



DSO associations' response to ENTSO-E public consultation on the Common Grid Model Methodology and the Generation and Load Data Provision Methodology

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General comment

DSOs fully recognise the usefulness of seeking to increase the international market-capacity between European countries, without lowering security of supply. The Common Grid Model Methodology (CGMM) and the Generation and Load Data Provision Methodology (CGLDPM) are two essential elements of the Capacity Allocation and Congestion Management (CACM) network code: a bad implementation would limit cross-border electricity trade and could endanger the power system stability.

A public consultation on the proper implementation of the requirements set in the section 2 of the CACM is thus very welcome. However, Distribution System Operators (DSOs) are surprised by the extensive scope of the foreseen methodology, and concerned by the licence TSOs intend to grant themselves for collecting data from grid users and other system operators. In several instance, these documents seem to go beyond the legal duties given to TSOs. The associations of DSOs' concerns are listed hereafter.

Distribution networks are also managed by *system* operators

A majority of the installed capacity of renewable energy resources (RES) is connected to distribution networks, and many DSOs have been investing continuously in automation and control equipment for the last ten years. The transition from traditional grids to smart grids is underway, but already today DSOs are *system* operators who have much more means for active system management than in the past.

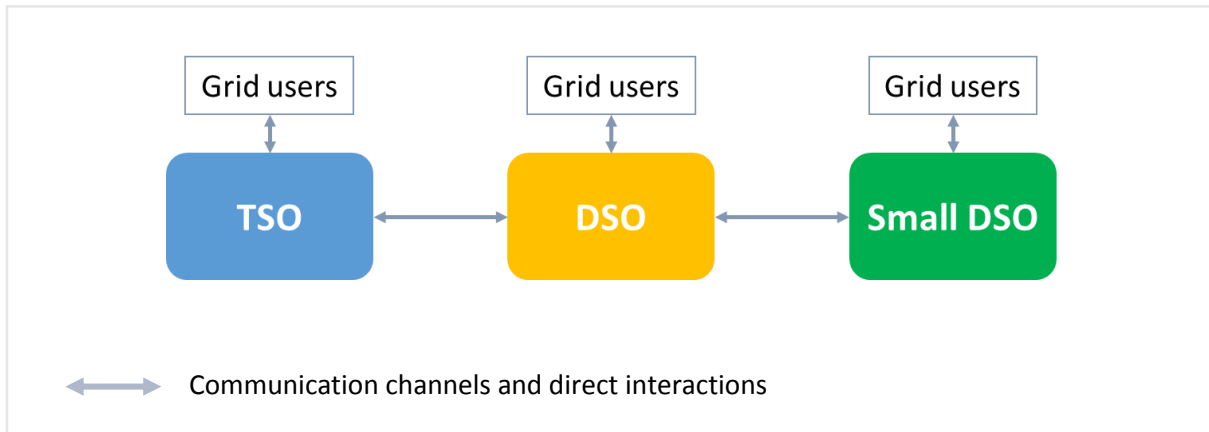
These system operators need data from grid users to operate their networks safely and efficiently manage RES. As distributed resources have greater effect on distribution than on transmission systems, DSOs need all necessary data from those generators. To avoid duplication of communication channels and unnecessary reporting burdens on generators, available data should be transferred between (distribution and transmission) system operators. Moreover, the data aggregation task of the DSO is important from a “one-system perspective”.

In the CGMM methodology, two approaches for modeling the power system are described, the “network reduction” and the “extended view”. The former implying to build a simplified model of the power system, the latter being a real in-depth simulation of power flows.

The network reduction approach appears to be the lightest in terms of IT processing power, and the easiest to implement. For decades, R&D-efforts were made to find efficient ways to reduce data for grid analysis without losing accuracy and make load flow analysis possible. To reduce complexity, Thévenin equivalents of neighboring and underlying systems were (and are) used. Significant DSOs could support this approach by delivering aggregated data on DSO-connected users to TSOs. DSOs would ensure that the aggregated values (e.g. load, generation by type) are correct and check the consistency of all delivered data. This model of interaction is favored by DSOs, who in any case need to collect data for their own system operations.

Member States may deviate from the methods if it involves high total costs to fully comply with the methods described in the document, as long as the overall intention can be met.

Simplified view of interactions and data flows between system operators



TSOs should not be allowed to expand unilaterally the network codes' scope

With the Third Energy Package, ENTSO-E has been granted extended powers, including drafting network codes. However, the methodology proposed would go one step beyond by giving TSOs the power to penalize grid users and DSOs. On page 47, the GLDPM reads: *“TSO shall have the right to sanction insufficient data quality in an appropriate manner”*.

This statement is puzzling by itself, but combined with unbalanced requirements, it becomes even worse. On page 30, the GLDPM states that it would be impractical to impose reporting obligations on owners of type A power generating modules. However, a few lines later, the reporting obligation is assigned to the corresponding DSO, but the DSO does not get any means to impose this reporting obligation on the owners of type A power generators. To impose an obligation without a means to fulfill it, but with a sanction when the obligation is not met, is unfair and could harm DSOs.

We believe **only a regulator should be able to sanction grid users and DSOs for a lack of compliance with European network codes** and/or an inappropriate response to a TSO's request.

In addition, article 40(5) of the GL SO governs the applicability of articles 44 and 47-53 related to data exchange, and states that the specific scope of the data exchange should be determined in cooperation with DSOs and SGUs. The methodology should not be used to circumvent this requirement, yet ENTSO-E writes in the last paragraph on page 25 of the GLDPM that this methodology creates “a legal basis for the TSO's to demand that the data be made available”. This is a critical issue for all grid users and DSOs.

A complementary consultation will be needed when the system operation guidelines are finalized

The CGMM refers in several instances to the system operations guidelines' requirements (GL SO). These guidelines are still under revision by the electricity cross-border committee, consequently the content of the CGMM in consultation is undefined. The consultation of CGMM is therefore premature and should be postponed or repeated when the final wording of the GL SO is known.

In addition, the CACM network code, and the GL SO both refer to a "common grid model" but there will probably be several CGMM:

- the CGMM mentioned in the CACM will be used for calculating cross-border capacity;
- the CGMM described in GL SO will be used for operational security analysis.

Both CGMM require different data setups, with a different level of details. The associations of DSOs expect that two consultations will be carried out, this one on the CACM, and another one on the GL SO (where the former might form the core of the latter).

ENTSO-E's methodology should follow a "protection by design" principle

The GLDPM seems to imply that TSOs will collect large volumes of data and then select the most relevant information. This approach will create unnecessary data collection costs and contradicts recent European efforts towards more data privacy and security.

For instance, the General Data Protection Regulation (to be adopted this spring) set the principle of data protection by design and by default for personal data: *"The controller shall implement mechanisms for ensuring that, by default, only those personal data are processed which are necessary for each specific purpose of the processing and are especially not collected or retained beyond the minimum necessary for those purposes, both in terms of the amount of the data and the time of their storage"*.¹

For critical infrastructure such as transmission and distribution grids, a similar principle should be applied. TSO should first carry out a sensitivity analysis of the system, and then define the data granularity needed.

No guarantee of harmonisation

The proposed methodologies give freedom to each TSO to define its own requirements. For instance, in the CGMM document:

- on page 54, *"the TSO has the right to choose if it provides a model with the lower voltage levels modelled in detail or not"*;

¹ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), article 23 (2)

- on page 55 *“each TSO shall decide which lower voltage connections have to be taken into account for the proper modelling of generation”*;
- *“The process of reduction is optional, as noted above each TSO shall decide if it is needed. DSO networks in IGMs may also be included in full detail”*.

The GLDPM document also gives the TSO the freedom to define its own requirements:

- On page 42 *“Therefore, data on forecast active power output and active power reserves shall also be provided on a (D-2) basis along with any other information the TSO deems relevant.”*

In addition, several paragraphs in the GLDPM consultation are unclear:

- *“As precise as possible, a breakdown of installed capacity on a nodal level”*;
- *“Expected changes to structural data for the relevant time horizons”*
- *“Power generating facility owners might be asked to indicate whether their power generating facility ...”* (p. 42).

The original purpose of the network codes was to improve security of supply and develop the internal energy market through a harmonised set of rules. The combination of letting each TSO design its own data requirements, and the lack of clarity of the proposed methodology will likely lead to very different methodology being used for each internal grid model. These various model then risk not to be reconcilable in a common grid model.