



EREGG Advice

Comitology Guidelines on Fundamental Electricity Data Transparency

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INFORMATION PAGE

Abstract

This document (Ref. E10-ENM-27-03) presents ERGEG's advice to the European Commission on Comitology Guidelines on Fundamental Electricity Data Transparency, following a public consultation of stakeholders.

It contains propositions on requirements for publishing information on generation, load, transmission and interconnectors as well as balancing. Furthermore, it is proposed that a central information platform for publishing the electricity data is established.

Related Documents

CEER/EREG Documents

- [1] ERGEG Advice on the Comitology Guidelines on Transparency, Initial Impact Assessment, 7 December 2010, Ref. E10-ENM-05-01 (updated version), http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/Comitology%20Guideline%20Electricity%20Transparency/CD/E10-ENM-05-01_FEDT%20IIA%20update_7-Dec-2010.pdf
- [2] ERGEG Public Consultation on Fundamental Electricity Data Transparency, Evaluation of responses, 7 December 2010, Ref. E10-ENM-27-03a, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/Comitology%20Guideline%20Electricity%20Transparency/CD/E10-ENM-27-03a_FEDT_EoR_7-Dec-2010.pdf
- [3] ERGEG, Guidelines of Good Practice on Information Management and Transparency in Electricity Markets, 2 August 2006, Ref. E05-EMK-06-10, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_EREG_PAPER_S/Guidelines%20of%20Good%20Practice/Electricity/EREG_GGPIMT%20Transparency%20in%20Electricity%20Markets%20-%20Augus.pdf
- [4] Report on Transparency, 13 September 2007, Electricity Regional Initiative, Northern Regional Electricity Market, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_INITIATIVES/ERI/Northern/Final%20docs/Report_on_Transparency1.pdf
- [5] Implementing the 3rd Package: next steps, CEER/EREG, 18 June 2009, Ref. C09-GA-52-06a, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_EREG_PAPER_S/Cross-Sectoral/2009/C09-GA-52-06a_Implementing_3rdpackage_18-Jun-09.pdf

External Documents

- [6] Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0055:0093:EN:PDF>
- [7] Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0001:0014:EN:PDF>
- [8] Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0015:0035:EN:PDF>

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1 Subject and scope

1.1 For the purpose of these guidelines “fundamental data” means historical and planning data of a technical or economic character, which may have an impact on the internal market in electricity and is related to:

- (1) transmission network infrastructure operated by the transmission system operators; or
- (2) other infrastructure, including generation and consumption, connected directly or indirectly to the transmission network; or
- (3) any physical measure on transmission network infrastructure; or
- (4) any market-related transmission network calculation.

1.2 These guidelines aim at:

- 1.2.1 establishing a minimum common level of fundamental data transparency that is a precondition for the efficient functioning of wholesale electricity markets;
- 1.2.2 defining a minimum common level of publication of the defined data on a fair and non-discriminatory basis across all Member States; and
- 1.2.3 developing a central information platform to enable all market participants to establish a coherent and consistent view of the European wholesale electricity market.

2 Definitions

2.1 To ensure that the data to be disclosed as required by these guidelines are consistent and comparable across the various providers of data, it is necessary to have clear, understandable, transparent and common definitions for each data item that is to be delivered and displayed at the central information platform.

2.2 In application of Article 3.2 of these guidelines, ENTSO-E shall develop the detailed definitions for each data item specified in these guidelines including the generation types of Appendix 1 herein. These definitions are to be prepared in a transparent manner and to be consulted upon publicly before their application. The Agency for the Cooperation of Energy Regulators (Agency) shall provide an opinion on these detailed definitions.

2.3 The detailed definitions of the data items shall be published at the same central information platform where the information required by these guidelines is published.

2.4 The definition of timing used is CET (Central European Time).

2.5 The following definitions shall be used:

2.5.1 **Available Transmission Capacity (ATC)** is that part of Net Transfer Capacity (see below), which remains available for further commercial activity after each phase of the transmission capacity allocation procedure;

2.5.2 **Balancing reserves** refer to all resources, if procured ex ante or in real time, or according to legal obligations, which are available to the TSO for balancing purposes;

- 2.5.3 **Balancing time unit** is the time period during which the price for balancing reserves is established;
- 2.5.4 **Bidding area** is a geographical area where market participants place bids/offers and where they are settled in accordance with that area's price. If a bidding area is common to several Member States, the information also has to be supplied for each Member State included totally or partially in the bidding area;
- 2.5.5 **Capacity allocation** is the allocation of the available interconnection capacity among the market participants;
- 2.5.6 **Consumption unit** is a resource which receives electrical energy for its own use; here Transmission System Operators (TSOs) and Distribution System Operators (DSOs) are not considered to be consumption units;
- 2.5.7 **Control area** is a geographical area operated and controlled by one TSO;
- 2.5.8 **Data provider** is the entity that is sending the data to the central information platform;
- 2.5.9 **Distribution System Operator (DSO)** as specified by Article 2(6) of Electricity Directive 2009/72/EC¹ means a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity;
- 2.5.10 **Generation unit** is a single electricity generator belonging to a production unit;
- 2.5.11 **Market time unit** is the period during which the market price is established. Since market time unit may vary depending on local market design, when the market time units of two bidding areas are not the same and a data item has to be published for those two bidding areas, the market time unit is the shortest possible common time period for the two bidding areas;
- 2.5.12 **Net Transfer Capacity (NTC)** is the technical term for transmission capacity which should be published according to paragraph (5) of Annex I of Regulation (EC) 714/2009². Net Transfer Capacity corresponds to the maximum exchange between two areas compatible with security standards applicable in both areas and taking into account the technical uncertainties on future network conditions;
- 2.5.13 **Offered capacity** is part or equivalent to the ATC that is offered to the market by the transmission capacity allocator (see below);
- 2.5.14 **Primary owner of the data** is the entity that is able to generate the data. It is the entity that is solely legally responsible for the quality of the data when it is being generated;
- 2.5.15 **Production unit** is understood as a facility for generation of electricity made up of a single generation unit or of an aggregation of generation units;

¹ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC

² Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003

- 2.5.16 **Total load**, including losses without stored energy, is equal to gross generation deducting exports, adding imports and deducting stored energy;
- 2.5.17 **Transmission Capacity Allocator** is the entity empowered by TSOs that manages the allocation of available transmission capacity;
- 2.5.18 **Transmission System Operator (TSO)** means, as specified by Article 2(4) of Electricity Directive 2009/72/EC¹, a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity;
- 2.5.19 **Vertical load** is the total amount of power flowing out of the transmission network to the distribution networks, to directly connected end-consumers or to the consuming part of generation.

3 Form of publication

- 3.1 TSOs, electricity generators, electricity consumption units and DSOs who are the primary owners of the data shall submit all information and data specified in these guidelines to the data providers to enable publication according to the requirements set out in these guidelines.
- 3.2 A central information platform for publishing the information specified in these guidelines shall be established. ENTSO-E is responsible for ensuring that the central platform complies with the requirements in these guidelines.
- 3.3 ENTSO-E shall ensure that the central information platform is set up and maintained in the most efficient and cost-effective manner. To this end, ENTSO-E shall submit, sufficiently in advance, its proposal for the central information platform to the Agency for approval.
- 3.4 The fundamental data shall remain the property of the primary owner of the data.
- 3.5 The data providers shall send to ENTSO-E, in due time, the fundamental data defined in these guidelines and on the basis of Article 2.2 of these guidelines, according to the terms and conditions of these guidelines in view of enabling the publication, by ENTSO-E, in a coordinated and timely manner. ENTSO-E shall fix a reasonable time period within which the fundamental data shall be provided to it on a regular basis, taking into account the complexity of the information required and the urgency for which the information is needed.
- 3.6 Each data provider and/or each primary owner of the data shall act either directly or via a duly authorised third party acting on its behalf. In the latter case, the duly authorised third party of data providers shall be indicated to ENTSO-E in advance. If needed, for the purpose of these guidelines TSOs can define, for the area where they operate, the architecture of information flows from primary owners.
- 3.7 The national regulatory authority shall ensure that the owners of the data submit the information they are obliged to submit on the basis of these guidelines either to the

- TSO in the control area of which they are located, to a duly authorised third party or to the central information platform. Any disputes regarding to whom the required information is to be submitted shall be resolved by the national regulatory authority. The primary owner of the data shall be responsible for the legality, reliability, integrity, quality, correctness and accuracy of the fundamental data provided. This shall apply also to the cases when the data providers supply the fundamental data requested.
- 3.8 The data provider, ENTSO-E and the primary owner shall use their best efforts to perform their obligations under these guidelines.
- 3.9 The liability of data provider, ENTSO-E and primary owner of the data under these guidelines shall be limited to cases of gross negligence and/or wilful misconduct. In any event, data provider and/or primary owner of the data shall not compensate any loss of profit, loss of business, or any other indirect incidental, special or consequential damages of any kind arising from a breach of these guidelines.
- 3.10 On the central information platform, the market time units related to various transparency requirements and the relevant bidding areas shall be published.
- 3.11 The information referred to in Article 4 of these guidelines shall be made available and disclosed in the following manner:
- 3.11.1 without undue delay and according to the timing requirements defined;
 - 3.11.2 on a common European website provided by ENTSO-E;
 - 3.11.3 the website is to be easily accessible to the public, free of charge for the information specified in these guidelines, however a neutral point of contact has to be provided;
 - 3.11.4 update on a regular/rolling basis; the update frequency shall be according to the changes that take place;
 - 3.11.5 information shall be stored for at least 5 years in the central information platform;
 - 3.11.6 in a user-friendly manner, in downloadable format that allows for quantitative analyses;
 - 3.11.7 in consistent units as required by these guidelines; and
 - 3.11.8 in English.
- 3.12 In close cooperation with the data providers and the primary owners of the data, and with respect to usual market practices and needs, for the purpose of publication, ENTSO-E shall establish and maintain standardised ways of communication between the different information systems, as well as define the quality criteria, the accuracy and the format of the fundamental data to be provided.
- 3.13 These guidelines do not preclude in any way the disclosure of the same information, parts of it or more information, on the websites of TSOs and other parties.

4 Content of the transparency requirements and timelines for publication

4.1 Load

- 4.1.1 As data providers, TSOs shall be responsible for collecting and sending all relevant data on load in their control area to the central information platform. The consumption units, the generation units and the DSOs that are located within the TSOs' control area shall provide the TSOs with all the relevant data that are required to fulfil the obligations of these guidelines.
- 4.1.2 If a TSO is neither able to measure nor to estimate total load value, it is allowed, until the end of 2013, to publish vertical load. The load is given in MW per market time unit per bidding area.
- 4.1.3 TSOs shall be responsible for providing to the central information platform at least the following load data:
 - 4.1.3.1 hourly actual total load at the latest one hour after the operational hour (H+1). The primary owners of the data are the TSOs and owners of generation units;
 - 4.1.3.2 a day-ahead estimate of the total load per market time unit per bidding area on the day before the operational day at the latest one hour before the gate closure time of the day-ahead market in the bidding area. The day-ahead hourly estimated load has to be updated, if necessary. The primary owners of the data are TSOs and DSOs;
 - 4.1.3.3 if applicable (if weekly energy and capacity products are offered), a week-ahead estimate of the total load per bidding area per day, for every day of the coming week W maximum, minimum and average load values (21 individual data), each Friday at the latest one hour before the gate closure time of the day-ahead market in the bidding area. Week-ahead estimated loads shall be updated, if necessary. The primary owners of the data are TSOs and DSOs;
 - 4.1.3.4 if applicable (if monthly energy and capacity products are offered), a month-ahead estimate of the total load per bidding area one week before the monthly capacity auction, or at the latest one week before the delivery month, for each week maximum, minimum and average load values. The primary owners of the data are TSOs and DSOs;
 - 4.1.3.5 if applicable (if yearly energy and capacity products are offered), a year-ahead estimate of the total load per bidding area for the following year, one week before the yearly capacity auction, or at the latest one week before the delivery year, for each month maximum, minimum and average load values. The primary owners of the data are TSOs and DSOs;
 - 4.1.3.6 a year-ahead forecast margin, which is defined as the difference between yearly forecast of available generation capacity and yearly forecast of total load. Information on generation capacity shall include forecast of total generation capacity, forecast of availability of generation and forecast of reserves contracted for system services. The information is to be given per bidding area, (MW) evaluated at local market time unit of annual maximum load. The information is to be published one week before the yearly capacity auction or at the latest one week before the delivery year. The primary owners for the total

load forecast are TSOs and DSOs and for the available generation capacity the owners of generation units;

- 4.1.3.7 ex-ante information on the planned unavailability of consumption units. Any change in the availability of a consumption unit is required to be reported and published if the change in available capacity of the consumption unit equals to or exceeds 100 MW and lasts at least one market time unit. Data to be provided and to be published shall include the name of the consumption unit, location, bidding area, available capacity during the event, installed capacity, reason for the unavailability and start and estimated stop date (day, hour) of the unavailability. The information shall be published as soon as possible and at the latest H+1 after the decision is made. Information is to be updated with changes as soon as possible and at the latest H+1 after the decision. The primary owner of the data is the consumption unit that is subject to planned unavailability;
 - 4.1.3.8 ex-post information on the unplanned unavailability of consumption units. Any change in availability of a consumption unit is required to be reported and made public if the unplanned change in availability of the consumption unit equals or exceeds 100 MW and lasts for at least one market time unit. Data to be submitted and published shall include name of the consumption unit, location, bidding area, available capacity during the event, installed capacity, reason for the unavailability and the start and estimated stop time (day, hour) of the unavailability. Data shall be provided and updated as soon as possible and at the latest H+1 after the outage or when an update is available. The primary owner of the data is the owner of the consumption unit that is subject to unavailability.
- 4.1.4 TSOs and ENTSO-E shall be transparent about the load forecast method. The description of the load forecast method shall be made public and included in the detailed definitions to be prepared by ENTSO-E according to Article 2.2 of these guidelines.

4.2 Transmission and interconnectors

- 4.2.1 TSOs shall provide, annually, information on expansion and dismantling projects in their national transmission grids per bidding area with the estimated impact (MW) also on the interconnection capacity (NTC) for minimum the following three years. This information must be given for projects with a relevant effect on transfer capability (NTC) between bidding areas. A relevant effect is considered to be an effect that equals or exceeds 100 MW at least during one market time unit. For every network component and interconnector project, the TSOs shall make public the name of the assets concerned. Also, the location, type of asset, the impact on interconnection capacity between the bidding areas and the estimated date of completion shall be provided. The information shall be published one week before the yearly transmission capacity auction or at the latest one week before the delivery year. Information is to be updated with relevant changes before end of March, end of June and end of September of year Y. The primary owner of the data is the TSO.
- 4.2.2 If any type of ATC method is applied for capacity calculation, TSOs shall publish all relevant data concerning the available transmission capacity between bidding areas on the basis of the best possible forecast. For this, TSOs shall provide at least the following information, of which they are also the primary owners of the data:

- 4.2.2.1 planned outages on interconnections between bidding areas and in the transmission grid that reduce interconnection capacity between bidding areas, if the estimated impact on capacity (NTC) equals or exceeds 100 MW during at least one market time unit. This information is to be published at the latest one week before the yearly transmission capacity auction, or if no transmission capacity auctions are conducted, at the latest one week before the delivery year. Information shall contain the name of the asset concerned, the place (including affected bidding area), the type of asset, the start and estimated stop dates of the outage (day, hour), the estimated impact (MW) on transmission capacity (NTC) between the bidding areas and the reasons. The information shall be updated with changes at the latest H+1 after information is known;
- 4.2.2.2 ex-post information on actual outages (planned and unplanned) in the transmission grid and on interconnections between bidding areas if the impact on transmission capacity (NTC) equals or exceeds 100 MW during at least one market time unit as soon as possible and at the latest H+1 after the occurrence. The TSO shall provide information on the asset concerned, the location, the affected bidding area, the type of asset, the start and estimated stop dates of the outage (day, hour) and the estimated impact (MW) on transmission capacity (NTC) between bidding areas. The reasons for the outage should be published at the latest on the next day;
- 4.2.2.3 in the case of explicit transmission capacity auctions, the offered capacity (MW) in the explicit capacity auction sufficiently in advance to the auction. In view of year-ahead, month-ahead and week-ahead auctions, publication should be done sufficiently in advance and no later than one week before the auction;
- 4.2.2.4 in the case of implicit auctions, the offered day-ahead capacity (MW) at the same time that TSOs provide capacity value to the entity responsible for the implicit auction;
- 4.2.2.5 for each border between bidding areas and per direction, estimated net transfer capacity (MW) for the next day (per market time unit). Information shall be published daily, at the same time that the offered day-ahead capacity (MW) is published;
- 4.2.2.6 if applicable (if weekly energy and capacity products are offered), for each border between two bidding areas and per direction, estimated net transfer capacity (MW) for the next week (one value per day). Information is to be published Friday the week before the delivery week, at the latest 1 hour before the gate closure time of the day-ahead market in the bidding area. The primary owner of the data is either Transmission Capacity Allocator or a TSO;
- 4.2.2.7 if applicable (if monthly energy and capacity products are offered), for each border between bidding areas and per direction, estimated net transfer capacity (MW) for the next month, one value per week with one maximum and one minimum value per market time unit. Information is to be published at the latest one week before monthly transmission capacity auction and at 18h00 at the latest;
- 4.2.2.8 if applicable (if yearly energy and capacity products are offered), for each border between bidding areas and per direction, estimated net transfer capacity (MW)

- for the next year, one average value per month. This information is to be published at the latest one week before yearly transmission capacity auction and at the latest one week before the delivery year at 18h00 at the latest;
- 4.2.2.9 for the intraday market at D-1 for the next day estimated hourly available transmission capacity (MW) per market time unit between the bidding areas and per direction, as soon as day-ahead capacity is known and at the latest at 18h00. Data should be updated per market time unit after each change;
 - 4.2.2.10 if applicable, for DC links, information on any restrictions placed on the use of available cross-border capacity through the application of ramping restrictions or intraday transfer limits.
- 4.2.3 In the case of the flow-based allocation for the capacity, TSOs or Transmission Capacity Allocators shall provide the following information. The primary owner of the data is Transmission Capacity Allocator:
- 4.2.3.1 non-redundant flow-based parameters containing power transfer distribution factor (PTDF) matrix with physical margins (MW) available for the market/allocation associated to the anonymous critical branches per market time unit, at D-1 before the (implicit or explicit) auction day for D;
 - 4.2.3.2 flow-based allocated capacity (MW) per non-redundant critical branches, in D-1, H+2 after auction (implicit or explicit) results have been released.
 - 4.2.3.3 for intraday market, non-redundant flow-based parameters containing PTDF matrix with estimated physical margins (MW) available for the intraday allocation associated to the anonymous critical branches per market time unit, at D-1 after day-ahead nominations/schedules are known. Data should be updated per market time unit after each change.
- 4.2.4 TSOs or Transmission Capacity Allocators shall provide information on the use of transmission and interconnection capacity. The primary owners of this information are the TSOs. The following information shall be disclosed:
- 4.2.4.1 for explicit auctions, for every market time unit, the capacity (MW) offered by TSOs, the capacity (MW) requested by the market and the capacity allocated to the market, the price of the capacity and the congestion revenue per border between bidding areas at the latest H+2 after each auction; for explicit auctions, for every market time unit, the total capacity nominated between bidding areas at the latest H+2 after each nomination;
 - 4.2.4.2 for cross-border implicit auctions, the allocation results (MW) per market time unit, equal to net positions of each bidding area, the price of each bidding area (euro/MWh) and congestion income per border between bidding areas;
 - 4.2.4.3 a yearly report, at least on a regional level, updated during the year where necessary, on where and why structural cross-border congestion exists. This report shall indicate where the limiting constraint in the transmission network is located, to what extent this constraint affects the level of transmission capacity (how many hours/days/weeks/months in the year) and all possible corrective measures that could be implemented to increase the transmission capacity,

together with their estimated cost. The methodology and projects for achieving the long-term solution shall be described;

- 4.2.4.4 aggregated final commercial scheduled exchanges and physical flows between bidding areas as closely as possible to real time and at the latest H+2, by market time unit. The primary owner of the data is a TSO or a Power Exchange;
- 4.2.4.5 reasons and effects on NTC of actions taken by TSOs and having a significant impact on NTC (equal to or above 100 MW during at least one market time unit), Information shall include a description of the effects of any corrective actions taken by the TSOs (such as curtailment, reduction of grid feed-ins or withdrawal and grid-related measures) for solving network or system problems. Information on NTC modification shall be published at H+2 and a complete report on D+1;
- 4.2.4.6 cross-border transfer capacity (MW) reserved as priority rights between the EU- and non-EU Member States per product period. The information shall be published at the entry into force of these guidelines and updated as soon as there is a modification in the information.

4.3 Generation

- 4.3.1 Generators are responsible for providing all relevant generation data specified in Chapter 4.3 of these guidelines.
- 4.3.2 The information on generation shall include at least the following information:
 - 4.3.2.1 ex-ante information on the total sum of generation capacity (MW) installed for all existing production units equalling or exceeding 1 MW installed capacity, for the three following years per production type as defined in Annex 1 of these guidelines, at the latest one week before the first year to which the data refers. The primary owners of the data are production units;
 - 4.3.2.2 information about the installed gross capacity (MW) annually for the 3 following years for each production unit (installed and planned) with an installed capacity equal to or larger than 100 MW. This information shall contain the unit name, the installed capacity, the location, the bidding area and the production type as defined in Annex 1 of these guidelines and it shall be provided at the latest one week before the first year to which the data refers. The primary owners of the data are generating units;
 - 4.3.2.3 ex-ante forecast of available capacity (MW) annually for the three following years for each production unit (installed and planned) with an installed capacity larger than 100 MW. This information shall contain the unit name and the installed capacity. The primary owners of the data are production units;
 - 4.3.2.4 ex-ante information on planned unavailability of generation units if the change in the available capacity is equal to or larger than 100 MW. The power plant name, the unit name, location, the bidding area, the installed capacity, the production type such as defined in Annex 1 of these guidelines, the start and estimated stop date (day, hour) of the unavailability, reason for the unavailability and the

available generation capacity shall be provided. Any planned unavailability of a generation unit is only required to be reported if the unavailability lasts at least one market time unit. The information shall be published H+1 at the latest after the decision is made. The information shall be updated with changes at the latest H+1 after information is known. The primary owners of the data are generating units;

- 4.3.2.5 ex-post information on unplanned unavailability of generation units with a change equal to or more than 100 MW in available capacity. Information shall be published as soon as possible and not later than H+1 after the failure. The information shall include the station name, the name of the affected generating unit, location, the bidding area, the installed capacity, the production type such as defined in Annex 1 of these guidelines, the start and stop date (day, hour) of the unavailability, reason for the unavailability and the available capacity during event. Information shall be updated at the latest H+1 after stop date is known. Information on unplanned unavailability of a power generation unit is only required to be reported if the unplanned unavailability of this generation unit lasts at least one market time unit. The primary owners of the data are generating units;
- 4.3.2.6 estimated aggregated information per market time unit on the total scheduled generation per bidding area for each hour of the following day, to be published D-1, at 18h00 at the latest. The primary owners of the data are generating units;
- 4.3.2.7 ex-post information for the previous week on the filling rate of the water reservoir and hydro storage plants in aggregated form (MWh) per bidding area on the third working day of the W+1. A comparison to the value of the year before must also be given. This is to be published for each bidding area only in countries with more than 10% feed-in of this type of generation per year or for bidding areas with more than 30% feed-in of this type of generation per year. The primary owners of this data are generating units;
- 4.3.2.8 actual unit by unit generation output (MW) detailed per generation unit of each production unit equal to or greater than 100 MW installed generation capacity, updated every hour. The information shall be provided H+1. The primary owners of the data are generating units;
- 4.3.2.9 actual aggregated generation output per market time unit and per generation type, as defined in Annex 1, to be published H+1. Actual generation of wind and solar power (MWh) in each bidding area per each market time unit in countries with more than 1% feed-in of wind or solar power generation per year or for bidding areas with more than 5% feed-in of this type of generation per year, to be published H+2, updated if necessary on the basis of measured values. Small-scale generation might be estimated. The primary owners of the data are generating units.
- 4.3.2.10 ex-ante forecast of day-ahead generation (MWh) of wind power and solar power for each bidding area per each market time unit for the following day in countries with more than 1% feed-in of wind or solar power generation per year or for bidding areas with more than 5% feed-in of this type of generation per year. Information shall be published D-1 at the latest at 18h00. Update is required in

case of changes. The primary owners of the data are generating units, TSOs or in some Member States central forecast bodies responsible for preparing the forecast.

4.4 Balancing

4.4.1 TSOs or where applicable operators of balancing markets shall provide at least the following information on the balancing and balancing market. TSOs are the primary owners of the following data:

4.4.1.1 rules on balancing including:

4.4.1.1.1. processes for the ex ante and real-time procurement of different types of balancing power reserves (e.g. primary, secondary, tertiary) and of balancing energy;

4.4.1.1.2. the methodology for setting prices for activated reserves (energy);

4.4.1.1.3. the methodology for calculating imbalance charges;

4.4.1.1.4. if applicable, a description on how cross-border balancing between two or more control areas is carried out and the conditions for generators and load to participate.

4.4.1.2 if applicable, reserved balancing reserves either according to legal requirements or by procurement processes, ex ante. The amount (MW) of such reserves in terms of generation or load for each kind of reserve and according to the time unit for which the reservation is made (e.g. hour, day, week, month, year, etc.); to be published as soon as possible and no later than two hours before the next procurement process takes place;

4.4.1.3 if applicable, prices of ex ante capacity reservations paid to generators or load for each kind of reserve, and the relevant pricing methodology according to the time unit for which the payment is made (e.g. hour, day, week, month, year, etc.); to be published as soon as possible and no later than two hours before the next procurement process takes place;

4.4.1.4 ex-post aggregated offers for activation to the TSO separated for each type of reserve (e.g. primary, secondary, tertiary reserve), where applicable, as soon as possible and no later than two hours after the operating hour by market time unit;

4.4.1.5 ex-post information on the activated balancing reserves (whether procured ex ante or not) by type of reserve (e.g. primary, secondary and tertiary reserves) by balancing time unit, where applicable, to be published as soon as possible and at the latest two hours after the operating hour;

4.4.1.6 ex post information on actual prices (average and marginal prices) paid by TSOs for balancing energy. Prices paid by the TSOs for up and down regulation respectively shall be published for each relevant balancing time unit and each

relevant kind of reserve product, where applicable. If the balancing energy is acquired through an auction, prices shall be published accordingly for each balancing market time unit. The information shall be published sufficiently before the following procurement procedure, if applicable;

- 4.4.1.7 imbalance prices per balancing time unit, as soon as possible and at least H+2. If there is an ex ante procurement procedure the information shall be given at least H-2 before the following procurement procedure;
 - 4.4.1.8 volumes of the aggregated imbalances per balancing time unit and actually used volumes of balancing reserves inside control areas. The information shall be published H+1 after the operating hour on the basis of the information available to the TSO;
 - 4.4.1.9 financial balance of the control area on a monthly basis. This publication shall include the expenses for balancing energy and capacity payments resulting from imbalance pricing and the difference between expenses and income. The publication shall be done at the latest on the last calendar day, three months after the operational month. If settlement is preliminary, the figures shall be updated after the final settlement;
 - 4.4.1.10 market information on the type of balancing bids/offers used (generation technology, load, export/import activation time) for each day of the month M.
- 4.4.2 If applicable, regarding TSO-TSO cross-border balancing exchanges, the TSO shall provide the following additional data, after the operating hour per balancing time unit:
- 4.4.2.1 volumes of exchanged bids and offers per procurement time unit;
 - 4.4.2.2 maximum and minimum prices of exchanged bids and offers per procurement time unit;
 - 4.4.2.3 volume of balancing energy activated in various control areas within joint cross-border balancing.

5 Monitoring

- 5.1 The national regulatory authorities as defined in Article 35 of Directive 2009/72/EC³ shall ensure compliance with these guidelines regarding the obligations placed on Transmission System Operators, generators, consumption units and Distribution System Operators. The Agency for the Cooperation of Energy Regulators (Agency) shall ensure compliance with these guidelines regarding the obligations placed on ENTSO-E.
- 5.2 Where appropriate to fulfil the aims of these guidelines, the regulatory authorities shall cooperate with each other, with the Commission and with the Agency in compliance with Chapter IX of Directive 2009/72/EC.
- 5.3 The Agency shall review annually the efficiency and cost-effectiveness of the central information platform based on a report to be sent by ENTSO-E.
- 5.4 Two years after the entry into force of the guidelines, the Agency shall provide a progress report that will also include an analysis of the different measures taken in the Member States to meet the transparency obligations, together with an examination of the effectiveness of those measures and, in particular, their effects on competition in the electricity market. Where appropriate, the report may include recommendations as to the measures to be taken to improve fundamental data transparency.

³ Directive 2009/72/EC of the European Parliament and of the COUNCIL of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC

Annex 1: Generation types

<u>Thermal power plants</u>	<u>Hydro power plants</u>	<u>Renewable energy plants</u>
<ul style="list-style-type: none">• Nuclear• Lignite• Hard coal• Brown coal• Gas• Oil• Waste• Peat	<ul style="list-style-type: none">• Reservoir• Run-of-river plant• (Pump) storage• Tide	<ul style="list-style-type: none">• Wind• Solar• Other renewable energy