the service provider can be validated by the baseline for the controllable unit and by the metering equipment that provides relevant measurements for the energy injected or withdrawn used by the service provider. Any deviation from the delivery corresponding to the activation of the balancing, congestion management and voltage control services compared to the requested activation is assigned to the service provider's BRP;
   (b) when service provider takes his balance responsibility or contractually delegates his

[1] Explanatory note: *For the aggregation models it is under discussion whether referring to the "connection point" or generally to "accounting point" should be used. The problem here is that when we refer to metering equipment at the connection point it does not reflect all possible situations. For instance, this does not fit the situation of an apartment building where there is a connection point in front of the building and the meter equipment is inside of each apartment.*

balance responsibility to a third party that is not the BRP of the supplier, the allocated volume to the supplier's BRP is based on the measurements of the meter at the connection point. One of the approaches described in Article 28(4) [Imbalance Settlement] shall be applied to the BRP of the supplier for calculating the actual delivery and subsequent imbalance; and

(c) the fact of having two different metering points (measuring the connection point and the controllable unit) enables to unambiguously assign the imbalances to the relevant parties.

3. For both models A and B, when service provider contractually delegates his balance responsibility to the BRP of the supplier, the single BRP holds full responsibility of the allocated volume of the supplier and the activation of the service provider.
4. For both models A and B, when service provider takes his balance responsibility or contractually delegates his balance responsibility to a third party that is not the BRP of the supplier, the supplier's BRP holds full responsibility of the connection point when the controllable unit is not activated for balancing, congestion management and voltage control services. By contrast, when an activation from the service provider takes place, service is activated, the responsibility of any deviation from the meter data compared to the baseline at the metering point remains within the service provider's BRP.
5. For the correct calculation and allocation of the imbalance to each of the BRPs on each aggregation model, different options are envisaged depending on the type of service according to articles 28(4) and 28(5) [Imbalance settlement].
6. Systems operators shall not reward to the concerned service provider any energy exceeding the requested amount or violating grid limitations expressed by the connecting systems operators at the connection point. Common terms and conditions at national level may define penalties to service providers violating those grid limitations.

Article 21

Roles and responsibilities of market parties and systems operators related to Aggregation Models

1. The roles and responsibilities described in this Article are related to the Aggregation models. It prescribes the responsibilities of the market parties in terms of the imbalance adjustments and the settlement as defined in Articles 19 (aggregation models) and Article 22 (financial compensation). The roles and responsibilities in the market operation are covered in Title IV.
2. The roles specified in this regulation shall be assigned according to the national rules.
3. The responsibilities of the different roles may differ per type of service but they shall at least cover the responsibilities as described in paragraphs 4-11 of this Article.

4. In addition to their roles and responsibilities defined in Regulation (EU) 2019/943, the TSO and/or the DSO shall have the following responsibilities:
   (a) calculation, if applicable, and validation of the baseline of the CU/ SPU/SPG and also of the baseline of the connection point or of the controllable unit considered in the models, according to the principles established in article 25 [General principles for baselining methods];
   (b) collection and processing of the meter data which must be sent by the MDAs from all metering devices considered within the aggregation models as defined in the Articles 19(4) and 19(5) [Aggregation models];
   (c) validation of the activation for each service provider based on measurements, baselines as applicable and according to Article 25 [General principles for baselining methods];
   (d) settlement of the delivered service with the service provider; and
   (e) collaboration with each other for the calculation of the activated services.
5. Besides of above-mentioned tasks, TSOs shall have the following further responsibilities:
   (a) calculation of BRPs final imbalances, caused in the system, based on the information provided by the connecting systems operator and including the determination of the imbalance adjustment on the relevant BRP(s) and the correction of final position of relevant parties, when applicable based on Article 19 [Aggregation models]; and
   (b) settlement of the final imbalance with the relevant BRPs in line with Regulation (EU) 2017/2195.
6. The Metered Data Administrator (MDA) is responsible for all the tasks regulated in article 5 of Commission Implementing Regulation (EU) 2023/1162 concerning the data of the metering equipment as defined in the articles 19.6 [Aggregation models] and 19.7 [Aggregation models].
7. The meter data acquisition and the meter data correction shall be done within time periods specified by the common national terms and conditions. The process, including possible meter data corrections allowed in national processes, shall be finalized within 12 months following the activation period.
8. The service provider shall be responsible for the following:
   (a) Respect all grid limitations and temporary limits communicated by the connecting systems operators and intermediate systems operators;
   (b) If applicable according to national rules, the settlement the financial compensation for the activated energy of the service providers with the relevant suppliers of the activated controllable unit; and
   (c) Where applicable pay penalties for the deviation of the delivered services to the requesting systems operators in line with the common national terms and conditions.

9. The BRP of the service provider shall receive the relevant data values corresponding to those periods where the controllable units under its portfolio were providing a service. Depending on the common national terms and conditions, the supplier or the BRP associated to the supplier shall be responsible for the reception of the relevant data values of the metering point for all timeseries with exception of the specific data related to the activation.
10. The BRP associated to the supplier shall be responsible for bearing the imbalance caused by the assets in its portfolio, as defined in article 28 (Imbalance settlement).
11. The provider of the baseline, being systems operators, market parties or any third party entitled by the NRA shall be established by common national terms and conditions.

Article 22
Financial compensation

1. In order to limit the impact that balancing or congestion management and voltage control services activation might generate on market parties, a financial compensation may apply, only when the measurements that determine the load curve of the customer is not corrected.
2. Member States may require suppliers or services providers or active customers to pay financial compensation, if those market participants are directly affected by the balancing or congestion management and voltage control services activation.
3. Financial compensation can only be foreseen in national rules for those situations where the service provider is acting independently from the supplier.
4. The method for calculating the financial compensation shall be subject to the approval of the national regulatory authority and may foresee either a regulated price, a fixed price, a specific formula, or a bilateral agreement between involved market parties.
5. If national rules foresee a financial compensation, the following provisions shall apply:
   (a) when service provider provides a demand reduction, a compensation to the supplier should apply being the party that indeed previously purchased that energy, according to national rules, for supplying to its clients, unless negative prices would apply where the compensation is applied from the supplier to the service provider;
   (b) when service provider offers an increased demand, a compensation from the supplier to the service provider should apply, being the supplier the beneficiary of billing more energy to the customer, according to national rules, unless negative prices would apply where the compensation is applied from the service provide to the supplier.
6. Depending on the service, the systems operators may play the role of financial intermediary for invoicing the service provider or the supplier for the energy cleared and transferring the sums collected to concerned parties. The TSO or the DSO will remain financially neutral.

Article 23

Costs of suppliers/BRPs and benefits of the independent aggregators to other MP

1. The costs and benefits of the activation of the flexibility resource may be covered by the financial compensation defined in Article 22 (Financial compensation), and shall be determined by the relevant national authorities.
2. Costs for the supplier resulting directly from the activation of services by the Service Provider shall include the following:
   (a) Compensation due to non-consumed energy when consumption is reduced;
   (b) If applicable, also the negative and positive costs related to rebound effects.
3. Benefits brought by service provider activations of services to other market participants when the liquidity is increased shall include the following:
   (a) lower investments in generation facilities; and
   (b) lower wholesale market clearing (for both day ahead and intraday).

Article 24

Data exchange process for aggregation models

1. For the activation of a balancing, congestion management and voltage control services, measurement of the activation, verification of the balancing, congestion management and voltage control service and correct settlement, relevant parties involved in the process shall exchange the data in the process framed for each possible type of aggregation model. Depending on the market phase of the product delivery and the type of the product, exchange of data may require real-time communication.
2. Each aggregation model in its market preparation phase shall respect the following rules of the interaction among the relevant parties of aggregation model due to activation of balancing, congestion management and voltage control service:
   (a) when baseline forecasting or calculation takes place before the actual activation, service provider shall provide the entity which determines the baseline, with all the data needed for its calculation or forecasting. Alternatively, according to national rules, service provider may calculate the baseline based on the relevant methodology and provide it to systems operators for validation. In some cases, baseline may be determined ex-post of service delivery, for settlement purposes, therefore additional data may be required by the entity which determines the baseline and the systems operators, including from the MDA;
   (b) For some services, especially these related to real-time processes, submission of offers is based on predefined gate opening and gate closure times and may not necessarily be

based on an explicit request from systems operators; and

(c) To secure the operations of the connecting systems operators, all service activations, in all the aggregation models, are verified to secure the respect of the grid limitation expressed at the connection point by the connecting systems operators.

3. When submission of bids is based on gate opening and gate closure time, selection of the bids is executed. The relevant systems operators or local market operator shall notify the service provider(s) whose bids have been selected. Upon notification about the acceptance of the bid, service provider must be fully ready to deliver a service related to the selected bid.
4. If applicable the BRPs involved in the activation shall obtain the notification about the activation.
5. After the activation or when applicable during the activation of service, the Service Provider shall submit all necessary data to the requesting systems operators. MDA shall provide metering point data to relevant BRP(s) and systems operators in line with Regulation (EU) 2023/1162.

CHAPTER 2
Baseline calculation and measurement

Article 25
General principles for baselining methods

1. The systems operators shall define general requirements for validating the baselining methods. Depending on the aggregation models applied, the national market design, the type of service and the type of technical resource, different baselining methods can be nationally implemented and applied. Therefore, the DSO(s) and the TSO(s) shall make common proposals for the TCs, on the baseline methods and the processes for its definition, calculation and validation, in each Member State and for the congestion management and voltage control services. For balancing services, the TSO(s) shall define the procedure for validating baselining methods for all balancing service providers, in line with Regulation (EU) 2017/2195.
2. These national requirements referred to in paragraph 1, shall enable different baselining methods where the baseline is assumed as reference for checking or validating the delivery. To enable innovation of baselining, the service providers, the DSOs, the TSOs or a third party (e.g. a SP) shall have the right to propose new approaches for determining a baseline.
3. The national TCs referred to in paragraph 1 shall include at least the following:

(a) the roles and responsibilities of the stakeholders involved in the process of balancing, congestion management and voltage control services regarding the development and implementation of baselines;

(b) the approval process of an individual baselining method by the systems operators or NRAs which will also consider the costs and benefits of the implementation of the specific baselining method;

(c) the process of validating the baseline;

(d) the process of re-evaluating proposing and approving new methods for baselining;

(e) the minimum set of data necessary to deliver and validate the respective balancing, congestion management and voltage control services;

(f) an obligation to share necessary data with all relevant stakeholders for executing processes of the respective balancing, congestion management and voltage control services;

(g) a procedure to support new and innovative approaches to the methods; and

(h) the obligation for the relevant entity for publishing a list of accepted baseline methods and their applicability.

4. The baselining methods shall be based on the following principles:

(a) the methods shall comply with relevant European standards and regulations;

(b) the methods shall be recalculable and transparent for the stakeholders;

(c) the methods shall avoid gaming (e.g. manipulating the baseline instead of activation or deactivation of power);

(d) the methods may consider the impact of a delivery of a balancing, congestion management and voltage control service, outside the time of activation but within contracted times;

(e) the methods shall be objective and shall deliver reliable results; and

(f) the methods shall use, if possible, the existing available data.

5. By 5 years after the entering into force of this Regulation, ENTSO-E and the EU DSO entity shall make a common assessment which considers costs and benefits of whether further standardisation of the baselining methods brings benefits in achieving the aims of the Electricity Regulation. In this process ENTSO-E and the EU DSO entity shall consult the stakeholder and consider their feedback. Final report will be published by not more than one year after starting the assessment. Based on this report further steps shall be taken into account on national level if needed.

Article 26

Baselining method: specification and validation

1. If the data used for determining the activation of a service is based on measurement, the granularity of the data used shall be at least the imbalance settlement period. Services with shorter control cycles may require a meter able to provide a higher resolution for

determining the activation of a service.

2. The system operators have the right to require all data needed to secure a proper activation of services and to set requirements designed to avoid deception and gaming possibilities.
3. The data described in Article 25 [General principles for baselining methods] shall have at least the necessary granularity and accuracy as required by the service:
   (a) For collecting the data described in Article 25 [General principles for baselining methods] the system operators shall define the frequency for collecting data to fit the process defined by the system operators for the respective service. The frequency for collecting the data shall be at least the same as collecting metering data meter used for billing;
   (b) All data shall be compliant with relevant standards concerning data formats and protocols. These standards shall be reflected in the respective terms and conditions of the DSOs and TSOs for each Member State;
   (c) The baseline requirements developed pursuant in Article 25 [General principles for baselining methods] shall ensure a proper activation of products requested by the systems operators, considering compensation effects and, if applicable, also rebound effects. Further the requirements shall give the procuring systems operators the possibility for a monitoring of the delivery of services. Based on paragraphs 1 and 2 of this Article, the systems operators shall set up a prequalification process as further described in Title III.
4. The systems operators shall re-evaluate the requirements defined in Article 25 [General principles for baselining methods], at least every 5 years after the entry into force of this Regulation, to consider developments in technology, the operation of the requirements and future markets need.
5. The respective stakeholders shall have the right to receive relevant data (e.g. metering data from the DSO) to execute a validation of a services provided to systems operators.
6. The validation of the baselining methodology shall be performed per service by the procuring systems operators or NRAs.

CHAPTER 3
Settlement

Article 27
General principles for settlement of congestion and voltage services and settlement related data exchange

1. As regards the settlement of the congestion management and voltage control services, systems operators shall establish a procedure, if not already existing, at national level for:
   (a) a calculation of the activated and final delivered volume of congestion management

and voltage control services energy based on requested energy or metered energy and baseline;

(b) claiming the recalculation of the activated volume of congestion management and voltage control services energy; and

(c) ensuring that the constraints of the grid limitations and temporary limits are respected.

2. Each relevant systems operator shall calculate the activated volume of congestion management and voltage control services energy according to the procedures pursuant to paragraph 1(a) at least for:

(a) each imbalance settlement period;

(b) each direction, with a negative sign indicating relative energy withdrawal by the service provider, and a positive sign indicating relative energy injection by the service provider;

(c) each SPU; and

(d) each SPG, if relevant.

3. Where applicable, relevant systems operators shall settle all activated volumes of congestion management and voltage control services energy calculated pursuant to paragraph 2, with the concerned service providers.

4. Each relevant systems operator shall be entitled to receive the necessary measurement values, aggregated or not, by the MDA for the calculation of the activated volume of congestion management service energy, voltage control service energy and balancing service energy but at least:

(a) for each imbalance settlement period of the time of activation;

(b) in a standardised data exchange format; and

(c) when updated data is available.

5. Each relevant systems operator shall, based on the criteria established at national level, receive, by the provider of the baseline in line with article 21(11) [roles and responsibilities of market parties and systems operators related to Aggregation Models], or calculate the baseline necessary for the calculation of the activated volume of congestion management service energy, voltage control service energy and balancing service energy but at least:

(a) in a standardised data exchange format; and

(b) when updated data is available.

6. Each relevant systems operator shall be entitled to receive the necessary information to map the activated volume of systems operators service energy to individual controllable units which are part of the concerned SPUs or SPGs from the service provider.

7. Each relevant system operator shall, on request, receive the individual metering values for controllable units which are part of the concerned SPUs or SPGs necessary for the

validation of the activated volume of congestion management service energy, voltage control service energy and balancing service energy and to verify the respect of grid limitations, according to the procedures but at least:

(a) for each imbalance settlement period of the time of activation; and

(b) in a standardised data exchange format.

8. Each relevant systems operator shall, on request, receive the individual baseline of controllable units which are part of the concerned SPUs or SPGs necessary for the validation of the activated volume of congestion management service energy, voltage control service energy and balancing service energy but at least:

   (a) for each imbalance settlement period of the time of activation; and

   (b) in a standardised data exchange format.

9. Where applicable, each relevant systems operator shall be entitled to receive the necessary information regarding the grid limitation for the correct settlement.

10. Where applicable, relevant TSO shall be entitled to receive the necessary information to calculate and apply the imbalance adjustments to the concerned BRPs for each activated congestion management and voltage control services and for each activated balancing service in line with Regulation (EU) 2017/2195.

11. Each recipient of data pursuant to paragraphs 4 to 10 shall validate the processability of the received data. In case the data is not processable the recipient shall inform the sender without undue delay about the error in a meaningful way.

12. Each service provider shall ensure that the delivery of the congestion management and voltage control services is registered at the connection point(s).

Article 28
Imbalance settlement

1. Each Member State shall choose in their TC whether the imbalance resulting from service activations is settled or the correction of the imbalance in line with paragraph 4 is applied depending on the service.

2. With regards to imbalance resulting from the provision of a balancing or congestion management and voltage control service, the imbalance of any BRP not responsible for the allocated volumes of the controllable units or BRP of the Service Provider shall not be affected by the provision of a systems operator service.

3. In the case the correction of the imbalance is not applied, for both models A and B, when service provider takes his balance responsibility or contractually delegates his balance responsibility to a third party that is not the BRP of the supplier, the BRP of the Service Provider shall be responsible for the imbalance resulting from the deviation of allocated volumes resulting by the provision of a systems operators service and the baseline.

4. For services where the position of the concerned BRPs is not corrected ex ante in the wholesale market, different options are envisaged for the correct calculation and allocation of the imbalance to the concerned BRPs, depending on the type of service:
   (a) where applicable, the responsible party assigned in the national terms and conditions shall correct the allocated volume of the concerned balance responsible parties for each activated congestion management and voltage control services through an agreed mechanism; and
   (b) where applicable, relevant TSO shall calculate an imbalance adjustment to be applied to the concerned balance responsible parties for each activated congestion management and voltage control services and for each activated balancing service. When the concerned balance responsible party is the BRP of the service provider in line with Article 19(6-7) [Aggregation models], the imbalance adjustment shall be based on the requested value of the service. When the concerned balance responsible party is the BRP of the supplier in line with Article 19(6-7) [Aggregation models], the imbalance adjustment shall be based on the measured or calculated value of the provision of service, except when, for both models A and B, service provider contractually delegates his balance responsibility to the BRP of the supplier, where the imbalance adjustment shall be based on the requested value of the service.
5. Only one method for the correct calculation and allocation of the imbalance in line with paragraph 3 shall be applied for each combination of concerned BRP as outlined in Article 19 (6-7) (Aggregation models) and service.

CHAPTER4
Minimum bid granularity for standard balancing products

Article 29

Roadmap for the implementation of balancing bids granularity

1. By twelve months after entry into force of this Regulation, all TSOs shall develop a proposal for a roadmap for the implementation allowing to set the bid granularity of all standard balancing products at one decimal starting from the minimum bid size of standard balancing products as defined in the Implementation Frameworks or methodologies pursuant to Regulation (EU) 2017/2195.
2. The implementation deadline of the requirement set in paragraph 2 shall be at least 2 years after the entry into force of this Regulation.
3. A national regulatory authority may, at the request of a TSO or at its own initiative, grant the relevant TSOs a derogation from the provision set out in paragraph 2 for all or some standard balancing products if the implementation is judged inefficient based on next condition:

(a) unfavorable cost-benefit analysis of the reduction of bid granularity; and

(b) negative impact to the implementation of Regulation (EU) 2017/2195.

4. Where the relevant national regulatory authority grants a derogation, it shall specify its duration. The derogation may be granted for a period maximum of two years, after which the TSO(s) of the concerned MS(s) shall reassess the implementation of the provision set out in paragraph 2. As a result of that reassessment, TSO(s) may ask to extend the derogation period.[2]

[2] Explanatory note: *ENTSO-E considers the integration of smaller resources in balancing processes is more efficient and effective through aggregation. There is an understanding that lowering minimum bid below 1 MW size has very low added value in terms of improving market access requirements and may create an unnecessary burdensome process, while at the same time making it more difficult the monitoring of service performance. On the other hand, TSOs understand that allowing higher granularity would make a difference for aggregators and facilitate the update of their portfolios with new participating resources joining them.*

TITLE III

PREQUALIFICATION REQUIREMENTS AND PROCESSES

CHAPTER 5
General requirements

Article 30
Qualification for Service Providers

1. The service provider shall successfully pass a service provider qualification with the requirements laid down in paragraphs 2, 3, 4 and 5 before being granted access to markets for balancing, congestion management or voltage control services. In case the service provider is already qualified for one or more markets for balancing, congestion management or voltage control services and applies for the participation in another market for balancing, congestion management or voltage control services, a simplified qualification process shall be foreseen further specified in the national TCMs for service providers.
2. The service provider shall have an adequate settlement account and shall fulfil further financial prerequisites as defined in the national TCMs for service providers.
3. The service provider shall ensure that the requirements regarding the ICT systems, measurements and communication for the product the service provider intends to provide are fulfilled, enabling:
   (a) reception and processing of signals necessary for the delivery of the service;
   (b) monitoring in real-time the execution of the service, if applicable for the product;
   (c) exchange of market data and technical data; and
   (d) reception and processing of measurements.
4. The service provider qualifying responsible shall have the right to request a communication test from the service provider.
5. The service provider shall provide, upon request of the service provider qualifying responsible, the following descriptions of:
   (a) how the service provider intends to technically provide the service;
   (b) the communication systems and approach to be deployed;
   (c) the expected availability of the proposed service;
   (d) how the compensation effect will be managed; and
   (e) how the rebound effect will be managed.
6. In case the ICT system of the service provider is subject to a significant update or the ICT system's provider is significantly changed with potential effect on the reliability of its service provision, the service provider qualifying responsible shall have the right to re-perform the communications test. The service provider shall inform the service provider

qualifying responsible about these changes without undue delay and no later than 5 business days prior to the significant update or provider change.

7. The service provider shall register all relevant data in the SP module as specified in Annex 2. The service provider qualifying responsible with the support of the connecting systems operators shall verify the provided data without undue delay. The service provider shall update the relevant data in the SP module in the case of changes without undue delay.
8. Systems operators shall have the right to revoke the 'qualification status' of a service provider for reasons of non-compliance with the requirements set out in this Article or due to repeated inadequate service provision further described in the national terms and conditions for service providers.
9. If costs are generated related to the qualification process, the cost allocation may be ruled within the national terms and conditions for service providers.

Article 31

Pre-Conditions and Applicability of the product prequalification and product verification processes

1. Before a service provider applies to provide a service, all the involved SPUs and SPGs shall be successfully registered in the respective SP module.
2. The service provider shall successfully pass either a product prequalification process or a product verification process at the SPU or SPG level, depending on the product the service provider requests to provide as defined by paragraph 3 and 4.
3. The service provider applying to provide standard balancing products or FCR shall be subject to the product prequalification process at SPU or SPG level, further described in Chapter 6 (Product Prequalification).
4. The service provider applying to provide specific balancing products, congestion management or voltage control products shall undergo a product verification at the SPU or SPG level, further described in Chapter 7 (Product Verification). In addition, for SPUs or SPGs fulfilling the following technical criteria, the PPR or any procuring systems operators shall have the right to require a product prequalification on SPU or SPG level:
   (a) for specific balancing products, where an SPU or an SPG does exceed a prequalified power threshold specified in the national terms and conditions of service providers, or where:
      i. the expected contribution for guaranteeing the system balance is particularly relevant;
      ii. an inadequate activation could compromise the continuity of supply that shall not be covered with other balancing products.

(b) for congestion management and voltage control services, where for the specific SPU or SPG:

i. the expected frequency of activation is particularly relevant;

ii. the expected contribution to resolve a congestion or voltage constraint is particularly relevant;

iii. an inadequate activation could lead to a significant change in the load-flow or trigger congestions in the grid of the affected systems operators;

iv. an inadequate activation could lead to a significant change in voltage or endanger voltage stability in the grid of the affected systems operators.

Article 32

Criteria for reassessment of product prequalification and product verification

1. The PPR shall have the right to reassess and potentially require a repetition of the product prequalification or product verification, following the steps indicated in article 31 (Pre-Conditions and Applicability of the product prequalification and product verification processes), of an SPU or an SPG, when one of the following criteria applies:
   (a) if the prequalified or verified capacity of the SPU or the SPG changes by more than 10% or 3 MW compared to the previously prequalified or verified SPU or the SPG due to additions or removal of controllable units. If the PPR requires a repetition of the product prequalification or product verification, the service provider shall be entitled to participate in the market with the previous qualified set-up of the SPU or SPG;
   (b) if the prequalified or verified capacity of the SPU or the SPG changes by more than 10% or 3 MW compared to the previously prequalified or verified SPU or the SPG due to significant modernisation or updates of controllable units. The service provider shall provide on request by the PPR evidence of the modernizations or updates to the PPR;
   (c) If the service provider or – if applicable -the delegated third party pursuant to the implementation of Article 40(6) of Regulation (EU) 2017/1485 intends to fundamentally change its communication system or technology; and
   (d) in the event of errors in the provision of the service, experienced by a procuring systems operators.
2. The service provider shall inform the PPR without undue delay when one of the criteria set out in paragraph 1 is met.
3. The service provider shall have the option to re-use the product prequalification and product verification results, not older than 5 years old, of any of the unchanged controllable units and combine this with the product prequalification results of the new or changed controllable unit, if the product prequalification or product verification is

repeated.

4. For the evaluation of the criteria pursuant to paragraph 1, standardised devices and small CUs shall be considered.
5. If the PPR requires a repetition of the product prequalification or product verification for a SPU or SPG containing standardised device or small CUs, the simplification criteria from Article 34 (Requirements for product prequalification), paragraph 9 shall apply.
6. Service providers shall be entitled before the date of the switching of the controllable unit pursuant to Article 33 (Switching of Controllable Units), to prove by an activation test of the planned re-configurated SPU or SPG that the fulfilment of the product requirements is still given.
7. The prequalification of SPUs or SPGs shall be re-assessed by the PPR at least once every 5 years. The service provider shall apply for a new product prequalification if this is required via the reassessment results.

Article 33
Switching of Controllable Units

1. Final customers shall have the right to choose the service provider and technical aggregator for their controllable units.
2. The operator of a flexibility register platform with a CU module shall ensure that at any single point in time, a controllable unit shall only be assigned to one service provider and can change the service provider according to the process for switching the service provider for a controllable unit further described in the national terms and for service providers.
3. The new service provider shall be responsible to make the final customer aware of the terms and conditions of the switch of the SP. The operator of a flexibility register platform with a CU module shall provide necessary digital procedures for the final customer to approve or reject the switch.
4. The operator of a flexibility register platform with a CU module shall enable the technical switch of CUs between service providers within a maximum of three weeks from the date of in which the request of the new service providers is submitted by the final customer or the new service provider in accordance with Article 12 of Directive (EU) 2019/944. Three years after entry into force of this Regulation, the operator of a flexibility register platform with a CU module shall enable the technical switch of CUs between SPs within a maximum of 1 business day.
5. The service provider shall have the right under the terms of the contract with the final customer to change, add or remove controllable units to, from or between the SPUs and SPGs under its control at any time within the same LFC area without negatively affecting market processes and the delivery of the service. The criteria for reassessment of product prequalification and product verification as described in Article 32 (Criteria for

reassessment of product prequalification and product verification) shall be respected.

6. To facilitate the switching of controllable units between service providers, CU Operators shall offer data exchange with the service provider based on a European standard (e.g. IEC-62746), or CU Operators shall provide at registration of the controllable unit a full and accessible technical documentation in the CU module for how these the controllable units can be controlled and monitored by any other service provider after switching.
7. To avoid lock-ins of final customers to technical aggregators, mass-produced devices need to follow a European standard (e.g., IEC-62747) for controllability of CUs. In addition, technical aggregators must provide at registration technical documentation about how the controllable unit operation can be switched to either direct final customer control or to another technical aggregator within three weeks, easily and without improper impediments. Three years after entry into force of this act, the operator of a flexibility register platform with a CU module shall ensure technical switching processes for technical aggregators within 1 business day.
8. CUs that are already in operation at the entry into force of this regulation may be used without changes implied by paragraphs 5, 6 and 7 until 3 years after entry into force of this act.
9. The competent NRA shall foresee means to monitor and assess the completion of the documentation and standardisation provisions in paragraph 8 and 9.

CHAPTER 6
Product Prequalification

Article 34
Requirements for product prequalification

1. When multiple systems operators are potential buyers of the same product for the same SPU or SPG under prequalification, the systems operators shall agree on one PPR.
2. The service provider shall ensure that its potential SPUs or potential SPGs meet the technical requirements of the service for which prequalification is conducted and is ready to provide required data.
3. The PPR shall evaluate whether the potential SPU or SPG is ready to provide the service, comparing the technical characteristics of the potential SPU or potential SPG with the technical requirements of the declared product. In the case of a negative result of this evaluation, the potential service provider shall decide how to improve the potential SPU or potential SPG to fulfil the requirements.
4. The PPR may perform an activation test to confirm that the potential service provider can deliver the requested product. The performance of such activation tests is conditioned by the fulfilment of the requirements set out in the national terms and conditions for service providers specified on the basis of Article 45(6)(c) (Principles for national

implementation) and is justified in cases where high reliability of service delivery is required due to the need to ensure system security or secure network operation.

5. Costs related to the activation of energy due to activation tests and possible required counteractions shall not be compensated unless required otherwise by national terms and conditions for service providers.
6. If the PPR requires an activation test pursuant to paragraph 4 for a potential SPG or SPU consisting only of small CUs or standardized devices as controllable units, the activation test shall include a limited number of controllable units of that SPU or SPG under prequalification, further specified in the national TCs for SPs.
7. The evaluation referred to in paragraph 3 shall be simplified where potential SPU or potential SPG exclusively consist of controllable units being identical to other prequalified already under other SPU or SPG for the product declared by the potential service provider. The conditions of simplification shall be specified in the national terms and conditions for service providers on the basis of Article 45(6)(a) (Principles for national implementation).
8. The PPR shall consider the prequalification process as approved when all evaluations and tests, if required, are successfully completed. The prequalification status of the SPU or SPG in the SP module shall be updated accordingly by the PPR without undue delay and no later than 5 working days.

Article 35

Provisions for prequalification for standard and specific balancing products

1. For any product prequalification processes related to balancing products the TSO shall be the PPR.
2. By 12 months after entry into force of this regulation, each TSO shall adapt the prequalification process for standard balancing products to the requirements set out in this regulation and shall make publicly available the details of the prequalification process for each standard balancing product.
3. When implementing the prequalification process for standard balancing products, a potential balancing service provider shall consider the technical minimum requirements set out in Article 158 and Article 161 of Commission Regulation (EU) 2017/1485.
4. The potential balancing service provider shall carry out the prequalification process for standard balancing products in accordance with the rules and time frames established pursuant to Article 159 and Article 162 of Commission Regulation (EU) 2017/1485.
5. When implementing the prequalification process for frequency containment reserve products, a potential balancing service provider shall take into account the technical minimum requirements set out in Article 154 of Commission Regulation (EU) 2017/1485.
6. The potential balancing service provider shall carry out the prequalification process for

frequency containment reserve product in accordance with the rules and time frames established pursuant to Article 155 of Commission Regulation (EU) 2017/1485.

7. When the TSO develops a specific balancing product in accordance with Article 26 of Commission Regulation (EU) 2017/2195 and when the criteria of Article 31 (4) (a) (Pre-Conditions and Applicability of the product prequalification and product verification processes) are met and as a result this product requires prequalification, the TSO shall simultaneously develop the prequalification process of the specific balancing product pursuant to the requirements set out in this act and will make publicly available the details of the prequalification process.
8. When implementing the prequalification process for specific balancing products as a result of meeting the criteria set out in Article 31 (4) (a) (Pre-Conditions and Applicability of the product prequalification and product verification processes), the TSO shall take into account the requirements set out in Article 31 (Pre-Conditions and Applicability of the product prequalification and product verification processes), 32 (Criteria for reassessment of product prequalification and product verification), 33 (Switching of Controllable Units) and 34(Requirements for product prequalification) and the requirements set out in the national terms and conditions for service providers.
9. ENTSO-E shall provide a description of the prequalification process for each standard balancing product in each EU member in the European report on integration of balancing markets pursuant to Article 59 of Regulation (EU) 2017/ 2195. The report shall describe the main steps, lead times as well as information and technical requirements. The report shall identify the variants of potential improvements towards harmonization of these prequalification processes in the light of the objectives of this Regulation.
10. If the European report on integration of balancing markets as referred in paragraph 1 recommends improvements in the harmonization of the prequalification process for standard balancing products, all TSOs shall, within 12 months of the adoption of the report, develop a common proposal for the harmonization of the prequalification process and submit it for approval to the Agency.

Article 36

The congestion management and voltage control services product prequalification process

1. When the criteria of Article 31 (4) (b) (Pre-Conditions and Applicability of the product prequalification and product verification processes) are met and as a result product requires prequalification, the potential service provider shall submit a formal application to the PPR together with the required information of potential SPU or SPG. Within no more than 4 weeks from receipt of the application, the PPR shall confirm whether the application is complete. Where the PPR considers that the application is incomplete, the potential service provider shall submit the additional required information within at most

2 weeks from receipt of the request for additional information. Where the potential service provider does not supply the requested information within that deadline, the application shall be deemed withdrawn.

2. Within no more than 3 months from confirmation that the application is complete, the PPR shall evaluate the information provided and decide whether the potential SPU or SPG meet the criteria for a given congestion management and voltage control services. The PPR shall notify its decision to the potential service provider.

CHAPTER 7
Product Verification

Article 37
Product Verification Requirements

1. Product verification shall be the default process for congestion management and voltage control services and specific balancing product pursuant to Article 31 (Pre-Conditions and Applicability of the product prequalification and product verification processes) paragraph 4.
2. A potential SPU or SPG for specific balancing products and congestion management and voltage control services shall have a temporary qualification for the preliminary participation on the respective market, until the verification criteria is applied by the PPR.
3. The national terms and conditions for service providers shall clarify which systems operators will act as the PPR to conduct the product verification process pursuant to Article 38 (Product Verification Process).

Article 38
Product Verification Process

1. The PPR shall perform product verification and may request relevant data from service providers for evaluating a compliant delivery of the services during market participation further specified in national terms and conditions for service providers.
2. The PPR shall verify, based on the behaviour of the relevant SPU or SPG during the requested activation timeframes, product requirements and the requested activation, whether this SPU or SPG proved full compliance with product requirement and the verification criteria defined in national terms and conditions for service providers.
3. Systems operators shall define in national terms and conditions for service providers the verification criteria for each product based upon the minimum percentage of service deliveries or upon minimum percentage of quantity delivered from all activations or upon minimum percentage of the quantity delivered from a single activation or by combination of these criteria or based on some other criteria.
4. Where the number of service deliveries do not achieve the minimum defined in national

terms and conditions for service providers, systems operators shall have the right to require an ex-post activation test for verification purposes.

5. In case of a negative result of this verification:
   (a) the PPR shall decide if the temporary qualification status for this SPU or SPG is revoked and if a product prequalification is necessary; and
   (b) the relevant service provider may be subject to a penalty, if so provided for in the national terms and conditions for service providers.
6. In case of a positive result of this verification, the PPR shall grant regular qualification status for the respective SPU or SPG.

CHAPTER 8
Requirements for flexibility master data exchange for prequalification

Article 39
Principles for Governance and Interoperability

1. Systems operators in each Member State shall describe in terms and conditions referred to in Article 45(8) (Principles for national implementation), functional requirements for CU and SP modules and a process(es) for nomination of the operator(s) for flexibility register platform(s).
2. The process(es) for nomination of operator(s) of flexibility register platform(s) shall take duly into account proposals of each connecting systems operator and include an NRA assessment ensuring that operator(s) of flexibility register platform(s) meet the requirements of this Regulation.
3. To avoid vendor and operator lock-ins, and to facilitate competition and innovation, data stored by flexibility register platforms that are not operated by systems operators shall be portable to other flexibility register platforms, particularly in cases where Member States or system operators decide to migrate towards new flexibility register platforms. Therefore, operators of such flexibility register platforms shall periodically demonstrate to the national regulatory authorities:
   (a) that all data stored in the CU module and the SP module can be exported to a common European or national standard in a structured, machine-readable and well-documented format; and
   (b) the existence of a well-defined procedure to export that data and suspend operation at a pre-defined point in time to facilitate potential migrations to other platforms.
4. For flexibility register platforms operated by systems operators, NRAs may decide to apply the provisions of paragraph 3 after a positive cost-benefit-analysis.
5. Interoperability of national sets of procedures for prequalification, flexibility registers and related data exchange shall be addressed under the European energy service

interoperability approach defined by the Implementing Regulation mandated by Article 24 of Directive (EU) 2019/944.

6. Member States shall ensure that flexibility register platforms that are already in place at the time of the publishing of this Regulation update these platforms to follow the provisions stated in this Regulation, or are replaced by new flexibility register platforms no later than 2 years after the approval of the national terms and conditions for service providers pursuant to Article 7 (Approval of common national terms and conditions).

Article 40

Principles and requirements for data exchange in the prequalification phase

1. (The) operator(s) of flexibility register platform(s) shall establish a 'common front-door' at a Member State level to make it easy for SPs to register and administer their information about SPGs and SPUs, and CUs assigned to them.
2. If a flexibility register in a Member State consists of multiple flexibility register platforms, operators of flexibility register platform(s) shall closely cooperate to facilitate the proper interoperation of all flexibility register platform(s) in a Member State.
3. EU DSO Entity and ENTSO-E shall co-operate with European standardisation organisations to adopt, maintain and further develop a European standard for data exchange with flexibility register platforms. All flexibility register platforms shall offer interfaces following that standard for data exchange with service providers, systems operators, market platforms and other relevant actors.

Article 41

Principles and requirements for operators of flexibility register platforms

1. Operators of flexibility register platforms shall make the administered data available to entitled parties, including final customers, in a non-discriminatory manner through online-platforms, which shall include up-to-date as well as historical data.
2. Operators of flexibility register platforms with a SP module shall:
   (a) administrate and make available to entitled actors at least the data stated in Annex 2, Table 2.2, Table 2.3, Table 2.4, Table 3.1 and Table 3.2 in a non-discriminatory manner through online platforms;
   (b) grant SPs access to the data of the SPU or SPG assigned to them, at any point in time easily, online and without undue delay on their request. Future and historical states of that data shall be made available;
   (c) inform all actors affected by the procedures pursuant to Article 42 (SP module procedures) without undue delay;
   (d) provide an online application as well as an application programming interface for the

interaction with entitled actors, particularly to integrate and automate all procedures described in Article 42 (SP module procedures); and

(e) make available data and changes of relevant data on the service provider or its SPUs and SPGs to entitled parties, online and in a structured, machine-readable format, immediately and without undue delay.

3. Operators of flexibility register platforms with a CU module shall:

(a) administrate and make available to entitled actors at least the data stated in Annex 2, Table 2.1. in a non-discriminatory manner through online platforms;

(b) provide an online application as well as an application programming interface for the interaction with entitled actors, particularly to integrate and automate all procedures described in Article 43 (CU module procedures);

(c) inform all actors affected by the procedures pursuant to Article 43 (CU module procedures) without undue delay;

(d) make available data and changes of relevant data related to the controllable unit to entitled parties, online and in a structured, machine-readable format;

(e) make available to Service providers means to provide and manage data regarding controllable units on behalf of the final customers in their portfolio. Service providers shall be responsible for the correctness and accuracy of that data;

(f) provide an easily usable way for entitled service providers on behalf of final customers to register, de-register and update information on the CUs;

(g) provide final customers access to all managed data about their CUs with audit information on data changes through an online application and shall inform final customers about changes to that data; and

(h) make available data and changes to data on their controllable units to third parties, online and in a structured, machine-readable format, on request and with the consent of final customers.

4. Optionally, operators of flexibility register platforms with a CU modules may provide direct interaction of the final customer or the service provider with the operator of the flexibility register platform with a CU module.

Article 42

SP module procedures

1. Operators of flexibility register platforms with a SP module shall provide for service providers at least the following procedures:

(a) a ‘registration procedure’, allowing the provisioning of their data and receive an EU-wide unique identification following the strategy provisioned in Article 84(11)

(Harmonisation);

(b) an ‘update procedure’ for service providers to change their data;

(c) a ‘suspension procedure’ to suspend the qualification of a service provider; and

(d) a ‘de-registration procedure’, allowing for service providers to remove their data from the SP module.

2. Operators of flexibility register platforms with a SP module shall provide for SPUs and SPGs at least the following procedures:

(a) a ‘registration procedure’, allowing for service providers to submit data about a SPU or SPG;

(b) an ‘update procedure’ for service providers to change the data about their SPU or SPG;

(c) if applicable, grid prequalification for grid qualifying responsibles to set limits on operation for CUs, SPUs and SPGs due to grid constraints, as provisioned in Article 75 (Grid Prequalification);

(d) a ‘suspension procedure’ for entitled parties to suspend all market activities of an SPU or SPG;

(e) a ‘de-registration procedure’, allowing for service providers to remove data about their SPU or SPG from the SP module; and

(f) an ‘assignment procedure' to change the belonging of controllable units assigned to the service provider to other or additional existing SPUs or SPGs of the same service provider. In this procedure, operators of flexibility register platforms with a SP module shall validate – if applicable, in co-operation with operators of flexibility register platforms with a CU module - that all controllable units in an SPU belong to the same connection point.

Article 43

CU module procedures

1. Operators of flexibility register platforms with a CU module shall provide for controllable units at least:

(a) a ‘registration procedure’, allowing service providers to submit data about a controllable unit on behalf and with the consent of final customers;

(b) an ‘update procedure’ allowing service providers to update data about a controllable unit on behalf and with the consent of final customers;

(c) if applicable, A ‘grid prequalification procedure’, allowing for the grid prequalifying party, in this case the connecting systems operators, to validate the information provided in the registration or update procedure and allow the utilization of a

controllable unit for balancing and local systems operators services under the provided characteristics. Information about the status of grid prequalification shall be made available to entitled actors;

(d) a ‘switching procedure’ allowing for service providers or final customers to request the assignment of existing controllable units to their portfolio on behalf of and with the consent of the final customer;

(e) a ‘revocation procedure’, to allow for the final customer to revoke the entitlement for the access of a service provider to the controllable unit. If the entitlement of a final` customer to a connection point is invalidated, the ‘revocation procedure’ shall automatically and implicitly be enacted as defined in Article 75 (Grid Prequalification);

(f) a ‘termination procedure’, that terminates assignment of a controllable unit to a service provider on request by the service provider. National terms and for service providers may foresee an obligation for service providers to pre-notify final customers in such a case;

(g) a ‘suspension procedure’ when grid prequalification is terminated or revoked, or if a controllable unit is suspended, all affected parties shall be notified without undue delay; and

(h) a ‘de-registration procedure’, allowing for service providers to remove data about controllable units not assigned to any SPU or SPG on behalf of and with the consent of the final customer; After the de-registration of a controllable unit from a CU module, platform operators shall retain data until no other business processes (e.g., validation, settlement) refer to it.

Article 44

Principles and requirements for data management for product prequalification and product verification

1. The PPR shall validate that each controllable unit in the SPU or SPG under validation is grid prequalified in line with principles pursuant to Article 75 (Grid prequalification). This shall be done regardless of whether a product prequalification or product verification is required for the product.
2. PPRs shall establish procedures in cooperation with operators of flexibility register platforms to ensure that when a controllable unit loses its grid prequalification, it is also removed from its SPU or SPG immediately and without undue delay.
3. PPRs shall in cooperation with operators of flexibility register platforms with a SP module provide and update all ‘product requirement’ characteristics as listed in Annex 3 – Table 3.1for all SPUs and SPGs that they qualify, and that all other PPRs can access that information.

CHAPTER 9
National harmonisation of market access processes

Article 45
Principles for national implementation

1. The national terms and conditions for service providers shall aim at simplifying the access to systems operators services and avoiding duplications when prequalification processes are technically justified.
2. Systems operators may develop the national terms and conditions for service providers in each Member State separately as terms and conditions for balancing service providers referred to in Article 18 (1) of Regulation (EU) 2017/2195 and terms and conditions for local service providers.
3. Systems operators within each Member State shall define in the national terms and conditions for service providers the step-wise implementation, requirements and the processes for service provider qualification pursuant to Article 30 (Qualification for service providers), product prequalification pursuant to Chapter 6 (Product Prequalification) and product verification pursuant to Chapter 7 (Product Verification) for different products. The process of implementation shall be defined and have a timeline including national standardisation of IT and communication requirements.
4. The national terms and conditions for service providers shall include:
   (a) requirements and procedures for flexibility registers, systems operators coordination, market platform operators and other relevant actors to cooperate with service providers and procuring systems operators to perform end-to-end training tests;
   (b) if applicable, conditions and provisions for the remuneration of costs for 'training tests' shall be define;
   (c) threshold for the capacity under which a controllable unit shall be regarded as a small controllable unit;
   (d) definition of the ToEq as set in Article 46 (Table of Equivalence);
   (e) an allocation of costs for activations test as part of the product prequalification or product verification;
   (f) A process for assigning, switching or removing the service provider for a controllable unit as set in Article 33 (Switching of Controllable Units) paragraph 2; and
   (g) A process for assigning, switching or removing the technical aggregator for a controllable unit as set in Article 33 (Switching of Controllable Units) paragraph 7.
5. Regarding service provider qualification process the national terms and conditions for service providers shall include:
   (a) requirements for service providers regarding market participation as set in Article 30

(Qualification for Service Providers); and

(b) further specifications of the systems operators right to suspend or revoke the 'qualification status' of a service provider for reasons of incompliance or repeated inadequate service provision set out in Article 30 (Qualification for Service Providers), paragraph 8.

6. Regarding product prequalification process the national terms and conditions for service providers shall include:

(a) a specification to simplify the product prequalification process for SPUs and SPGs that exclusively consist of small controllable units or standardised devices as controllable units including the definition of the limited number of controllable units that shall participate in activation tests pursuant to Article 34 paragraph 6 (Requirements for product prequalification);

(b) a specification to simplify the evaluation pursuant to Article 34 paragraph 7 (Requirements for product prequalification) for SPGs or SPUs that exclusively consists of controllable units being identical to other prequalified already under other SPUs or SPGs for the product declared by the potential service provider;

(c) the conditions under which systems operators shall have the right to conduct an activation test if it is needed to ensure the system security and grid operation;

(d) a procedures to allow for service providers to apply for prequalification for different products in parallel;

(e) thresholds for the conditions where a PPR shall request a product prequalification for an SPU or SPG applying for a specific balancing product as set in Article 31(Pre-Conditions and Applicability of the product prequalification and product verification processes) (4) (a);

(f) Specify the requirements for successful activation test in the case where the PPR performs an activation test to confirm that the potential balancing or local service provider can deliver the requested product; and

(g) Detailed product prequalification requirements for specific balancing products, if necessary.

7. Regarding product verification process the national terms and conditions for service providers shall include:

(a) verification criteria for each product pursuant to Article 38 (Product Verification Process) paragraph 3;

(b) the condition to perform an ex-post activation test for verification pursuant to Article 32 (Criteria for reassessment of product prequalification and product verification);

(c) the condition to impose penalties pursuant to Article 38 (Product Verification Process) paragraph 5 (b), if the verification criteria is violated; and

(d) the assignment of the PPR.

8. Regarding data exchange the national terms and conditions for service providers shall include:
   (a) a roles and responsibility in terms of the flexibility register platform operator(s), including responsibility for SP module(s) and CU module(s);
   (b) a specification of all procedures for data exchange in relation to the flexibility register, product verification, product prequalification and switching of service providers;
   (c) procedure for the service providers to inform all affected parties without undue delay about the reduction the available capacity of its SPU or SPG of as set in Article 32 (Criteria for reassessment of product prequalification and product verification); and
   (d) Conditions for the service provider's obligation to pre-notify the final customer in case of termination of controllable unit's assignment to an service provider as set down in Article 42 (SP module procedures).
9. Regarding local products the national terms and conditions for service providers shall include:
   (a) list and specification of standardized congestion management and voltage control products;
   (b) Process for the definition of additional attributes for congestion management products as set out in Chapter 10 Article 58 (List of attributes);
   (c) Specific provisions for standardised congestion management products in the case where central dispatch model is used as set in Article 59 (Requirements for the definition of congestion management products); and
   (d) responsibility to enter, keep up-to-date and make publicly available on a freely accessible national single point of reference, the product requirements listed in Annex 1 – Table 1.1, and the products ToEq information listed in Annex 3 – Table 3.2 to appropriate national actors.
10. Regarding the involvement of the final customers, the national terms and conditions for service providers shall include:
   (a) a specification of the options for the final customer to interact with the CU module;
   (b) a specification of the options for the final customer's permissions to the SP module;
   (c) a procedure to create by the final customer controllable units and register them in CU module;
   (d) a procedure for changing the attributes of the controllable unit by the final customer referred to in Article 43 (CU Model procedures) and reflecting this change in the CU module and if applicable, informing the cooperating SPs about the change;
   (e) a procedure for initiating cooperation by the final customer using flexibility register data with the selected service provider in the scope of providing a balancing or congestion management or voltage control product;

(f) a procedure for initiating cooperation by service provider using flexibility register data with selected final customer in the scope of providing a balancing or congestion management or voltage control product; and

(g) a procedure for terminating cooperation between final customer and service provider.

Article 46
Table of Equivalences

1. The national terms and conditions for service providers shall define a ToEq and related unified procedures to facilitate the simplification of product prequalification for SPUs and SPGs participating in multiple markets.
2. ENTSO-E and EU DSO Entity shall develop a common European ToEq based on national ToEq's to foster the harmonization of the products between MSs. ENTSO-E and EU DSO Entity shall develop a process to maintain, amend and publish a European list of comparable product attributes in line with the European harmonisation provisioned in Article 84 (Harmonization). As part of the European ToEq, EU DSO Entity and ENTSO-E shall identify comparable European 'product requirements' based on at least the comparable product attributes listed in Annex 1 - Table 1.1. If necessary and contributing to the simplification of product prequalification processes of SPUs and SPGs, systems operators may consider supporting further national comparable 'product requirements'.
3. If applicable, all PPRs in a Member State shall make available the 'product requirements characteristics' referred to in Annex 3 Table 3.1 that they verify to the SP module without undue delay after the performance of a prequalification process.
4. The operator of a flexibility register platform with a SP module shall make these characteristics, and changes to them, available to all entitled PPRs in due time and without undue delays.
5. PPRs shall consult the operator of a flexibility register platform with a SP module for already available information on a SPU or a SPG in the flexibility register as referred to in Annex 3 – Table 3.1, before requiring service providers to perform additional activation tests or prequalification steps.
6. PPRs prequalifying SPUs or SPGs with already at least partly existing 'product requirements characteristics', shall have the possibility to extend or overwrite the characteristics referred to in Annex 3 – Table 3.1 with the more recent or additional information.
7. PPRs shall be responsible for the correctness of the information about SPUs and SPGs referred to in Annex 3 – Table 3.1 provided to flexibility registries.
8. Flexibility registers shall keep and maintain log information on accesses and changes to this information.

TITLE IV

MARKET DESIGN FOR CONGESTION MANAGEMENT AND VOLTAGE CONTROL SERVICES

Article 47

Solutions for congestion and voltage issues through active power

1. The procurement of services for congestion management and voltage control within a bidding zone shall be in accordance with transparent, non-discriminatory and market-based procedures unless the conditions in Article 32(1) and Article 40(5) of Directive (EU) 2019/944 apply.
2. Each systems operators shall choose the most effective and economically efficient option or combination of options of the different tools at its disposal, which can include grid investments, non-firm connection agreements, grid-technical measures, including non-costly remedial actions, and market-based procurement and activation of local systems operators services or other tools to maintain active energy flows or voltage within operational limits[3]. The principles to choose should be transparent and coordinated.
3. Non-market based redispatching may be applied within a bidding zone and/or network area, if an exception set forth in Article 13(3) of Regulation 2019/943 applies.
4. The relevant national regulatory authority may adopt non market-based solutions pursuant to Article 32(1) and Article 40(5) of Directive (EU) 2019/944 when its assessment has concluded that the procurement of market-based services is not economically efficient or where such procurement would lead to severe market distortions or to higher congestion. The assessment shall take into account that conclusions may differ for different parts of the grid within a Member State, for different products (especially distinguishing short term and long-term products).

Article 48

National terms and conditions for market design for congestion management and voltage control services through active power

1. Systems operators in each Member States shall commonly assess and propose if existing

[3] Explanatory note: *Operational limits may include physical congestions within a bidding zone and/or network area, limits set at connection point between systems operators network, and may include limits due to aging of equipment or other operational criteria. Operational limits may include limits between systems operators, limits set in contractual agreements between systems operators on the use of the network capacity, physical limits, range for importing or exporting reactive power or others.*

national regulation and national terms and conditions for markets for congestion management and voltage control are compliant to this Regulation and if they are effective and efficient to solve congestion and voltage issues, commonly assessing what development and update is needed in the national terms and conditions.

2. By latest 6 months after the entry into force of this Regulation systems operators shall submit the common assessment referred to in §1 for approval to their respective national regulatory authority.
3. By latest 3 months after receiving this assessment, the national regulatory authority will, in line with the applicable national process, adopt or if applicable submit to the relevant Member State authorities a proposal for updating relevant regulation.
4. Additionally, systems operators shall commonly propose national terms and conditions for the development of intrazonal congestion management and voltage control services through active power, taking into account the result of the assessment in paragraph 1 where applicable, and submit this to the national regulatory authority pursuant to article 5 (National process to develop national terms and conditions).
5. The national terms and conditions referred to in paragraph 1 shall comply with the following principles and requirements:
   (a) principles for procurement and pricing of congestion management and voltage control services, in line with Article 49 (Principles for procurement and pricing for market-based congestion management and voltage control services);
   (b) requirements for publication of information in line with Article 52 (Publication of information);
   (c) principles for the coordination of and interoperability between local and day-ahead, intraday and balancing markets, in line with Article 53 (Principles for the coordination and interoperability between local and day-ahead, intraday and balancing markets);
   (d) requirements to procuring system operators, in line with Article 54 (Requirements for procuring system operators); and
   (e) requirements applicable to operators of local markets, in line with Articles 55 (General requirements to local market operators) to 57 (Tasks local market operators).
6. When preparing the national terms and conditions referred to in paragraph 4, DSOs and TSOs shall consider the national context at least including:
   (a) whether long-term markets, day-ahead, intraday or balancing markets apply unit or portfolio bidding;
   (b) whether central or self-dispatch is applied in existing markets;
   (c) specific roles and responsibilities assigned;
   (d) the maturity and expected volumes of congestion management and voltage control services;

(e) the potential depth and potential liquidity of local markets, and the local availability of flexible resources;

(f) the number and structure of DSOs;

(g) the different grid characteristics and needs between the distribution and the transmission grid, and how they are defined;

(h) the size and characteristics of the connected grid users and potential CU/SPU/SPG connected to each grid;

(i) the nationally standardised products for congestion management and voltage control services;

(j) the existing ancillary service and congestion management market structure or organisation; and

(k) the potential impact on other wholesale market prices from anticipation of pricing in subsequent, parallel or coordinated, linked or labelled local markets for congestion management and voltage control services.

7. In the national terms and conditions pursuant to this article at least the following roles and processes related to this Regulation and in line with this Regulation should be described:

(a) The procuring system operators;

(b) The requesting system operators;

(c) The connecting system operators;

(d) The affected system operators;

(e) The operators of local markets;

(f) The coordination with operators of long-term, day-ahead, intraday and balancing markets;

(g) The operators of flex-register(s);

(h) The service providers as relevant; and

(i) The balance responsible party as relevant.

8. National terms and conditions shall in particular clarify how the selection and activation of bids and the verification/validation of the service provision is done.

9. National terms and conditions shall describe whether sequential, simultaneous or other market processes is used for congestion management and voltage control services procurement and between local markets and day-ahead, intraday and balancing markets on Member State level while ensuring time for coordination of power system balance and congestion management and voltage issue management.

10. National terms and conditions shall describe whether and under which conditions bids can be combined and forwarded to other markets. If combined and/or forwarded bids are

allowed at least the following should be described:

(a) Requirements for combining and/or forwarding bids to other markets;

(b) How locational information is included;

(c) How forwarded/combined bids are priced and how service providers are compensated;

(d) Measures to avoid that the same bid is selected twice in separate markets or by different systems operators;

(e) How forwarded/combined bids are handled with respect to verification/validation of service provision.

11. The main elements of the procurement process shall be submitted to national regulatory authority as part of the national terms and conditions according to this article prior to starting the procurement process.

12. The costs for procuring congestion management and voltage control services shall be allocated and recovered in line with the applicable national legislation.[4]

13. Systems operators are entitled to present a common proposal for market-based congestion management mechanisms to the national regulatory authority that complements the existing non –market-based mechanisms in line with paragraph 4. This proposal shall describe interactions with existing non-market-based mechanisms.

14. Systems operators are entitled to bring proposals to relevant national regulatory authority for handling grid issues in certain parts of the grid with non-market based solutions in accordance with conditions specified in Directive (EU) 2019/944, when this is advised when the procurement of market-based services is not economically efficient or where such procurement would lead to severe market distortions or to higher congestion, or when the market options have proven not to solve the need.

Article 49

Principles for procurement and pricing for market-based congestion management and voltage control services

1. Procurement rules detailed in national terms and conditions referred to in Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power), shall follow these principles:

(a) enable participation of any resources (production, consumption or storages);

[4] Explanatory note: *Different regulatory regimes coexist in Europe regarding the treatment of congestion management costs. While in some jurisdictions these are considered as OPEX for transmission and distribution system operators, in others these are considered as electricity system costs. In both cases setting efficiency incentives to moderate OPEX and CAPEX costs is possible and advisable solution, out of scope of this NC. Recovery of OPEX costs from congestion management or CAPEX from network investments has a strong link with setting customer tariffs and an impact on the territorial organization of prices within a Member State. National authorities are responsible to make the decision on how these costs are allocated and recovered from customers and on the role of transmission and distribution system operators in translating locational price signals to customers.*

(b) be non-discriminatory and technology neutral;

(c) guarantee protection of confidential data as well as transparency of the procurement in line with Article 52 (Publication of information);

(d) enable matching in a timely manner the volumes and products characteristics requested by the procuring system operator with the offer of products and services;

(e) be aligned with the applicable European processes and nationally defined rules as far as these national rules fulfill the criteria and requirements of this Regulation and follow the principles for coordination and interoperability pursuant to Article 53 [Principles for the coordination and interoperability between local and day-ahead, intraday and balancing markets]; and

(f) respect the applicable coordination process, described pursuant to Title VII (TSO-DSO coordination and DSO-DSO coordination).

2. The activation of a product for different purposes or the same purpose in different grids shall be allowed if technically feasible and shall only be remunerated once.

3. The pricing mechanism for market-based procurement of congestion management and voltage control services shall:

(a) ensure fairness and competitiveness;

(b) ensure economic and efficient activation;

(c) provide incentives for long-term market development; and

(d) provide equal treatment of service providers and ensure technological neutrality.

4. The pricing mechanism for market-based procurement of congestion management and voltage control services shall allow for:

(a) variations depending on different products, voltage level of the issue[1], different time horizons, different depth/liquidity of markets, and specific national and/or local features and purpose of the activation;

(b) predetermined prices for availability and/or activation of resources contracted in advance subject to an assessment of economic efficiency; and

(c) energy-only payments and/or capacity payments, subject to assessment of economic efficiency.

5. Procurement of products can be contracted in advance in organised markets or tender procedures. Tender procedures shall follow principles in Article 50 (Principles for procuring by tender procedure).

6. When congestion management and voltage control services are activated following the procurement contracted in advance, it shall allow for the submission of bids which are not submitted based on a contract for capacity and these resources should be treated on equal terms with precontracted resources.

7. When congestion management and voltage control services are procured in long-term,

day-ahead, intraday or balancing markets, the pricing mechanism may be different from the general pricing mechanism in the day-ahead, intraday or balancing markets whilst still being in accordance with the rationales and criteria in this Article.

Article 50
Principles for procuring by tender procedure

1. In the case of the procurement for congestion management and voltage control services that is determined by a tender procedure, systems operators shall follow the additional following principles:
   (a) If the tendering procedure allows service provider to make offers based on their intent to fulfill their portfolio with new CU/SPU/SPG not yet registered or prequalified at the time of offer pursuant to Title III and Article 75 (Grid prequalification), systems operators are entitle to require service providers to document that they in a timely manner will be able to register the necessary CU/SPU/SPG and have them prequalified, as a condition for systems operators to consider their offer. Required documentation will be described in the essential referred in §3;
   (b) The tender process may enable participation of assets not yet connected provided that 1) they will be connected, registered or prequalified in a timely manner consistent with the procurement process and service providers document connection, registration and prequalification in a timely manner and 2) the following principles are met:
      i. The connection procedure for such new asset shall ensure that such applicant does not have preferential information to any other service provider engaged in the procurement process in particular in terms of technical or economical information as per article 52 (Publication of information);
      ii. If the national terms and conditions enable the participation of assets not yet connected, all specific conditions must be regulated at national level including its relation to general connection procedures, whether or not such connection may have priority under certain conditions; and
      iii. The connection agreement of such new assets shall ensure that they neither aggravate nor create congestion or voltage issues, during and outside of its provision of services.
   (c) The tender essential elements shall be consistent with national terms and conditions. The selection criteria and the results of the tender shall be transparent and technology-neutral. The best techno-economic option shall be selected for each particular case, including when comparing to the systems operators alternative solution to solve the congestion or voltage issue.
2. Further criteria to be fulfilled by the tendering procedure shall be defined at national level;
3. The national terms and conditions may provide that the systems operators are not obliged

to commit themselves to accept the offered services under certain conditions, defined and published in the essential elements, if they can find other solutions or combination of solutions to solve their congestion or voltage issues in line with article 47 (Solutions for congestion and voltage issues through active power).

Article 51
Principles for applying non-firm connection agreements

1. If non-firm connection agreements are allowed in a member state, the relevant national authorities shall define at national level the framework for non-firm connection agreements" including their applicability, scope, limitations and conditions for compensation if any.
2. National terms and conditions or other applicable national regulation shall ensure that non-firm connection agreements do not lead to market-distortion by providing rules following these principles:
   (a) When non-firm connection agreements are established, transmission and distribution system operators shall not unduly limit the possibility for grid users to provide services in other markets;
   (b) When non-firm connection agreements are allowed, conditions for systems operators to choose non-firm connection agreements shall be specified;
   (c) When non-firm connection agreements and markets for congestion management and voltage control servicesco-exist, the interaction between the two options shall be specified;
   (d) When non-firm connection poses a risk to the resource's ability to deliver a congestion management, voltage control or balancing service, the participation in that market may be limited for the relevant time-frame[25]; and
   (e) When the provision of services by units affected by non-firm connection agreements is allowed at national level, the connecting and intermediate system operator shall be able to communicate restrictions by setting limits during applicable grid prequalification process or following short term procedure defined in Title VII article 74 (Short-term procedures to account for DSO limits).

Article 52
Publication of information

[5] Explanatory note: *Non firm connection agreements might contain conditions that limit the connection of a resources for certain time periods or in specific situations. This could be certain times of year (i.e. summer/winter, night/day or specific months) or when specific conditions applies (i.e. grid limitations, high/low temperatures or peak hours). When these situations occur the resource might not be able to participate in other markets, depending on the conditions in the agreement. In any other situations/time frames the resource should be able to participate in other relevant markets.*

1. Based on the expected congestion or voltage control issues on their grid, systems operators shall publish, at least as frequently as network development plans, the relevant and necessary information for proper functioning of the market, indicative but non-binding information for the expected need for congestion management and voltage control services.
2. When it is necessary for the market and does not lead to market distortion[36], the systems operators shall publish:
   (a) indicative but non-binding information on the different product needs, whether it is up- or downregulation, the foreseen utilization patterns, expected volumes or other information, with sufficient granularity and detailed per different time horizons; and
   (b) locational information for the participation of assets to provide the needed services, and where relevant other information such as the impact factor.
3. All published information shall be made available in an accessible and transparent manner.
4. In order to operate a transparent market the systems operators shall publish:
   (a) the characteristics of products for congestion management and voltage control services;
   (b) bid selection criteria and pricing mechanisms for local markets; and
   (c) economic conditions to provide the needed services if applicable.
5. In particular, when capacity for congestion management and voltage control services is procured, transmission and distribution system operators shall publish the relevant information for the participation, including the required volumes, the selection criteria and the relevant details of the contracting process.
6. Local market operator shall publish clear information on the market sessions, including the number and structure of market sessions, gate closure times and bid selection criteria, as well as information on the products traded under the platform(s) they operate.
7. Systems operators or, if applicable pursuant to requirements in national terms and conditions pursuant to article 48 [National terms and conditions for market design for congestion management and voltage control services through active power], local market operator(s), shall publish, no later than three months, at least next market results of congestion management and voltage control services, promoting transparency while respecting commercial secrecy and confidentiality of information and preventing market distortion and in compliance with national rules and applicable national regulatory

6 Explanatory note: *In some markets, publication of the needs exante is part of the market process. In other markets the service providers provide bids by default and/or on a mandatory basis, and the publication of required volumes towards the market is not needed. Since it is information sensitive from point of view of market distortion, it is important to pay attention to measures to diminish market distortion and gaming risk in case of ex-ante publication of foreseen congested network.*

authority decision(s):

(a) Aggregated and anonymized information on results of market-based procured capacity for congestion management and voltage control services, at least for:

i. Procured capacity (MW and time period);

ii. Resulting price (currency/MW/time period).

(b) When applicable, results on market-based congestion management and voltage control services activation, as applicable:

i. Total kW x time activation (MWh) per direction and time period;

ii. Cost for activated kW x time per direction (currency/MWh/ time period).

8. The relevant regulatory national authority may require system operators publish the information referred to in this Article on a single platform on national level.

Article 53

Principles for the coordination and interoperability between local and day-ahead, intraday and balancing markets

1. When defining the national terms and conditions for the market design for congestion management and voltage control services the following principles shall be respected for the coordination of and interoperability between local markets and long-term, day ahead and intraday as well as balancing markets:

(a) interoperability and portability[57] in line with paragraph 2(f) between local markets and long-term, day-ahead, intraday and balancing markets at least on national level;

(b) the interoperability between markets shall aim at cost efficient access to all markets for both service providers and systems operators[6];

(c) coherence in the interaction across different markets and different time frames including the scheduling and imbalance settlement process; and

(d) inclusion of all activations made by systems operators for congestion management and voltage control services, when applicable, in the imbalance adjustment of the respective balance responsible parties.

2. Markets for congestion management and voltage control services may allow different granularity and minimum bid size than day-ahead, intraday and balancing markets.

3. Coordination between congestion management and voltage control services shall not distort day-ahead, intraday or balancing markets and shall respect the rules of their functioning established on the basis of applicable legislation.

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7 Explanatory note on the Term “portability”: *In the context of market interaction, paragraph (66) of the Framework Guideline requires "interoperability and portability between local and other wholesale markets at least on national level (…). We understand the term "portability" to refer to "portability" of products between markets, not the "portability" between technical solutions, and thus the option/ability to translate bids made on one market to bids in another market in a standardized way.*

4. The national terms and conditions for the market design for congestion management and voltage control services shall:
   (a) Specify whether and under which conditions bids offered in day-ahead, intraday and balancing markets can be used for congestion management. Even if this is an option it shall be possible to organise additional local markets;
   (b) Describe how markets for congestion management and voltage control services shall interact with day-ahead, intraday and balancing markets;
   (c) Minimize the possibilities for withholding of capacities, gaming and other market abuse;
   (d) Ensure that the design provides efficient solutions to deal with needs for congestion management and voltage control services;
   (e) Allow bids that are not procured in one market to be offered to another market, given they are qualified for that market. To achieve this the service provider may offer their services in another market themselves including by means of an intermediary or a market operator may forward the bids, given that the concerned service provider has given its consent. Aggregation of bids for forwarding to meet the requirements of other markets shall be possible; and
   (f) Avoid that the same bid is selected twice, in particular where the same SPU/SPG is active in different markets, and the responsibilities for guaranteeing that.[7]

5. The terms and conditions referred to in article 6 [Common national terms and conditions] shall include provisions aiming at avoiding too many different market places if this leads to inefficiencies.

Article 54
Requirements for procuring system operators

1. All procuring systems operators must publish the terms and conditions of procurement and pricing mechanism of market based congestion management and voltage control services.
2. All procuring systems operators shall follow the next principles:
   (a) The procuring systems operators shall act in a non-discriminatory manner when procuring and using congestion management or voltage control products;
   (b) No exchange of preferential confidential and sensitive information with affiliated companies and other service providers; and
   (c) The relation between the procuring systems operators and service providers shall be transparent to all market participants.
3. The procuring systems operators shall, according to this Regulation and the national terms and conditions, provide all information on requested services according Article 52

(Publication of information) to market participants.

4. The procuring system operators shall identify bids, SPUs, parts of SPGs or volumes that can solve the congestion or voltage issue in line with requirements in Article 72 (Principles for forecasting, identifying congestion and voltage control issues through active power) and 73 (Principles for solving congestion and voltage control issues).
5. The procuring system operators shall fulfill the tasks pursuant to national terms and conditions regarding validation and activation of the provided congestion management and voltage control services.

Article 55
General requirements to local market operators

1. Operators of local markets shall comply with the following requirements:
   (a) it owns or has contracted adequate resources (financial resources, necessary information technology, adequate technical infrastructure, and operational procedures) to fulfil the local market operator nationally assigned tasks;
   (b) it shall have an adequate level of business separation from market participants, including service providers, and keep separate accounts for local market operator tasks and other market activities;
   (c) it shall treat market participants in a non-discriminatory way, and have appropriate transparency and confidentiality agreements in place with service providers and the relevant systems operators, including a proper access to information regarding the local market operator tasks in accordance with article 52 (Publication of information); and
   (d) it shall be neutral towards all service providers and technologies.

Article 56
Local market operator(s)

1. Systems operators shall describe in terms and conditions referred to in Article 48(4), functional requirements of local market operators and a process for nomination of local market operators.
2. The process for nomination of local market operators shall take duly into account proposals of each procuring system operator and include national regulatory authority's assessment ensuring that the local market operators meet the general requirements described in Article 55 of this Regulation and in national terms and conditions referred to in Article 48(4).
3. Local market operator(s) can be a. the TSO(s) or DSO(s) which procure the services, either alone or together; b. another TSO or DSO, either alone or together; c. a third party.

4. The relevant national regulatory authority shall ensure that nomination is revoked if the local market operator fails to maintain compliance with the criteria in Article 55 (General requirements to local market operators) and in national terms and conditions referred to in Article 48(4) (National terms and conditions for market design for congestion management and voltage control services through active power).

Article 57
Tasks of local market operators

1. The operators of markets for congestion management and voltage control services shall provide, maintain and operate the IT solutions that:
   (a) processes bids, provides a merit order list of bids as applicable, facilitates the matching of the markets for congestion management and voltage control services in line with the procurement and pricing rules as described in national terms and conditions pursuant to Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power); and
   (b) communicates with the service providers and the systems operators for;
      i. the offers from service providers and if applicable the demands from systems operators;
      ii. as applicable, the information necessary for systems operators to perform their tasks in line with Title VII [TSO-DSO COORDINATION and DSO-DSO COORDINATION], including reception and processing of temporary limits affecting service providers offers in line with Article 74 (Short-term procedures to account for DSO limits);
      iii. the information to service providers and systems operators, on the market results;
      iv. communicate as applicable relevant information to other affected market roles; and
      v. gathers and exchanges the information for the settlement of the markets of congestion management and voltage control services as described in national terms and conditions pursuant to article 48 (National terms and conditions for market design for congestion management and voltage control services through active power).
2. The platforms referred to in paragraph 1 shall integrate or communicate as applicable with the flexibility registry(ies).
3. The following non-exhaustive list of tasks may also be delegated by systems operators, when applicable, to a local market operator[8]:

[8] Explanatory note: *Local market operators should operate and maintain the platform for communicating with service providers and transmission and distribution system operators, providing the clearing of bids, and if applicable the settlement of bids. The validation of the service may not be done by local market operators, but*

(a) inform potential service providers about the local market;

(b) selection of bids;

(c) validation of delivered services;

(d) communication of relevant information from DSOs and TSOs; and

(e) settlement tasks in line with national terms and conditions pursuant to Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power).

4. Operators of local markets shall coordinate with other markets in line with national terms and conditions pursuant to Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power). In the case a local market operator is allowed to combine bids to suit the needs of DSOs or TSOs, or to forward bids to other markets combined or not, the local market operator shall perform this task while ensuring the necessary transparency and following the pricing mechanism and settlement principles defined in the national terms and conditions referred to in Article 48(National terms and conditions for market design for congestion management and voltage control services through active power), and subject to the service providers consent. The local market operator is prohibited from performing any arbitrage in the bid selection or acting as market participant in the market in which they act as the local market operator.

5. Local market operators shall publish market results, avoiding market distortion and respecting commercially sensitive information in line with Article 52 (Publication of information) and with requirements in terms and conditions pursuant to Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power).

CHAPTER 10

Congestion management products

Article 58
List of attributes

1. When systems operators define nationally standardized congestion management products, they shall use attributes from the common list of attributes. The common list of attributes

eventually by the procuring system operator. The selection of bids may be done as a result of a matching process, run by the local market operator, considering only the bids of the units identified as purposeful for solving the grid issue by the procuring system operator. The activation of the units may be done by procuring system operator, local market operator or the service provider.

shall be commonly developed and published by ENTSO-E and EU DSO Entity within 6 months after entry into force of this Regulation following the process to develop EU TCMs in line with Article 9 (Union-wide terms and conditions or methodologies).

2. ENTSO-E and EU DSO Entity shall review the list of attributes at least once every two years based on additional attributes in national terms and conditions, valid standardised products and additional systems operators proposals and prepare a new common list of product attributes. The new list shall be published in accordance with the previous paragraph. If ENTSO-E and EU DSO Entity cannot agree on a new list of attributes, ACER decides on this, based on an initiative by ENTSO-E or EU DSO Entity.
3. The NRA may allow systems operators to use additional attributes for a maximum period of two years, what should be defined in national terms and conditions.
4. The list of attributes referred to this article shall not apply to the integrated scheduling process in Member States implementing a central dispatching model.

Article 59

Requirements for the definition of congestion management products

1. Systems operators per Member State shall standardise, where appropriate, market-based congestion management products at national level included in national terms and conditions pursuant to Title IV Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power).
2. Different provisions may apply to standardised market-based congestion management products under paragraph 1 for self-dispatching models and central dispatching models in accordance with article 2(17) and 2(18) of Regulation (EU) 2017/2195.
3. Systems operators in a Member State shall establish the requirements for congestion management products in a transparent matter. The requirements shall ensure the effective and non-discriminatory participation of system users and market parties for providing congestion management services.
4. Congestion management products shall correspond with the specific needs of systems operators, considering:
   (a) Dependency to network topology;
   (b) Size and predictability of the congestion;
   (c) Expected local market liquidity to enable market-based congestion management;
   (d) The type of congestion management products; and
   (e) The list of attributes as referred to in Article 58 (List of attributes).

Article 60

Products from Day-ahead, intraday or balancing markets

1. If the products from other day-ahead, intraday or balancing markets are used for congestion management, then those products shall be included in the list of standardised products for congestion management as referred to in Article 58 (List of attributes).

TITLE V SYSTEMS OPERATORS -OWNED STORAGE FACILITIES

Article 61

Procedure for sharing storage ownership or operations

1. In Member States where it is decided that NRA can grant derogations for systems operators to develop, own, operate or maintain storages, systems operators can proceed to implement a solution that relies on systems operators development, ownership, operations, or maintenance of storage if the following conditions are met:
   (a) market-based procurement of services to solve congestion or voltage issue of the systems operators according to Articles 47-50 (Solutions for congestion and voltage issues through active power; National terms and conditions for market design for congestion management and voltage control services through active power; Principles for procurement and pricing for market-based congestion management and voltage control services; Principles for procuring by tender procedure) and 81 (Voltage control services with use of reactive power) do not result in the delivering by service provider of the needed services to solve the congestion or voltage issue at a reasonable cost and in a timely manner, including offers with not yet registered or prequalified assets as per Article 50.1.a (Principles for procuring by tender procedure) or not yet connected assets (including storages) as per Article 43.1,b if allowed by the tendering procedure;
   (b) as an additional requirement to Article 50 (Principles for procuring by tender procedure), the tender essential elements of Article 50 shall be submitted to public consultation and to NRA approval prior to starting the procurement process;
   (c) the regulatory authority during the approval procedure has carried out an assessment of the tendering procedure, including the conditions of the tendering procedure;
   (d) storage facilities are necessary for the system operators to fulfil their obligations for the efficient, reliable and secure operation of the distribution system and the facilities are not used to buy or sell electricity in the electricity markets; and
   (e) the regulatory authority has assessed the need of such a derogation described in 54.1.d. and has granted its approval.
2. In Member States where systems operators are allowed to develop, own, operate or maintain storages that are fully integrated network components as approved by the NRA, systems operators can proceed to implement a solution that relies on systems operators development, ownership, operations or maintenance of storage as a fully integrated network component if market-based procurement of services to solve congestion or voltage issue of the systems operators according to Articles 47-50 (Solutions for congestion and voltage issues through active power ; National terms and conditions for overall market design for congestion management and voltage control services through active power; Principles for procurement and pricing for market-based congestion management and voltage control services; Principles for procuring by tender procedure)

and 81 (Voltage control services with use of reactive power) does not result in the delivering by service provider of the needed services to solve the congestion or voltage issue at a reasonable cost and in a timely manner, including offers with not yet registered assets as per Article 50.1.a or not yet registered or prequalified assets (including storages) as per Article 50.1,b if allowed by the tendering procedure.

3. In addition, where it is allowed by Members States, systems operators may consider sharing ownership and operation of such storage facilities. This is without prejudice to the systems operators' rights, if such a right is given by Member State, to develop, own, operate or maintain fully integrated network elements as regulated in articles 36 and 54 of Directive (EU) 2019/944. In case systems operators consider implementing a shared storage ownership or operation, systems operators shall submit to public consultation the general terms and conditions of tenders, including the intended shared ownership agreement, it will perform, then submit the tendering process to NRA approval prior to the tendering takes place. Such tendering process may be specific to each systems operators and each assets.
4. Before launching a tendering procedure to share ownership and operation of systems operators storage, systems operators shall first assess the opportunity to engage such tendering procedure, considering the storage size, the storage part available to third party, cost of processing the tender and engaging in shared ownership and operations, potential savings and costs due to shared ownership and operations or other relevant criteria. If such assessment shows that such ownership and operation is not efficient, systems operators may ask NRA to discard the possibility of shared ownership, and grant the systems operators a derogation to own, develop, operate and manage the storage facilities.
5. The tender for shared ownership and operation shall provide relevant and useful information for the potential third party to prepare an appropriate offer. This information shall include the minimum and maximum part, in terms of capacity or energy or other relevant criteria, available to third party, the foreseen utilization pattern and expected volumes of the systems operators part of the storage considering charge and discharge, with sufficient granularity or other relevant information.
6. Systems operators shall publish information on economic conditions of the tender for shared ownership and operation. The transparency on the economic conditions shall be balanced against the potential impact on the pricing of the offers.
7. The tendering procedure shall ensure transparency of the selection criteria and the results of the tender.
8. Based on the applications for the tender, systems operators shall assess whether shared ownership is a better economical solution than full systems operators ownership and consistent with other relevant criteria, and submit its assessment and proposed outcome of the tender to NRA approval.

9. Based on the assessment of the systems operators according to paragraph 4 or 8 of this Article, the NRA shall:
   (a) Discard the possibility of shared ownership, and grant the systems operators a derogation to own, develop, operate and manage the storage facilities; or
   (b) Approve, if relevant, the final shared ownership agreement and grant the systems operators a derogation to own, develop, operate and manage the storage facilities under shared ownership and operations agreement.
10. For TSO storages, NRA shall notify the decision to grant a derogation to the Commission and ACER together with relevant information about the request and the reasons for granting the derogation.
11. NRAs shall publish its decision of derogation taken according to paragraph 9 of this Article together with sufficient reasoning.
12. Paragraphs 9, 10 and 11 are without prejudice to the systems operators' rights, if such a right is given by Member State, to develop, own, operate or maintain fully integrated network elements as regulated in articles 36 and 54 of Directive (EU) 2019/944.

Article 62

Shared storage ownership and operations agreement

1. Whether or not the storage is shared with third party, the systems operators:
   (a) shall use its part of the storage facility to fulfil its obligations for the efficient, reliable and secure operation of its grid; and
   (b) shall not use its part for the purpose of buying or selling electricity in the electricity markets. The NRA shall approve the framework for charge and discharge of the systems operators part of the storage, which in this case does not qualify for buying or selling of electricity, resulting from fulfilling their obligation for the efficient, reliable and secure operations of their grid, performing maintenance, or compensating internal losses of the storage facilities. This framework shall not have negative impacts in market dynamics and competition, and unbundling principles shall be strictly kept; and
   (c) shall be responsible for any imbalance induced by operation of its share, in line with applicable national terms and conditions.
2. In case of shared ownership or operation of the storage facility, the third party shall own and operate its part of the storage without further constraint, as concerns shared ownership and operations, than neither aggravating nor creating congestion or voltage issues or other provision in line with relevant national regulation, and enabling the systems operators to use its part of the storage facility to fulfil its obligations for the efficient, reliable and secure operation of its distribution / transmission grid. The third

party shall be responsible for the imbalance they cause and for the purchase or the sale of the energy for its part in line with national terms and conditions. The third party shall be treated as any other participant while operating its part of the storage.

3. The shared storage ownership and operations shall lead to a fair share of costs between systems operators and third party. It shall neither yield any subsidies from systems operators to the third party, nor give a preferential treatment of the third-party part of the facility versus other network users. It shall define the share of cost including connection, development, ownership, operations, management and ceasing of activity of the facility.
4. Sharing may be based on a percentage, and sharing attributes may be time, season, capacity, output or any other clearly defined sharing deemed useful.
5. The shared storage ownership and operations agreement shall contain further provisions, including provisions concerning changes in ownership shares from either the third parties or the system operator to market parties, or bankruptcy of third party, and the conditions of the future connection agreement after a possible future transfer from the systems operators to the third party.

Article 63

Assessing and transferring ownership of systems operators owned storages

1. Where it is technically possible to transfer systems operators storage activity to third party and where storage is not a fully integrated network component, the regulatory authorities shall perform a public consultation on the existing energy storage facilities in order to assess the potential availability and interest in investing in such facilities. Such consultation shall take place at least every five years as prescribed in article 36.3 or 54.4 of Directive (EU) 2019/944 and shall be aligned as much as possible with applicable grid planning processes such as NDP. Systems operators shall define the criteria needed in §7, to select the best offer from third party. Those criteria shall be published.
2. Parties interested in taking over the systems operators -owned storage shall submit proposals to the NRA including at least:

(a) demonstration of their capability to own, develop, operate or manage such facilities;

(b) their offer regarding the take-over of systems operators ownership and operations;

(c) their commitment to provisions contracted by systems operators and included as part of the public consultation, that already govern the storage they intend to take over;

(d) their commitment to additional provisions that shall govern the storage they intend to take over, including that the storage shall neither aggravate nor create congestion or voltage issues or other provision in line with relevant national regulation, be it while providing the service needed by systems operators or at other times; and

(e) details or additional information, as prescribed by national terms and conditions or relevant authority.

3. The NRA shall submit these proposals regarding b, c, d and e of paragraph 2 of this Article for assessment to the systems operators that owns or operates the storage. The systems operators shall decide whether such offers are acceptable.

4. Where the public consultation referred in paragraph 1 of this article shows sufficient interest for third parties to take over the systems operators owned storage, and if there is at least one acceptable offer as per §3, systems operators shall engage a process in line with Title IV (market design for congestion management and voltage control services) to procure the needed services if systems operators were to cease its existing storage activity. Market participants may propose to provide the needed services by taking over the systems operators owned storage or based on other CU/SPU/SPG. The systems operators procurement procedure of such services shall in addition:

(a) consider that only the third party that will take over the systems operators storage following the public consultation referred to in this article can claim to be able to include the systems operators storage as part of its SPU or SPG to provide the needed services; and

(b) suspend the procurement clearing/outcome of the procurement process until the NRA decision referred to in paragraphs 6 and 7 of this article.

5. Systems operators shall provide NRA:

(a) an update of costs of owning, operating and managing the storage while providing the needed systems operators services;

(b) the costs induced by phasing out the storage activity;

(c) a Cost-Benefit Analysis of the results of the tender to procure the needed service if systems operators were to cease its existing storage activity.

6. NRA shall assess whether the overall cost benefit analysis indicates that it is preferable to phase out of the systems operators storage and purchase the necessary services from third parties rather than continuing the systems operators storage activity based on the information from paragraphs 2, 3 and 5 of this Article.

7. The NRA shall ensure that systems operators phase out storage activity within 18 months if all three criteria are fulfilled:

(a) if there is at least one acceptable offer as per §3;

(b) if third parties are willing to provide the services that the systems operators needs from the storage facility, be it by taking over the systems operators owned storage or by other means, based on the information from paragraph 4 of this Article; and

(c) if it is preferable to phase out of the systems operators storage and purchase the necessary services from third parties rather than continuing the systems operators.

storage activity based on the information from paragraphs 2, 3 and 5 of this Article.

8. If all three conditions for the phase-out described in §6 are fulfilled;

(a) NRA decides on the start date of the 18 months phase out period;

(b) The systems operators shall decide on the best acceptable offer according to the criteria set forth in §1 and assessment in §3.

9. Within 18 months from the date of the NRA set forth in §7 of this Article:

(a) systems operators shall phase-out activity on that facility and transfer the storage activity to that third party, and shall receive compensation according to the proposals received;

(b) the systems operators contract the congestion management and voltage control services that match in a timely manner the systems operators needs in price or cost, and in volume, or discard these offers. Systems operators shall publish the outcome of the tender in line with Title IV article 52 (Publication of information**).**

TITLE VI DISTRIBUTION NETWORK DEVELOPMENT PLANS

CHAPTER 11
Distribution Network Development Plan

Article 64
Process and Content of the Distribution Network Development Plan (DNDP)

1. The DNDP shall provide identification of network development needs with transparency on planned investments and the potential needs of congestion management and voltage control services.
2. Two years after the entry into force of this regulation DSOs shall publish and submit to the regulatory authority their network development plan based on existing and future supply and demand.
3. Before submitting the DNDP, DSOs shall run a public consultation following the principles laid down in the TITLE VI Article 68 (DNDP public consultation and publication).
4. The process described in paragraph 2 and 3 shall be repeated at least every two years.
5. The DNDP shall at least include a description of:
   (a) the general planning methodology, scenario(s) and assumptions used to identify network development projects and congestion management and voltage control services needs with comprehensible description for stakeholders, taking into account, at least, the provisions of the Article 65 (General principles on the DNDP planning methodology), and the Article 66 (Requirements on development scenario(s));
   (b) the planning criteria used by the DSO to identify and plan network development projects, including the connecting of new grid users and reinforcing the network while ensuring the best collective welfare;
   (c) how, the DSO takes into account congestion management and voltage control services to cost-efficiently alleviate or postpone the need to reinforce/expand the distribution grid and to support the efficient and secure operation of the distribution grid by considering principles described in the Article 67 (Congestion management and voltage control services in the DNDP);
   (d) the planned and ongoing investments with an expected time frame for the next five-to-ten years. The level of detail of information might be differentiated considering the voltage levels or other criteria; and
   (e) an overview of changes in plans, assumptions, methods, scenarios from preceding plans, as well as to which extent preceding plans have been followed.
6. Systems operators within Member State shall ensure, where relevant, that their development plans are coordinated and the necessary information to prepare the network

development plans is exchanged during the development process in order to identify the need of grid investments.

Article 65
General principles on the DNDP planning methodology

1. The planning methodology shall ensure that the distribution networks are developed in a sustainable, and cost-effective manner.
2. The planning methodology shall follow the next principles:
   (a) abide national regulation and comply with national requirements for transmission and distribution system operators;
   (b) allow for taking into account particular characteristics at national and DSO level. In that regard a distinction between voltage level and/or region might be appropriate;
   (c) identify and establish DSOs observability areas in line with Article 70 (Principles for the definition of DSO observability area), if applicable;
   (d) be coordinated with the planning methodology and the scenario building process of the national TSOs where relevant;
   (e) consider development scenario(s) as described in the Article 66 (Requirements on development scenario(s)) of this Title;
   (f) consider congestion management and voltage control services as described in the Article 67 (congestion management and voltage control services in the DNDP);
   (g) consider limitations to connect new generation or demand units;
   (h) consider alternative solutions such as non-firm connection agreement, where applicable; and
   (i) consider other relevant principles, if applies.

Article 66
Requirements on development scenario(s)

1. The development scenario(s) and/or assumptions shall describe the most probable prospective(s) of the future electricity distribution system, in the five-to-ten years window.
2. The development scenario(s) shall be coordinated between concerned DSOs and TSOs and national bodies, if relevant, in order to be sufficiently consistent.
3. The development scenario(s) shall, at least, encompass existing and future demand, generation, storage capacities, consider national energy and climate plans, local energy strategies and relevant development factors.
4. The scenario(s) assumptions shall be described comprehensively for stakeholders.

5. The development scenario(s) shall allow to identify the future needs of distribution network development and congestion management and voltage control services.

Article 67
Congestion management and voltage control services in the DNDP

1. Congestion management and voltage control services in the DNDP can be used to alleviate or postpone the need of grid reinforcement when considered cost-efficient and fully ensuring the maintenance of the quality parameters of the supplied electricity to the extent permitted by national regulations. The DNDP planning methodology shall contain:
   (a) an assessment made by DSOs of current and predicted congestion management and voltage control services needs for solving congestion and/or voltage issues. For planned projects the information when, where and which volumes required, shall be predicted; and
   (b) a description on how the cost-effectiveness of congestion management and voltage control services is evaluated.
2. The granularity, in times and location, of the volumes of congestion management and voltage control services needed to solve the congestions or voltage issues identified in the DNDP might be differentiated by voltage levels such as:
   (a) for HV – in reference to the 'project name' identified for main grid infrastructure; and
   (b) for MV and LV – in reference to aggregated granularity.
3. Congestion management and voltage control services need published in the DNDP might detail different time horizons.
   (a) The DNDP shall describe the methodologies and processes used to identify congestion management and voltage control services needs. Such descriptions might be addressed by use cases.
   (b) To assess how congestion management and voltage control services might improve efficiencies in the operation and development of the distribution system, DSO assessment methodologies can include:
      i. Costs of grid investment or its deferral, including savings in their maintenance or operating costs;
      ii. Costs of losses, non-injected energy, and the value of lost load;
      iii. Estimated costs to enable and implement at congestion management and voltage control services;
      iv. Estimated cost of the procured congestion management and voltage control services;
      v. Other criteria if deemed relevant by DSO or prescribed nationally.
4. Such methodologies may compare solutions with different combinations of congestion management and voltage control services and solutions without congestion management

and voltage control services in the operation and development of the distribution system. The methodologies shall describe hypothesis on congestion management and voltage control services used in the assessment, which may include its estimated cost, its available volume, its reliability, its availability in time, duration or location, or other explicit criteria.

5. DNDP shall provide information to market participants how future congestion management and voltage control services needs have been taken in the medium and long-term with a granularity consistent with the point 2.
6. Congestion management and voltage control services are not relevant for projects including:
   (a) investment tasks, the implementation of which is due to replacement needs, the legitimacy of which has been determined directly from the technical condition of the facility, which can endanger persons or the environment, the safe operation of the equipment itself, the maintenance of power supply continuity, displacement of assets as required by external authorities or third parties, or prescribed as legal obligations;
   (b) Projects that have a different purpose function such as to reduce the probability of occurrence of an incident or reduce the time to recover from such incident; and
   (c) in the transitional period before entering into force of this regulation, projects launched prior to the implementation of processes to handle congestion management and voltage control services.

Article 68
DNDP public consultation and publication

1. The consultation process of the Network Development Plan made by DSO shall be open and clear to all system users and the distribution and transmission system operators and gives equal opportunities to participate and provide feedback.
2. All stakeholders shall be notified in advance of the consultation process, including the timeframe, subject matter and scope of consultation.
3. The consultation process shall last for a period of not less than six weeks.
4. The consultation document shall be available in accessible formats, and feedback mechanisms shall be available on a webpage.
5. Comments received during the public consultation shall be considered in a transparent manner by justifying/reasoning of their potential impact on the DNDP.
6. The consultation process should be documented and reported on, including the number of stakeholders consulted, the feedback received, and how this feedback has been considered in the final version of the DNDP.
7. The report from the consultation process shall be made publicly available to ensure that the process is transparent to all stakeholders.

8. The final DNDP, including the report from consultation process shall be submitted to the national regulatory authority.
9. The regulatory authority may request amendments to the plan.

TITLE VII TSO-DSO COORDINATION AND DSO-DSO COORDINATION

Article 69
National implementation and condition for coordination

1. When developing the national terms and conditions for TSO-DSO and DSO-DSO coordination, systems operators shall take into account the requirements included in this Title, aiming that:
   (a) the coordination between systems operators shall be compatible with operational criteria and the relevant rules defined at European and national level;
   (b) actions to solve balancing, congestion or voltage issue:
      i. do not create or aggravate congestion or voltage issues on other system operator grids or endanger system security;
      ii. there is an efficient use of resources; and
      iii. perform an efficient operation of its grid infrastructure. The general principles defined in Article 75 (Grid prequalification) as well as the provisions in Article 23(3) on preparation, activation and coordination of remedial action and Title I Chapter 5 of Regulation (EU) 2017/1485 on contingency analysis and handling are taken into account.
2. The proposal for terms and conditions shall include a proposed timescale for their implementation.
3. National terms and conditions required by the paragraph 1 shall be subject to approval by the relevant regulatory authorities or, where applicable, another competent authority within the respective deadlines. The national terms and conditions for coordination shall comply with the principles prescribed in this regulation:
   (a) General principles for coordination in line with Article 70 (General principles for system operators' coordination);
   (b) Principles for defining DSO observability area in line with Article 71 (Principles for the definition of DSO observability area);
   (c) Principles for forecasting congestion issues and voltage issues through active power, in line with Article 72 (Principles for forecasting, identifying congestion and voltage control issues through active power);
   (d) Principles for solving congestion issues and voltage issues, in line with Article 73 (Principles for solving congestion and voltage control issues);
   (e) Principles for taking into account DSO short-term limits, in line with Article 74 (Short-term procedures to account for DSO operational limits);
   (f) Principles for grid prequalification, in line with Article 75 (Grid prequalification);
   (g) Requirements for data exchange between DSOs and TSO-DSO, in line with Article 76

(Data exchange between DSOs-DSOs and DSOs-TSO);

(h) Requirements related with the confidentiality obligations, in line with Article 18 (Confidentiality obligations); and

(i) Principles for ensuring the system balance, in line with Article 77 (Ensuring system balance).

Article 70
General principles for system operators' coordination

1. The coordination scheme between systems operators shall ensure that the grid operational procedures and temporary limits are applied and fulfilled.
2. Without prejudice to existing rules at Member State level, the requesting systems operators starts the process described in Title VII.
3. Each connecting and intermediate system operator shall be entitled to set temporary limits to the delivery of congestion management, voltage control and balancing services, in line with options in article 74 (Short-term procedures to account for temporary DSO limitations).
4. The applicable national terms and conditions shall determine that the necessary information about the procurement and activation of congestion management, voltage control and balancing services are shared with the connecting, requesting, procuring, intermediate and affected system operators in order to perform their tasks. All the involved processes shall be defined in national terms and conditions in line with Article 69 (National implementation and condition for coordination).

Article 71
Principles for the definition of DSO observability area

1. When defining DSO observability areas, DSOs shall involve the affected system operators.
2. As part of the national Terms and Conditions for systems operators coordination referred in Article 1, DSOs and TSOs shall jointly develop a common proposal for the national criteria to define the DSO observability areas considering the electrical connection points between DSO-DSO and TSO-DSO, grid voltage operated by the DSO and the standard network topology.
3. DSO observability areas shall be initially defined and later assessed when the DNDP is performed according to the Article 71.2 and updated every two years. However, DSO observability areas might be assessed again at the request of the requesting or affected DSO when it is justified.
4. The definition of DSO observability areas shall consider the following principles:

(a) all the involved systems operators shall cooperate and exchange necessary data to calculate the DSO observability area;

(b) DSOs shall identify the set of grid elements and grid users that are part of the DSO observability area;

(c) the requesting DSO shall assess the potential influence of other system operators on the congestion and voltage issue; and

(d) the requesting system operator shall inform the affected system operators if this DSO observability area includes parts of their grid.

Article 72

Principles for forecasting, identifying congestion and voltage control issues through active power

1. Each system operator shall analyse its own network in order to forecast and identify potential congestion and voltage control issues and to initiate the appropriate procedures between the affected system operators to solve those issues at the relevant time horizons. This process shall be aligned with relevant procedures and methodologies, such as, for instance regional methodologies pursuant to Article 76(1) of Regulation (EU) 2017/1485.
2. The national terms and conditions referred to in Article 69 (National implementation and condition for coordination) shall define the minimum relevant time horizons referred to in paragraph 1, which may include DNDP time frame, outage planning timeframe, day-ahead, intraday and if relevant closer to real-time. At national level, relevant system operators may agree to add additional time horizons that may be needed for the DSO observability areas.
3. When conducting forecasts DSOs may use the information obtained through the data exchanges pursuant to Articles 76, 79 and 80 (Data exchange between DSOs-DSOs and DSOs-TSO, Data to be provided by service providers of congestion management and voltage control services and Data to be provided by grid users).
4. Each DSO shall determine in the applicable time horizons, with the appropriate granularity depending on the time horizon and when relevant as close as possible to the imbalance settlement period the following:
   (a) the flows on its network elements;
   (b) the dimension of congestion and voltage control issues;
   (c) the time of each issue;
   (d) the location of the issue including the specific grid element(s) involved in the issue; and
   (e) potential solutions.
5. DSOs shall use digital tools, alone or in cooperation with other DSO, to forecast, detect grid issues and if applicable, initiate the actions to select optimal solution.

Article 73

Principles for solving congestion and voltage control issues

1. To solve congestion or voltage issues through the management of active power each systems operators shall identify the options available that can contribute to solve congestion or voltage issues in line with Article 47 (Solutions for congestion and voltage issues through active power). This process shall be consistent, when applicable, with relevant existing procedures and methodologies, such as regional methodologies pursuant to Article 76(1) of Regulation (EU) 2017/1485.
2. To solve a congestion or voltage issues through congestion management and voltage control services made of active power, the following principles shall be fulfilled:
   (a) Relevant systems operators shall initiate and adopt an efficient and effective measure, or combination of measures, to prevent or solve these issues, in line with Title IV Article 47 (Solutions for congestion and voltage issues through active power);
   (b) The process to select measures shall be transparent, technologically neutral and prevent market distortion;
   (c) The selected option shall respect the operational limits in own and other affected grids; and
   (d) In the case where a market-based solution is applied, the national terms and conditions described in Title IV, article 48 (National terms and conditions for market design for congestion management and voltage control services through active power) shall describe the way requesting system operator identifies the required volumes, or if applicable, services that are able to contribute to solve the issue.
3. When a service requested by a systems operators may be delivered by SPUs or SPGs not directly connected to its own grid, the selection and activation of SPUs and SPGs shall take into account the temporary and operational limits defined by the connecting, or intermediate system operator. Accordingly, systems operators shall implement at least one of the following processes:
   (a) a grid prequalification procedure as described in Article 75 (Grid prequalification); and
   (b) short term procedures ensuring the temporary limits of the grid are respected ahead of or during, as applicable, the selection of the service, as described in Article 74 (Short-term procedures to account for DSO operational limits).
4. To solve a congestion or voltage issue, national terms and conditions shall define as a process to decide which systems operators takes the next actions:
   (a) procures the congestion management and voltage control services;
   (b) Takes actions to activate the congestion management and voltage control services

5. The assignment of the roles described in the paragraph 4 between systems operators may depend on the specific issue, its location or other criteria. Relevant systems operators where the congestion or voltage issue occurs is the one who procures the congestion management and voltage control services and takes actions to activate the congestion management and voltage control services in line with the applicable control rights, unless otherwise agreed between the affected and requesting systems operators provided in the National Terms and Conditions.

Article 74
Short-term procedures to account for DSO temporary limits

1. The process to set temporary limits on bids SPU, parts of SPG, SPG or contracted capacity[9] for balancing, congestion, voltage or network security issues shall follow the following principles:
   (a) when and why bids or contracted capacity are not activated or limited due to temporary limits in the connecting or intermediating grid shall be as transparent as possible while also protecting confidential information about the concerned service provider;
   (b) system operators shall minimize these limits;
   (c) Temporary limits set by the connecting or intermediating system operator are communicated to the procuring system operator, to the local market operator or to other concerned parties as soon as they are known and at the latest before the time the bids are selected or contracted capacity activated in the balancing or congestion management or voltage control service processes and in accordance to national and international procedures;
   (d) National processes shall ensure that the temporary limits are communicated at the latest before the times the bids are processed by the balancing processes in accordance with Regulation (EU) 2017/2195 and Article 182 of Regulation (EU) 2017/1485, where applicable;
   (e) National processes shall ensure that the temporary limits are communicated as soon as they are known and at the latest before the times the bids are processed as a remedial action to be used in the international process in accordance with Article 76(1)(b) of Regulation (EU) 2017/1485, where applicable, and national procedures. This process shall not be used to cancel previously activated bids[10]. In case of unforeseen events that result in a measure violating operational limits in DSO grid, the TSO shall coordinate to find a solution in line with Article 42(4) of Regulation (EU) 2019/943.

[9] setting temporary limits in short term may be realised through flagging bids, setting traffic lights or consideration of free network capacities and the sensitivities of the offered bids.

[10] Subject to emergency action.

2. System operators may define common national criteria to identify the temporary limits. These criteria shall, at least:
   (a) Ensure that the delivery of the balancing, congestion management or voltage control service respects the grid operational limits of the connecting grid and, when applicable, of the intermediate grids, and the procedures defined at national level.
   (b) Be based on the foreseen status of the grid.
   (c) Consider different network configurations, voltage levels, schedules and forecasts of generation and consumption.
   (d) Consider situations where the individual activation of SPU, SPG or parts of SPG may not create congestion or voltage issues (thus do not require limitations), whereas limitations shall be necessary to prevent activation of several SPU, SPG or parts of SPG at the same time that could otherwise create congestion or voltage issues.
3. Temporary limits may be applicable to a single SPU, parts of SPG, SPG or a group of several of SPUs, parts of SPG, SPGs. Temporary limits may be set as accumulated maximum delivery of balancing, congestion management or voltage control services [11]
4. Bids and volumes not activated due to temporary limits, including the reason, in the connecting or intermediate grid shall be reported to the NRA at least every year.

Article 75
Grid prequalification

1. A procedure for grid prequalification shall be developed as part of the national terms and conditions pursuant to Article 69 (National implementation and condition for coordination) in accordance with Article 182 of Regulation (EU) 2017/1485.
2. Such a procedure shall ensure that the delivery of the balancing or congestion management and voltage control services by SPU/SPG does not compromise the safe operation of the connecting grid and, when applicable, of the intermediate grids.
3. Grid prequalification shall be performed by the grid prequalification responsible and, where applicable, this process shall also be coordinated with the intermediate system operator/s. The grid prequalification responsible shall be the connecting system operator.
4. The grid prequalification procedure shall follow the next principles:
   (a) the connecting and intermediate system operators can specify limits when an activation might lead to not fulfilling the grid operational limits and procedures defined at national level. This shall be based on the foreseen status of the grid;
   (b) the connecting and intermediate system operators shall minimize these limits, based

[11] In this last case, the corresponding SPU/part of SPG/SPG can individually deliver balancing, congestion management or voltage control services provided that the accumulated delivered services does not exceed the temporary limit. This aims to minimize the number of effective temporary limits because they would be only applied when an a threshold (made of the sum of delivered flexibility) is exceed,

on the implementation of network reconfigurations and the available data for each case;

(c) the data exchange during the grid prequalification procedure shall guarantee the protection of confidential information of all the involved parties; and

(d) the grid prequalification process shall be conducted with transparency.

5. The grid prequalification procedure shall result in a grid prequalification status that is:

(a) approved if the SPU/SPG can deliver the full capacity of the prequalified congestion management or voltage control service; or

(b) not approved if the SPU/SPG cannot deliver the congestion management or voltage control service; or

(c) conditionally prequalified if the grid prequalifying responsible set some limits on the time or quantity for delivery of the congestion management or voltage control service. The list of criteria for conditional grid prequalification shall be defined at national level.

6. Where grid prequalification status is not approved or conditionally prequalified, the grid prequalifying responsible shall argue, why the issue cannot be sufficiently tackled with setting temporary limits in a short-term procedure, according to Article 74 (Short-term procedures to account for DSO limits).

7. When performing a grid prequalification, the systems operators may consider its own grid in one or more scenarios, i.e. assuming one or more infrastructure configurations and one or more set(s) of power flow profiles from/to SPG and distribution or transmission grids directly connected.

8. Once a grid prequalification has a status defined in the paragraph 3, the connecting or the intermediate system operator may update in line with Article 43 (CU module procedures) this status or set new limits in coordination with the procuring system operator considering the network or system evolution.

9. Grid prequalifying responsible shall report to the NRA, at least yearly the reasons for the limitations referred to in this Article.

Article 76

Data exchange between DSOs-DSOs and DSOs-TSO

1. DSOs shall be entitled to receive information for their predefined DSO observability areas from DSOs and where applicable from the relevant TSOs in addition to the data pursuant to Article 40 (10) of Regulation (EU) 2017/1485, based on the following categories:

(a) structural data in accordance with the paragraph 2;

(b) scheduling and forecast data in accordance with the paragraph 3;and

(c) real-time data in accordance with the paragraph 4.

2. The content of the structural data shall include:

(a) substations by voltage;

(b) lines that connect the substations referred to in point (a);

(c) transformers from the substations referred to in point (a);

(d) SGUs pursuant to Article 2 of Regulation (EU) 2017/1485;

(e) controllable units, SPUs and SPGs; and

(f) reactors and capacitors connected to the substations referred to in point (a).

3. The content of scheduling and forecast data shall include:

(a) the duration and location of grid issues including planned outages and remedial actions;

(b) schedule data, available pursuant to Articles 49, 52(2) and 53(1)(b) of Regulation (EU) 2017/1485 and to Article 49.1 (Principles for procurement and pricing for market-based congestion management and voltage control services) of this Regulation, from significant grid users in their observability area; and

(c) where applicable, temporary limitation pursuant to the short-term procedure in Article 74 (Short-term procedures to account for DSO limits) of this Regulation to be shared with all relevant system operators including the TSO.

4. The content of the real-time data shall include:

(a) the actual topology, the busbar voltage, active and reactive power flows;

(b) real time measurement of SPG or SPU in line with national terms and conditions referred to in Article 69 (National implementation and condition for coordination); and

(c) real time measurements for SGUs.

5. Relevant information about the procured and activated congestion management, voltage control and balancing services shall be shared with the connecting systems operator, affected systems operators, and the TSO(s).

6. For the data defined in the paragraphs 2, 3, 4 and 5, the information should be delivered with a periodicity and granularity agreed with the affected systems operators.

7. TSOs are entitled to receive from DSOs, in addition to the requirements pursuant to Article 40 of Regulation (EU) 2017/1485, the data requested from service providers pursuant to article 79 (Data to be provided by service providers of congestion management and voltage control services) of this Regulation, with the necessary granularity.

Article 77

Ensuring system balance

1. The National terms and conditions for overall market design described in Title IV Article 41(National terms and conditions for market design for congestion management and

voltage control services through active power) shall clarify the process to ensure system balance in the presence of the activation of congestion management and voltage control services, including, if applicable, the details on the possible use of bids from balancing energy markets.

2. The process referred to in paragraph 1 shall ensure that: The imbalances due to the activation of congestion management and voltage control services are solved as soon as possible:
   (a) An effective and efficient solution is applied, avoiding the activation of unnecessary balancing energy; and
   (b) the costs of activation of congestion management and voltage control services are kept separate from balancing.
3. The cost of ensuring system balance shall be recovered in line with applicable national legislation.

TITLE VIII: DATA EXCHANGE REQUIREMENTS FROM GRID USERS

Article 78
Organisation, roles, responsibilities and quality of data exchange

1. Provisions from this Title shall not replace but complement information exchange requirements from SPU/SPG that are SGU in line with the Regulation (EU) 2017/1485 and its national implementation. This chapter's provision shall mandate CU/SPU/SPG that do not already have a mandate to provide information exchange according to the Regulation (EU) 2017/1485 and its national implementation.
2. Service provider shall be responsible for providing adequate quality data and information to the requesting system operator and the procuring and the activating system operator, on behalf of customers/grid users[12]. This responsibility can be delegated to third parties[13].
3. National terms and conditions for service providers shall define how the information specified in article 79 (Data to be provided by service providers) and 80 (Data to be provided by grid users) shall be exchanged. The national data exchange requirements shall be established in line with the principle of limiting the requested data to what is necessary information for system(s) operators to fulfil their tasks and therefore ensure operational security. A justification of the need for the data requested at national level shall be provided to the NRA jointly with the national Terms and Conditions for SPs.
4. For each service, the national terms and conditions for service providers[14] shall determine the applicability, scope and granularity of the data exchange of the following categories:
   (a) structural data in accordance with Article 79.2 (Data to be provided by service providers of congestion management and voltage control services);
   (b) scheduling and forecast data in accordance with Article 79.3 (Data to be provided by service providers of congestion management and voltage control services);
   (c) Data in real-time in accordance with Article 79.3 (Data to be provided by service providers of congestion management and voltage control services)
   (d) Data to be exchanged in real-time in accordance with Articles 76 (Data exchange between DSOs-DSOs and DSOs-TSO).
   (e) All data necessary for prequalification of service provision, when relevant, in line with article 75 (Grid prequalification);

[12] Data exchange from CUs/SPUs/SPGs towards T/DSOs should normally be realised through SPs or as otherwise provided (technical operator, etc)

[13] Explanatory note: *it can be the case that, similarly and in line with the implementation of SOGL and KORRR – where third parties delegated by SGUs can be SPs or other parties not involved in market activities, but only in collection and exchange of data, in particular in real time.*

[14] These, in line with Article 5, shall be commonly proposed by TSOs and DSOs and shall be approved by NRA.

(f) All data necessary for verification of service provision, where relevant, in line with article 31 (Pre-Conditions and Applicability of the product prequalification and product verification processes); and

(g) All data necessary for performance of activation tests, when relevant, in line with article 32 (Criteria for reassessment of product prequalification and product verification).

5. The applicability, scope and requirements for data exchange shall be determined on the basis of the following criteria:

(a) the size and characteristics of the SPU and SPG;

(b) the voltage level of connection of the SPU and SPG; and

(c) the characteristics of the services.

6. National terms and conditions shall define the process and format for the data exchange with service provider in line with existing data interoperability rules. When defining format and protocol for data exchange, the system(s) operators shall take into account and use available international standards.[15]

7. The service provider, or as otherwise provided in national terms and conditions for service providers, shall be responsible for updating the structural information and other relevant information.

Article 79
Data to be provided by service providers

1. SPU or SPG providing congestion management and voltage control services others than those in scope of article 2 of Regulation (EU) 2017/1485 shall provide the information defined in this Article, in line with applicable national terms and conditions.

2. The structural information shall be provided by SPU and SPG is part of the prequalification processes as defined in the Title III (Prequalification requirements and processes) and Annex 2. In particular, the structural data:

(a) Shall include the maximum deliverable congestion management or voltage service per CU being part of SPU and CU being part of SPG;

(b) May include the expected/average contribution (coincidence factor) of that CU being part of SPG to the delivery of each congestion management or voltage service or other relevant criteria needed to assess the congestion or voltage issues.

3. The schedule data information provided by SPU or SPG shall include the following data:

(a) its scheduling program for the congestion management and voltage control services, if applicable, including for SPG the expected contribution of parts of SPG to the

[15] Future Implementation Act 2.0 on Data Access and Interoperability should develop further this point.

services, if required; and

(b) its scheduled unavailability;

4. If applicable, the data to be provided in real time shall include the following data:

(a) Operation status of the SPU;

(b) active and reactive power; and

(c) Unexpected unavailability of the SPU/SPG.

5. Systems operators shall define the granularity of the data to be provided for each service and appropriate real time data refreshing time, which should be properly justified in the national terms and conditions.

Article 80

Data to be provided by grid users

1. In addition to the requirements in Article 53 of Regulation (EU) 2017/1485 stated for SGUs pursuant to Article 2 of Regulation (EU) 2017/1485, distribution-connected demand facilities, that are SGUs or participate in congestion management or voltage control issues, shall, in line with national process for data exchange provide the following data:

(a) scheduled active power consumption on a day-ahead and intraday basis, including any changes of those schedules or forecast or, where applicable the baseline; and

(b) by exception to point (a), in regions with a central dispatch system, the data requested by the TSO for the preparation of its active power output schedule.

2. With the NRA approval, the systems operators can extend the applicability of the structural, schedule and real-time data provision referred in Article 71 to other grid users in their (DSO) observability area that are not SPUs/SPGs, if it is needed for forecasting or to maintain operational security.

TITLE IX: VOLTAGE CONTROL

CHAPTER 12
General principles

Article 81
Voltage control services with use of reactive power

1. Systems operators shall manage reactive power flows and keep the voltage within operational limits in their grid area. Systems operators are responsible for reactive power control and voltage control in their own grids.
2. When systems operators identify that the mandatory requirements for reactive power are not enough for the voltage control in its grid, the corresponding systems operators shall:
   (a) assess and quantify the additional reactive power needs;
   (b) identify the potential solutions for these additional reactive power needs identified in a), and based on the next points:
      i. specific grid investments;
      ii. the procurement of reactive power in addition to the mandatory requirements through a congestion management and voltage control services; or
      iii. other technical solutions.
   (c) define an action plan;
   (d) Send to the NRA the information from the points (a), (b) and (c); and
   (e) Update, as applicable, the national terms and conditions pursuant to Article 69 (National implementation and condition for coordination).
3. In the procurement of the reactive power needs identified in the paragraph 3.b.iii:
   (a) market-based procurement is preferred, and may be substituted by ruled-based procurement when:
      i. the solution provided by the market-based procurement is not economically efficient;
      ii. no market-based alternative is available;
      iii. all available market-based resources have been used; or
      iv. the number of potential providers is not enough to ensure liquid and competitive functioning of market-based solution.
   (b) The procurement rules shall be transparent, non-discriminatory and technologically neutral, and shall be included as part of national terms and conditions referred to in Title IV Article 48 (National terms and conditions for market design for congestion management and voltage control services through active power).
4. The technical attributes of the congestion management and voltage control services to

procure reactive power shall select parameters from Annex 1. In case list from Annex 1 does not include necessary parameters, it shall be set on national level.

5. The information exchange associated with the provision of the congestion management and voltage control services shall include bidirectional real-time data exchange between the SPU/SPG and the systems operators.
6. The data exchange from SPG/SPU to systems operators shall include at least:
   (a) provision on data exchange detailed in the Title VIII;
   (b) data to monitor the provision of the service.
7. The data exchange from systems operators to SPG/SPU shall include at least:
   (a) a setpoint for the provision.

TITLE X: DEROGATIONS, AND MONITORING

Article 82
Derogations

1. A regulatory authority in accordance with Article 59 of Directive (EU) 2019/944 may, at the request of a transmission system operator or distribution system operator or at its own initiative, grant the relevant transmission system operator or distribution system operator a derogation from one or more provisions of this Regulation in accordance with paragraphs xxx.
2. A transmission system operator or distribution system operator may request a derogation from the following requirements:
   (a) the deadlines … pursuant to Articles xxxx;
   (b) Registry and monitoring of derogation.
3. A national regulatory authority in accordance with Article 59 of Directive (EU) 2019/944 may, at the request of a DSO and/or TSO grant the relevant DSOs and/or TSOs a derogation from approved national terms and conditions to test concepts before inclusion in amended terms and conditions. The derogation process shall be transparent, non-discriminatory, non-biased, well documented and based on a reasoned request.
4. The derogation shall be limited to a time reasonable to establish whether the new concept can be included in the amended terms and conditions.
5. The new experiences resulting from such a derogation shall be shared transparently and made accessible to all interested stakeholders within a reasonable timeframe.
6. The derogation shall not go against the purposes of this Regulation or negatively affect the implementation based on the national terms and conditions.

Article 83
Monitoring reports

1. ACER shall develop a dedicated monitoring report in the following matters:
   (a) analysis of options for further harmonisation on aggregation models, if needed;
   (b) analysis of good practices in ex-post verification processes and ex ante prequalification processes;
   (c) assessment of options for market-based congestion management including products, updated list of European attributes, procurement methods, overall market design for congestion management and voltage control services, stakeholder information and transparency on procurement and activations processes and systems operators coordination; and
   (d) analysis of options for market-based voltage control.

Article 84
Harmonisation

1. A European process for monitoring the implementation within the Member States shall be established and include recommendations at least for the following areas:
   (a) aggregation models; benefits and drawbacks for each type of aggregation models;
   (b) product verification processes and product prequalification processes, in particular the identification of cases where product prequalification can be replaced by product verification as well as simplifications in these processes, requirements and activations tests where applicable, including specific simplifications for small controllable units and standardised devices;
   (c) options for market-based congestion management including products, updated list of European attributes, procurement methods, overall market design and systems operators coordination;
   (d) Mitigation measures to prevent gaming in local markets and their effectiveness; and
   (e) Description of how catch-up effects are considered.
2. Every 3 years after the entry into force of this regulation, the national implementations of this Regulation shall be analysed in a European monitoring report for each of the areas listed in paragraph 1 to map the national implementation status with description of implementation options and potential recommendations.
3. Systems operators, shall provide the necessary data to conduct the report prescribed in paragraph 2.
4. Second edition and every other subsequent editions of the EU monitoring report described in paragraph 2 shall include specific recommendations for further harmonisation at European level of the following:
   (a) main elements of aggregation models and of baseline methodologies;
   (b) stakeholder information and transparency on procurement and activation processes and results;
   (c) product verification processes and product prequalification processes, including criteria for grid prequalification, where applicable; and
   (d) updated list of products attributes.
5. EU harmonisation shall be envisaged, if it increases overall effectiveness and efficiency of the system and considers costs and may distinguish between self-dispatching models and central dispatching models, after several EU monitoring publications. The items to be examined for possible further harmonisation might include:
   (a) timeline, deadlines for data delivery; and

(b) interaction with regional methodologies pursuant to Article 76(1) of Regulation (EU) 2017/1485, such as utilisation of potentials, solving of internal congestion, solving of DSO congestion.

6. The following process for developing proposals for EU methodologies shall be followed when the need for harmonisation in the areas listed in paragraphs 4 and 5 is identified:

(a) a specific harmonised methodology shall be proposed by ENTSO-E and EU DSO Entity as part of the report described in the paragraph 2 and shall be included in the yearly work plan of both associations.

7. A proposal for the methodology to further harmonising the areas listed in paragraphs 4 and 5 shall be developed jointly by ENTSO-E and EU DSO Entity and submitted to ACER for review and approval, and considering the stakeholder engagement in a public consultation.

TITLE XI : TRANSITIONAL AND FINAL PROVISIONS

Article 85
Transitional provisions for xxx and yy countries

1. Except for the participation in the development of terms and conditions, for which the respective deadlines shall apply, the requirements of this Regulation shall apply in xx and yy countries from 31 December 20xx.
2. Until flexibility register is in place, systems operators may use existing IT solutions and tools to provide for the possibility of offering services on the basis of this Regulation.

Article 86
Amendment of contracts and general terms and conditions

1. All relevant clauses in contracts and relevant clauses of general terms and conditions relating to the …. (e.g. service providers) subject to all or some of the requirements of this Regulation in accordance with Article xx shall be amended in order to comply with the requirements of this Regulation. The relevant clauses shall be amended within three years following the decision of the regulatory authority or Member State as referred to in Article xx.
2. Regulatory authorities shall ensure that national agreements between system operators and … (e.g. service providers) subject to this Regulation and relating to service provision, in particular in national network codes, reflect the requirements set out in this Regulation.
3. All relevant clauses in contracts and general terms and conditions of systems operators and significant grid users relating to system operation shall comply with the requirements of this Regulation. To that effect, those contracts and general terms and conditions shall be modified accordingly.

Article 87
Entry into force

1. This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.
2. For Articles xx to yy, and zz to ww, this Regulation shall apply from one year after entry into force of this Regulation.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, xx Month 202x.
For the Commission

The President

…….

Annex – Flexibility Register Data

*[DISCLAIMER: The description of information objects and attributes has been put into this Annex by the Development Team for consultation with key stakeholders. Please note that the team has identified the need for these lists to be adapted frequently and over time. Therefore, in the final version of the legal text, it might not be kept in the legal act directly. The team is currently investigating legal and formally correct provisions to account for these considerations.]

Annex 1 – Data on products

Table 1.1 - List of product attributes

No.	ATTRIBUTE	DESCRIPTION/ DEFINITION
1	Product identifier	Unique identifier of the product at EU level.
2	Name	Name of the product at national level.
3	Product category	May be one of • Standard balancing • Specific balancing • Congestion management • Voltage control based on active power • Voltage control based on reactive power • Other
4	Capacity / energy	This attribute determines whether the product accounts for the possible acquisition of capacity (in MW) or energy (in MWh)
5	Validity period	The period when the bid offered by the service provider can be activated, where all the characteristics of the product are respected. The validity period is defined by a start and end time.
6	Duration of the contract	The duration of a given contract between the system operators and the service provider. The duration may vary from hours to years.
7	Locational information	Information where (electrical localisation defined on national level) the product is available.
8	Direction of activation	Direction means in which direction (up or/and down) the volume can be activated.
9	Symmetric/asymmetric product	This attribute determines whether only symmetric products or also asymmetric products are allowed. For a symmetric product upward regulation volume and downward regulation volume has to be equal.
10	Certificate of origin	This attribute determines whether the service provider would be required to deliver a certificate of origin of the energy they sell.
11	Maximum number of activations per time period	Maximum number of times the procuring system operator can activate an service provider during a period of time.

12	Availability Window	Availability window (e.g. per hour, per day, per week, per year) is the time period required by the procuring system operator when the resource shall be available to provide a service.
13	Recovery period	Minimum duration between the end of deactivation period and the following activation.
14	Preparation period	Means the period between the activation request by the procuring system operator and the start of the ramping period.
15	Ramping period	The period during which the input and/or output of power will be increased or decreased until the requested amount of power is reached.
16	Full Delivery Time (FDT)	Means the period between the activation request by the procuring system operator and the corresponding full delivery of the concerned product.
17	Minimum and maximum duration of delivery period	The minimum/maximum length of the period of delivery during which the service provider delivers the full requested product.
18	Maximum positive and negative rebound avoidance time	Means the maximum time to which a demand reduction or increase can be shifted before or after the delivery of the service (if applicable).
19	Deactivation period	Means the period for ramping from full delivery to a set point.
20	Mode of activation	Means the mode of activation of products, manual or automatic, depending on whether product is triggered manually by an operator or automatically in a closed-loop manner.
21	Minimum and maximum quantity	Minimum and maximum quantity of a bid traded on the market and it may be capacity or energy based depending on the nature of the product
22	Divisibility	Means the possibility for the procuring system operator to use only part of the bids offered by the service provider, either in terms of power activation or time duration.
23	Granularity	The smallest increment in volume of a bid.
24	Maximum / minimum price	Maximum and minimum price the procuring system operator accepts.
25	Activation price	Price for the flexibility actually accepted and delivered (mostly expressed in EUR/MWh).
26	Cost of start	Means the cost paid to producer to start/activate the production unit.
27	Availability price	Price for keeping the flexibility available (mostly expressed in EUR/MW/hour of availability
28	Aggregation allowed	Determines whether a grouped offering of power by covering several units via an aggregator is allowed.
29	Baseline methodology	Methodology used to estimate the volume of energy delivered by an FSP compared to the case if the product would not have been activated.
30	Redundancy of Data Link	This attribute determines whether a dual data connection is required or not

31	Data Granularity	Means the required data resolution in seconds or minutes
32	Data Type	This attribute determines whether the data is based on real time metering values or calculated average values
33	Archiving	This attribute determines the minimum time duration of how long the data needs to be archived (e.g. 0, 1 month, 3 months, 6 months)
34	Measurement Accuracy	This attribute determines the max. tolerated measurement error (e.g. 0,5% or 1%)
35	Data Protocol	Means the communication protocol(s) (e.g. IEC 60870–5–101) the systems operators accept
36	Data Interface	Means the data platform(s) over which the service provider is allowed to connect
37	Metering Type	Means the type of meter used (smart meter, traditional meter, dedicated measurement device)

Annex 2 – Data on controllable unit**s,** service provider**s, SPUs and SPGs**

Table 2.1 - Controllable unit (CU) data managed by CU modules

No.	ATTRIBUTE	DESCRIPTION
0	CU module	Identification of CU module at EU level.
1	Identification	A unique identifier of the controllable unit at EU level.
2	Accounting point identifier	Identifier of the accounting point / connection point the controllable unit is connected to.
3	Service provider	Nationally unique identification of the service provider as referred to in Table 2.2.
4	CU Operator	Either the final customer or the unique identifier of the 'technical aggregator'.
4	Connecting systems operators	Connecting systems operators of the connection/accounting point the controllable unit is connected to.
5	Locational information	Geographical or topological information about the location of the accounting point/connection point in the grid.
6	List of SPGs and SPUs the controllable unit is a part of	If applicable, the identification of the SPG or the SPU belongs to as referred to in Table 2.3 and Table 2.4.
7	Grid prequalifying party	Entitled party that has confirmed the grid prequalification details of the controllable unit. In most cases, this will be the connecting systems operators.
8	Grid prequalification status	Status of the grid prequalification of the controllable unit.
9	Start date	Meaning the date from when the controllable unit is grid qualified, if applicable
10	End data	Meaning the date until when the controllable unit is considered grid qualified, if applicable
11	Regulation direction	Meaning the regulation direction, the controllable unit is qualified for; Up, down or both.
12	Minimum duration	Meaning the minimum time for which the unit can be activated.
13	Maximum duration	Meaning the maximum time for which the unit can be activated.
14	Is small controllable unit?	Information about whether the controllable unit is a small controllable unit or not.
15	Standard implemented	If applicable and if the controllable unit is a standardised device, the reference to the certified standard implementing by the controllable unit.
16	Type certificate information	If applicable, information on the certificate the standardised device has obtained.
17	Supplier	The supplier assigned to all technical resources within a controllable unit. Note that all technical resources

		coordinated by a controllable unit must be assigned to the same supplier.

Table 2.2 - Service provider (SP) data managed by flexibility registers

No.	ATTRIBUTE	DESCRIPTION
0	SP register module	Identification of SP register module at EU level.
1	Identification	A unique identifier of the SP at EU level.
2	License issued by the NRA	If applicable.
3	Name	Name of the service provider in a human readable and clearly identifiable form.
4	Contact information	Comprising at least, but not exclusively, phone number, email and postal address.
5	Settlement information	Comprising at least the VAT number if applicable, bank account information and other related data.

Table 2.3 – Service providing group (SPG) data managed by SP register modules

No.	ATTRIBUTE	DESCRIPTION
0	SP register module	Identification of SP register module at EU level.
1	Identification	A unique identifier of the SPG at EU level.
2	Service provider	Nationally unique identification of the service provider as referred to in Table 1 No. 1.
3	Qualification status	Qualification for products in ToEq for the SPG as a whole.
4	Limits on operation	Limits on operation due to grid constraints as provisioned in Article 34 – Grid prequalification, paragraph 2.

Table 2.4 – Service providing unit (SPU) data managed by SP register modules

No.	ATTRIBUTE	DESCRIPTION
0	SP register module	Identification of SP register module at EU level.
1	Identification	A unique identifier of the SPU at EU level.
2	Accounting point identifier	Identifier of the accounting point / connection point the SPU is connected to.
3	Service provider	Nationally unique identification of the service provider as referred to in Table 1 No. 1.
4	Qualification status	Qualification for products in ToEq for the SPU.
5	Operational constraints Limits on operation	Limits on operation due to grid constraints as provisioned in Article 34 – Grid prequalification, paragraph 2.

Table 2.5 - Technical aggregator data managed by SP register modules

No.	ATTRIBUTE	DESCRIPTION
1	Identification	A unique identifier of the technical at EU level.
2	License issued by the NRA	If applicable.
3	Name	Name of the technical aggregator in a human readable and clearly identifiable form.
4	Contact information	Comprising at least, but not exclusively, phone number, email and postal address.
5	Settlement information	Comprising at least the VAT number if applicable, bank account information and other related data.
6	Switching documentation	Information on how controllable units operated by the technical aggregator can be migrated to another technical aggregator or to self-control by the final customer.

Annex 3 – Table of Equivalences (ToEq) Data

Table 3.1 - Product requirement characteristics of SPUs and SPGs in the SP register module, if the 'product requirements' - based ToEq approach is employed.

No.	ATTRIBUTE	DESCRIPTION
1	SPU or SPG identifier	Unique identifier of SPU or SPG at EU Level as described in Table 2.3 No. 1 and Table 2.4 No. 1.
2	Product requirement characteristics	Characteristics of the SPU or SPG in terms of the 'product requirements', as verifiable by the PPR that writes them.

Table 3.2 – Product requirements in the Table of Equivalences (ToEq)

No.	ATTRIBUTE	DESCRIPTION
1	Product identifier	A unique identifier of the product at EU level.
2	Market platform operators for that product	Identifiers of the operators managing market platforms for the product.
3	Challenge ranking	If applicable, a value indicating the national ranking of the product from more to less challenging requirements.