

**APPROVAL BY ALL REGULATORY AUTHORITIES  
AGREED AT THE ENERGY REGULATORS' FORUM**

**ON**

**THE ALL TSOs' PROPOSAL FOR A  
COMMON GRID MODEL METHODOLOGY (CGMM) IN  
ACCORDANCE WITH ARTICLE 18 OF COMMISSION  
REGULATION (EU) 2016/1719 ESTABLISHING A  
GUIDELINE ON FORWARD CAPACITY ALLOCATION**

**11 June 2018**

## I. Introduction and legal context

This document elaborates an agreement of All Regulatory Authorities reached at the Energy Regulators' Forum on 11 June 2018, on the All TSO Proposal for Article 18(1) of Regulation 2016/1719<sup>1</sup> (CGMM proposal) submitted in accordance with Article 4.6(b) of Regulation 2016/1719.

This agreement of All Regulatory Authorities shall provide evidence that a decision on the CGMM does not need to be adopted by ACER pursuant to Article 4(10) of the Regulation 2016/1719. It is intended to constitute the basis on which All Regulatory Authorities will each subsequently make national decisions pursuant to Article 4(9) to approve the CGMM proposal, submitted by TSOs.

The legal provisions relevant to the submission and approval of the CGMM, and to this All Regulatory Authority agreed opinion of the CGMM proposal, can be found in Articles 2, 3, 4, 18, 19, 20 and 21 of Commission Regulation (EU) 2016/1719 of 16 September 2016 establishing a guideline on forward capacity allocation, and in Articles 2, 17, 18 and 19 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (Regulation 2015/1222). The legal provisions are set out here for reference.

The term 'individual grid model' (IGM) is defined in Article 2(1) of Regulation 2015/1222 and means a data set describing power system characteristics (generation, load and grid topology) and related rules to change these characteristics during capacity calculation, prepared by the responsible TSOs, to be merged with other individual grid model components in order to create the common grid model.

The 'common grid model' is defined in Article 2(2) of Regulation 2015/1222 and means a Union-wide data set agreed between various TSOs describing the main characteristic of the power system (generation, loads and grid topology) and rules for changing these characteristics during the capacity calculation process.

Article 3 of Regulation 2016/1719 states:

*This Regulation aims at:*

- (a) promoting effective long-term cross-zonal trade with long-term cross-zonal hedging opportunities for market participants;*
- (b) optimising the calculation and allocation of long-term cross-zonal capacity;*
- (c) providing non-discriminatory access to long-term cross-zonal capacity;*
- (d) ensuring fair and non-discriminatory treatment of TSOs, the Agency, regulatory authorities and market participants;*
- (e) respecting the need for a fair and orderly forward capacity allocation and orderly price formation;*
- (f) ensuring and enhancing the transparency and reliability of information on forward capacity allocation;*
- (g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union.*

Article 4 of Regulation 2016/1719:

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<sup>1</sup> Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation

1. TSOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the competent regulatory authorities within the respective deadlines set out in this Regulation. Where a proposal for terms and conditions or methodologies pursuant to this Regulation needs to be developed and agreed by more than one TSO, the participating TSOs shall closely cooperate. TSOs, with the assistance of ENTSO for Electricity, shall regularly inform the competent regulatory authorities and the Agency about the progress of developing these terms and conditions or methodologies.
2. (...)
3. (...)
4. (...)
5. Each regulatory authority shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 6 and 7.
6. The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities:
  - (a) the generation and load data provision methodology pursuant to Article 17;
  - (b) (...)
  - (c) (...)
  - (d) (...)
  - (e) (...)
  - (f) (...)
  - (g) (...)
7. (...)
8. The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within three months on the proposals for terms and conditions or methodologies.
9. Where the approval of the terms and conditions or methodologies requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6 and 7, within six months following the receipt of the terms and conditions or methodologies by the regulatory authority or, where applicable, by the last regulatory authority concerned.
10. (...)
11. (...)
12. (...)
13. TSOs responsible for establishing the terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the competent regulatory authorities or, if no such approval is required, after their establishment, except where such information is considered as confidential in accordance with Article 7.

Article 17(2) of Regulation 2015/1222, referred to in Article 18 of Regulation 2016/1719, specifies the minimum set of items to be included in the CGM proposal: The common grid model methodology shall enable a common grid model to be established. It shall contain at least the following items:

- (a) a definition of scenarios in accordance with Article 18 of Regulation 2015/1222;
- (b) a definition of individual grid models in accordance with Article 19 of Regulation 2015/1222;
- (c) a description of the process for merging individual grid models to form the common grid model.

In addition, Article 18 of Regulation 2015/1222, referred to in Article 18 of Regulation 2016/1719, gives the requirements on the scenarios in the CGM proposal:

1. All TSOs shall jointly develop common scenarios for each capacity calculation time-frame referred to in Article 14(1)(a) and (b). The common scenarios shall be used to describe a specific forecast situation for generation, load and grid topology for the transmission system in the common grid model.
2. One scenario per market time unit shall be developed both for the day-ahead and the intraday capacity calculation time-frames.
3. For each scenario, all TSOs shall jointly draw up common rules for determining the net position in each bidding zone and the flow for each direct current line. These common rules shall be based on the best forecast of the net position for each bidding zone and on the best forecast of the flows on each direct current line for each scenario and shall include the overall balance between load and generation for the transmission system in the Union. There shall be no undue discrimination between internal and cross-zonal exchanges when defining scenarios, in line with point 1.7 of Annex I to Regulation (EC) No 714/2009.

Article 19 of Regulation 2015/1222, referred to in Article 20 of Regulation 2016/1719, gives the requirements for the individual Grid Models:

1. For each bidding zone and for each scenario:
  - (a) all TSOs in the bidding zone shall jointly provide a single individual grid model which complies with Article 18(3); or
  - (b) each TSO in the bidding zone shall provide an individual grid model for its control area, including interconnections, provided that the sum of net positions in the control areas, including interconnections, covering the bidding zone complies with Article 18(3).
2. Each individual grid model shall represent the best possible forecast of transmission system conditions for each scenario specified by the TSO(s) at the time when the individual grid model is created.
3. Individual grid models shall cover all network elements of the transmission system that are used in regional operational security analysis for the concerned time-frame.
4. All TSOs shall harmonise to the maximum possible extent the way in which individual grid models are built.
5. Each TSO shall provide all necessary data in the individual grid model to allow active and reactive power flow and voltage analyses in steady state.
6. Where appropriate, and upon agreement between all TSOs within a capacity calculation region, each TSO in that capacity calculation region shall exchange data between each other to enable voltage and dynamic stability analyses.

Article 21(1) of Regulation 2016/1719 states: The process of merging the individual grid models established in accordance with Article 27 of Regulation (EU) 2015/1222 shall apply when merging the individual grid models into a common grid model for each long-term time frame. No later than six months after the decision on the generation and load data provision methodology referred to in Article 17 and the common grid model methodology referred to in Article 18, all TSOs in each capacity calculation region shall jointly develop operational rules for long-term capacity calculation time frames supplementing the rules defined for the operation to merge the individual grid models pursuant to Article 27 of Regulation (EU) 2015/1222.

## II. The All TSO proposal

The CGMM draft proposal was consulted on by All TSOs through ENTSO-E for one month from 6 March 2017 to 6 April 2017 in line with Article 18(1) and Article 6 of Regulation 2016/1719. The All TSO CGMM proposal, dated 23 May 2017, was received by the last Regulatory Authority on 5 September 2017, together with a separate document providing justification for including or not the views resulting from the public consultation. The proposal includes proposed timescales for its implementation and a description of its expected impact on the objectives of Regulation 2016/1719, in line with Article 4.8 of Regulation 2016/1719.

The Energy Regulators' Forum decided on 23 February 2018 to request all TSOs to amend the proposal, pursuant Article 4(12) of Regulation 2016/1719. The request was sent to all TSOs latest 5 March 2018.

All TSO submitted the amended proposal on 14 May 2018, latest. Article 4(12) of Regulation 2016/1719 declares that all NRAs decide on the amended methodology within two months following the submission. A decision is therefore required by each Regulatory Authority by 14 July 2018.

## III. All Regulatory Authority position

All NRAs have requested all TSOs to amend the CGMM proposal submitted in September 2017. All NRAs requested the TSOs to remove the indications in the methodology which imply that each capacity calculation region may develop its own set of scenarios.

The amended proposal requires all TSOs to jointly develop a common set of scenarios to be used when building individual grid models for the year-ahead and one common set for the month-ahead capacity calculation timeframe. Thereby, the principles defined in Article 3(3) of the amended proposal shall be respected. Unless and until these scenarios have been developed, the default scenarios specified in Article 3(1)(a)-3(1)(h) and Article 3(2)(a)-3(2)(b) shall be used. Where only those TSOs applying a security analysis based on multiple scenarios for their capacity calculation jointly develop scenarios for the common grid model that differ from the scenarios to be defined by all TSOs (or from the current default scenarios), then those TSOs applying a statistical approach for the capacity calculation (cf. Article 10(4)(b) FCA GL) are not obliged to use the new set of scenarios (which was developed without them) for their individual grid model. NRAs are of the opinion that all TSOs shall agree and use one and the same set of scenarios for building their individual grid models which are then to be merged into a consistent common grid model.

All NRAs however consider that the amended proposal by all TSOs will lead to a sufficiently accurate capacity calculation, as argued by all TSOs. Although not ideal, it may technically not be strictly necessary for all the IGMs to be built upon the same scenario in order to be able to be merged into the CGM. It could be argued that each TSO should only have to prepare those IGMs that are strictly required for a consistent and workable CGM. All NRAs consider the possible risk for significant deviations or errors in the CGM to be minimal. Therefore, all NRAs can approve the amended proposal by all TSOs.

All NRAs consider that the CGMM and the possible later to be defined scenarios could potentially lead to inconsistencies between this CGMM and the CGMMs which are based on Regulation 2015/1222 and Regulation 2017/1485. Therefore, Regulatory Authorities consider that, once the three common grid model methodologies are approved, they could be amended in order to have only one consolidated methodology that will meet the provisions of the three Regulations and contain consistent scenarios. They have consulted TSOs that agree that there is benefit in merging these methodologies. These requests for amendments to obtain a consolidated CGM methodology can be done by TSOs or Regulatory Authorities in accordance with Article 9(13) of Regulation 2015/1222, Article 4(12) of Regulation 2016/1719 and Article 7(4) of Regulation 2015/1485

All Regulatory Authorities conclude that the CGMM proposal meets the requirements of Regulation 2016/1719.

#### **IV. Conclusions**

All Regulatory Authorities welcome the submitted CGMM proposal and the improvements adopted by All TSOs. All Regulatory Authorities have assessed, consulted and closely cooperated and coordinated to reach an agreement about the CGMM proposal which meets the requirements of Regulation 2016/1719 and as such can be approved by All Regulatory Authorities.

All Regulatory Authorities will issue their national decisions, on the basis of this agreement, by 14 July 2018.

Following national decisions by All Regulatory Authorities, all TSOs will be required to publish the CGMM on the internet in line with Article 4(13) of Regulation 2016/1719, and must meet the implementation deadlines required by Article 24 of the CGMM.