



ENTSO-E consultations on Generation and Load Data Provision Methodology v.2 and Common Grid Model Methodology v.2

Joint response paper

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EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids joint response to ENTSO-E consultations on GLDPM and CGMM

This response paper is a joint response from EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids, taking part in the two ENTSO-E public consultations on

-) the Common Grid Model Methodology pursuant to Article 18 of Regulation 2016/1719 ("CGMM-v2"), and
-) the Generation and Load Data Provision Methodology pursuant to Article 17 of Regulation 2016/1719 ("GLDPM-v2")

The consultations incorporate the requirements defined in two Guidelines:

- Guideline on Capacity Allocation and Congestion Management (CACM) and
- Guideline on Forward Capacity Allocation (FCA).

Currently, both methodologies undergo changes due to the prescriptions of the FCA Guideline.

The Common Grid Model Methodology (CGMM) and Generation and Load Data Provision Methodology (GLDPM) are closely linked. GLDPM describes the data required by the TSOs to establish a common grid model, enabled by CGMM and based on the data received from DSOs and grid users.

Both consultation responses have been submitted online, all comments inserted with reviewer details as follows:

Reviewer email	Reviewer affiliation	Reviewer name
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The undersigned acknowledge some positive evolutions compared to the previous version submitted to consultation, such as the clarification of the binding and explanatory paragraphs. However, due to incoherency with the underlying CACM regulation, we would welcome a revision of CGMM and GLDPM proposals.

The interdependencies between transmission grids cause that TSOs have to synchronise not only the operation but also the planning of their grids. Therefore, we support the idea of establishing a common grid model (CGM) in order to enable TSOs to develop their networks in accordance with the demands of the next decades. As a consequence, it is sensible to develop a common methodology, GLDPM, to describe the type of data needed for CGM and the way to procure them. In the view of EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids, it is sensible to base the CGM on individual grid models (IGMs) developed by the TSOs (Art. 17.2.b of the CACM regulation) and to prescribe that *"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"* (Art. 19.3 of the CACM regulation).

However, currently proposed version of CGMM is not fully in line with this provision. As stated in Art. 5 of the present draft CGMM proposal, the data included in the TSOs' individual grid models (IGMs) *"shall contain the elements of the high-voltage and extra high-voltage network insofar as these are used in regional operational security analysis for the concerned time-frame"*. This does not take into account that in many countries across Europe, from Spain to Germany and Denmark to Greece and Sweden, the high-voltage grids are not part of the transmission system and are not operated by the TSOs but by DSOs.

With regard to these grids, the proposals go beyond the scope of application in the underlying CACM regulation as well as FCA regulation, as Art. 20 of the latter regulation is directly linked to Art. 19 of CACM.

Regarding GLDPM, the undersigned expect the long-term capacity calculation to need substantially less data than day-ahead and intraday capacity calculation. Currently, the draft GLDPM proposal does not clearly mark which information is necessary for long-term and which for day-ahead calculation. This bears the risk of misunderstandings, or TSOs demanding inefficient amounts of data from grid users during national implementation. A clear distinction should be made between data needed following (EU) 2016/1719 and (EU) 2015/1222.

Related document	Line number	Article	Paragraph	Comment / Suggestion
CGMM	15	3	1 2	<p>EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids welcome the proposal to publish the list of scenarios established for the following year / month, including their description and the period during which these scenarios are to be used by the TSO. It is a positive evolution in terms of transparency, as it will enable market participants to have access to scenarios used to build IGMs and CGMs. However, the publication of scenarios should also be accompanied by the publication of the resulting IGMs/CGMs.</p> <p>The reason for keeping CGMs data confidential is not very clear, especially for long-term time-frames, as far as they reflect the best forecast made by system operators without any confidential or commercially sensitive information. The availability of this data would be useful to provide stakeholders with a better visibility on the level of available cross-border capacity and to enable market participants to better anticipate the potential evolutions of market prices. It may also contribute to improve the accuracy of the forecasts provided by Significant Grid Users (SGUs). A good level of transparency on the CGMs would also be consistent with the obligations imposed on TSOs by the Third Energy Package to provide estimates and information on the available transfer capacity of their networks and on the availability and use of generation and load assets (Article 15 of Regulation 714/2009 EC).</p>
CGMM	30	5		<p>This provision in the CGMM proposal does not take into account that in many European countries, e. g. in Germany, the high-voltage grids are not part of the transmission system and are not operated by the TSOs but by DSOs. With regard to these grids, the CGMM proposal goes beyond the scope of application set by the above cited provisions in the underlying CACM regulation. This is not in line with the basics of European legislation. Art. 5 of the draft CGMM proposal scope of application should be limited to those elements that are operated by TSOs and used in regional operational security analysis.</p> <p>Our proposal for the art. 5.1:</p> <p>1. IGMs shall contain the elements of the high-voltage and extra high-voltage network insofar as these are operated by a TSO and used in regional operational security analysis for the concerned time-frame.</p>

CGMM	32	6	1 3	<p>Articles 6.1 and 6.3 describe in detail which grid elements shall be included in the IGMs. Among these there are numerous grid elements belonging to the high-voltage grids. In these paragraphs, ENTSO-E acknowledges that these grids may be run either by TSOs or by DSOs; but the provisions say that the grid elements have to be included in the IGMs regardless of the operator. This should be limited to grid operated by TSOs, as article 19 paragraph 3 of underlying EC/1222/2015 prescribes.</p> <p>Our proposal for the art. 6.1:</p> <p>1. The grid elements described in paragraph 2 of this Article shall be included in each IGM regardless of whether these are operated by the TSO or a DSO (incl. CDSO) if these grid elements are operated by a TSO and of a voltage level</p> <p>a. of 220 kV or above;</p> <p>b. of less than 220 kV and the grid elements of which are used in regional operational security analysis.</p> <p>Our proposal for the art. 6.3:</p> <p>A model or an equivalent model of those parts of the grid operated at a voltage of less than 220 kV (#005) shall be included in the IGM regardless of whether these parts of the grid are operated by the TSO or a DSO (incl. CDSO) if these grid elements are operated by a TSO and</p> <p>a. these parts of the grid have elements which are used in regional operational security analysis, or</p> <p>b. the relevant grid elements in those parts of the grid are connecting</p> <p>i. a generation unit or load modelled in detail in accordance with Article 8 or 9 to the 220 kV or higher voltage level;</p> <p>ii. two nodes at the 220 kV or higher voltage level.</p>
CGMM	95	23		<p>Concerning the quality monitoring, EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids consider that TSOs should elaborate and make public some key performance indicators to evaluate the accuracy of IGMs and CGMs. This further transparency effort would be useful in order to allow all interested parties to improve their own estimates and to contribute to the improvement of the methodologies and the scenarios used by TSOs with a benefit in terms of efficient operations of the electricity system.</p>

GLDPM	14 47	3 18	<p>EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids welcome the clarifications introduced in GLDPM Articles 3 & 18 to limit the risk of increased reporting obligations imposed on SGUs. However, these developments do not dispel all concerns on the scope of data to be provided by SGUs.</p> <p>The draft methodologies could still imply a potential extension of the obligations imposed on generation and consumption units identified as SGUs in terms of data provision to TSOs. Notably, the identification of the specific data to be provided and the deadlines for the provision of this data will be left to local implementation rules (cf. Article 18) with the possibility for TSOs to impose additional operational costs on market participants. Since some of the required estimates can be already elaborated by TSOs, the undersigned wish to reiterate that the decision on the sharing of data provision obligations between system operators and SGUs should be based on stakeholder consultation and subject to NRAs approval according to the principle of economic efficiency as clearly mentioned in the draft System Operation Guideline (GL SO), i.e. “apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved” (Article 4.2.c). TSOs should not take the responsibility to unilaterally decide on the scope of SGUs’ obligations. If the local TSO decides to request data and to elaborate local implementation rules according to Article 18, they should, on the contrary, back their proposals with factual elements (e.g. cost-benefit analyses and timely consultation of stakeholders) which will be assessed by NRAs.</p>
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GLDPM	18	5	<p>Article 5 of the present draft GLDPM proposal states that the data to be provided by DSOs and closed DSOs shall comprise not only data on grid elements in voltage levels of 220 kV or above – are usually operated by the TSO – but also data on grid elements in voltage levels “of less than 220 kV [if] they are used in regional operational security analysis” (Article 5.1.b revised draft GLDPM Guideline). EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids do not support the idea to pass on to the TSO detailed data on distribution grid assets such as sub-stations, lines or cables, power transformers including phase-shifting power transformers, power compensation devices and flexible AC transmission systems. The impact of the exact layout at distribution level is so small that taking it into account does not provide any additional accuracy, as the accompanying data sources have a much greater inaccuracy (e.g. generation shift key) than the possible additional accuracy provided by this information. Instead, it should be sufficient to prescribe that DSOs provide for equivalent models for their distribution systems to the TSO. This would align article 5 of GLDPM with article 19 paragraph 3 of the CACM regulation, which limits IGMs to the transmission system. As GLDPM must only address data to build up the respective IGM, this limit has to be respected by GLDPM as well.</p> <p>Our proposal for the art. 5:</p> <p>1. For the purposes described in Regulation 2016/1719, provision of equivalent models for the distribution system by the respective DSO shall be deemed sufficient.</p> <p>2. Distribution and closed distribution system operators shall provide the structural data described in paragraph 2 of this Article if these grid elements are operated by a TSO and pertain to a voltage level</p> <p>a. of 220 kV or above;</p> <p>b. of less than 220 kV and they are used in regional operational security analysis.</p> <p>[...]</p> <p>3. 4. Distribution and closed distribution system operators shall provide a model or an equivalent model of those parts of the grid operated at a voltage of less than 220 kV (#005) and operated by a TSO if</p> <p>a. these parts of the grid are used in regional operational security analysis, or</p> <p>b. the relevant grid elements in those parts of the grid are connecting</p> <p>i. a generation unit or load modelled in detail in accordance with Article 8 or 11 to the 220 kV or higher voltage level; or</p> <p>ii. two nodes at the 220 kV or higher voltage level.</p> <p>[...]</p>
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GLDPM	20	6	<p>For the same reasons as described for art. 5, there is no need to amend the requirements with regard to the provisions of “infrequently changing variable data” laid down in Article 6 of the current draft GLDPM proposal. The impact of the exact layout and status at distribution level is so small that taking it into account does not provide any additional accuracy, as the accompanying data sources have a much greater inaccuracy (e.g. generation shift key) than the possible additional accuracy provided by this information. It should be sufficient to prescribe that DSOs provide for equivalent models for their distribution systems to the TSO.</p> <p>Our proposal for the art. 6:</p> <ol style="list-style-type: none"> 1. For the purposes described in Regulation 2016/1719, provision of infrequently changing variable data for the distribution system is not necessary. 2. Distribution and closed distribution system operators shall provide the following infrequently changing variable data for the relevant network elements: <ol style="list-style-type: none"> a. the tap position of all modelled power transformers including phase-shifting transformers without regulation (#024); [...]
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GLDPM	22	7	1	<p>Article 7 of the GLDPM proposal prescribes the types of variable data which are to be delivered by DSOs and closed DSOs to the TSO. The revised draft presented on 14 February 2017 incorporates the provision of information on topological remedial actions pursuant to Article 14 of Regulation (EU) 2016/1719 (FCA regulation). This Article 14 of the FCA regulation reads: "If remedial actions are taken into account in the long-term capacity calculation, each TSO shall ensure that those remedial actions are technically available in real time operation and meet the requirements set out in Article 25 of Regulation (EU) 2015/1222."</p> <p>That means there is no need for the TSO to take remedial actions in his own grid into account. Having this in mind, why does a TSO need information regarding remedial actions in the distribution system, no matter whether it is foreseen to take them into account or not? The impact of remedial actions at distribution level is so small that taking them into account does not provide any additional accuracy, as the accompanying data sources have a much greater inaccuracy than the possible additional accuracy provided by this information.</p> <p>Apart from this, the TSO is not in the position to "ensure that those remedial actions are technically available in real time operation" if they are foreseen for the distribution system.</p> <p>Our proposal for the art. 7.1:</p> <p>1. For the purposes described in Regulation 2015/1222, distribution and closed distribution system operators shall provide the following variable data for the network elements referred to in Article 5:</p> <p>a. the planned or forced unavailability of modelled items of equipment that are known or expected to be unavailable (#025);</p> <p>b. topological remedial actions pursuant to Article 25 of Regulation 2015/1222 and Article 14 of Regulation 2016/1719, respectively, as well as topological agreed measures pursuant to the common grid model methodology (#026);</p> <p>c. forced unavailability of modelled equipment if applicable for the concerned time-frame (#028).</p>
GLDPM	45	17	2	<p>EURELECTRIC, CEDEC, GEODE and EDSO for Smart Grids welcome the positive evolution introduced following the first consultation, as far as TSOs have deleted the possibility for TSOs to sanction stakeholders for "insufficient data quality". The new wording of article 17.2 seems much more balanced and appropriate, as far as from now on, the TSO "shall in the first instance attempt to resolve these problems directly with the entity concerned".</p>