

UNOFFICIAL TRANSLATION

**RULES**  
**ON THE PUBLICATION OF ELECTRICITY MARKET**  
**FUNDAMENTAL DATA**

Pursuant to Article 109 (1) point 13) and Article 176 of the Energy Law (Official Gazette of the RS, No. 145/2014 and 95/2018 - other Law and 40/2021) and Article 28 (1), point 29) of the Statute of the Joint Stock Company “Elektromreža Srbije” Belgrade (Official Gazette of the RS, No. 88/2016), Assembly of the Joint Stock Company “Elektromreža Srbije” Belgrade, on the 93 Extraordinary Session held on March 02<sup>nd</sup>, 2022, adopted this

## **RULES**

# **ON THE PUBLICATION OF ELECTRICITY MARKET FUNDAMENTAL DATA**

## **1. GENERAL PROVISIONS**

### **1.1. *SUBJECT MATTER***

- 1.1.1. These Rules govern in detail the timely publication of all relevant data on the consumption, transmission, production and balancing market as key market data, and their availability to all energy market participants, as a prerequisite for non-discriminatory and transparent functioning of the electricity market.
- 1.1.2. These Rules also govern in detail the obligations of the transmission system operator, distribution system operator, closed distribution system operator, electricity producers and end customers with regard to publication of market data and other issues necessary for their publication.

### **1.2. *SUBMISSION AND PUBLICATION OF DATA***

- 1.2.1. The transmission system operator shall timely publish all relevant data relating to the total forecasted load and actual load, availability and use of reserved transmission capacity and capacity of interconnection transmission line, forecasted generation and actual generation and data on the balancing electricity market laid down in these Rules (hereinafter Key Market Data) in accordance with the law governing the energy sector (hereinafter the Law).
- 1.2.2. The transmission system operator shall ensure publication of Fundamental Market Data within deadlines and contents laid down in these Rules in such a way to make them available on the EMS AD website ([www.ems.rs](http://www.ems.rs)) for electronic data interchange of the European Network of Transmission System Operators for Electricity ([www.entsoe.eu](http://www.entsoe.eu)) to all market participants.
- 1.2.3. For the purpose of publication the Fundamental Market Data in accordance with these Rules (hereinafter Data), the transmission system operator shall use all data and information originally available, as well as data of the distribution system operator, closed distribution

system operator, electricity producers and end customers, if they are submitted to the transmission system operator within the deadlines and in the contents laid down in these Rules.

1.2.4. For the purpose of publication of the Fundamental Market Data, the producer and the end customer, distribution system operator and closed distribution system operator shall submit the data prescribed by these Rules and displayed in the proper format (form) determined by the transmission system operator.

1.2.5. Distribution system operator or closed distribution system operator shall submit to the transmission system operator the following information:

- 1) Total actual generation on the distribution system or closed distribution system for the accounting interval;
- 2) Installed generation capacity aggregated of production units connected to the distribution system or closed distribution system;
- 3) Total day-ahead generation forecast on the distribution system or closed distribution system;
- 4) Total day-ahead generation forecast for solar power and total day-ahead generation forecast for wind power on the distribution system or closed the distribution system;
- 5) Actual generation aggregated by type of generation on the distribution system or closed distribution system for the accounting interval;
- 6) Total actual generation for solar power and total generation for wind power in the distribution system or closed the distribution system;

1.2.6. Electricity producer shall submit to the transmission system operator the following information:

- 1) Actual generation on the transmission system for the accounting interval;
- 2) Total actual load of pumped storage plants and pumped hydroelectric storages operating in the pump mode in the accounting interval;
- 3) Installed generation capacity aggregated on the transmission system;
- 4) Installed capacity of production unit (100 MW and more);
- 5) Day-ahead aggregated generation on the transmission system;
- 6) Total day-ahead generation forecast for solar power and total day-ahead generation forecast for wind on the transmission system;
- 7) Planned unavailability of generation unit;
- 8) Actual unavailability of generation unit;
- 9) Planned unavailability of production unit;
- 10) Actual unavailability of production unit;
- 11) Actual generation of production units;
- 12) Actual wind and solar power generation;
- 13) Weekly average value of stored energy.

1.2.7. The final customer for consumption units larger than or equal to 100 MW shall submit to the transmission system operator the following information:

- 1) Planned unavailability of the consumption units;
- 2) Actual unavailability of the consumption units.

1.2.8. Transmission system operator shall provide the following information:

- 1) Value of electricity cross - zonal exchange;
- 2) Day-ahead load forecast;
- 3) Week-ahead load forecast;

- 4) Month-ahead load forecast;
- 5) Year-ahead load forecast;
- 6) Year-ahead forecast margin;
- 7) Development plan;
- 8) Planned outages in the transmission grid;
- 9) Changes in the actual availability of interconnections and the transmission grid;
- 10) Forecasted cross-zonal capacity;
- 11) Offered transmission capacity cross - zonal;
- 12) Yearly report about critical network elements limiting offered capacities;
- 13) Use of transfer capacity - auctions;
- 14) Use of transfer capacity - allocations;
- 15) Total capacity nominated;
- 16) Total capacity already allocated;
- 17) Prices on the day-ahead organised electricity market;
- 18) Total scheduled commercial exchange;
- 19) Physical flows;
- 20) Congestion management - redispatching;
- 21) Congestion management - countertrading;
- 22) Congestion management report;
- 23) Rules on balancing;
- 24) Amount of balancing reserve under contract;
- 25) Prices of the reserved capacity of balancing reserves;
- 26) Accepted aggregated offers (volumes);
- 27) Volumes of activated balancing reserves;
- 28) Prices of activated balancing reserves;
- 29) Imbalance prices;
- 30) Total imbalance volume;
- 31) Monthly financial balance;
- 32) Aggregated volumes of offers for control areas balancing activation;
- 33) Prices for control area balancing for bids and offers;
- 34) Volumes of control area balancing energy activated;

1.2.9. Data shall be submitted by e-mail or by information system. The delivery shall be deemed to have been effected when the sender receives recipient's electronically generated confirmation of the receipt of the data sent by e-mail or information system. The recipient and the sender shall adjust their information systems in order to ensure electronic confirmation of receipt of data.

1.2.10. Delivery of notifications shall be made directly via delivery service – courier, by mail, fax or e-mail. The delivery shall be deemed to have been effected on the day of receipt of a written confirmation by the recipient or the receipt of the recipient's electronic confirmation by the sender of the receipt of the notification sent by e-mail.

1.2.11. The entities referred to in section 1.2.3 above shall be responsible for timeliness, completeness and accuracy of data submitted to the Transmission System Operator.

1.2.12. The entities referred to in paragraph 1 hereof shall inform the transmission system operator of changes in the name, business address, phone number, fax, e-mail, change of person authorised for submission of data and other changes that have an impact on the publication of data.

1.2.13. In order to ensure the confidentiality of data pursuant to the Law

- 1) the electricity producer shall quote the words: “Republic of Serbia” when providing information on the location of prescribed in sections 5.2.3, 5.5.2, 5.6.2, 5.7.2, 5.8.3 and 5.9.2 hereof;
- 2) Transmission system operator quotes the marking of border with a neighbouring country to which the information relates when providing information on the location from sections 4.2.1, 4.3.1 and 4.14.1 hereof.

## 2. VOCABULARY

### 2.1. DEFINITIONS

Certain terms used in these Rules shall have the following meaning:

**Balancing reserve under contract** – available capacities of balancing entities determined in accordance with the rules governing the operation of a transmission system and the rules governing the operation of the electricity market.

**Countertrading** – exchange of electricity cross - zonal initiated by the transmission system operator between two control areas for the purpose of removing physical congestion.

**Net generation** – total actual production on the transmission and distribution threshold within a control area in the accounting interval.

**Accounting interval** – time period during which calculation is carried out and the duration of which is determined in accordance with the rules governing the operation of the electricity market.

**Consumption unit** – facility of the final customer of electricity.

**Generation unit** – a single generator within the production facility of the electricity producer.

**Production unit** – a facility for generation of electricity made up of one or more generators (generation units).

**Week** – time period between Monday at 00:00 hours and Sunday at 24:00 hours.

**Type of generation** - generation determined depending on the resources used to produce electricity and which in terms of these Rules can be:

- fossil (brown coal / lignite, hard coal, coal gas, oil, oil shale, natural gas, peat);
- hydro (storage, flow, pumped storage);
- nuclear;
- renewable (wind, solar energy, geothermal energy, biomass and other renewable resources);
- others.

Other terms used herein shall have the meaning set out in the Law and the Rules adopted on the basis of the Law, governing the operation of the transmission system, operation of the electricity market and distribution of capacity between trading areas.

### 2.2. ABBREVIATIONS

Abbreviations used in these Rule shall have the following meanings:

**ATC (Available Transfer Capacity)** –Defined in accordance with the Transmission Grid Code;

**EIC (Energy Identification code)** – identification code used for electricity entities and elements of the electric power system; the list of valid codes is given on the website of the European Network of Transmission System Operators for Electricity (ENTSO-E)  
[https://www.entsoe.eu/fileadmin/user\\_upload/edi/library/eic/cds/area.htm](https://www.entsoe.eu/fileadmin/user_upload/edi/library/eic/cds/area.htm)

**NTC (Net Transfer Capacity)** – Defined in accordance with the Transmission Grid Code

**UIOSI (Use-It-Or-Sell-It)** – a rule under which the transmission capacity cross - zonal not-nominated is automatically made available for a day-ahead capacity allocation.

### 3. FUNDAMENTAL MARKET DATA ON CONSUMPTION

#### 3.1. ACTUAL TOTAL LOAD

3.1.1. The transmission system operator shall publish the average value of actual total load within the accounting interval according to the following formula:

Actual load = Net generation - Export + Import - Load of pumps

Where:

**Net generation** represents total actual generation on the transmission and distribution threshold in the control area within the accounting interval.

**Export** represents average power per hour of exchange cross - zonal given from a control area in the accounting interval.

**Import** represents average power per hour of exchange cross - zonal taken from the neighboring control areas in the accounting interval.

**Load of pumps** represents total load of pumped storage plants and pumped hydroelectric storages operating in the pump mode in the accounting interval.

In case the electricity producer is not able to deliver a measurement on the transmission threshold, he can deliver the generation on the balancing entities threshold.

3.1.2. Electricity producer shall submit to the transmission system operator data on total actual generation in the transmission system for the accounting interval and total load of pumped storage plants and pumped hydroelectric storages when operating in the pump mode in the accounting interval maximum 50 minutes after each accounting interval.

3.1.3. Distribution system operator or closed distribution system operator shall submit to the transmission system operator data on the actual total generation at the distribution level or in the closed distribution system for the accounting interval maximum 50 minutes after each accounting interval.

3.1.4. The information shall be published not later than one hour (H+1) following each accounting interval.

3.1.5. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **3.2. DAY-AHEAD FORECAST OF THE TOTAL LOAD**

- 3.2.1. Transmission system operator shall publish data on the average load values in the accounting interval for the day ahead not later than two hours before expiry of the deadline for submission of offers on the day-ahead organised electricity market.

### **3.3. WEEK-AHEAD TOTAL LOAD FORECAST**

- 3.3.1. Transmission system operator shall publish the maximum and minimum average value of load forecast in the accounting interval for each day of the following week.
- 3.3.2. The information shall be published on Friday in the week preceding the week to which the data relate, by 14:00 h.

### **3.4. MONTH-AHEAD TOTAL LOAD FORECAST**

- 3.4.1. Transmission system operator shall publish the maximum and minimum average value of load forecast in the accounting interval for each week of the following month.
- 3.4.2. The information shall be published in the week preceding the first day of the month to which the data relate (M-1).

### **3.5. YEAR-AHEAD TOTAL LOAD FORECAST**

- 3.5.1. Transmission system operator shall publish the maximum and minimum average value of load forecast in the accounting interval for each week of the following year.
- 3.5.2. The information shall be published not later than 15 days before the beginning of the calendar year to which the data relate.

### **3.6. PLANNED UNAVAILABILITY OF CONSUMPTION UNITS**

- 3.6.1. Transmission system operator shall publish aggregated data on planned unavailability of all consumption units larger than or equal to 100 MW of a duration of minimum one accounting interval.
- 3.6.2. The end customer shall submit to the transmission system operator the following information on the consumption units of the approved capacity larger than or equal to 100 MW:
- EIC of the consumption unit;
  - Value of the unavailable power;
  - Reason for the unavailability;
  - The start and the end date of planned unavailability (day, month, year, hour and minute);
  - Comment or additional information, if any.
- 3.6.3. The end customer shall submit to the transmission system operator the information from section 3.6.2 not later than 50 minutes after the decision on the planned unavailability of the consumption units.

- 3.6.4. In case of correction of the submitted data, the end customer shall submit the corrected data not later than one hour (H+1) after becoming aware of the change of data.
- 3.6.5. The information shall be published not later than one hour (H+1) after the decision on the planned unavailability of the consumption units.

### **3.7. ACTUAL UNAVAILABILITY OF THE CONSUMPTION UNITS**

- 3.7.1. Transmission system operator shall publish aggregated data on the unavailability of all consumption units with power change larger than or equal to 100 MW and of a duration of minimum one accounting interval.
- 3.7.2. The end customer shall submit to the transmission system operator the following information on the consumption units of the approved capacity larger than or equal to 100 MW:
- EIC of the load unit;
  - Value of the available power;
  - Reason for the unavailability;
  - The start and the (estimated) end date of change of availability (day, month, year, hour and minute);
  - Comment or additional information, if any.
- 3.7.3. The end customer shall submit to the transmission system operator the information from section 3.7.2 not later than 50 minutes after the change of unavailability of the consumption units.
- 3.7.4. The information shall be published not later than one hour (H+1) following the change of the unavailability of the consumption units.
- 3.7.5. In case of correction of the submitted data, the end customer shall submit the corrected data not later than one hour (H+1) after becoming aware of the change of data.

### **3.8. YEAR-AHEAD FORECAST MARGIN**

- 3.8.1. Transmission system operator shall publish the year-ahead forecast margin.
- 3.8.2. The year-ahead forecast margin shall be determined as a difference between the yearly availability generation capacity and yearly load forecast.

The forecast of availability generation capacity represent a difference between yearly net generation capacity forecast and yearly forecast of unavailability generation capacity. In determining unavailability generation capacity account shall be taken of maintenance and overhauls, disconnections and capacities reserved for system services, as well as capacities not planned to be hired by the manufacturer during this period.

- 3.8.3. In calculating the year-ahead forecast margin, the transmission system operator shall use data on the value of the generation forecast capacity and the load forecast in the accounting interval with the highest forecast load value for the following year.
- 3.8.4. The information shall be published not later than a week before the week in which yearly auction is held or 15 days before the beginning of the year to which the data relate.



## **4. FUNDAMENTAL MARKET DATA ON TRANSMISSION**

### **4.1. REPORT ON DEVELOPMENTS**

- 4.1.1. Transmission system operator shall publish a list of projects for construction, dismantling and reconstruction of the transmission system elements whose effects to NTC exceed 100MW, and which the transmission system operator will implement within the next three years in accordance with the Ten-Year Transmission System Development Plan and the Transmission System Investment Plan.
- 4.1.2. The information shall be published a week before the week in which yearly auctions are held or 15 days before the beginning of the year to which the data relate.

### **4.2. PLANNED UNAVAILABILITY IN THE TRANSMISSION GRID**

- 4.2.1. Transmission system operator shall publish the planned unavailability in the transmission grid in the control area causing a reduction of NTC by 100 MW or more, and of a duration of minimum one accounting interval.

The following information shall be published:

- EIC of the power line;
- Location – marking of border;
- Name of asset;
- Type of asset;
- Estimated effects on NTC;
- Reason for the unavailability;
- The start and the end date of change in availability (day, hour);
- Comment or additional information, if any.

- 4.2.2. The information shall be published one hour (H+1) following the decision on the planned unavailability.

### **4.3. CHANGES IN THE ACTUAL AVAILABILITY OF INTERCONNECTIONS AND THE TRANSMISSION GRID**

- 4.3.1. Transmission system operator shall publish the changes in the actual availability of interconnections and the transmission grid in the control area causing a reduction of NTC by 100 MW or more, and of a duration of minimum one accounting interval.

The following information shall be published:

- EIC of elements of the electric power system;
- Location – marking of border;
- Name of asset;
- Type of asset;
- Estimated effects on NTC;
- Reason for the unavailability ;

- The start and the (estimated) end date of the unavailability (day, hour);
- Comment or additional information, if any.

4.3.2. The information shall be published one hour (H+1) following the change of the availability.

4.3.3. It is not possible to change the status of unplanned outage in transmission network to a status of planned outage.

#### **4.4. FORECASTED CROSS-ZONAL CAPACITY**

4.4.1. Transmission system operator shall publish the yearly, monthly and daily NTC:

- a) For yearly NTC – values for each month (a minimum value related to the whole month);
- b) For monthly NTC – values for each day of the month (a minimum value for a day);
- c) For daily NTC – values for each accounting interval for the day to which the data are related.

4.4.2. The information shall be published:

- for yearly NTC, for the year Y, seven days before the day for submission of a request for yearly auctions, but not later than December 15<sup>th</sup> in the year Y-1;
- for monthly NTC not later than two business days before the day for submission of a request for monthly auctions;
- for daily NTC, not later than one hour before expiration of the deadline for submission of offers for participation in a day-ahead organised electricity market.

#### **4.5. OFFERED TRANSMISSION CAPACITY CROSS - ZONAL**

4.5.1. Transmission system operator shall publish the yearly, monthly, daily and intraday ATC for each border and direction, as follows:

- For yearly ATC – values for each month (a minimum value related to the whole month);
- For monthly ATC – values for each day of the month (a minimum value for a day);
- For daily ATC – values for each accounting interval for the day to which the data are related;
- For intraday ATC – values for each accounting interval for the day to which the data are related;

4.5.2. The information shall be published:

- for yearly ATC, for the year Y, seven days before the day for submission of a request for yearly auction, but not later than December 15<sup>th</sup> in the year Y-1;
- for monthly ATC not later than two business days before the day for submission of a request for monthly auctions;
- for daily ATC, not later than one hour before expiration of the deadline for submission of offers for participation in a day-ahead organised electricity market;
- for intraday ATC one hour before the first intraday allocation and after each change.

#### **4.6. YEARLY REPORT ABOUT CRITICAL NETWORK ELEMENTS LIMITING OFFERED CAPACITIES CROSS - ZONAL**

- 4.6.1. Transmission system operator shall publish data on the critical network elements which are limiting the use of offered capacity cross - zonal.
- 4.6.2. The information shall be published by the end of February in the year to which the data relate.

#### **4.7. USE OF TRANSFER CAPACITIES - AUCTIONS**

- 4.7.1. Transmission system operator shall publish data for the yearly, monthly and daily explicit auctions for each border and direction, as follows:
- Required transmission capacity cross - zonal (MW);
  - Allocated transmission capacity cross - zonal (MW);
  - Marginal prices (in EUR/MW) and
  - Auction revenue (in EUR).
- 4.7.2. The information shall be published one hour (H+1) after the completed auctions.

#### **4.8. USE OF TRANSFER CAPACITIES - AUCTIONS**

- 4.8.1. Transmission system operator shall publish for each border and direction:
- Required transmission capacity cross - zonal (in MW);
  - Allocated transmission capacity cross - zonal (in MW).
- 4.8.2. The information shall be published one hour (H+1) after the completed auctions.

#### **4.9. TOTAL NOMINATED CAPACITY TRANSMISSION CROSS - ZONAL**

- 4.9.1. The transmission system operator publishes the total capacity nominated for each accounting interval in a day.
- 4.9.2. Total nominated transmission capacity cross - zonal is an aggregate capacity per border and direction, nominated by the market participants entitled to report daily work plans according to the rules, which define operation of transmission system and agreed and confirmed by a neighboring transmission system operator.
- 4.9.3. Transmission system operator publish the values of total nominated transmission capacity, per border and direction:
- For long-term period (sum of capacity nominations allocated on yearly and monthly auctions).
  - For day-ahead period (sum of capacity nominations allocated on yearly and monthly, weekly and daily auctions)
  - For intraday period (sum of capacity nominations allocated on yearly, monthly, weekly, daily and intraday auctions)

#### **4.10. TOTAL CAPACITY ALREADY ALLOCATED CROSS - ZONAL**

4.10.1. Transmission system operator shall publish for each border and direction:

- Monthly capacity already allocated;
- Daily capacity already allocated.

4.10.2. The monthly capacity already allocated represents allocated cross - zonal transmission capacity on yearly auctions reduced by the value of the returned capacity for each day of the month.

4.10.3. The daily capacity already allocated represents the total transmission capacity cross - zonal allocated at yearly and monthly auctions, reduced by the value of the returned yearly capacity and by the value of the capacity returned by applying the principle of UIOSI for each accounting interval for the day to which the data relate.

4.10.4. The information shall be published:

- for monthly capacity already allocated, two business days before holding the monthly auctions;
- for daily capacity already allocated, one hour before the completion of the process of submission of offers in a day-ahead organised electricity market;

#### **4.11. DAY-AHEAD PRICES**

4.11.1. Transmission system operator publishes the prices (EUR/MWh) on the day-ahead organised electricity market of the market area for each accounting interval.

4.11.2. The information shall be published not later than one hour (H+1) before expiration of the deadline for submission of offers on a day-ahead organised electricity market.

#### **4.12. TOTAL SCHEDULED COMMERCIAL EXCHANGES CROSS - ZONAL**

4.12.1. Transmission system operator publishes the total scheduled commercial exchanges cross - zonal, from both explicit and implicit capacity allocations, by border and direction, for each accounting interval in a day.

4.12.2. Transmission system operator shall determine the total scheduled commercial exchanges cross - zonal as an aggregate capacity per border and direction, nominated by the market participants entitled to report daily work plans, according to regulations which regulate transmission system operation (yearly, monthly, weekly, daily and intraday), exclusive the transactions between transmission system operators, agreed and confirmed by a neighboring transmission system operator.

4.12.3. Transmission system operator published values for total nominated exchange cross - zonal, by border and direction:

- For period day-ahead (sum of total nominated exchange cross - zonal according to capacities allocated on yearly, monthly, weekly and daily auctions)

- For period intraday (sum of total nominated exchange cross - zonal according to capacities allocated on yearly, monthly, weekly, daily auctions and intraday auctions)

#### **4.13. *PHYSICAL FLOWS***

- 4.13.1. Transmission system operator shall publish netted average values of power flows (MW) between the market areas for each accounting interval in a day.
- 4.13.2. The information shall be published not later than one hour (H+1) after each accounting interval.

#### **4.14. *CONGESTION MANAGEMENT -REDESPATCHING***

- 4.14.1. Transmission system operator shall publish the information related to redispatching for the accounting interval.

The following information shall be published:

- Action taken (increase or decrease in generation, increase or decrease in consumption);
  - EIC code of elements which are the reason for redispatching;
  - Location – marking of border;
  - Name of asset;
  - Type of asset;
  - Reason for the redispatching (element overloading, voltage regulation);
  - Energy, as a result of redispatching (MWh)
  - Control area from which energy is taken
  - Control area where energy is delivered to
  - The start and the end date of redispatching (day, hour);
  - Comment or additional information, if any.
- 4.14.2. Redispatching as a result of increasing of generation/consumption and decreasing of generation/consumption.
- 4.14.3. The information should be published one hour (H+1) after the accounting interval in which the redispatching was activated. In case the preliminary data, about the element which was the reason for redispatching, was delivered, then in D+1 correction of previous submitted data is taken.

#### **4.15. *CONGESTION MANAGEMENT - COUNTERTRADING***

- 4.15.1. Transmission system operator shall publish the information related to countertrading for the accounting interval.

The following information shall be published:

- Action taken (increase or decrease in the electricity exchange exchange cross - zonal);
- Border/direction;
- Reason;
- Estimated effects on the offered capacity cross - zonal (MW);
- The start and the end date (day, hour);
- Comment or additional information, if any.

4.15.2. The information shall be published one hour (H+1) after the accounting interval in which the countertrading was activated.

#### **4.16. CONGESTION MANAGEMENT REPORT**

4.16.1. Transmission system operator shall publish the information related to the monthly costs of congestion management, especially for redispatching, countertrading and total costs.

4.16.2. The information shall be published not later than the last business day of the month (M+1) after the month (M) in which the congestion management actions were taken.

## **5. FUNDAMENTAL MARKET DATA ON GENERATION**

### **5.1. INSTALLED GENERATION CAPACITY AGGREGATED**

5.1.1. Transmission system operator shall publish the installed generation capacity of all production units (in MW) of the installed capacity greater than or equal to 1 MW by type of generation.

5.1.2. Electricity producer shall submit to the transmission system operator data on the installed generation capacity of the production units in the transmission system, aggregated by type of generation, not later than two weeks before the beginning of the year to which the data relate.

5.1.3. Distribution system operator or closed distribution system operator shall submit to the transmission system operator data on the installed generation capacity in the distribution system or in the closed distribution system, aggregated by type of generation, not later than two weeks before the beginning of the year to which the data relate.

5.1.4. The data aggregated by type of production shall be published not later than one week before the beginning of the year to which the data relate.

5.1.5. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **5.2. INSTALLED CAPACITY BY PRODUCTION UNIT**

5.2.1. System operator shall publish data on the production units (existing and planned, in MW) of the installed capacity greater than or equal to 100 MW (name of production unit, EIC, installed capacity (MW) at the beginning of the year, current installed capacity (MW), type of generation).

5.2.2. The data from section 5.2.1 shall be published for the period covering the next three years.

5.2.3. Electricity producer shall submit to the transmission system operator:

- name of production unit;
- installed capacity (MW);
- location;
- voltage level at the connection point;
- type of generation.

- 5.2.4. Electricity producer shall submit data from section 5.2.3 to the transmission system operator not later than two weeks before the beginning of the year to which the data relate.
- 5.2.5. The data from section 5.2.1 shall be published one week before the beginning of the year to which the data relate.
- 5.2.6. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **5.3. DAY-AHEAD AGGREGATED GENERATION**

- 5.3.1. Transmission system operator shall publish an estimate of day-ahead aggregated generation (in MW) of the control area for each accounting interval.
- 5.3.2. Electricity producer shall submit to the transmission system operator aggregated data on total generation in the transmission system for each accounting interval, not later than the day preceding the day to which the data relate (D-1), by 17:30 h.
- 5.3.3. Electricity producer shall submit to the transmission system operator aggregated data on the total generation in the transmission system for each accounting interval, not later than the day preceding the day to which the data relate (D-1), by 17:30 h.
- 5.3.4. On the basis of the submitted data from sections 5.3.2 and 5.3.3, the system operator shall publish data from section 5.3.1 on the day preceding the day to which the data relate (D-1) by 18:00 h.

### **5.4. DAY-AHEAD GENERATION FORECAST FOR WIND AND SOLAR**

- 5.4.1. Transmission system operator shall publish a forecast of the total day-ahead generation (net value) for solar power and a forecast of total day-ahead generation (net value) for wind power (MW) for each accounting interval.
- 5.4.2. Producer of electricity generated from sun and wind power shall submit the following information:
  - average forecast values for electricity generated from solar power for each accounting interval in the next day;
  - updated average forecast values for electricity generated from solar power for all left over accounting intervals on the day to which the data relate;
  - average forecast values for electricity generated from wind power for each accounting interval in the next day;
  - updated average forecast values for electricity generated from wind power for each accounting intervals on the day to which the data relate;
- 5.4.3. Electricity producer shall submit to the transmission system operator the aggregated data on the total generation of each type of electricity from section 5.4.2 in the transmission system :
  - average forecast values not later than the day preceding the day to which the data relate (D-1) by 17:30 h;
  - updated average forecast values not later than the day to which the data relate (D) by 7:50h;

- 5.4.4. Distribution system operator or closed distribution system operator shall submit to the transmission system operator aggregated data for each type of electricity from section 5.4.2 in the distribution system or closed distribution system:
- average forecast values not later than the day preceding the day to which the data relate (D-1) by 17:30 h;
  - updated average forecast values not later than the day to which the data relate (D) by 7:50h;
  -
- 5.4.5. On the basis of the submitted data from section 5.4.2, the aggregated data from section 5.4.1 shall be published on :
- not later than the day preceding the day to which the data relate (D-1) by 18:00 h;
  - not later than the day to which the data relate (D) by 8:00 h;
- 5.4.6. Resubmission of data shall be possible in case of correction of the previously submitted values no later than:
- - not later than the day preceding the day to which the data relate (D-1) by 17:30 h;
  - - not later than the day to which the data relate (D) by 7:50 h,.

## **5.5. *PLANNED UNAVAILABILITY OF GENERATION UNIT***

- 5.5.1. Transmission system operator shall publish data on planned unavailability of a generation unit in case the planned unavailability is larger than or equal to 100 MW and of a duration of minimum one accounting interval. The data shall be published for generation units larger than or equal to 100 MW for the period covering maximum three years.
- 5.5.2. Producer shall submit to the transmission system operator:
- name of production unit;
  - name of generation unit;
  - location;
  - installed capacity (MW);
  - type of generation;
  - available generation capacity;
  - reason for the unavailability;
  - the start and the (estimated) end date of change in availability (day, hour).
- 5.5.3. Electricity producer shall submit this data to the transmission system operator not later than 50 minutes after the approval of the outage plan.
- 5.5.4. The information from section 5.5.2 shall be published one hour (H+1) after the approval of the outage plan.
- 5.5.5. In case of change of the submitted data, the producer shall submit the corrected data not later than one hour (H+1) after the change of the submitted data.



## **5.6. ACTUAL UNAVAILABILITY OF GENERATION UNIT**

- 5.6.1. Transmission system operator shall publish data on actual unavailability of a generation unit in case the unavailability is larger than or equal to 100 MW and of a duration of minimum one accounting interval.
- 5.6.2. Producer shall submit to the transmission system operator:
- name of production unit;
  - name of generation unit;
  - location;
  - installed capacity (MW);
  - type of generation;
  - available capacity (net value) of a generation unit;
  - reason for the unavailability;
  - the start and the (estimated) end date of change in availability (day, hour).
- 5.6.3. The producer shall submit to the transmission system operator data from section 5.6.2 not later than 50 minutes after the change of availability.
- 5.6.4. In case of unavailability of generation unit was planned and published with availability generation capacity, this data is not be re-submitted.
- 5.6.5. The data from section 5.6.2 shall be published one hour (H+1) after the change of the availability.
- 5.6.6. In case of change of the submitted data, the electricity producer shall submit the corrected data not later than one hour (H+1) after the change of the submitted data.

## **5.7. PLANNED UNAVAILABILITY OF PRODUCTION UNIT**

- 5.7.1. Transmission system operator shall publish data on the planned unavailability of a production unit in case the planned unavailability is larger than or equal to 100 MW and of a duration of minimum one accounting interval. The data shall be published for the production units of installed capacity larger than or equal to 200 MW.

In case the data have already been published together with the data from section 5.5 hereof, the transmission system operator shall not publish this data separately.

- 5.7.2. The producer shall submit data on the unavailability of the production unit for the period covering maximum three years, as follows:
- name of production unit;
  - location;
  - installed capacity (MW);
  - type of generation;
  - available generation capacity;
  - reason for the unavailability;
  - the start and the (estimated) end date of change in availability (day, hour).
- 5.7.3. The producer shall submit to the transmission system operator all data from section 5.7.2 not later than 50 minutes after the approval of the outage plan.
- 5.7.4. The data from section 5.7.2 shall be published one hour (H+1) after the approval of the outage plan.

5.7.5. In case of change of the submitted data, the producer shall submit the corrected data not later than one hour (H+1) after the change of the submitted data.

## **5.8. ACTUAL UNAVAILABILITY OF PRODUCTION UNIT**

5.8.1. Transmission system operator shall publish data on the actual unavailability of a production unit in case the actual unavailability is larger than or equal to 100 MW and of a duration of minimum one accounting interval, and the installed capacity of the production unit is larger than or equal to 200 MW.

5.8.2. In case the data have already been published together with the data from section 5.6 hereof, the transmission system operator shall not publish this data separately.

5.8.3. In case the planned unavailability of generation production is published, it is not necessary to re-submit information about the actual unavailability of the production group for the same production capacity.

5.8.4.

5.8.5. The producer shall also submit to the transmission system operator the following information:

- name of production unit;
- location;
- installed capacity (MW);
- type of generation;
- available capacity (net value) of the production unit;
- reason for the unavailability;
- the start and the (estimated) end date of change in availability (day, hour).

5.8.6. The producer shall submit to the transmission system operator all data not later than 50 minutes after the change of availability.

5.8.7. The data from section 5.8.3 shall be published one hour (H+1) after the change of the availability.

5.8.8. In case of change of the submitted data, the producer shall submit the corrected data not later than one hour (H+1) after the change of the submitted data.

## **5.9. ACTUAL GENERATION PER UNIT**

5.9.1. Transmission system operator shall publish the actual generation (net value) per generation unit (MW) for each accounting interval in a day (D). The data shall be published for the generation units of installed capacity larger than or equal to 100 MW.

5.9.2. The electricity producer shall submit to the transmission system operator data from section 5.9.1 not later than 4 days (D+4) after the day (D) to which the data relate.

5.9.3. Data shall be published five days (D+5) after the day (D) to which the data relate.

5.9.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

## **5.10. *AGGREGATED GENERATION PER TYPE***

- 5.10.1. Transmission system operator shall publish the aggregated actual generation (net value) per type of generation (aggregated average value) for each accounting interval in a day (D).
- 5.10.2. The electricity producer shall submit to the transmission system operator data for the generation units connected to the transmission system not later than 50 minutes after each accounting interval.
- 5.10.3. Distribution system operator or closed distribution system operator shall submit to the transmission system operator aggregated data by type of generation in the distribution system or in the closed distribution system, maximum 50 minutes after each accounting interval.
- 5.10.4. In case the measured values are not available, estimated values can be submitted.
- 5.10.5. The data from section 5.10.1 aggregated by type of generation shall be published not later than one hour (H+1) after each accounting interval.
- 5.10.6. Resubmission of data shall be possible in case of correction of the previously submitted values.

## **5.11. *ACTUAL WIND AND SOLAR POWER GENERATION***

- 5.11.1. Transmission system operator shall publish a total actual or estimated generation (net value) from solar power and a total actual or estimated electricity (net value) from wind power for each accounting interval in a day (D).
- 5.11.2. The electricity producer shall submit to the transmission system operator data for the production units (net value) connected to the transmission system not later than 50 minutes after each accounting interval.
- 5.11.3. Distribution system operator or closed distribution system operator shall submit to the transmission system operator aggregated data (net value) in the distribution system or in the closed distribution system maximum 50 minutes after each accounting interval.
- 5.11.4. In case the measured values are not available, estimated values can be submitted.
- 5.11.5. The information shall be published not later than one hour (H+1) after each accounting interval.
- 5.11.6. Resubmission of data shall be possible in case of correction of the previously submitted values. In case of submitted preliminary values, the producer and the distribution system operator or the closed distribution system operator shall submit the final values.

## **5.12. *PUMPED STORAGE/RESERVIOR STORED ENERGY***

- 5.12.1. Transmission system operator shall publish aggregate data on the average value of total energy in the reservoirs (MWh) for each week.
- 5.12.2. The producer shall submit to the transmission system operator average value of total energy in the reservoirs (MWh) for each week by 14:00 hours on the third business day of the week following the week to which the data relate.

- 5.12.3. The data shall be published by 15:00 hours on the third business day of the week following the week to which the data relate.
- 5.12.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

## **6. FUNDAMENTAL MARKET DATA ON BALANCING**

### **6.1. *RULESON BALANCING***

- 6.1.1. Transmission system operator shall update on regular basis and make available the applicable provisions of the Rules on balancing.

### **6.2. *AMOUNT OF BALANCING RESERVES UNDER CONTRACT***

- 6.2.1. Transmission system operator shall publish the amount of balancing reserves (MW) per type of reserve (primary, secondary, tertiary reserves).
- 6.2.2. Data to be published for each type of the reserve:
- source of the reserve (generation or load);
  - direction of regulation (up-regulation or down-regulation);
  - amount of balancing reserve (MW);
  - time period for which the reserves are contracted (hour, day, week, month, year).
- 6.2.3. The information shall be published one hour (H+1) after the reserve procurement process..
- 6.2.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **6.3. *PRICES OF THE RESERVED CAPACITY OF BALANCING RESERVES***

- 6.3.1. Transmission system operator shall publish the prices of the reserved capacity of balancing reserves (RSD/MW) per type of reserve (primary, secondary and tertiary reserves).
- 6.3.2. Data to be published:
- type of reserve (primary, secondary and tertiary reserves);
  - source of reserve (generation or load);
  - direction of regulation (up-regulation or down-regulation);
  - price of procured balancing reserve (RSD/MW);
  - time period for which the reserves are contracted (hour, day, week, month, year).
- 6.3.3. The data shall be published one hour (H+1) after the reserve procurement process.
- 6.3.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

#### **6.4. ACCEPTED AGGREGATED OFFERS**

- 6.4.1. Transmission system operator shall publish the total available balancing reserve (MW) per type of reserve for each accounting interval in a day (D).
- 6.4.2. The total available balancing reserve comprises available balancing reserve from balancing entities and contracted balancing reserve remained after the accepted daily work plans for each accounting interval.
- 6.4.3. Data to be published:
- total available balancing reserve in the accounting interval (MW);
  - type of the reserve (primary, secondary and tertiary reserves);
  - source of the reserve (generation or load);
  - direction of regulation (up-regulation or down-regulation);
- 6.4.4. The data shall be published not later than one hour (H+1) after each accounting interval.
- 6.4.5. Resubmission of data shall be possible in case of correction of the previously submitted values.

#### **6.5. VOLUMES OF ACTIVATED BALANCING RESERVES**

- 6.5.1. Transmission system operator shall publish the volumes of activated balancing reserves in the accounting interval (MWh), separated by type of the activated reserve.
- 6.5.2. The following information shall be published:
- activated balancing energy (MWh) in the accounting interval;
  - type of the activated balancing energy (primary, secondary and tertiary reserve);
  - source of the activated balancing energy reserve (generation or load);
  - direction of regulation (up-regulation or down-regulation);
- 6.5.3. The data shall be published not later than 30 minutes after each accounting interval.
- 6.5.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

#### **6.6. PRICES OF ACTIVATED BALANCING RESERVES**

- 6.6.1. Transmission system operator shall publish the prices of activated balancing reserves in the accounting interval (EUR/MWh), separated by type of the reserve.
- 6.6.2. In the event that the transmission system operator sells/buys balancing energy for the purpose of system balancing according to the method of the offered price, the weighted price of all activated offers in the respective accounting period shall be published.
- 6.6.3. In the event that the transmission system operator sells/buys balancing energy for the purpose of system balancing according to the method of the marginal price, the marginal price of all activated offers in the respective accounting period shall be published.
- 6.6.4. The following information shall be published:
- prices of activated balancing energy in the accounting interval (EUR/MWh);
  - type of the reserve (primary, secondary and tertiary reserves);

- source of the reserve (generation or load);
- direction of regulation (up-regulation or down-regulation);

6.6.5. The data shall be published not later than one hour (H+1) after each accounting interval.

6.6.6. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **6.7. *IMBALANCE PRICES***

6.7.1. The transmission system operator publishes the imbalance price (EUR/MWh) for each accounting interval in a day (D).

6.7.2. The data shall be published the next day (D+1) for the values relating to the day (D).

6.7.3. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **6.8. *AREA CONTROL ERROR***

6.8.1. The transmission system operator shall publish the total imbalance volume of the control area for each accounting interval in a day (D).

6.8.2. The data shall be published not later than 30 minutes after each accounting interval.

6.8.3. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **6.9. *MONTHLY FINANCIAL BALANCE***

6.9.1. Transmission system operator shall publish data on total expenses and total incomes of the transmission system operator (EUR) made on the basis of:

- a) calculated amount of balancing reserves under contract for the accounting period;
- b) calculated activated balancing energy from the balancing entities for the accounting period;
- c) calculated charges for all balancing groups for the accounting period;

6.9.2. The data shall be published on the last calendar day of the month M+3 for the month M.

6.9.3. In case of correction of financial balance the transmission system operator shall publish the corrected data from section 6.9.1.

### **6.10. *AGGREGATED VOLUMES OF OFFERS FOR CONTROL AREAS BALANCING ACTIVATION***

6.10.1. The transmission system operator publishes the aggregate power (MW) for each accounting interval from the offer for:

- d) activation of up-regulation from the neighboring control areas;
- e) activation of down-regulation from the neighboring control areas.

- 6.10.2. In the event that in the activation of offers a common list of activation of balancing reserve in the tertiary regulation is used, comprising also the balancing entities from the neighboring control areas and which have been published in accordance with section 6.4, the transmission system operator will not publish such data separately.
- 6.10.3. The data shall be published not later than one hour (H+1) after each accounting interval.
- 6.10.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

#### **6.11. *PRICES FOR CONTROL AREA BALANCING FOR BIDS AND OFFERS***

- 6.11.1. The transmission system operator shall publish the minimum and maximum price (EUR/MW) for each accounting interval from offers for:
- f) activation of up-regulation from the neighboring control areas;
  - g) activation of down-regulation from the neighboring control areas.
- 6.11.2. In the event that in the activation of offers a common list of activation of balancing reserve in the tertiary regulation is used, comprising also the balancing entities from the neighboring control areas, these data have already been published pursuant to section 6.6 and the transmission system operator will not publish such data separately.
- 6.11.3. The data shall be published not later than one hour (H+1) after each accounting interval.
- 6.11.4. Resubmission of data shall be possible in case of correction of the previously submitted values.

#### **6.12. *VOLUMES OF CONTROL AREA BALANCING ENERGY ACTIVATED***

- 6.12.1. The transmission system operator shall publish the activated balancing energy from the neighboring control areas in each accounting interval due to:
- h) activation of up-regulation;
  - i) activation of down-regulation.
- 6.12.2. The data shall be published not later than one hour (H+1) after each accounting interval.
- 6.12.3. Resubmission of data shall be possible in case of correction of the previously submitted values.

### **7. TRANSITIONAL AND FINAL PROVISIONS**

- 7.1.1. The producer shall submit data from section 5.9 hereof to the transmission system operator as of January 1<sup>st</sup>, 2022.
- 7.1.2. Data related to the forecast and the actual generation from solar energy from sections 5.4. and 5.1 hereof shall be published once the share of electricity generated from these renewable sources exceeds 1% of the total annual electricity production. The transmission system

operator shall timely inform the producers, distribution system operators and closed distribution system operators about the fulfillment of the above condition.

- 7.1.3. Upon the approval of the Energy Agency of the Republic of Serbia, these Rules shall be published on the website of the transmission system operator and shall come into force on eighth day from the day of publication.

**PRESIDENT OF THE ASSEMBLY**

**Milun Trivunac, M.S. in Economics**

**EMS AD BEOGRAD**

**ASSEMBLY**

**Class. mark: 1 4 0**

**Number: 000-00-ROU-00/20**

**Belgrade, March 02<sup>nd</sup>, 2022**