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| From:            | Secretary-General of the European Commission,<br>signed by Mr Jordi AYET PUIGARNAU, Director |
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| To:              | Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of<br>the European Union       |

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Delegations will find attached document COM(2016) 861 final - ANNEX 1.

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EUROPEAN  
COMMISSION

Brussels, 30.11.2016  
COM(2016) 861 final

ANNEX 1

## **ANNEX**

**to the**

### **Proposal for a Regulation of the European Parliament and the Council on the internal market for electricity**

{SWD(2016) 410 final}  
{SWD(2016) 411 final}  
{SWD(2016) 412 final}  
{SWD(2016) 413 final}

## ANNEX I

### ANNEX I

#### GUIDELINES ON THE MANAGEMENT AND ALLOCATION OF AVAILABLE TRANSFER CAPACITY OF INTERCONNECTIONS BETWEEN NATIONAL SYSTEMS

##### 1. General Provisions

1.1. Transmission system operators (TSOs) shall endeavour to accept all commercial transactions, including those involving cross border trade.

1.2. When there is no congestion, there shall be no restriction of access to the interconnection. Where this is usually the case, there need be no permanent general allocation procedure for access to a cross border transmission service.

1.3. Where scheduled commercial transactions are not compatible with secure network operation, the TSOs shall alleviate congestion in compliance with the requirements of network operational security while endeavouring to ensure that any associated costs remain at an economically efficient level. Curative re-dispatching or countertrading shall be envisaged in case lower cost measures cannot be applied.

1.4. If structural congestion appears, appropriate congestion management methods and arrangements defined and agreed upon in advance shall be implemented immediately by the TSOs. The congestion management methods shall ensure that the physical power flows associated with all allocated transmission capacity comply with network security standards.

1.5. The methods adopted for congestion management shall give efficient economic signals to market participants and TSOs, promote competition and be suitable for regional and Community wide application.

1.6. No transaction-based distinction shall be applied in congestion management. A particular request for transmission service shall be denied only when the following cumulative conditions are fulfilled:

(a) the incremental physical power flows resulting from the acceptance of that request imply that secure operation of the power system may no longer be guaranteed, and

(b) the monetary value of the request in the congestion management procedure is lower than all other requests intended to be accepted for the same service and conditions.

1.7. When defining appropriate network areas in and between which congestion management is to apply, TSOs shall be guided by the principles of cost effectiveness and minimisation of negative impacts on the internal market in electricity. Specifically, TSOs shall not limit interconnection capacity in order to solve congestion inside their own control area, save for the abovementioned reasons and reasons of operational security ( 12 ). If such a situation occurs, this shall be described and transparently presented by the TSOs to all the system users. Such a situation shall be tolerated only until a long term solution is found. The methodology and projects for achieving the long term solution shall be described and transparently presented by the TSOs to all the system users.

~~1.8. When balancing the network inside the control area through operational measures in the network and through re-dispatching, the TSO shall take into account the effect of those measures on neighbouring control areas.~~

~~1.9. By 1 January 2008, mechanisms for the intra-day congestion management of interconnector capacity shall be established in a coordinated way and under secure operational conditions, in order to maximise opportunities for trade and to provide for cross-border balancing.~~

~~1.10. The national regulatory authorities shall regularly evaluate the congestion management methods, paying particular attention to compliance with the principles and rules established in this Regulation and those Guidelines and with the terms and conditions set by the regulatory authorities themselves under those principles and rules. Such evaluation shall include consultation of all market participants and dedicated studies.~~

## ~~2. Congestion management methods~~

~~2.1. Congestion management methods shall be market based in order to facilitate efficient cross border trade. For that purpose, capacity shall be allocated only by means of explicit (capacity) or implicit (capacity and energy) auctions. Both methods may coexist on the same interconnection. For intra-day trade continuous trading may be used.~~

~~2.2. Depending on competition conditions, the congestion management mechanisms may need to allow for both long and short term transmission capacity allocation.~~

~~2.3. Each capacity allocation procedure shall allocate a prescribed fraction of the available interconnection capacity plus any remaining capacity not previously allocated and any capacity released by capacity holders from previous allocations.~~

~~2.4. TSOs shall optimise the degree to which capacity is firm, taking into account the obligations and rights of the TSOs involved and the obligations and rights of market participants, in order to facilitate effective and efficient competition. A reasonable fraction of capacity may be offered to the market at a reduced degree of firmness, but the exact conditions for transport over cross-border lines shall, at all times, be made known to market participants.~~

~~2.5. The access rights for long and medium term allocations shall be firm transmission capacity rights. They shall be subject to the use-it-or-lose-it or use-it-or-sell-it principles at the time of nomination.~~

~~2.6. TSOs shall define an appropriate structure for the allocation of capacity between different timeframes. This may include an option for reserving a minimum percentage of interconnection capacity for daily or intra-daily allocation. Such an allocation structure shall be subject to review by the respective regulatory authorities. In drawing up their proposals, the TSOs shall take into account:~~

~~(a) the characteristics of the markets;~~

~~(b) the operational conditions, such as the implications of netting firmly declared schedules;~~

~~(c) the level of harmonisation of the percentages and timeframes adopted for the different capacity allocation mechanisms in place.~~

~~2.7. Capacity allocation shall not discriminate between market participants that wish to use their rights to make use of bilateral supply contracts or to bid into power exchanges. The highest value bids, whether implicit or explicit in a given timeframe, shall be successful.~~

~~2.8. In regions where forward financial electricity markets are well developed and have shown their efficiency, all interconnection capacity may be allocated through implicit auctioning.~~

~~2.9. Other than in the case of new interconnectors which benefit from an exemption under Article 7 of Regulation (EC) No 1228/2003 or Article 17 of this Regulation, establishing reserve prices in capacity allocation methods shall not be allowed.~~

~~2.10. In principle, all potential market participants shall be permitted to participate in the allocation process without restriction. To avoid creating or aggravating problems related to the potential use of dominant position of any market player, the relevant regulatory and/or competition authorities, where appropriate, may impose restrictions in general or on an individual company on account of market dominance.~~

~~2.11. Market participants shall firmly nominate their use of the capacity to the TSOs by a defined deadline for each timeframe. That deadline shall be such that TSOs are able to reassign unused capacity for reallocation in the next relevant timeframe — including intra-day sessions.~~

~~2.12. Capacity shall be freely tradable on a secondary basis, provided that the TSO is informed sufficiently in advance. Where a TSO refuses any secondary trade (transaction), this must be clearly and transparently communicated and explained to all the market participants by that TSO and notified to the regulatory authority.~~

~~2.13. The financial consequences of failure to honour obligations associated with the allocation of capacity shall be attributed to those who are responsible for such a failure. Where market participants fail to use the capacity that they have committed to use, or, in the case of explicitly auctioned capacity, fail to trade on a secondary basis or give the capacity back in due time, they shall lose the rights to such capacity and pay a cost-reflective charge. Any cost-reflective charges for the non-use of capacity shall be justified and proportionate. Likewise, if a TSO does not fulfil its obligation, it shall be liable to compensate the market participant for the loss of capacity rights. No consequential losses shall be taken into account for that purpose. The key concepts and methods for the determination of liabilities that accrue upon failure to honour obligations shall be set out in advance in respect of the financial consequences, and shall be subject to review by the relevant national regulatory authority or authorities.~~

### ~~3. Coordination~~

~~3.1. Capacity allocation at an interconnection shall be coordinated and implemented using common allocation procedures by the TSOs involved. In cases where commercial exchanges between two countries (TSOs) are expected to affect physical flow conditions in any third-country (TSO) significantly, congestion management methods shall be coordinated between all the TSOs so affected through a common congestion management procedure. National regulatory authorities and TSOs shall ensure that no congestion management procedure with significant effects on physical electric power flows in other networks is devised unilaterally.~~

~~3.2. A common coordinated congestion management method and procedure for the allocation of capacity to the market at least annually, monthly and day-ahead shall be applied by 1 January 2007 between countries in the following regions:~~

~~(a) Northern Europe (i.e. Denmark, Sweden, Finland, Germany and Poland);~~

~~(b) North-West Europe (i.e. Benelux, Germany and France);~~

~~(c) Italy (i.e. Italy, France, Germany, Austria, Slovenia and Greece);~~

~~(d) Central Eastern Europe (i.e. Germany, Poland, Czech Republic, Slovakia, Hungary, Austria and Slovenia);~~

~~(e) South West Europe (i.e. Spain, Portugal and France);~~

~~(f) UK, Ireland and France;~~

~~(g) Baltic states (i.e. Estonia, Latvia and Lithuania).~~

~~At an interconnection involving countries belonging to more than one region, the congestion management method applied may differ in order to ensure the compatibility with the methods applied in the other regions to which those countries belong. In that case, the relevant TSOs shall propose the method which shall be subject to review by the relevant regulatory authorities.~~

~~3.3. The regions referred to in point 2.8. may allocate all interconnection capacity through day-ahead allocation.~~

~~3.4. Compatible congestion management procedures shall be defined in all those seven regions with a view to forming a truly integrated internal market in electricity. Market participants shall not be confronted with incompatible regional systems.~~

~~3.5. With a view to promoting fair and efficient competition and cross-border trade, coordination between TSOs within the regions set out in point 3.2. shall include all the steps from capacity calculation and optimisation of allocation to secure operation of the network, with clear assignments of responsibility. Such coordination shall include, in particular:~~

~~(a) the use of a common transmission model dealing efficiently with interdependent physical loop flows and having regard to discrepancies between physical and commercial flows;~~

~~(b) allocation and nomination of capacity to deal efficiently with interdependent physical loop flows;~~

~~(c) identical obligations on capacity holders to provide information on their intended use of the capacity, i.e. nomination of capacity (for explicit auctions);~~

~~(d) identical timeframes and closing times;~~

~~(e) identical structure for the allocation of capacity among different timeframes (for example, 1 day, 3 hours, 1 week, etc.) and in terms of blocks of capacity sold (amount of power in MW, MWh, etc.);~~

~~(f) consistent contractual framework with market participants;~~

~~(g) verification of flows to comply with the network security requirements for operational planning and for real-time operation;~~

~~(h) accounting and settlement of congestion management actions.~~

~~3.6. Coordination shall also include the exchange of information between TSOs. The nature, time and frequency of information exchange shall be compatible with the activities set out in point 3.5 and the functioning of the electricity markets. That information exchange shall, in particular, enable the TSOs to make the best possible forecast of the global network situation in order to assess the flows in their network and the available interconnection capacities. Any TSO collecting information on behalf of other TSOs shall give back to the participating TSO the results of the collection of data.~~

#### ~~4. Timetable for market operations~~

~~4.1. The allocation of the available transmission capacity shall take place sufficiently in advance. Prior to each allocation, the involved TSOs shall, jointly, publish the capacity to be~~

~~allocated, taking into account where appropriate the capacity released from any firm transmission rights and, where relevant, associated netted nominations, along with any time periods during which the capacity will be reduced or not available (for the purpose of maintenance, for example).~~

~~4.2. Having full regard to network security, the nomination of transmission rights shall take place sufficiently in advance, before the day-ahead sessions of all the relevant organised markets and before the publication of the capacity to be allocated under the day-ahead or intra-day allocation mechanism. Nominations of transmission rights in the opposite direction shall be netted in order to make efficient use of the interconnection.~~

~~4.3. Successive intra-day allocations of available transmission capacity for day D shall take place on days D-1 and D, after the issuing of the indicated or actual day-ahead production schedules.~~

~~4.4. When preparing day-ahead network operation, the TSOs shall exchange information with neighbouring TSOs, including their forecast network topology, the availability and forecasted production of generation units, and load flows in order to optimise the use of the overall network through operational measures in compliance with the rules for secure network operation.~~

## ~~5. Transparency~~

~~5.1. TSOs shall publish all relevant data related to network availability, network access and network use, including a report on where and why congestion exists, the methods applied for managing the congestion and the plans for its future management.~~

~~5.2. TSOs shall publish a general description of the congestion management method applied under different circumstances for maximising the capacity available to the market, and a general scheme for the calculation of the interconnection capacity for the different timeframes, based upon the electrical and physical realities of the network. Such a scheme shall be subject to review by the regulatory authorities of the Member States concerned.~~

~~5.3. The congestion management and capacity allocation procedures in use, together with the times and procedures for applying for capacity, a description of the products offered and the obligations and rights of both the TSOs and the party obtaining the capacity, including the liabilities that accrue upon failure to honour obligations, shall be described in detail and made available in a transparent manner to all potential network users by TSOs.~~

~~5.4. The operational and planning security standards shall form an integral part of the information that TSOs publish in an open and public document. That document shall also be subject to review of the national regulatory authorities.~~

~~5.10. TSOs shall exchange regularly a set of sufficiently accurate network and load flow data in order to enable load flow calculations for each TSO in their relevant area. The same set of data shall be made available to the regulatory authorities and to the Commission upon request. The regulatory authorities and the Commission shall ensure the confidential treatment of that set of data, by themselves and by any consultant carrying out analytical work for them on the basis of those data.~~

## ~~6. Use of congestion income~~

~~6.1. Congestion management procedures associated with a pre-specified timeframe may generate revenue only in the event of congestion which arises for that timeframe, except in the case of new interconnectors which benefit from an exemption under Article 7 of Regulation (EC) No 1228/2003 or Article 17 of this Regulation. The procedure for the distribution of those revenues shall be subject to review by the regulatory authorities and shall neither distort~~

~~the allocation process in favour of any party requesting capacity or energy nor provide a disincentive to reduce congestion.~~

~~6.2. National regulatory authorities shall be transparent regarding the use of revenues resulting from the allocation of interconnection capacity.~~

~~6.3. The congestion income shall be shared among the TSOs involved in accordance with criteria agreed between the TSOs involved and reviewed by the respective regulatory authorities.~~

~~6.4. TSOs shall clearly establish beforehand the use they will make of any congestion income they may obtain and report on the actual use of that income. Regulatory authorities shall verify that such use complies with this Regulation and those Guidelines and that the total amount of congestion income resulting from the allocation of interconnection capacity is devoted to one or more of the three purposes set out in Article 16(6) of this Regulation.~~

~~6.5. On an annual basis, and by 31 July each year, the regulatory authorities shall publish a report setting out the amount of revenue collected for the 12-month period up to 30 June of the same year and the use made of the revenues in question, together with verification that that use complies with this Regulation and those Guidelines and that the total amount of congestion income is devoted to one or more of the three prescribed purposes.~~

~~6.6. The use of congestion income for investment to maintain or increase interconnection capacity shall preferably be assigned to specific predefined projects which contribute to relieving the existing associated congestion and which may also be implemented within a reasonable time, particularly as regards the authorisation process.~~

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## **ANNEX I**

### **FUNCTIONS OF REGIONAL OPERATIONAL CENTRES**

#### **1. Coordinated capacity calculation**

- 1.1. Regional operational centres shall perform coordinated calculation of cross zonal capacities.
- 1.2. Coordinated capacity calculation shall be performed in due time for each market timeframe and as frequently as needed during the intraday timeframe.
- 1.3. Coordinated capacity calculation shall be performed based on a common system model in accordance with point 2 and on a coordinated capacity calculation methodology developed by the transmission system operators of the relevant system operation region.
- 1.4. Coordinated capacity calculation shall ensure efficient congestion management in accordance with the principles of congestion management defined in this Regulation.

#### **2. Coordinated security analysis**

- 2.1. Regional operational centres shall perform coordinated security analysis aiming at ensuring secure system operation.
- 2.2. Security analysis shall be performed for all operational planning timeframes using the common system models.



2.3. Regional operational centres shall share the results of the coordinated security analysis with at least the transmission system operators of the system operation region.

2.4. When as a result of the coordinated security analysis a regional operational centre detects a possible constraint, it shall design remedial actions maximizing economic efficiency.

### **3. Creation of common system models**

3.1. Regional operational centres shall set up efficient processes for the creation of a common system model for each operational planning timeframe.

3.2. Transmission system operators shall appoint one regional operational centre to build the common system model for all regions.

3.3. Common system models shall include relevant data for efficient operational planning and capacity calculation in all operational planning timeframes.

3.4. Common system models shall be made available to all regional operational centres, transmission system operators, ENTSO for Electricity and the Agency, upon its request.

### **4. Consistency assessment of transmission system operators' defense plans and restoration plans**

4.1. All transmission system operators shall agree on a threshold above which the impact of actions of one or more transmission system operators in the emergency, blackout or restoration states is considered significant for other transmission system operators synchronously or non- synchronously interconnected.

4.2. Using the threshold defined pursuant to point 4.1, each regional operational centre shall provide support to the transmission system operators of the system operation region regarding the assessment of the consistency of its transmission system operators' system defence plans and the restoration plans.

4.3. In providing support to the transmission system operators, the regional operational centre shall:

- (a) identify potential incompatibilities;
- (b) propose mitigation actions.

4.4. Transmission system operators shall take into account the proposed mitigation actions.

### **5. Coordination and optimization of regional restoration**

5.1. Regional operational centres shall be equipped with the close to real time supervisory control and data acquisition systems with the observability defined by applying the threshold defined in accordance with point 4.1.

5.2. Each relevant regional operational centre shall provide assistance to the appointed frequency leaders and the resynchronisation leaders aiming at improving the efficiency and effectiveness of system restoration. Transmission system operators shall be entitled to request assistance from regional operational centres if their system is in a blackout or restoration state.

### **6. Post-operation and post-disturbances analysis and reporting**

6.1. Regional operational centres shall investigate and prepare a report on any incident above the threshold defined in accordance with point 4.1. The regulatory authorities of the system operation region and the Agency may be involved in the investigation upon their request. The report shall contain recommendations aiming at preventing similar incidents in future.

6.2. The report shall be made available to all transmission system operators, regulatory authorities, the Commission and the Agency. The Agency may issue recommendations aiming at preventing similar incidents in future.

## **7. Regional sizing of reserve capacity**

7.1. Regional operational centres shall determine the reserve capacity requirements for the system operation region. The determination of reserve capacity requirements shall:

- (a) pursue the general objective to maintain operational security in the most cost effective manner;
- (b) be performed at the day-ahead and/or intraday timeframe;
- (c) determine the overall amount of required reserve capacity for the system operation region;
- (d) define minimum reserve capacity requirements for each type of reserve capacity;
- (e) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement;
- (f) set out the necessary requirements for the geographical distribution of required reserve capacity, if any.

## **8. Facilitation of the regional procurement of balancing capacity**

8.1. Regional operational centres shall support the transmission system operators of the system operation region in determining the amount of balancing capacity that needs to be procured. The determination of the amount of balancing capacity shall:

- (a) be performed at the day-ahead and/or intraday timeframe;
- (b) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement;
- (c) take into account the volumes of required reserve capacity that are expected to be provided by balancing energy bids, which are not submitted based on a contract for balancing capacity.

8.2. Regional operational centres shall support the transmission system operators of the system operation region in procuring the required amount of balancing capacity determined in accordance with point 8.1. The procurement of balancing capacity shall:

- (a) be performed at the day-ahead and/or intraday timeframe;
- (b) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement.

## **9. Regional system adequacy forecasts and preparation of risk reducing actions**

9.1. Regional operational centres shall perform week ahead to intraday regional adequacy assessments.

- 9.2. Regional operational centres shall base the adequacy assessments on the information provided by the transmission system operators of system operation region with the aim of detecting situations where a lack of adequacy is expected in any of the control areas or at regional level. Regional operational centres shall take into account possible cross-zonal exchanges and operational security limits in all operational planning timeframes.
- 9.3. When performing a regional generation adequacy assessment, each regional operational centre shall coordinate with other regional operational centres to:
- (a) verify the underlying assumptions and forecasts;
  - (b) detect possible cross-regional lack of adequacy situations.
- 9.4. Each regional operational centre shall deliver the results of the regional generation adequacy assessments together with the actions it proposes to reduce risks of lack of adequacy to the transmission system operators of the system operation region and to other regional operational centres.

## **10. Regional outage coordination**

- 10.1. Each regional operational centre shall perform outage coordination in order to monitor the availability status of the relevant assets and coordinate their availability plans to ensure the operational security of the transmission system, while maximizing the capacity of the interconnectors and/or the transmission systems affecting cross-zonal flows.
- 10.2. Each regional operational centre shall maintain a single list of relevant grid elements, power generating modules and demand facilities of the system operation region and make it available on the ENTSO for Electricity operational planning data environment.
- 10.3. Each regional operational centre shall carry out the following activities related to outage coordination in the system operation region:
- (a) assess outage planning compatibility using all transmission system operators' year-ahead availability plans;
  - (b) provide the transmission system operators of the system operation region with a list of detected planning incompatibilities and the solutions it proposes to solve the incompatibilities.

## **11. Optimization of inter-transmission system operators compensation mechanisms**

- 11.1. Regional operational centres shall support the transmission system operators of the system operation region in administering the financial flows related to inter-transmission system operators settlements involving more than two transmission system operators, such as redispatching costs, congestion income, unintentional deviations or reserve procurement costs.

## **12. Training and certification**

- 12.1. Regional operational centres shall prepare and execute training and certification programs focusing on regional system operation for the personnel working in the planning and control rooms of the transmission system operators of system operation region.
- 12.2. The training programs shall cover all the relevant components of system operation, including scenarios of regional crisis.

- 13. Identification of regional crisis situations and preparation of risk mitigation scenarios reviewing the risk preparedness plans as established in Member States**
- 13.1. If ENTSO for Electricity delegates this function, regional operational centres shall identify regional crisis scenarios in accordance with the criteria set out in Article 6(1) of [Risk Preparedness Regulation]
- 13.2. Regional operational centres shall prepare and carry out yearly crisis simulation in cooperation with competent authorities according to Article 12(3) of [Risk Preparedness Regulation].