





The Rules for the electricity balancing market in North Macedonia

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# The Rules for the electricity balancing market in Republic of Macedonia

**Draft rules** 

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MEPSO MacedonianTransmission System Operator in accordance with... (state the basic legislation for these Rules) ...adopted:

### THE RULES FOR THE ELECTRICITY BALANCING MARKET

#### 1. GENERAL PROVISIONS

### Article 1 (Subject matter and scope)

- (1) These Rules for the Operation of Balancing Market (here after: the Rules) govern the method for implementation of the electricity balancing market in Macedonia, including:
  - the terms, conditions and procedures for balancing service providers;
  - the terms, conditions and procedures for balance responsible parties.
- (2) With these Rules Transmission System Operator MEPSO defines the terms and conditions:
  - that have to be taken into account by Balance Service Providers in order to take part on the balancing market in all timeframes;
  - that have to be taken into account by Balance Responsible Parties in order to become active market participants as Balance Groups;
  - that have to be taken into account by Balance Group Members within another balance group;
  - that the Transmission System Operator will follow when organising and implementing the balancing market of Macedonia, i.e. implementing prequalification process to become a BSP and to offer balancing services, implementing auctions for procurement of balancing services and activation of balancing energy, financial settlement of procured balancing capacities and activated balancing energy, and when controlling the realisation of delivery of balancing services together with the penalisation of the service in line with these Rules;
  - that the Transmission System Operator will follow when implementing qualification procedure to become active Market Participant as Balance Responsible Party and financial settlement of imbalance settlement;
  - that the Transmission System Operator will follow when implementing financial settlement of imbalance settlement;
  - that the Market Operator will follow when implementing imbalance settlement calculation.
- (3) With these Rules the Transmission System Operator defines implementation and operation of balancing market in Macedonia by procuring balancing services in the form of FCR, aFRR, mFRR and RR provided by BSPs
- (4) The rules should be implemented in a way that allow for cross-border trade and integration with the EU market.

Article 2 (Definitions)

(1) In the Rules The following definitions shall apply:



- **FCR**: primary regulation called Frequency Containment Reserve and it means the active power reserve available to contain system frequency;
- FRR: means Frequency Restoration Reserve which includes aFRR and mFRR;
- aFRR: secondary regulation called automatic Frequency Restoration Reserve and it means
  the active power reserve that can be activated by an automatic control device available to
  restore system frequency to the nominal frequency;
- mFRR: Tertiary regulation called manual Frequency Restoration Reserve and it means the
  active power reserve that can be activated by a manual control device available to restore
  system frequency to the nominal frequency;
- **RR**: it means the active power reserves available to restore or support the required level of FRR to be prepared for additional system imbalances, including generation reserves;
- **Balance Group**: a Balance Group is a group of one or more Balance Group Members. In a Balance Group one of Balance Group Members is a Balance Responsible party, the other Balance Group Members are hierarchically inferior to the Balance Responsible Party;
- **Balance Group Member**: is a Market Participant that has signed a statement of inclusion into a balance group with one of the Balance Responsible Parties;
- Balancing Service Provider: means a Market Participant with reserve-providing units or reserve-providing groups able to provide balancing services to the Transmission System Operator that has a valid Balancing Service Agreement with the Transmission System Operator;
- **Balance Responsible Party**: is a Market Participant that has concluded a Balancing Agreement with the Transmission System Operator;
- **Balance scheme**: is a hierarchically organised system of the balancing responsibilities which is kept in the register of Balance Responsible Parties and Balance Groups and is operated by the Transmission System Operator;
- **Balancing Agreement**: is a legal transaction or other relation which a legal person utilizes to manage the delivery of balancing energy and financial settlement of the imbalances in the case of an unmatched balance with the Transmission System Operator, by which the legal or natural person is included into a Balance Scheme as a Balance Responsible Party;
- **imbalance**: means an energy volume representing the difference between the allocated volume attributed to a Market Participant and the final position of that Market Participant within a given imbalance settlement period;
- TSO: means Transmission System Operator;
- **DSO:** means Distribution System Operator.
- (2) The terms used in these Rules, the meaning of which is not specified in the preceding paragraph shall have the same meanings as defined by the Energy Law.



### 2. T&C FOR BALANCE SERVICE PROVIDERS

### 2.1. Roles and responsibilities

#### Article 3

(The role of Transmission System Operator in the balancing market)

- (1) The Transmission System Operator is responsible for procuring balancing services from Balancing Service Providers in order to ensure operational security taking into account all planned disconnections, outages due to the defects and maintenance of frequency and voltage stability of the system.
- (2) In relation to Balancing Service Providers, the Transmission System Operator is responsible for:
  - signing a contract with Balance Service Providers,
  - procuring balancing services from Balancing Service Providers,
  - collecting bids for procurement of balancing capacity,
  - collecting bids for balancing energy,
  - making a merit order list for procurement of balancing capacity and balancing energy for aFRR and mFRR,
  - establishing and maintaining of Registry of Balancing Service Providers,
  - calculating activated and delivered balancing energy.
- (3) The Transmission System Operator shall apply a self-dispatching model for determining generation schedules and consumption schedules.

# Article 4 (The role of Balancing Service Providers)

- (1) The Balance Service Providers that have already been qualified for providing FCR, aFRR or mFRR balancing capacity and balancing energy when these rules enter into force do not have to enter the prequalification process and are regarded as Balance Service Providers for FCR, aFRR or mFRR and conclude Balance Service Agreement with TSO and may participate in the procurement process of balancing energy.
- (2) The Transmission System Operator shall ensure the monitoring of the compliance with the FRR minimum technical requirements and will have the right to check the data at any time with performing tests for the technical requirements.
- (3) A Balancing Service Provider shall qualify for providing bids for balancing energy or balancing capacity which are activated or procured by the Transmission System Operator. Successful completion of the prequalification process, ensured by the Transmission System Operator shall be considered as a prerequisite for the Balancing Service providers to take part in the balancing market.
- (4) The Balancing Service Provider shall submit to the connecting Transmission System Operator its balancing capacity bids that affect one or more Balance Responsible Parties.
- (5) The Balancing Service Provider with a contract for balancing capacity shall submit to the Transmission System Operator the balancing energy bids corresponding to the volume, products, and other requirements set out in the Balancing Capacity Contract.
- (6) All Balancing Service Providers have the right to submit to the Transmission System Operator the balancing energy bids from standard products or specific products for which it has passed the prequalification process.



### (Mandatory offering of balancing capacity and balancing energy)

- (1) The Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a decision with which it defines the Balancing Service Providers that have the obligation to offer balancing capacity and balancing energy to the Transmission System Operator together with the types of the reserves and other parameters.
- (2) The Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a decision with which it defines the methodology for calculation of prices for balancing capacity and for calculation of prices for balancing energy that shall be used for mandatory provision of balancing capacity and balancing energy.
- (3) The Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a reasoned decision with which it defines the Balancing Service Providers that have the obligation to participate at the auctions for the provision of balancing capacity and balancing energy together with the types of the reserves and other parameters for a limited period of time.
- (4) In case when no Balance Service Provider applies for the auction or no one submits bids for balancing capacity the Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a reasoned decision with which it defines the Balancing Service Providers that have the obligation to offer balancing capacity and balancing energy to the Transmission System Operator for a limited period of time.

# 2.2. Methodologies for determination of the amount of reserves needed and prequalification process

# Article 6 (General description)

- (1) The Transmission System Operator needs reserve power to guarantee reliable grid operation and it decides about the value of operating reserves.
- (2) The amount of reserves needed is defined in the MESPO Grid Code. The Transmission System Operator decides about the value of operating reserves for aFRR and mFRR.

# Article 7 (Prequalification process to become Balancing Service Provider)

- (1) A potential Balancing Service Provider shall demonstrate to the Transmission System Operator that it complies with the minimum technical requirements defined in these rules, by completing successfully the prequalification process of potential Balancing Service Provider providing units.
- (2) The Transmission System Operator publishes on its website the application form for the Balancing Service Provider that has to be filled and sent by the entity applying to become a Balancing Service Provider.
- (3) A potential Balancing Service Provider shall submit a formal application to the Transmission System Operator together with the required information of potential Balancing Service Provider providing units. Within 8 weeks from receipt of the application, the Transmission System Operator shall confirm whether the application is complete.



- (4) If the application is incomplete the Transmission System Operator shall request additional information and the potential Balancing Service Provider shall submit the additional required information within 4 weeks from the receipt of the request.
- (5) If the potential Balancing Service Provider does not supply the requested information within the deadline, the application shall be deemed to be withdrawn.
- (6) Within 3 months after the Transmission System Operator confirms that the application is complete, the Transmission System Operator shall evaluate the information provided and decide whether the potential Balancing Service Provider meets the criteria for a prequalification and if it passed the tests. The Transmission System Operator may request for amendments that the Balancing Service Provider shall submit. If the potential Balancing Service Provider does not supply the requested information within the deadline, the entity is not accepted The Transmission System Operator shall notify its decision to the potential Balancing Service Provider. The potential Balancing Service Provider becomes a Balancing Service Provider only if it meets all of the requisite criteria and if all the required tests for the technical requirements have been successfully passed and signs the Balancing Service Agreement with the Transmission System Operator.
- (7) Together with the notification of its decision from paragraph 6 the Transmission System Operator shall submit to the applicant a Balancing Service Agreement that defines the conditions and the manner for participation in the balancing market in four copies.
- (8) The applicant shall sign the Balancing Service Agreement within 10 days from the date of receipt of the agreement and submit two copies of the signed contract to the Transmission System Operator.
- (9) Upon the receipt of the Agreement for participation in the balancing market the Transmission System Operator shall register the Market Participant in the Register of Balance Service Providers.
- (10)On the day of registration in the Register the Market Participant acquires the right to participate in the balancing market as a Balance Service Provider.
- (11)The prequalification process to become Balancing Service Provider is depicted in the diagram in Appendix I.
- (12)The Balance Service Providers that have already been qualified for providing FCR, aFRR, or mFRR balancing capacity and balancing energy when these rules enter into force do not have to enter the prequalification process and are regarded as Balance Service Providers for the type of the capacity they have already been qualified for.
- (13)For the Balance Service Providers referred to in the previous paragraph the Transmission System Operator may request their capacity to be re-assessed with the official testing protocol.

(14)Qualification procedure for becoming a Balance Service Provider includes

- general requirements,
- technical requirements,
- information communication requirements,
- all the data needed by the Transmission System Provider has been provided.

(15) The general requirements for becoming a Balance Service Provider are:

- the generation units of the Balance Service Provider are connected to the transmission grid in the Republic of Macedonia,
- the potential Balance Service Provider is a legal person established in the Republic of Macedonia,
- the potential Balance Service Provider controls the offered generation units.

(16) The technical requirements for becoming a Balance Service Provider are:



- the generation units of the Balance Service Provider have a valid operation permit,
- the potential Balance Service Provider has passed the technical requirements examination,
- the potential Balance Service Provider has implemented the process of archiving the measurement data for later proofing of balancing energy activation.

(17) The information communication requirements for becoming a Balance Service Provider are:

- there is a communication established between the potential Balance Service Provider and the Transmission System Operator for the purpose of data exchange for scheduling of FCR, aFRR, or mFRR sources,
- there is a communication channel established between the potential Balance Service Provider and the Transmission System Operator for the purpose of data exchange for Real time operation control of FCR, aFRR, or mFRR sources.
- (18)The qualification of Balance Service Provider for the FCR, aFRR, or mFRR capacity shall be re-assessed:
  - at least once every 5 years;
  - in case the technical or availability requirements or the equipment have changed; and
  - in case of modernisation of the equipment related to FCR, aFRR, or mFRR activation.
- (19)The detailed technical requirements and the required data that have to be provided by the potential Balance Service Provider are defined in MEPSO Grid Code:

#### Article 8

(The application form for the Balancing Service Provider)

- (1) The application form for the Balancing Service Provider (DBSPE form) shall in particular contain:
  - name, address, contact data and applicant's EIC code,
  - names and data for all persons authorized to represent the applicant during the implementation of the procedure for registration on the balance energy market,
  - a list of all balance units that meet the criteria for providing the appropriate system service with which the applicant intends to participate in the balance energy market,
  - application form for the balancing units.

#### Article 9

(The application form for the balancing units)

- (1) The application form for the balancing units of a Balancing Service Provider (ODP form) shall in particular contain:
  - type of production unit and brief description (model, constraints, etc.),
  - rated power expressed in MW,
  - permissible overload expressed in MW,
  - minimum level of variable load expressed in MW,
  - normal and critical speed of increasing the output power expressed in MW / min,
  - normal and critical reduction speed of output power expressed in MW / min,
  - minimum shutdown time from full load expressed in min,
  - the minimum time required for re-commissioning from a cold and hot state expressed in min
  - available capacity for primary reserve,
  - available capacity for maximum and minimum secondary reserve,
  - available capacity for tertiary reserve,



- availability for self-starting in a powerless state (black-start).
- (2) For consumers with a property of a balanced unit, the ODP form shall in particular contain:
  - peak power expressed in MW,
  - points of connection,
  - minimum level of variable load expressed in MW,
  - the maximum level of the variable load expressed in MW,
  - normal and critical speed of increase of output power expressed in MW/min,
  - normal and critical reduction speed of output power expressed in MW/min,
  - the maximum level of load which can be interrupted expressed in MW,
  - the maximum duration of the interruption expressed in min.
- (3) The Transmission System Operator is obliged to prepare the ODP form and upon prior approval by the ERC to publish it on its website.

(Criteria for becoming Balancing Service Provider)

- (1) The Transmission System Operator determines through the qualification process if the criteria to become a Balance Service Provider have been met.
- (2) The minimum technical requirements to becoming Balancing Service Provider shall be the following:
  - The Balancing Service Provider shall activate FRR unit in accordance with the setpoint received from the Transmission System Operator;
  - The Balancing Service Provider shall have an automatic FRR activation delay not exceeding 30 seconds;
  - The Balancing Service Provider shall ensure that the FRR activation within a reserve providing group can be monitored. For that purpose, the FRR provider shall be capable of supplying to the Transmission System Operator real-time measurements of the connection point or another point of interaction agreed with the Transmission System Operator concerning time-stamped scheduled active power output and time-stamped instantaneous active power for each FRR unit and each power generating module or demand unit with a maximum active power output larger than or equal to 1,5 MW;
  - The Balancing Service Provider providing group for automatic FRR shall be capable of activating its complete automatic reserve capacity on FRR within the automatic FRR full activation time;
  - The Balancing Service Provider providing group for manual FRR shall be capable of activating its complete manual reserve capacity on FRR within the manual FRR full activation time;
  - The Balancing Service Provider shall fulfil the FRR availability requirements.
- (3) The Transmission System Operator may define additional technical requirements for the Balancing Service Providers to ensure the safe and secure delivery of FRR.
- (4) The Balancing Service Provider shall ensure that its FRR providing units fulfil the FRR technical minimum requirements, the FRR availability requirements and the ramping rate requirements in accordance with Grid Codes.
- (5) The Balancing Service Provider shall inform the Transmission System Operator about a reduction of the actual availability of its FRR providing unit or its FRR providing group or a part of its FRR providing group no latter than 24 hours after the reduction of availability.



(6) The Transmission System Operator shall ensure the monitoring of the compliance with the FRR minimum technical requirements, and will have the right to check the data at any time performing tests for the technical requirements.

#### Article 11

(Suspension of the participant in the balancing market)

- (1) For submitting inaccurate data or repeated irregularities in relation to already submitted data on dynamic parameters, the Transmission System Operator has the right to suspend the participant in the balancing market.
- (2) The decision on suspension shall contain the reasons for its adoption. The duration of the suspension cannot be longer than six months.
- (3) The Transmission System Operator shall be obliged to submit a warning before the suspension, stating the reasons for it before issuing a Decision on suspending the participant of the balancing market.
- (4) The warning prior to the suspension shall contain a time period not longer than 30 days, in which the participant of the balancing market shall be obliged to remove the reasons for which the warning was submitted by the Transmission System Operator.
- (5) The Transmission System Operator may withdraw the warning before the suspension and inform the participant in the balancing market in writing if it expires before the expiry of the deadline specified in the warning, proving that it has eliminated the reasons for which the warning was submitted.
- (6) If, during the period specified in the notice prior to the suspension, the participant of the balancing market does not remove the reasons for which it was delivered, the Transmission System Operator is obliged to adopt a decision on the suspension of the participant of the balancing market.
- (7) The Transmission System Operator is obliged, within one day from the day of passing the decision on suspension, ie the warning before the suspension of the participant of the balancing market, to inform the participant and publish it on its website, until a decision is taken to withdraw the suspension, ie withdraw the warning before the suspension.
- (8) Against the decision of the Transmission System Operator for suspension, the participant of the balancing market who has been suspended may submit a request for resolving a dispute to ERC, within 15 days from the day of the receipt of the Decision.

### Article 12

(Participation of Balancing Service Providers at the auctions for balancing capacity and offering balancing energy)

- (1) In case the Balancing Service Provider fulfils the qualification criteria for the auctions defined in the auction rules it acquires the status of the qualified Balancing Service Provider. This status gives the Balancing Service Providers the right to submit bids for balancing capacity and balancing energy in the amount of qualified capacity.
- (2) In case when the Energy Regulatory Commission issues a decision with which it defines the Balancing Service Provider to have an obligation to offer balancing capacity and balancing energy the Balancing Service Provider in obligation has to submit the bids for balancing capacity and balancing energy in accordance with the methodology for calculation of prices for balancing capacity and for calculation of prices for balancing energy.



# Article 13 (Description of the process of balancing of the system)

- (1) The objective of the process of balancing is to maintain a balance between generation and consumption (demand) within the system. A frequency deviation away from the nominal frequency results from an imbalance between generation and demand. The Transmission System Operator may use the next three types of balancing capacity: FCR, aFRR, and mFRR.
- (2) Control actions are performed in the following successive steps:
  - FCR starts within seconds as a joint action of all parties involved;
  - aFRR replaces FCR over minutes and is put into action by the Transmission System Operator by activating a proper amount of aFRR provided by Balancing Service Providers involved in the process of aFRR;
  - mFRR partially complements and finally replaces aFRR by re-scheduling generation and is put into action manually by the Transmission System Operator in cases of outages of large production units or in case of system imbalances lasting for long time periods.
- (3) Additionally to the listed three types of regulation FCR, aFRR, and mFRR, the Transmission System Operator may also implement an independent process for activation of Replacement Reserves (here after RR) which represents the active power reserves available to restore or support the required level of FRR to be prepared for additional system imbalances, including generation reserves.
- (4) The whole process of control actions performed by the Transmission System Operator is shown in the following Figure 1:

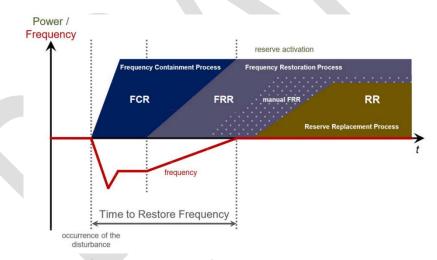


Figure 1: process of control actions performed by the Transmission System Operator

# Article 14 (The manner of providing balancing energy)

- (1) Balancing services shall be procured by the Transmission System Operator in a transparent and non-discriminatory manner by performing public auctions for capacity and energy for aFRR and mFRR, whereby at least the following information shall be defined in advance:
  - type of auction,
  - performing time of auction,
  - characteristics of the products.



(2) The Transmission System Operator gathers the bids, performs auctions, activates the bids for balancing energy, and publishes the results of auctions and its reports using a Platform.

# Article 15 (The register of Balance Service Providers)

- (1) The register of Balance Service Providers is an electronic data register in which the following data is kept:
  - the name of the legal entity,
  - the Balance Responsible Party, to which it belongs,
  - BRP EIC code,
  - entry date,
  - the type of reserve,
  - the list of the participating units.

### 2.3. Balancing energy for frequency containment process (FCR)

### 2.3.1. Standard products (capacity, energy)

### Article 16 (General Principles)

- (1) The FCR acts through turbine speed regulation which follows the frequency deviation from the nominal value due to imbalance of production and consumption in synchronous interconnected systems.
- (2) The technical characteristics of the FCR and operational requirement that must be met by generators that participate in the FCR are defined in Grid Code.

# Article 17 (Standard product definition)

(1) The product of FCR is a symmetric which means that upward and downward balancing capacity are procured together. The Transmission System Operator defines the standard product of FCR.

# Article 18 (Obligation to provide FCR)

- (1) As defined in MEPSO Grid Code all hydro and thermal generation units must be equipped with turbine control system with automatic speed regulation and capable of supplying primary control power. The Transmission System Operator can exempt the individual generation unit from the obligation of taking part in the primary control in accordance with generator technology and primary fuel type.
- (2) All hydro generation units, with installed capacity higher than 10 MW and all thermal generation units with installed capacity higher than 30 MW must take part in the system primary control. Other hydro and thermal units (for hydro with installed capacity of less or equal to 10 MW and for thermal with installed capacity of less or equal to 30 MW) are obliged to activate the automatic speed regulation only if it is required by the Transmission System Operator.



- (3) In case when the Transmission System Operator does not have access to enough FCR capacity, it informs Energy Regulatory Commission who may request from the generation units capable of supplying primary control power to take part in the system primary control.
- (4) The Transmission System Operator calculates FCR volume on monthly basis.

### 2.3.2. Technical requirements for BSPs (data exchange, communication system)

#### Article 19

(Technical requirements for FCR sources)

(2) Each generation unit, which takes part in the balancing market as FCR, must be capable of providing active power frequency response in accordance with the technical characteristics that are defined MEPSO Grid Code.

#### 2.3.3. Activation of balancing energy

#### Article 20

(Activation of FCR)

- (1) The FCR capacity is activated automatically on the generation unit in accordance with the technical instructions laid down by MEPSO Grid Code.
- (2) The Balance Service Provider shall make available to the Transmission System Operator, for each of its FCR providing units the information indicating if FCR is on or off and the active power data needed to verify FCR activation.

### 2.3.4. Financial settlement of balancing energy

### Article 21

(Financial settlement of activated FCR balancing capacity and balancing energy)

- (1) The balancing capacity from FCR units is not the subject to financial settlement between the Balance Service Provider and the Transmission System Operator.
- (2) The balancing energy from FCR units is not the subject to financial settlement between the Balance Service Provider and the Transmission System Operator.

### 2.4. Balancing energy for frequency restoration process with automatic activation (aFRR)

#### 2.4.1. Participation at the auctions for aFRR

#### Article 22

(General Principles)

(1) The Transmission System Operator procures the required quantity of aFRR from the Balancing Service Providers using the market base principles through implementation of the auctions in accordance with these rules.



- (2) The procurement of aFRR is based on the procurement of the aFRR balancing capacity and the aFRR balancing energy.
- (3) The Transmission System Operator will publish Rules for procurement of aFRR on its website after approval by Energy Regulatory Commission, no later than 30 October for the next year.
- (4) The Transmission System Operator performs auctions for the aFRR balancing capacity in different timeframes.
- (5) The Transmission System Operator performs auctions for the aFRR balancing energy in one auction with the defined Gate Opening Time (here after GOT) and the defined Gate Closure Time (here after GCT).
- (6) The bids for aFRR balancing capacity or aFRR balancing energy may only be given by the Balancing Service Provider that is qualified to offer aFRR balancing capacity or aFRR balancing energy.
- (7) The Balancing Service Provider that participates at the auction for aFRR balancing capacity is obliged to enter the bids for the aFRR balancing energy in the amount of offered aFRR balancing capacity.
- (8) The Balancing Service Provider enters separate bids for each direction of the aFRR balancing capacity and aFRR balancing energy.
- (9) The Balancing Service Provider qualified to offer aFRR balancing capacity or aFRR balancing energy has always the possibility to enter bids for aFRR balancing energy voluntarily.

### 2.4.2. Standard products (capacity, energy)

### Article 23

(Standard product definition of balancing capacity for aFRR)

- (1) The available capacity for aFRR represents the difference between the generator's operating point determined by the production plan (base power of the balance unit) and the positive part of the scope of regulation.
- (2) The range of regulation is the zone in which the AGC (Automatic Generation Control) operates automatically in both directions (regulation up and down regulation).
- (3) The range of balancing unit regulation is provided by setting the lower and upper limits by the operators in the Balance Service Provider's power plants.
- (4) The products for the aFRR balancing capacity are different for each direction and are different for each predefined product.
- (5) The Balancing Service provider may enter bids for one or more balancing units in the so-called portfolio bidding strategy. The Balancing Service provider may not enter linked bids which would link different bids for different time periods which activation would depend from each other.
- (6) The Transmission System Operator is allowed to set the maximum value of the bid prices that are acceptable for the Transmission System Operator to be accepted.
- (7) The Transmission System Operator will define general definitions of the products of aFRR balancing capacity in the auction rules for the procurement of the balancing capacity and balancing energy from aFRR. The auction rules will define at least:
  - product,
  - bidding strategy,
  - full activation time,



- activation type,
- minimum bid,
- maximum bid,
- minimum price,
- maximum price,
- validity of the bid,
- bid resolution,
- bid division,
- bid linking,
- availability,
- payment.

(Auctions for balancing capacity for aFRR)

- (1) The product for the aFRR balancing capacity is a monthly product with band values (the same value in all hours of the day).
- (2) The Transmission System Operator performs yearly auction once per year at least thirty (30) calendar days before the first delivery day of the yearly product
- (3) If needed the Transmission System Operator may decide to introduce additional monthly auctions or weekly auctions, for which it must publish the decision no later than 4 months in advance.
- (4) The Transmission System Operator may define different or additional time resolutions of the auctions for which it must publish the decision at least 4 months in advance.

#### Article 25

(Standard product definition of balancing energy for aFRR)

- (1) The products for the aFRR balancing energy are different for each direction and are different for each predefined product.
- (2) The product for the aFRR balancing energy is an hourly product.
- (3) The Balancing Service provider may not link bids on a technical or economic level which would link different bids for different time periods which would be interdepend.
- (4) The activated balancing energy from aFRR is financially settled using the method pay-as-bid.
- (5) The Balancing Service Provider may enter any number of the bids with any volume of aFRR balancing capacity.
- (6) The Transmission System Operator is allowed to set the maximum value of the bid prices that are acceptable for the activation by the Transmission System Operator.
- (7) The Transmission System Operator will define general definitions of the products of aFRR balancing energy in the Rules for procurement of aFRR. The Rules for procurement of aFRR will define at least:
  - minimum bid,
  - maximum bid,
  - minimum price (technically),
  - maximum price (technically),
  - bid resolution,
  - bid division,
  - bid linking,



- mandatory bids,
- voluntary bids.
- (8) The Energy Regulatory Commission may define a transitional period during which the activated aFRR balancing energy is financially settled with a specific methodology defined by the Energy Regulatory Commission. The decision on the transitional period and the methodology should be published no later than thirty (30) calendar days before it enters into force.

### 2.4.3. Technical requirements for BSPs (data exchange, communication system)

#### Article 26

(Technical requirements for aFRR sources)

- (1) The Balancing Service Provider who wants to offer aFRR should send a formal application for approval of technical requirements for aFRR sources.
- (2) The prequalification process for becoming an aFRR provider is performed in accordance with the Article 7 and the diagram depicted in Appendix I.
- (3) The application form is defined by the Transmission System Operator and it is published on the Transmission System Operator's website. The application requests at least the following information from the applicant:
  - Basic information on the legal entity,
  - The grid where it is connected,
  - Regulation area,
  - Balance group to which it belongs,
  - Technical information from which the qualification for aFRR may be recognised (scheme of the unit, regulation ability, technical details of the unit, procedures of internal testing and testing reports, etc.),
  - Description of the system management,
  - Fulfilment of the measurement requirements,
  - Frequency range,
  - Full activation time (in accordance with the standard product definition for aFRR),
  - The maximal technical capability of the unit,
  - Continuous availability,
  - Fulfilment of the information communication technology requirements,
  - The standard set of data for data exchange and archiving,
  - Fulfilment of the real-time data provision,
  - Information on the management centre of the Balancing Service Provider
- (4) The Transmission System Operator issues the decision on the application in three (3) months after it receives the application.

### Article 27

(Prerequisites for recognition of technical competence of BSPs for aFRR)

- (1) In order for the entity to get a recognition of technical competence of a Balance Service Provider shall:
  - fulfil the requirements set out in the application form for approval of technical requirements for aFRR sources,



- successfully pass the tests of communication between the Transmission System Operator and the aFRR unit and/or the applying entity,
- successfully pass the test activation of the aFRR source.

(Properties of the response of aFRR source)

(1) Each generation unit, which takes part in the balancing market as an aFRR, must be capable of providing active power frequency response in accordance with the technical characteristics that are defined in MEPSO Grid Code.

#### Article 29

(Availability of procured aFRR capacity)

- (1) The whole aFRR balancing capacity reserved by the Transmission System Operator (payed for the capacity) has to be available continuously without interruptions for the whole period of reservation by the Transmission System Operator and may be activated anytime and cannot be planned and engaged for mFRR at the same time.
- (2) The Balance Service Provider has to continuously monitor its aFRR balancing capacity and it has to send notification to the Transmission System Operator immediately in case of technical difficulties resulting in inability to realise balance energy activation.
- (3) In case of technical difficulties resulting in inability to realise balance energy activation the Balance Service Provider has to in two weeks' time provide a detailed explanation of the incident and a proposal for measures to prevent recurrence of the incident.

#### Article 30

(Simultaneously provision of other balancing services)

(1) The Balance Service Provider cannot provide FCR and mFRR from the same units simultaneously with aFRR under condition that the provision of aFRR is not endangered.

### Article 31

(Metering of balancing power and balancing energy)

(1) The detailed technical specifications for metering are defined in the MEPSO Grid Code.

#### Article 32

(Data required for aFRR operation)

- (1) The Balance Service Provider is responsible to provide data on the next two data sets:
  - a. Reserve planning and scheduling of the units
  - b. Real time operation of the units.
- (2) The Balance Service Provider defines the production units that are to be used in aFRR procurement process. The Balance Service Provider nominates schedule of production units involved in aFRR procurement process for the day D on the day D-1.
- (3) The Balance Service Provider may change the balance units engaged in aFRR procurement process for the day D, by submitting a new schedule at least 2 hours before the start of the hour to which the change relates.
- (4) The Transmission System Operator is responsible to provide data on the data set related to activation and realisation of activation of balancing energy



- (1) For the purpose of real time operation management of the units the next data have to be provided by the Balance Service Provider for each aFRR generation unit:
  - measured active power,
  - base power without activation of aFRR
  - activated power aFRR
  - max balancing power capacity for both directions,
  - other data if required by the Transmission System Operator.
- (5) All the information referred to in the first paragraph of this Article is provided by the Balance Service Provided defined in MEPSO Grid Code

### Article 33 (Communication system)

- (1) The Transmission System Operator is required to maintain SCADA/EMS system and to develop and maintain telecommunications infrastructure that is in his possession.
- (2) The Balance Service Provider may establish its own private communication channel.
- (3) The Balance Service Provider must install technical equipment to transfer data to the Transmission System Operator needed to manage the power system in real time.
- (4) The communication protocols that must be used by the Balance Service Provider and the Transmission System Operator are defined under title Communication and exchange of data in real time of MEPSO Grid Code.

# 2.4.4. Procurement of aFRR balancing capacity (qualification, auction requirements, provision)

# Article 34 (General requirements)

- (1) Only the Balancing Service Providers that have qualified in the prequalification process for the aFRR or have already been a Balancing Service Provider at the time of enter into force of these rules and that fulfil the requirements for the participation at the auctions may participate in the process of the procurement of balancing capacity.
- (2) The Transmission System Operator defines the auction rules for the procurement of the balancing capacity and balancing energy from aFRR units and publishes the rules on its website.

### Article 35 (Bid submission for balancing capacity for aFRR)

- (1) The Balancing Service Providers submit the bids for balancing capacity into the platform operated by the Transmission System Operator or a delegated third party.
- (2) The Balancing Service Provider may submit the bids for the balancing capacity that in total do not exceed the value of the qualified aFRR balancing capacity of the Balancing Service Providers in each time period.



(Platform for collection of bids for balancing capacity for aFRR)

- (1) The Transmission System Operator implements and operates an electronic platform capable of receiving the bids for the balancing capacity, and matching the bids and the needs defined by the Transmission System Operator.
- (2) The Transmission System Operator defines specifications of the electronic platform, the rules for platform operation, the communication protocols, and other technical properties of the platform and publishes this information on its website.
- (3) The Transmission System Operator procures all the aFRR balancing capacity through the platform. In exceptional cases of technical problems the Transmission System Operator may gather bids for the aFRR balancing capacity using different means of communication, e.g. email. The Transmission System Operator immediately informs all of the participants of the exceptional situation together with the reasons over email and by publishing the information on its website.
- (4) The Transmission System Operator shall implement the market based method of matching bids using merit order list.
- (5) The merit order list is a list of balancing capacity bids sorted in order of their bid prices, used for the selection of the balancing capacity.
- (6) The bids with the lowest price are selected in the matching process in the amount selected by the Transmission System Operator.

#### Article 37

(Rules for the procurement for balancing capacity for aFRR)

- (1) The Transmission System Operator performs the auctions for the procurement of aFRR balancing capacity in accordance with the auction rules which shall define at least:
  - general requirements for the Balance Service Providers to participate in the auctions,
  - standard products of the auctions,
  - the dates and time of the auctions,
  - bid submission,
  - the criteria of the optimisation function,
  - the timetable of the calculation and publishing of the results.

#### Article 38

(Procurement of aFRR balancing capacity)

- (1) The Transmission System Operator selects the bids for aFRR capacity by implementing optimisation function through which it selects those bids for balancing capacity which were successful in accordance with the auction rules.
- (2) The Transmission System Operator informs the Balancing Service Providers of the auction results through the platform.
- (3) The participating Balancing Service Providers may submit an objection to the results in accordance with the auction rules.
- (4) In case of technical difficulties resulting in inability to realise balance energy activation the Balance Service Provider has to send notification to the Transmission System Operator 2h before the ISP.



### 2.4.5. Collection of bids for balance energy for aFRR

### Article 39 (General requirements)

- (1) The Balancing Service Providers of which aFRR balancing capacity was selected in the auctions for the balancing capacity are obliged to submit the balancing energy bids into the platform at least in the amount of the selected balancing capacity but not exceeding the value of the qualified aFRR balancing capacity of the Balancing Service Providers in each time period.
- (2) All Balancing Service Providers with aFRR units have the possibility to submit voluntary balancing energy bids into the platform up to the value of the qualified aFRR balancing capacity of the Balancing Service Providers in each time period

# Article 40 (Bid collection for aFRR balancing energy)

(1) The Transmission System Operator collects information for the availability of aFRR units through schedule nomination. The bids for prices of balancing energy is collected in accordance with auction rules.

# Article 41 (Platform for collection of bids for aFRR balancing energy)

- (1) When the conditions on the balancing market allow the implementation of a market-based method for procurement of aFRR, the Transmission System Operator implements and operates an electronic platform capable of receiving the bids for the balancing energy, and matching the bids and the needs defined by the Transmission System Operator. In this case after the decision of the Transmission System Operator the following paragraphs are used for collection of bids for aFRR balancing energy instead of the previous Article.
- (2) The Balancing Service Providers submit the bids for balancing energy into the platform operated by the Transmission System Operator or a delegated third party.
- (3) The Balancing Service Provider may submit the bids for the balancing energy that in total do not exceed the value of the qualified aFRR balancing capacity of the Balancing Service Providers in each time period.
- (4) The platform for organising the auctions for aFRR balancing energy may be implemented together with the platform for organising the auctions for aFRR balancing capacity.
- (5) The Transmission System Operator defines specifications of the electronic platform, the rules for platform operation, the communication protocols, and other technical properties of the platform and publishes this information on its website.
- (6) The Transmission System Operator activates all of the aFRR balancing energy through the platform. In exceptional cases of technical problems the Transmission System Operator may gather bids for the aFRR balancing energy using different means of communication, e.g. email. The Transmission System Operator immediately informs all of the participants of the exceptional situation over email and by publishing the information on its website.
- (7) The Transmission System Operator shall implement the market based method of matching bids using merit order list.



- (8) The merit order list is a list of balancing energy bids sorted in order of their bid prices, used for the activation of those bids.
- (9) The activation of balancing energy bids shall be based on a single-buyer model with a merit order list with the next properties:
  - common merit order lists shall consist of balancing energy bids from standard products;
  - upward and downward balancing energy bids shall be separated in different merit order lists,
  - each activation optimisation function shall use at least one merit order list for upward balancing energy bids and one merit order list for downward balancing energy bids,
  - depending on the requirement for standard products for balancing energy, the Transmission System Operator may create more common merit order lists.
- (10)The bids with the lowest price are activated in the matching process in the amount defined by the Transmission System Operator.

(Rules for the bid collection for aFRR balancing energy)

- (1) The Transmission System Operator performs the auctions for the procurement of aFRR balancing energy in accordance with the auction rules which shall define at least:
  - general requirements for the Balance Service Providers to participate in the auctions,
  - standard products of the auctions,
  - the dates and time of the auctions,
  - GOT, GCT, GOTV and GCTV,
  - bid submission,
  - the criteria of the optimisation function,
  - the timetable of the calculation and publishing of the results.
- (2) The Balancing Service Providers submit the bids for balancing energy on a resolution of the ISP.

#### Article 43

(Timings for the bid collection for aFRR balancing energy)

- (1) The Balancing Service Providers submit the mandatory bids for the mFRR balancing energy to the auction platform in the time window between the GOT and the GCT.
- (2) The Balancing Service Providers submit the voluntary bids for the mFRR balancing energy to the auction platform in the time window between the Gate Opening Time for Voluntary bids (here after GOTV) and the Gate Closure Time for Voluntary bids (here after GCTV).
- (3) The Balancing Service Providers have submit the bids for all of the ISPs in the delivery date in order for the bid to be valid.

### Article 44 (Transitional Period)

(1) Articles from 41 to 45 are only applicable if there are no special provisions present in the Auction Rules for a specific auction regarding the matter that is a subject of those articles.



### 2.4.6. Activation of aFRR balancing energy

### Article 45 (Activation of aFRR)

- (1) The aFRR is activated automatically over the Transmission System Operator's SCADA which sends an activation signal with the required power for activation of aFRR to the Balance Service Provider that are successfully switched into Automatic Generation Control in accordance with the procedure for activation of aFRR.
- (2) The Transmission System Operator is obliged to activate aFRR balancing energy only from the production units that are submitted by the Balancing Service Providers in the schedule.

Article 46 (Merit order list)

- (1) The bids in the merit order list are activated cascading, the bids with the lowest price first until the needed volume balancing energy is activated.
- (2) In case of more than one bid with the same price, the bid with the lowest time stamp is activated first.

# Article 47 (Backup procedure for activation)

- (1) In exceptional cases when the platform does not work properly or in cases of other types of technical problems the Transmission System Operator may activate bids for the aFRR balancing energy using different means of communication and the Balancing Service Providers shall follow the instructions of the Transmission System Operator.
- (2) In these exceptional cases the Transmission System Operator may activate the bids for the aFRR balancing energy in different order, i.e. not the bid with the lowest price. The Transmission System Operator immediately informs all of the participants of the exceptional situation together with the reasons over email and by publishing the information on its website.

### 2.4.7. Calculation of activated and delivered aFRR balancing energy

#### Article 48

(Calculation of volume of activated and delivered aFRR balancing energy)

- (1) The calculation of the activated aFRR balancing energy and of the delivered aFRR balancing energy is calculated for each hour separately.
- (2) The calculation of the activated aFRR balancing energy is performed using the next formula:

$$E_{sb_{i,t}} = (E_{sbm_{i,t}} - E_{sbazna_{i,t}})$$

Where:

 $E_{sb_{i,t}}$  - Activated energy from aFRR for balance unit (i) for the settlement interval (t), (MWh)

 $E_{sbm_{i,t}}$  - measured electricity activated from aFRR for balance unit (i) for the settlement interval (t), (MWh)

 $\rm E_{sbazna_{i,t}}$  - base power of the balance unit (i) for the settlement interval (t), (MWh)



The total activated balance energy for aFRR for the settlement interval (t) is calculated by the following formula:

$$E_{sr_t} = \sum_{i=0}^{i=n} E_{sb_{i,t}}$$

If  $E_{sr_t} > 0$ , activated balance energy for aFRR for the settlement interval (t) is for upward regulation; If  $E_{sr_t} < 0$ , activated balance energy for aFRR for the settlement interval (t) is for downward regulation.

(3) BSP balance units shall be considered to have worked correctly in aFRR if it continuously worked for at least 45 minutes in the relevant hour.

### 2.4.8. Financial settlement of aFRR balancing energy

#### Article 49

(Financial settlement of procured balancing capacity)

- (1) The Transmission System Operator carries out the financial settlement of procured (reserved) aFRR balancing capacity based on the data on the volumes and prices from the auctions for the aFRR capacity.
- (2) The settlement period is one calendar month.
- (3) The Transmission System Operator sends the settlement report for the financial settlement of aFRR procurement five (5) working days after the end of the calendar month.
- (4) The Transmission System Operator sends the invoice eight (8) working days after the end of the calendar month.
- (5) The settlement due date is the eight (8) working days from the invoice date.

### Article 50

(Financial settlement of delivered balancing energy)

- (1) The Transmission System Operator carries out the financial settlement only for the delivered aFRR balancing energy based on the data on the volumes of the calculated delivered aFRR balancing energy and prices from the auctions for the aFRR energy.
- (2) For the financial settlement of the realised aFRR balancing energy the prices set by the Balancing Service Provider are used as arranged in the merit order list, cascading from the lowest price to the highest price.
- (3) The settlement period is one calendar month.
- (4) The Transmission System Operator sends the settlement report for the financial settlement of aFRR procurement seven (7) working days after the end of the calendar month.
- (5) The Balancing Service Provider has the right to object to the report and has to send the objection no later than two working days after the Transmission System Operator sends the settlement report. The Transmission System Operator sends the final settlement report no later than one working day after it received the objection, the final settlement becomes final for financial settlement.
- (6) The Transmission System Operator sends the invoice for the negative balancing energy to the Balancing Service Provider twelve (12) working days after the end of the calendar month.



- (7) The Balancing Service Provider sends the invoice for the positive balancing energy to the Transmission System Operator twelve (12) working days after the end of the calendar month.
- (8) The settlement due date is the eight (8) working days from the invoice date.

# Article 51 (Consequences of failure to comply with conditions)

- (1) The Balancing Service Provider has to submit the volume of the bids for the aFRR balancing energy at least in the amount of the reserved balancing capacity from the units that were procured by the Transmission System Operator.
- (2) The Balancing Service Provider has to have available aFRR balancing power at least in the amount of the reserved balancing capacity from the units that were procured by the Transmission System Operator.
- (3) If the Balancing Service Provider fails to submit enough volume of the bids for the aFRR balancing energy from the units that were procured by the Transmission System Operator or it fails to deliver the available aFRR balancing capacity (the value of available power for balancing) it has to pay for the missing balancing energy or capacity. The highest value of missing bids and missing aFRR capacity is the basis for the calculation of the value of the missing aFRR balancing energy.
- (4) The value of the missing aFRR balancing energy is calculated using a double value the price of the activated aFRR balancing energy (absolute value) that was valid for the ISP, for which the Balancing Service Provider failed to submit the bid or provide aFRR balancing capacity.

# 2.5. <u>Balancing energy for frequency restoration process with manual activation (mFRR)</u> 2.5.1. Participation at the auctions for mFRR

### Article 52 (General Principles)

- (1) The Transmission System Operator procures the required quantity of mFRR from the Balancing Service Providers using the market base principles through implementation of the auctions in accordance with these rules.
- (2) The procurement of mFRR is divided into the procurement of the mFRR balancing capacity and the mFRR balancing energy.
- (3) The Transmission System Operator performs auctions for the mFRR balancing capacity in different timeframes.
- (4) The Transmission System Operator will publish Rules for procurement of mFRR on its website after approval by Energy Regulatory Commission, no later than 30 October for the next year.
- (5) The Transmission System Operator performs auctions for the mFRR balancing energy in one auction with the defined Gate Opening Time (here after GOT) and the defined Gate Closure Time (here after GCT).
- (6) The bids for mFRR balancing capacity or mFRR balancing energy may only be given by the Balancing Service Provider that is qualified to offer mFRR balancing capacity or mFRR balancing energy.
- (7) The Balancing Service Provider that participates at the auction for mFRR balancing capacity is obliged to enter the bids for the mFRR balancing energy in the amount of offered mFRR balancing capacity.



- (8) The Balancing Service Provider enters separate bids for each direction of the mFRR balancing capacity and mFRR balancing energy.
- (9) The Balancing Service Provider qualified to offer mFRR balancing capacity or mFRR balancing energy has always the possibility to enter bids for mFRR balancing energy voluntarily.

(Rules for the procurement for balancing capacity and balancing energy for mFRR)

- (1) The Transmission System Operator performs the auctions for the procurement of mFRR balancing capacity and balancing energy in accordance with the rules for the procurement of the balancing capacity and energy from mFRR units which shall define at least:
  - general requirements for the Balance Service Providers to participate in the auctions,
  - standard products of the auctions,
  - the dates and time of the auctions,
  - GOT, GCT, GOTV and GCTV,
  - bid submission,
  - the criteria of the optimisation function,
  - the timetable of the calculation and publishing of the results.
- (2) The Balancing Service Providers submit the bids for balancing energy on a resolution of the ISP.

### 2.5.2. Standard products (capacity, energy)

#### Article 54

(Standard product definition of balancing capacity for mFRR)

- (1) The products for the mFRR balancing capacity will be hourly products for each direction.
- (2) The Balancing Service provider may enter bids for one or more balancing units in the so-called portfolio bidding strategy. The Balancing Service provider may not enter linked bids which would link different bids for different time periods which activation would depend from each other.
- (3) The Transmission System Operator is allowed to set the maximum value of the bid prices that are acceptable for the Transmission System Operator.
- (9) The Transmission System Operator will define general definitions of the products of aFRR balancing energy in the Rules for procurement of aFRR. The Rules for procurement of aFRR will define at least:
  - product,
  - bidding strategy,
  - full activation time,
  - activation type,
  - minimum bid,
  - maximum bid,
  - minimum price,
  - maximum price,
  - validity of the bid,
  - bid resolution,
  - bid division,
  - bid linking,



- availability,
- payment.

(Auctions for balancing capacity for mFRR)

- (1) The product for the mFRR balancing capacity is a monthly product with band values (the same value in all hours of the day).
- (2) The Transmission System Operator performs monthly auctions for every month at least (15) calendar days before the first delivery day of the monthly product
- (3) If needed the Transmission System Operator may decide to introduce additional yearly auctions or weekly auctions, for which it must publish the decision no later than 4 months in advance.
- (4) The Transmission System Operator may define different or additional time resolutions of the auctions for which it must publish the decision at least 4 months in advance.

### Article 56

(Standard product definition of balancing energy for mFRR)

- (1) The hourly products for the mFRR balancing energy are different for each direction and are different for each predefined product.
- (2) The Balancing Service provider may not link bids on a technical or economic level which would link different bids for different time periods which would be interdepend.
- (3) The activated balancing energy from mFRR is financially settled using the method pay-as-bid.
- (4) The Balancing Service Provider may enter any number of the bids with any volume of mFRR balancing capacity.
- (5) The Transmission System Operator is allowed to set the maximum value of the bid prices that are acceptable for the activation by the Transmission System Operator.
- (6) The Transmission System Operator will define general definitions of the products of mFRR balancing energy in the Rules for procurement of mFRR. The Rules for procurement of mFRR will define at least:
  - minimum bid,
  - maximum bid,
  - minimum price (technically),
  - maximum price (technically),
  - bid resolution,
  - bid division.
  - bid linking,
  - mandatory bids,
  - voluntary bids.

### 2.5.3. Technical requirements for BSPs (data exchange, communication system)

### Article 57

(Technical requirements for mFRR sources)

(1) The Balancing Service Provider who wants to offer mFRR may send a formal application for approval of technical requirements for mFRR sources.



- (2) The prequalification process for becoming an mFRR provider is performed in accordance with the Article 7 and the diagram depicted in Appendix I.
- (3) The application form is defined by the Transmission System Operator and it is published on the Transmission System Operator's website. The application requests at least the following information from the applicant:
  - Basic information on the legal entity,
  - The grid where it is connected,
  - Regulation area,
  - Balance group to which it belongs,
  - Technical information from which the qualification for mFRR may be recognised (scheme
    of the unit, regulation ability, technical details of the unit, procedures of internal testing
    and testing reports, etc.),
  - Description of the system management,
  - Fulfilment of the measurement requirements,
  - Frequency range,
  - Full activation time (in accordance with the standard product definition for mFRR),
  - The maximal technical capability of the unit,
  - Continuous availability (in case of technical difficulties resulting in inability to realise balance energy activation the Balance Service Provider has to send notification to the Transmission System Operator 2 hours before the ISP; in two weeks' time the Balancing Service Provider has to provide a detailed explanation of the incident and a proposal for measures to prevent recurrence of the incident),
  - Fulfilment of the information communication technology requirements,
  - The standard set of data for data exchange and archiving,
  - Fulfilment of the real-time data provision,
  - Information on the management centre of the Balancing Service Provider
- (4) The Transmission System Operator issues the decision on the application in three (3) months after it receives the application.

(Minimum balancing capacity)

(1) Minimum balancing capacity 5 MW in positive or negative direction balancing capacity. If the Balancing Service Provider provides capacity on both directions, it should provide a minimum of 5 MW capacity in both directions.

### Article 59 (Properties of the mFRR product)

(1) Each generation unit, which takes part in the balancing market as an mFRR, must be capable of providing active power frequency response in accordance with the technical characteristics that are defined in MEPSO Grid Code.



# Article 60 (Availability of procured mFRR capacity)

- (1) The whole mFRR balancing capacity reserved by the Transmission System Operator (payed for the capacity) has to be available continuously without interruptions for the whole period of reservation by the Transmission System Operator and may be activated anytime.
- (2) The Balance Service Provider has to continuously monitor its mFRR balancing capacity and it has to send notification to the Transmission System Operator immediately in case of technical difficulties resulting in inability to realise balance energy activation.
- (3) In case of technical difficulties resulting in inability to realise balance energy activation the Balance Service Provider has to in two weeks' time provide a detailed explanation of the incident and a proposal for measures to prevent recurrence of the incident.

#### Article 61

(Simultaneously provision of other balancing services)

(1) The Balance Service Provider cannot provide FCR and aFRR from the same units simultaneously with mFRR under condition that the provision of mFRR is not endangered.

#### Article 62

(Metering of balancing power and balancing energy)

(1) The detailed technical specifications for metering are defined in the MEPSO Grid Code.

#### Article 63

(Data required for mFRR operation)

- (1) The Balance Service Provider is responsible to provide data on the next two data sets:
  - a. Reserve planning and scheduling of the units
  - b. Real time operation of the units.
- (2) The Transmission System Operator is responsible to provide data on the data set related to activation and realisation of activation of balancing energy
- (3) BSP will determine the balance units that will be engaged for mFRR for the day D on the day D-1 by submitting a schedule.
- (4) BSP may change the balance units engaged for mFRR for the day D, by submitting a new schedule at least two (2) hours before the start of the hour to which the change relates.
- (5) The BSP is obliged to submit in the schedule only the balance units that are selected in the auction and the TSO is obliged to engage only those balance units for mFRR.
- (6) For the purpose of real time operation management of the units the next data have to be provided by the Balance Service Provider for each mFRR generation unit:
  - measured active power,
  - base power without activation of mFRR
  - activated power mFRR
  - reference power.
- (7) All the information referred to in the first paragraph of this Article is provided by the Balance Service Provided as defined in the MEPSO Grid Code.



# Article 64 (Communication system)

- (1) The Transmission System Operator is required to maintain SCADA/EMS system and to develop and maintain telecommunications infrastructure that is in his possession.
- (2) The Balance Service Provider may establish its own private communication channel.
- (3) The Balance Service Provider must install technical equipment to transfer data to the Transmission System Operator needed to manage the power system in real time.
- (4) The communication protocols that must be used by the Balance Service Provider and the Transmission System Operator are defined under title Communication and exchange of data in real time of MEPSO Grid Code.

# 2.5.4. Procurement of mFRR balancing capacity (qualification, auction requirements, provision)

# Article 65 (General requirements)

- (1) Only the Balancing Service Providers that have qualified in the prequalification process for the mFRR and that fulfil the requirements for the participation at the auctions may participate in the process of the procurement of balancing capacity.
- (2) The Transmission System Operator defines the auction rules for the procurement of the balancing capacity and energy from mFRR units and publishes the rules on its website.

# Article 66 (Bid submission for balancing capacity for mFRR)

- (1) The Balancing Service Providers submit the bids for balancing capacity into the platform operated by the Transmission System Operator or a delegated third party.
- (2) The Balancing Service Provider may submit the bids for the balancing capacity that in total do not exceed the value of the qualified mFRR balancing capacity of the Balancing Service Providers in each time period.

### Article 67

(Mandatory provision of mFRR balancing capacity and aFRR balancing energy)

- (1) In case when no Balance Service Provider applies for the mFRR auction or no one submits bids for mFRR capacity the Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a decision with which it defines the Balancing Service Providers that have the obligation to offer mFRR balancing capacity and aFRR balancing energy to the Transmission System Operator.
- (2) The Energy Regulatory Commission may on the basis of a proposal from the Transmission System Operator or on its own initiative issue a decision with which it defines the methodology for calculation of prices for mFRR balancing capacity and for calculation of prices of mFRR balancing energy that shall be used for mandatory provision of balancing capacity and balancing energy. The decision on the transitional period and the methodology should be published no later than thirty (30) calendar days before it enters into force.



# Article 68 (Platform for collection of bids for balancing capacity for mFRR)

- (1) The Transmission System Operator implements and operates an electronic platform capable of receiving the bids for the balancing capacity, and matching the bids and the needs defined by the Transmission System Operator.
- (2) The Transmission System Operator defines specifications of the electronic platform, the rules for platform operation, the communication protocols, and other technical properties of the platform and publishes this information on its website.
- (3) The Transmission System Operator procures all the mFRR balancing capacity through the platform. In exceptional cases of technical problems the Transmission System Operator may gather bids for the mFRR balancing capacity using different means of communication, e.g. email. The Transmission System Operator immediately informs all of the participants of the exceptional situation together with the reasons over email and by publishing the information on its website.
- (4) The Transmission System Operator shall implement the market based method of matching bids using merit order list.
- (5) The merit order list is a list of balancing capacity bids sorted in order of their bid prices, used for the selection of the balancing capacity.
- (6) The bids with the lowest price are selected in the matching process in the amount selected by the Transmission System Operator.

# Article 69 (Procurement of mFRR balancing capacity)

- (1) The Transmission System Operator selects the bids for mFRR capacity by implementing optimisation function through which it selects those bids for balancing capacity which were successful in accordance with the auction rules.
- (2) The Transmission System Operator informs the Balancing Service Providers of the auction results through the platform.
- (3) The participating Balancing Service Providers may submit an objection to the results in accordance with the auction rules.
- (4) In case of technical difficulties resulting in inability to realise balance energy activation the Balance Service Provider has to send notification to the Transmission System Operator 2h before the ISP.

### 2.5.5. Collection of bids for balance energy for mFRR

# Article 70 (General requirements)

- (1) The Balancing Service Providers of which mFRR balancing capacity was selected in the auctions for the balancing capacity are obliged to submit the balancing energy bids into the platform at least in the amount of the selected balancing capacity but not exceeding the value of the qualified mFRR balancing capacity of the Balancing Service Providers in each time period.
- (2) All Balancing Service Providers have the possibility to submit voluntary balancing energy bids into the platform up to the value of the qualified mFRR balancing capacity of the Balancing Service Providers in each time period



(3) The Transmission System Operator defines the rules for the procurement of the balancing capacity and energy from mFRR units and publishes the rules on its website.

# Article 71 (Bid collection for mFRR balancing energy)

- (1) The Balancing Service Providers submit the bids for balancing energy into the platform operated by the Transmission System Operator or a delegated third party.
- (2) The Balancing Service Provider may submit the bids for the balancing energy that in total do not exceed the value of the qualified mFRR balancing capacity of the Balancing Service Providers in each time period.

#### Article 72

(Platform for collection of bids for mFRR balancing energy)

- (1) The Transmission System Operator implements and operates an electronic platform capable of receiving the bids for the balancing energy, and matching the bids and the needs defined by the Transmission System Operator.
- (2) The Transmission System Operator may during the transitional period until the implementation of the electronic platform use a different tendering process for the availability of mFRR units. The process has to be described in the tendering rules published on its website
- (3) The platform for organising the auctions for mFRR balancing energy may be implemented together with the platform for organising the auctions for mFRR balancing capcity.
- (4) The Transmission System Operator defines specifications of the electronic platform, the rules for platform operation, the communication protocols, and other technical properties of the platform and publishes this information on its website.
- (5) The Transmission System Operator activates all of the mFRR balancing energy through the platform. In exceptional cases of technical problems the Transmission System Operator may gather bids for the mFRR balancing energy using different means of communication, e.g. email. The Transmission System Operator immediately informs all of the participants of the exceptional situation over email and by publishing the information on its website.
- (6) The Transmission System Operator shall implement the market based method of matching bids using merit order list.
- (7) The merit order list is a list of balancing energy bids sorted in order of their bid prices, used for the activation of those bids.
- (8) The activation of balancing energy bids shall be based on a single-buyer model with a merit order list with the next properties:
  - common merit order lists shall consist of balancing energy bids from standard products;
  - upward and downward balancing energy bids shall be separated in different merit order lists,
  - each activation optimisation function shall use at least one merit order list for upward balancing energy bids and one merit order list for downward balancing energy bids,
  - depending on the requirement for standard products for balancing energy, the Transmission System Operator may create more common merit order lists.
- (11)The bids with the lowest price are activated in the matching process in the amount defined by the Transmission System Operator.



### 2.5.6. Activation of mFRR balancing energy

### Article 73 (Merit order list)

- (1) The bids in the merit order list are activated cascading, the bids with the lowest price first until the needed volume balancing energy is activated.
- (2) In case of more than one bid with the same price, the bid with the lowest time stamp is activated first.

# Article 74 (Manual activation of bids)

- (1) The bids for mFRR are activated manually by the Transmission System Operator to the Balance Service Provider with all the relevant information to activate mFRR with the required power.
- (2) The shape of the standard product for Balancing Energy is defined with the following standard characteristics of a bid also shown on the Figure 2:
  - (a) Preparation Period;
  - (b) Ramping Period;
  - (c) Full Activation Time;
  - (d) minimum and maximum quantity;
  - (e) Deactivation Period;
  - (f) minimum and maximum duration of Delivery Period;
  - (g) Validity Period; and
  - (h) Mode of Activation.

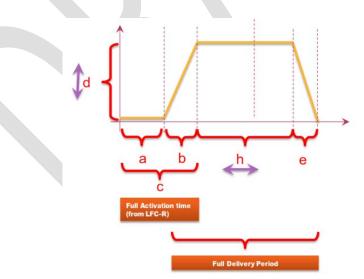


Figure 2: The process of control actions performed by the Transmission System Operator

(3) The Transmission System Operator defines the technical details of the activation, timings, mode of activation etc. in the rules for the procurement of the balancing capacity and energy from mFRR units.



# Article 75 (Backup procedure for activation)

- (1) In exceptional cases when the platform does not work properly or in cases of other types of technical problems the Transmission System Operator may activate bids for the mFRR balancing energy using different means of communication and the Balancing Service Providers shall follow the instructions of the Transmission System Operator.
- (2) In these exceptional cases the Transmission System Operator may activate the bids for the mFRR balancing energy in different order, i.e. not the bid with the lowest price. The Transmission System Operator immediately informs all of the participants of the exceptional situation together with the reasons over email and by publishing the information on its website.

### 2.5.7. Calculation of activated and delivered balancing energy

#### Article 76

(Calculation of volume of activated and delivered balancing energy)

- (1) The total volume of activated mFRR balancing energy per ISP represents the demand from the Transmission System Operator which is calculated based on the bids submitted by the Balancing Service Providers.
- (2) The delivered balancing energy is equal to the activated balancing energy.
- (3) The total balancing energy is calculated using the data on time of the start and the end of activation.

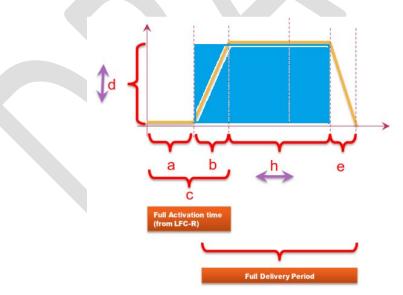


Figure 3: The volume of activated mFRR balancing energy (blue coloured rectangle)

- (4) If the activation of the balancing energy includes more than one ISP, the activation is divided into the ISPs included in the activation. Each part of the activation has a price for the balancing energy that is defined by the Balancing Responsible Party in its bid.
- (5) The volume of activated mFRR balancing energy is calculated using the following formula:

$$\mathrm{mFRR}_{a} = \frac{P_{d}}{t_{h}} \left( t_{e} - t_{s} \right)$$



Where:

mFRR<sub>a</sub> - activated balancing energy

 $P_d$ - demand from the TSO

 $t_h$ - 60 min (hourly products)

 $t_s$  – time of the start of activation

 $t_e$  — time of the end of activation

## 2.5.8. Financial settlement of balancing energy

#### Article 77

(Financial settlement of procured balancing capacity)

- (6) The Transmission System Operator carries out the financial settlement of procured (reserved) mFRR balancing capacity based on the data on the volumes and prices from the auctions for the mFRR capacity.
- (7) The settlement period is one calendar month.
- (8) The Transmission System Operator sends the settlement report for the financial settlement of mFRR procurement five (5) working days after the end of the calendar month.
- (9) The Transmission System Operator sends the invoice eight (8) working days after the end of the calendar month.
- (10) The settlement due date is the eight (8) working day from the invoice date.

#### Article 78

(Financial settlement of delivered mFRR balancing energy)

- (1) The Transmission System Operator carries out the financial settlement only for the delivered mFRR balancing energy based on the data on the volumes of the calculated delivered mFRR balancing energy and prices from the auctions for the mFRR energy.
- (2) For the financial settlement of the realised mFRR balancing energy the prices set by the Balancing Service Provider are used as arranged in the merit order list, cascading from the lowest price to the highest price.
- (3) The settlement period is one calendar month.
- (4) The Transmission System Operator sends the settlement report for the financial settlement of mFRR procurement seven (7) working days after the end of the calendar month.
- (5) The Balancing Service Provider has the right to object to the report and has to send the objection no later than two working day after the Transmission System Operator sends the settlement report. The Transmission System Operator sends the final settlement report no later than one working day after it received the objection, the final settlement becomes final for financial settlement.
- (6) The Transmission System Operator sends the invoice for the negative balancing energy to the Balancing Service Provider twelve (12) working days after the end of the calendar month.
- (7) The Balancing Service Provider sends the invoice for the positive balancing energy to the Transmission System Operator twelve (12) working days after the end of the calendar month.
- (8) The settlement due date is the eight (8) working day from the invoice date.



# Article 79 (Consequences of failure to comply with conditions)

- (1) The Balancing Service Provider has to submit the volume of the bids for the mFRR balancing energy at least in the amount of the reserved balancing capacity from the units that were procured by the Transmission System Operator.
- (2) The Balancing Service Provider has to have available mFRR balancing power at least in the amount of the reserved mFRR balancing capacity from the units that were procured by the Transmission System Operator.
- (3) If the Balancing Service Provider fails to submit enough volume of the bids for the mFRR balancing energy from the units that were procured by the Transmission System Operator or it fails to deliver the available mFRR balancing capacity (the value of available power for balancing) it has to pay for the missing balancing energy or capacity. The highest value of missing bids and missing mFRR capacity is the basis for the calculation of the value of the missing mFRR balancing energy.
- (4) The value of the missing mFRR balancing energy is calculated using

 $S_{missing} = W_{missing} * P_{penalization}$   $P_{penalization} = 2 * mFRR average capacity price for that month$ 

## 2.6. Balancing energy for reserve replacement process (RR)

# Article 80 (General principles)

- (1) The Transmission System Operator may perform additional activities to release the aFRR and mFRR capacities. For this purpose it may conclude bilateral agreements on the purchase or selling of the electricity in order to release the aFRR or mFRR capacities.
- (2) The Transmission System Operator has to use a market based method to procure RR balancing energy in a form of tendering process or an invitation to all interested BSPs or Market Participants that have expressed their wish to participate in the balancing market on the level of RR.
- (3) The Transmission System Operator may define the rules for the procurement of the balancing energy from RR.

## 3. TERMS AND CONDITIONS FOR BALANCE RESPONSIBLE PARTIES and BALANCE GROUPS

# 3.1. General provisions

# Article 81 (General provisions)

- (1) These Terms and Conditions for Balance Responsible Parties define the responsibilities of Balance Responsible Parties including the conditions to conclude balancing agreements and the process of inclusion of Market Participants into the balance scheme into other Balance Groups.
- (2) Balance Scheme members shall act professionally and in compliance with good business practices and shall not deploy any unsuitable or unreasonable business methods or any illicit business practice on the electricity market.



(3) At the request of the Transmission System Operator, the Balance Scheme members shall provide to the Transmission System Operator all information or documentation on their conduct on the electricity market, including all contracts which were concluded by a Balance Scheme member on the market and which are relevant for the uninterrupted operation of the electricity market as a whole within eight working days.

### 3.2. Roles and responsibilities

#### Article 82

(The role of Transmission System Operator)

- (1) The Transmission System Operator implements and operates the register of Balance Responsible Parties and Balance Groups, which represents balance responsibility of each Market Participant.
- (2) The Transmission System Operator concludes a Balancing Agreement which includes provisions on financial settlement with Market Participant that wants to become a Balance Responsible Party who is financially responsible for the imbalances of its Balance group.
- (3) The Transmission System Operator registers statement of inclusion into a balance group signed by the Balance Responsible Party and Market Participant in order to include Market Participants into Balance Group.
- (4) The Transmission System Operator informs Market Operator about every change in the register of Balance Responsible Parties and Balance Groups.

#### Article 83

(The role of Market Operator on the balancing market)

- (1) The Market Operator informs Transmission System operator about every change in the Register of Market Participants.
- (2) The Market Operator calculates imbalances of the Balance Groups and the first calculation of financial values of imbalances. Market Operator submits the data on imbalance settlement to the Transmission System Operator, who then performs financial settlement of imbalance settlement.
- (3) Market Operator calculates the imbalances of Balance Groups based on metering data, activated amounts of balancing services for each Balance Group, settlement prices and the final daily schedule received from the Transmission System Operator and the Distribution System Operator.

### Article 84

(The register of Balance Responsible Parties and Balance Groups)

- (3) The register of Balance Responsible Parties and Balance Groups is an electronic data register in which the following data is kept:
  - Balance Group title
  - Balance Responsible Parties
  - BRP EIC code
  - Hierarchically inferior Market Participants
  - Hierarchically inferior Market Participant's EIC codes
  - Entry date
  - Exit data
  - Hierarchically superior BRP.



(4) The Transmission System Operator publishes the register on its web site. The Transmission System Operator should keep the register historical data permanently.

# Article 85 (The Balance Scheme)

- (1) The Balance scheme is a hierarchically organised system of the balancing responsibilities which is kept in the register of Balance Responsible Parties and Balance Groups and is operated by the Transmission System Operator.
- (2) Participants of the electricity market who wish to actively operate on the electricity market shall be included into the Balance Scheme. With the inclusion into the balance scheme it is defined who is responsible for the imbalances of the Market Participant and for the financial settlement of those imbalances, i.e. into which Balance Group it is included.

# Article 86 (Balance Scheme membership)

- (1) A Balance Scheme member shall be a legal person included in a Balance Scheme by the Transmission System Operator. The Balance Scheme member may become active on the market only after inclusion in both the Register of Market Participants and in the Register of Balance Responsible Parties and Balance Groups after it has concluded a Balancing Agreement or has submitted a statement of inclusion into a balance group signed by the Balance Responsible Party and Market Participant.
- (2) A Transmission System Operator is a Balance Scheme member within the framework of providing the activities of public utility service relating to the activity of a Transmission System Operator.
- (3) A Distribution System Operator is a Balance Scheme member within the framework of providing the activities of a distribution system operator.
- (4) The holder of activity of the organised electricity market is a Balance Scheme member for the purpose of providing the balance of transactions concluded on the organised electricity market.
- (5) The operator of a closed distribution network is a Balance Scheme member within the implementation of tasks relating to the management of a closed distribution network.
- (6) Balance Groups shall be constituted by the Balance Responsible Party and any number of hierarchically inferior Balance Group Members.
- (7) Balance Group Members are included in the balancing scheme as inferior members of Balance Responsible parties as members of a Balance Group.

## 3.3. Balance responsible parties

# Article 87 (Balance Group)

- (1) A Balance Group is established on the basis of a Balance Group Agreement concluded between the Market Operator and a Market Participant wishing to become a Balance Responsible Party.
- (2) Market Participants may join the Balance Group of their choice.
- (3) A Balance Group may consist of one or more Market Participants.
- (4) A Market Participant may be a member of only one Balance Group.
- (5) The units of preferential producers that are using a feed-in tariff in accordance with the Energy Law belong to the Balance Group with the Market Operator as Balance Responsible Party.



- (6) A Market Participant performing a regulated energy activity must not join a Balance Group with Market Participants that perform unregulated energy activities or with consumers. The Regulatory Agency approves contracts for joining a Balance Group of regulated energy providers.
- (7) Balance Group is established for the purpose of delivering balancing energy, operation of the Balance Group Members on the electricity market by governing balance responsibility, and risk management and control of imbalances of the Balance Responsible Party and of the hierarchically inferior Balance Group Members of the Balance Group, and, as such, represents a subject of the imbalance settlement.
- (8) A Balance Group shall be represented by the Balance Responsible Party who shall be primarily responsible for:
  - submitting a statement of inclusion into a balance group signed by the Balance Responsible Party and Market Participant which serves as the basis for the inclusion of individual hierarchically inferior Balance Group Member;
  - adequate adjustment of financial guarantees on Transmission System Operator's call;
  - sending nominations of Trade Party Schedules, Consumption Party Schedules, and Production Party Schedules to the Transmission System Operator for the entire Balance Group including hierarchically inferior Balance Group Members of the Balance Group in accordance with the Energy Law;
  - a financial settlement of imbalance settlement for the Balance Group;
  - compliance with the obligations arising from financial settlement of imbalance settlement; and
  - submission of data and documentation upon the Transmission System Operator's or Market Operator's request on the basis of these Rules.

# Article 88 (Balance Group Member)

- (1) A Balance Group Member is included into the balance scheme as an inferior member of the Balance Group on the basis of a statement of inclusion into a balance group signed by the Balance Responsible Party and Market Participant.
- (2) A Balance Group Member shall be primarily responsible for:
  - the exchange of data with the Balance Responsible Party;
  - sending nominations of Trade Party Schedules, Consumption Party Schedules, and Production Party Schedules to the Transmission System Operator in accordance with the Energy Law and Balance Responsible Party whose member it is.

# Article 89 (Request for establishing a balance group)

- (1) The Market Operator is responsible for keeping records of all agreements for the establishment of balance groups concluded between electricity market participants and the electricity market operator.
- (2) The Market Operator shall be obliged to prepare the template of the Agreement for the establishment of balance groups, and upon prior approval by the ERC, publish it on its website.
- (3) The market participant, on behalf of the balance group it represents, submits to the Market Operator Request for registration of the balance group.
- (4) Any Request for registration of the balance group shall contain the following information:



- 1) full name, address and contact details for the applicant,
- 2) type and number of the applicant's license, if any,
- 3) names and contact details of all authorized persons of the applicant,
- 4) full name, EIC code, and ID for virtual metering points for members of the balance group.
- (5) The following documents for the applicant referred to in paragraph 3 shall be submitted to the request referred to in paragraph 4:
  - 1) Certificate of solvency, issued by the Central Registry of the Republic of Macedonia,
  - 2) Certificate from the Public Revenue Office for paid taxes and other public duties prescribed by law and
  - 3) confirmation that no bankruptcy or liquidation procedure has been initiated.
- (6) The documents referred to in paragraph (5), items 1), 2) and 3) shall not be older than 30 days.
- (7) Market participants who have decided to form a balance group must themselves register themselves as BOC.
- (8) The Market Operator is obliged to prepare the Application Form referred to in paragraph 4, and upon prior approval by the ERC, publish it on its website.

(Signing an agreement for the establishment of the balance group)

- (1) If the Market Operator determines that the Application referred to in Article 89 contains the necessary data and / or has been provided in a prescribed manner and form, the Market Operator will adopt a conclusion on the correctness of the Application within five working days from the day of submitting the request.
- (2) With the conclusion of paragraph 1, the Market Operator shall submit to the applicant an Agreement for the establishment of a balance group in four copies.
- (3) The applicant shall, within five days from the day of receiving the contract referred to in paragraph 2, sign the contract and submit it to the Market Operator.
- (4) The Market Operator shall notify TSO to the market participant who has concluded an agreement on the establishment of a balance group on the date of concluding the contract.
- (5) The Market Operator shall, within five working days of receipt of the Request referred to in Article 89, adopt a conclusion which determines that the Application is not correct if it determines that it does not contain the necessary data and / or has not been provided in the prescribed manner and form.
- (6) In the conclusion referred to in paragraph 1, the Market Operator shall inform the applicant of the defects and shall instruct him to remove them within 15 days from the date of receipt of the conclusion.
- (7) If the applicant does not act upon the conclusion of paragraph 1, the Market Operator shall adopt a decision for rejecting the Request.
- (8) Against the decision referred to in paragraph 3, the applicant may submit a request for dismissal to a ERC within 15 days from the day of receipt of the decision.



(Termination of the agreement for the establishment of the balance group)

- (1) Market Operator shall adopt a Decision on termination of the validity of the Agreement for the establishment of a balance group in the case of:
  - 1) Termination of the contract for participation in the market and / or
  - 2) Termination of the contract of balance liability.
- (2) The market participant whose agreement for establishing a balance group ceased to be valid shall inform the members of the balance group that it represented.
- (3) In that case, the members of the balance group shall be obliged, within a period of 5 working days from the day of receiving the notification of the termination of the validity of the agreement for the formation of the balance group, to start one of the following procedures:
  - 1) one of the members to conclude an agreement to establish a balance group and take a balance responsibility for the other members of that balance group or to form balance groups for themselves, in accordance with Article 89 and Article 90 of these Rules,
  - 2) transfer all members to already existing balance groups,
  - 3) to withdraw from participation in the market by terminating the market participation agreement.
- (4) If a member of the balance group does not commence one of the procedures referred to in paragraph 3 within a period of five working days from the date of receipt of the notification referred to in paragraph 2, it shall be deemed to have decided to withdraw from the market and be deleted from the register of participants on the market counted from the date of termination of the agreement for the establishment of the balance group.
- (5) Market Operator is obliged to notify TSO for any changes occurring in the balance groups on the date of termination of the agreement for the establishment of the balance group.

# Article 92 (Balance responsibility)

- (1) The market participant that is registered and has established a balance group represents the same and assumes a balance responsibility for each trading interval for the balance group in front of TSO.
- (2) If the market participant is a single member of the balance group, he has the same rights and obligations as the BRP.
- (3) By signing a Balancing Agreement with TSO, the market participant shall be registered as a balance responsible party in accordance with these rules.



# Article 93 (Transitions between Balance Groups)

- (1) Transition of Balance Scheme members between the Balance Groups can take place in the following cases:
  - transition due to the cancellation of a balancing agreement and signing of a statement of inclusion into a balance group;
  - transition due to the expiration or cancellation of a statement of inclusion into a balance group and the conclusion of a balancing agreement or signing of a new statement of inclusion into a balance group.
- (2) With transitions of Balance Scheme members between Balance Groups:
  - in the case of a transition of a supplier, relations among the existing consumers and/or producers do not change;
  - in the case of a transition of the supplier supplying their own delivery points, the supply to these delivery points does not change.
- (3) In the case of a transition among Balance Groups, the enforcement day shall be defined in accordance with Article 102 of these Rules.
- (4) Each market participant may submit a Request for changing the balance group to the Market Operator
- (5) In addition to the request referred to in paragraph (4), the market participant shall also be obliged to submit:
  - 1) The consent of the BRP to the balance group to which it accedes,
  - 2) A statement of the BRP of the balance group from which it appears that all obligations under the balance responsibility within the balance group are regulated and
  - 3) A joint statement signed by the BRP on the disputing party and the BRP of the party to which it is being approached to determine the date and time of the change.
  - 4) If any BRP referred to in paragraph (5) fails to issue a statement or consent, the market participant may raise a dispute before the ERC against the BRP which has not provided the required statement or consent.
- (6) In the case of adding a new registered participant to the market as a member of an existing balance group it is necessary to submit it to the Market Operator,
  - 1) The request from paragraph (4) and
  - 2) the documents referred to in paragraph (5) item 1) of this Article.
- (7) The Market Operator shall be obliged to prepare the application form referred to in paragraph (4), and upon prior approval by the ERC, publish it on its website.

#### Article 94

- (1) Any market participant who is a member of a balance group may be excluded from the balance group at the request of the BRP, if it fails to comply with its mutual agreements.
- (2) The BRP shall notify the market participant referred to in paragraph (1) that it will not be a member of the balance group 6 days prior to the day on which the BRP no longer assumes its balance responsibility.
- (3) The BRP shall submit the notification referred to in paragraph (2) of this Article to TSO and to the Market Operator.



- (4) The market participant referred to in paragraph (1) shall be obliged to settle all obligations on the basis of the balance responsibility within the balance group.
- (5) The market participant referred to in paragraph (1) shall initiate a procedure for transferring the balance responsibility or shall be registered as a BRP in accordance with the Balancing Rules.

## 3.3.1. Procedure of registration of Balance Responsible Parties

#### Article 95

(Request for the registration of a Balance Responsible Party)

- (1) A request for registration of a Balance Responsible Party shall be submitted in writing to the Transmission System Operator.
- (2) The Transmission System Operator prescribes an application form for a request to become a Balance Responsible Party and publishes it on its website.
- (3) In the application form, the Transmission System Operator prescribes the identification code for the purpose of a uniform identification of the entity which a legal person that wishes to become a Balance Responsible Party shall have and which shall be used in accordance with the rules on the use of identification code.

### Article 96

(Conditions for becoming a Balance Responsible Party)

- (1) Prior to the conclusion of a balancing agreement, any legal person who wishes to become a Balance Responsible Party shall submit to the Transmission System Operator a request for the inclusion into the Register of Balance Responsible Parties and Balance Groups along with the documentation defined in the application form that is published on the Transmission System Operator's web site.
- (2) The Balance Responsible Party shall notify in 3 working days the Transmission System Operator of all changes of the data provided when included into the Register of Balance Responsible Parties and Balance Groups.
- (3) The Transmission System Operator may at any time request a Balance Responsible Party to provide appropriate evidence of the fulfilment of conditions within eight working days.

## Article 97

(Verification of the conditions for the inclusion into the Register of Balance Responsible Parties and Balance Groups as a Balance Responsible Party)

- (1) Upon the receipt of a request, the Transmission System Operator shall first verify:
  - whether a request has been submitted on a prescribed form;
  - whether all required data are provided in the application form;
  - whether all required documentation is enclosed to the request.

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- (2) If the request fails to comply with the conditions referred to in the previous paragraph, the Transmission System Operator shall invite the applicant to remedy the deficiencies within 15 days.
- (3) If the applicant remedies the deficiencies within the determined period, the request shall be deemed submitted when there are no more deficiencies in the request.
- (4) If the applicant fails to remedy the deficiencies within the period determined by the Transmission System Operator, the Transmission System Operator shall inform the applicant of the failure to meet the conditions in writing, and the request shall be deemed not submitted.
- (5) If after the procedure referred to in the first to fourth paragraph of this Article, it is found that the requiest meets all the requirements from the first paragraph of this Article, the Transmission System Operator shall carry out a substantive examination.
- (6) The Transmission System Operator shall issue a decision on the matter no later than within one month from the receipt of a complete request, namely:
  - the request is granted if it is determined that all requisite conditions are met, and the Transmission System Operator shall send the balancing agreement to the applicant to be signed.
  - rejects the request when, during the substantive examination, it is found that not all the conditions have been met, and shall notify the applicant in writing.
- (7) The applicant shall be obliged to sign the balancing agreement and send the signed agreement via registered mail to the Transmission System Operator 's address within two months from receipt of the agreement. The Transmission System Operator signs the Balancing Agreement after it has been received and sends the Balancing Agreement to the Transmission System Operator to be signed. The Transmission System Operator has fifteen (15) calendar days to sign the Balancing Agreement.
- (8) If the Transmission System Operator does not receive the signed balancing agreement within the prescribed period, it shall be considered that the applicant has withdrawn its request to enter the Balance Scheme.
- (9) The applicant shall provide the required financial guarantees to the Transmission System Operator within three months from the date of the balancing agreement conclusion (when signed by both parties of the agreement), or the agreement shall be considered rescinded.
- (10)The Transmission System Operator enters the new Balance Responsible Party as a member into the Register of Balance Responsible Parties and Balance Groups within five working days from the fulfilment of the last of the following conditions: a concluded balancing agreement, and a submitted required financial guarantee to the Transmission System Operator. The Transmission System Operator informs Market Operator about the fulfilment of the conditions and that it may be activated in the Register of Market Participants.
- (11)The date of the entry into the record of all Agreements for the establishment of Balance Groups concluded between the Transmission System Operator and the Market Participants shall be considered the enforcement day of the inclusion into the Balance Scheme.
- (12) The Transmission System Operator shall publish the inclusion of a new Balance Scheme member to the register of Balance Responsible Parties on its official website.
- (13)The Balance Scheme member may become active on the market as a Balance responsible Party only after inclusion in both registers the: Register of Market Participants and Register of Balance Responsible Parties and Balance Groups.



(Temporary technical prevention by the Transmission System Operator from operating on the electricity market)

- (1) The Transmission System Operator may temporarily technically prevent the Balance Scheme member from operating on the electricity market:
  - if the Balance Scheme member fails to meet outstanding financial obligations;
  - if the Balance Scheme member fails to submit financial guarantees required by the Transmission System Operator;
  - upon the request of Market Operator if the Balance Scheme member does not conclude an Annex to the Market Participant agreement on the Market Operator's call, which would ensure compliance of the agreement content with the Rules;
  - if the Balance Scheme member does not conclude an Annex to the Balancing Agreement on the Transmission System Operator's call, which would ensure compliance of the agreement content with the Rules;
  - if the Balance Scheme member fails to meet technical, staff and other conditions necessary to ensure the use of the Transmission System Operator's and the Market Operator's information system or the settlement system;
  - if the operations of the Balance Scheme member threaten the stability of the operation of the electricity system;
  - if the Transmission System Operator cancels the balancing agreement or the Market Operator cancels the Market Participant Agreement in accordance with the agreement and these Rules when the reasons arise for the cancellation of the Balancing Agreement or the Market Participant Agreement, or
  - due to a request from the Energy Regulatory Commission.
- (2) A temporary technical prevention from operating on the electricity market shall be immediately entered into the register of Balance Responsible Parties and Balance Groups and shall apply as long as the reasons from the previous paragraph persist. In each case of a temporary technical prevention from operating on the electricity market, the Transmission System Operator shall inform the Balance Responsible Party, the Market Operator and the Energy Regulatory Commission by e-mail.
- (3) In case of a temporary technical prevention from operating on the electricity market, the Balance Responsible Party shall have the opportunity to file a request to the Energy Regulatory Commission within fifteen (15) days from sending the notification from the previous paragraph of this Article in accordance with the procedure under Article 37 of the Energy Law to take a decision to resolve a dispute with the Transmission System Operator.
- (4) In case of a temporary technical prevention from operating on the electricity market, a member shall be prevented from notification of Trade Party Schedules, Consumption Party Schedules, and Production Party Schedules to the Transmission System Operator in the period of limited operation on the electricity market; the measure shall be published on the Market Operator's website.



### 3.3.2. Cessation of the Balance Scheme membership

#### Article 99

(Cessation of the Balance Scheme membership)

- (1) Balance Scheme Membership shall cease when the cessation of the Balance Scheme membership is entered into the Register of Balance Responsible Parties and Balance Groups in accordance with these Rules and other applicable regulations.
- (2) The Transmission System Operator shall publish the cessation of the Balance Scheme membership on its website and, at the same time, he shall inform Market Operator by e-mail.
- (3) In the event of cessation of the Balance Scheme membership, the provisions of the balancing agreement shall continue to apply until all liabilities under the applicable balancing agreement have been settled.

#### Article 100

(Termination of the Balancing Agreement by the Transmission System Operator)

- (1) The Transmission System Operator may terminate a balancing agreement concluded with the Balance Responsible Party on the basis of justified termination of the balancing agreement without notice and with effect from the moment the cessation of the Balance Scheme membership is entered into the Register of Balance Responsible Parties:
  - if the Balance Responsible Party was admitted on the basis of untrue or false information;
  - if legal consequences occur as a result of the bankruptcy or liquidation proceedings of a Balance Responsible Party;
  - if a Balance Responsible Party violates the provisions of the regulations in force concerning the electricity market, or the provisions of other applicable regulations which can influence the Balance Responsible Party's ability to act according to these Rules;
  - if a Balance Responsible Party member fails to fulfil its obligations under the balancing agreement;
  - if a Balance Responsible Party fails to act on the basis of the Transmission System Operator's warning in the event that hierarchical inferior members of the Balance Scheme violate these Rules, or fails to cancel the statement of inclusion into a balance group on the basis of the Transmission System Operator's warning;
  - if the Balance Responsible Party member does not conclude an Annex to the balancing agreement on the Transmission System Operator's call in accordance with the Rules, or
  - if a Balance Scheme member breaches these Rules in any other way.
- (2) The Balance Responsible Party may request to terminate the balancing agreement if its obligations to the Transmission System Operator are fulfilled and settled, and
  - it has no hierarchically inferior Balance Group Members, it is not a supplier to any consumer or producer, and it does not supply any self-owned delivery points, or
  - it has no hierarchically inferior Balance Group Members and it signs of a statement of inclusion into a balance group with another Balance Responsible Party which becomes a new foundation for its membership in another Balance Group, which makes it a Balance Group Member.



- (3) The termination of the balancing agreement by the Balance Responsible Party becomes effective on the day of the entry of the termination into the Register of Balance Responsible Parties and Balance Groups. The entry of the termination shall be made within 5 working days from receipt of the notification of the termination of the balancing agreement.
- (4) In the case of the termination of the balancing agreement by the Balance Responsible Party, the latter can indicate the desired day of the entry of termination into the Register of Balance Responsible Parties and Balance Groups, which also specifies the date when the termination of the balancing agreement shall take effect and which shall in no case be prior to the expiry of 5 working days referred to in the previous paragraph.
- (5) The financial guarantees submitted by the Balance Responsible Party shall remain valid and/or the Transmission System Operator shall retain them until potential liabilities arising from imbalance settlement, including imbalance settlement recalculation, have been settled.
- (6) In the event of transition from the status Balance Responsible Party to a Balance Group Member, the Balance Group Member shall, in order to ensure the coverage of financial liabilities arising from the imbalance settlement recalculation, submit a statement by the new superior Balance Responsible Party which indicates that the financial guarantees of the superior Balance Responsible Party may also be used to cover the liabilities arising from the imbalance settlement recalculation for the time period when the entity was a Balance Responsible Party. In this case, the Transmission System Operator shall return financial guarantees referred to in the previous paragraph within 5 working days from submission of the statement.

(Other reasons for cessation of Balance Scheme Membership)

- (1) Participation in the Balance Scheme shall also cease:
  - with deletion of a Balance Scheme member from the court or similar register;
  - with deletion of Market Participant from the Register of Market Participants;
  - if the Balance Scheme member is issued a prohibition to carry out the activities;
  - if the decision is taken by the inspector with which it is made impossible for the Balance Scheme member to participate on the electricity market; or
  - when the statement of inclusion into a balance group and/or balancing agreement is rescinded by mutual consent.
- (2) In the event referred to in the first indent of the preceding paragraph, the cessation of membership is recorded on the day of the event, whereas in other cases on the day when the Transmission System Operator is notified of the reason for the cessation of the Balance Scheme membership.
- (3) If the membership of the Balance Responsible Party ceases on the basis of the provisions of this Article, the concluded balancing agreement shall be deemed rescinded on the day the fact referred to in the previous paragraph is entered into the Register of Balance Responsible Parties and Balance Groups.

### Article 102

(Enforcement days of changes to the Balance Scheme)

(1) The date of the entry into the Register of Balance Responsible Parties and Balance Groups shall be regarded as the enforcement date in the procedure of acquiring, changing or ceasing the membership.



(2) The transition among Balance Groups is carried out the first day of the month beginning at least one month later than the moment when all conditions have been met for the entry into the record, or the first day of the month agreed between the Transmission System Operator and Balance Scheme member, should that day come later.

## 3.3.3. Standard contract for Balance Responsible Party

# Article 103 (Balancing agreement)

- (1) A balancing agreement is a legal transaction or other relation which a legal person utilizes to manage the delivery of balancing energy and financial settlement of the imbalances in the case of an unmatched balance with the Transmission System Operator, by which the legal person is included into a Balance Scheme as a Balance Responsible Party.
- (2) A balancing agreement shall regulate the whole series of relations with regard the establishment, charging, and responsibility for payments for the imbalances and for the inclusion of the Balance Responsible Parties into a Balance Scheme.
- (3) A balancing agreement shall include the following mandatory elements:
  - provisions on financial settlement of imbalance settlement;
  - provisions on compulsory notification of the Transmission System Operator on the signing of a statement of inclusion into a balance group, and
  - a provision that the balancing agreement shall be recorded in the Register of Balance Responsible Parties and Balance Groups within five working days from the fulfilment of requisite conditions for the inclusion to the Balance Scheme and shall take effect on the same day.
- (4) The date of the entry into the Register of Balance Responsible Parties shall be deemed to be the date of the entry into force of the Balancing Agreement. A legal person is included into the Balance Scheme with the entry into the Register of Balance Responsible Parties and Balance Groups. The Transmission System Operator shall inform legal person of the entry into the Register in writing by e-mail.

# Article 104 (Registration of a statement of inclusion into a balance group)

- (1) The Balance Responsible Party is responsible for informing the Transmission System Operator of the signing of a statement of inclusion into a balance group which forms the basis for the inclusion of the hierarchically inferior Balance Group Members into the Balance Scheme, and is responsible for submitting a request for inclusion into the Balance Scheme under Article 95 of these Rules.
- (2) A statement of inclusion into a balance group does not have a prescribed form and shall include the following mandatory elements:
  - date of entry into force of the a statement of inclusion into a balance group, including the
    provision that determines that the statement in question shall become effective no earlier
    than on the day of the entry of the essential elements into the Register of Balance
    Responsible Parties;



- provisions for reasons of cancellation with a notice period which shall meet all the conditions concerning the enforcement day under Article 102 of these Rules;
- a clause stipulating that a Balance Responsible Party wishes to include a hierarchically inferior Balance Group Member into its own Balance Group;
- a clause stipulating that the balance of the Balance Group Member is settled through the balance of the Balance Group.
- (3) If any of the required mandatory elements from the previous paragraph fail to comply with the Rules, the Rules shall directly apply in this part.
- (4) The Transmission System Operator shall publish the template of the statement of inclusion into a balance group on its website.

### 3.4. Imbalance settlement

## 3.4.1. Required data exchange

#### Article 105

(Market Operator's access to the databases of System Operators)

(1) Transmission System Operator and Distribution System Operators shall be obliged to provide and send to the Market Operator a prompt, free and unlimited access to all the data needed for the calculation of the imbalance settlement.

# Article 106 (Submission of data by System Operators)

- (1) The metering data on the realised consumption and production of the delivery points are recorded by the System Operators.
- (2) The deadlines for submission of metering and accounting data on realised consumptions and production at the real and virtual delivery points for the purposes of the imbalance settlement are defined in the Protocol for submission and exchange of data and information.
- (3) Accounting data on realised consumptions and production of real and virtual delivery points for the purposes of the imbalance settlement and for the purposes of the imbalance settlement recalculation is prepared by the System Operators and is submitted to the Market Operator in accordance with the Protocol for submission and exchange of data and information.
- (4) System Operators shall submit to the suppliers the accounting data on realised consumptions and production of the real and virtual delivery points for the purposes of verifying the correctness of the imbalance settlement calculation and for the purposes of verifying the correctness of the imbalance settlement recalculation within the deadline referred to in the previous paragraph.
- (5) System Operators shall provide the Balance Responsible Party with the following accounting data separately by network and separately for each imbalance settlement period (here after ISP):
  - production of the electricity according to Balance Scheme members who are hierarchically inferior to the Balance Responsible Party, aggregated for the virtual delivery point of the Balance Scheme members and separately for metered and non-metered producers;
  - consumption of the electricity separately according to Balance Scheme members who are hierarchically inferior to the Balance Responsible Party, aggregated for the virtual delivery point of the Balance Scheme members and separately for metered and non-metered consumers.



# Article 107 (Content of the data submitted by System Operators)

- (1) The Electricity System Operators shall provide the Market Operator with at least the following data:
  - accounting data on the consumption of the delivery points of metered consumers;
  - accounting data on the monthly consumption of non-metered consumers;
  - accounting data on the production of the delivery points of metered producers;
  - accounting data on the production of the delivery points of non-metered producers, and
  - accounting data on acceptance and delivery on contact points between the transmission network and distribution network areas.
- (2) In addition to the data referred to in the previous paragraph of this Article, the Distribution System Operator shall also provide the Market Operator the following accounting data separately according to the distribution network areas and separately according to each ISP:
  - total delivery of the electricity to the distribution network area, namely aggregated for all production delivery points and separately according to metered and non-metered producers;
  - losses in the Distribution Network Area;
  - production of the electricity in the distribution network area separately per virtual metering points of suppliers, and separately according to metered and non-metered producers and according to the type of production; and
  - consumption of electricity from the distribution network area separately per virtual metering points of suppliers, and separately according to metered and non-metered consumers.
- (3) In addition to the data referred to in the first paragraph of this Article, the Transmission System Operator shall also provide the Market Operator with the following data:
  - accounting data on metered power flow on the borders of the transmission network with the neighbouring Transmission System Operators;
  - accounting data on realised losses in the transmission network.
- (4) On the day of the shift from winter to summer time an appropriate number of ISPs for 23 hours are used and on the day of the shift from winter to summer time an appropriate number of ISPs for 25 hours are used.

## Article 108

## (Accounting data for metered consumers and producers)

- (1) The delivery points fitted with registration meters and which registration interval is shorter than or equals the length of ISP are classified as metered consumers and metered producers.
- (2) The accounting data on allocated volume by metered consumers and metered producers in an individual ISP shall be determined on the basis of the measurements registered.
- (3) In the case of missing or incorrect measurements for the Delivery points on the distribution network due to power failure, the destruction, or inaccuracy of the metering data, the accounting data is prepared according to the Electricity Distribution Grid Code.



# Article 109 (Accounting data for non-metered consumers)

- (1) The delivery points without registration meters, the delivery points whose registration interval is longer than the length of ISP and other delivery points defined in the Electricity Distribution Grid Code are classified as non-metered consumers.
- (2) The allocated volume of consumption of non-metered consumers in an ISP is calculated by using the standard load profiles of non-metered consumers.
- (3) In each ISP the differences between the real total volume of consumption in a distribution system and the total quantities of standard load profiles of all non-metered consumers in the distribution system is the residual consumption.
- (4) The residual consumption is the balancing responsibility of the Distribution System Operator and is added to the allocated volume of total consumption the Distribution System Operator aside to the grid losses.

# Article 110 (Standard load profiles of non-metered consumers)

(1) The standard load profiles are defined in the Rules for the operation of electricity market. Distribution System Operator calculates the allocated volumes for each individual consumer for each ISP and aggregates the allocated volumes per virtual metering points of Balancing Scheme Member.

# Article 111 (Calculation of grid losses)

- (1) The Distribution System Operator estimates the electricity losses which occur during the operation of individual distribution network areas for the purpose of imbalance settlement on the basis of the past allocated volumes of the grid losses.
- (2) The estimated losses in the distribution network area are calculated in each ISP.
- (3) The actual losses of electricity which occur during the operation of individual distribution system are calculated from the difference in the total accepted and delivered electricity.
- (4) The total accepted electricity is the electricity which is received by an individual distribution system on contact points with a transmission network, on production delivery points, or in the case of non-regulated supply.
- (5) The total delivered electricity is the electricity which is delivered by an individual distribution system on contact points with a transmission network, on consumption delivery points, or in the case of non-regulated supply.
- (6) The actual electricity losses which occur during the operation of the transmission network are calculated in each ISP from the difference between the accepted and the delivered electricity which was received or delivered by the transmission network on contact points with a distribution network, on Delivery points which separate the transmission network from networks of the neighbouring Transmission System Operators, on production Delivery points, and on consumption Delivery points.



#### 3.4.2. Process of imbalance settlement

# Article 112 (Imbalance settlement)

- (1) Market Operator implements imbalance settlement according to the Register of Balance Responsible Parties and Balance Groups and using the received data from System Operators by performing the next steps:
  - calculation of total Balance Groups' allocated volume,
  - calculation of total Balance Groups' adjusted volumes,
  - calculation of Balance Groups' imbalances, and
- (2) The imbalance settlement shall be carried out once per accounting period and separately for each ISP.
- (3) The submitted quantities of accounting data shall be provided accurate at least to one kWh.

### Article 113

(First calculation of imbalance settlement)

- (1) The Transmission System Operator sends each Balance Responsible Party imbalance and financial settlement report for their Balance Group for the calendar month in question within sixty (60) days after the calendar month.
- (2) The Market Operator sends the Transmission System Operator imbalance settlement reports of all Balance Responsible Parties for the purpose of financial settlement of the imbalance settlement within the deadline stipulated in the previous paragraph.
- (3) The imbalance settlement report contains the values of positive and negative imbalances of a Balance Group separately by accounting interval, and it primarily includes the following data:
  - value of imbalances,
  - value of imbalances where the tolerance band was exceeded,
  - value of forecasted imbalances.
- (4) It shall be deemed that the imbalance settlement report is received by the Balance Responsible Party at the moment when the time stamp was created by sending the imbalance settlement report by e-mail or electronic data interchange.
- (5) If the Balance Responsible Party wishes to receive the imbalance settlement reports or notifications regarding the imbalance settlement through registered post, they shall notify the Transmission System Operator in writing by registered letter.

### Article 114

(Objection to the imbalance settlement report)

- (1) Balance Responsible Parties have a right of objection to the imbalance settlement report within five (5) working days after receipt from the Transmission System Operator.
- (2) The objection submitted by the Balance Responsible Party is valid if the reasons for the objection are clear, intelligible and justified.
- (3) The Transmission System Operator may publish a template for raising objections on its website.
- (4) An objection to the imbalance settlement report shall contain all indications regarding the violation of provisions of the substantive law, incorrect or incomplete conclusions about the actual situation, or violations of procedure for which the Balance Responsible Party believes are contained in the imbalance settlement report, and are the subject of their objection.



- (5) If the Balance Responsible Party claims that the imbalance settlement report was issued on the basis of incorrect or incomplete conclusions regarding the actual situation, the objection shall include all and complete facts which the Balance Responsible Party finds relevant in the particular case.
- (6) If the Balance Responsible Party possesses any kind of documentation that could justify their objection, that documentation shall be included in their objection and sent to the Transmission System Operator via e-mail or registered mail. When an objection is sent by e-mail, the Transmission System Operator shall be required to confirm its receipt, or the documentation shall be regarded as non-served.
- (7) The lodging of the objection to the Transmission System Operator shall not suspend the execution of the financial settlement. The financial settlement shall take place on the basis of the imbalance settlement report.

(Obligations of System Operators related to the objection concerning the imbalance settlement report)

- (1) The Transmission System Operator shall submit to System Operators the notification regarding the received objection to the imbalance settlement the following working day after the deadline for the submission of objections and shall request Market Operator and System Operators to submit a written explanation and metered or accounting data on consumption and delivery.
- (2) At a written request from the Transmission System Operator, Market Operator and System Operators shall submit a written explanation for the imbalance settlement and measuring or accounting data on consumption and delivery for the requested Delivery points or selected Balance Scheme members within three working days.
- (3) The Transmission System Operator shall use the written explanation and the data from the previous paragraph only to make a decision on the objection to the imbalance settlement report; however, the Transmission System Operator is not obliged to present these to the Balance Scheme members.

#### Article 116

(Decision on the objection to the imbalance settlement)

- (1) The decision on the objection to the imbalance settlement report is made by the Transmission System Operator and is based on the objection itself and other documentation and information received on the case within five (5) working days after the receipt of the written explanation and/or data from the Market Operator and System Operators.
- (2) If the Transmission System Operator finds that the objection to the imbalance settlement is justified and the data submitted by the Electricity System Operators is adequate, new calculation of the imbalance settlement is made by Market Operator within five working



- days after receiving all the necessary data. Then, the imbalance settlement report becomes final.
- (3) If the objection is not justified, the Transmission System Operator rejects it by way of decision. The imbalance settlement report which was the subject of the objection becomes final.

# (Recalculation of imbalance settlement)

- (1) The Market Operator calculates Recalculation of imbalance settlement only for Balance Responsible Parties for which it receives corrected data from the Transmission System Operator or the Distribution System Operator.
- (2) The Transmission System Operator sends each Balance Responsible Party a report on recalculation of the imbalance settlement for their Balance Group for the calendar month in question within six (6) months after the calendar month.
- (3) The Market Operator sends the Transmission System Operator report on recalculation of the imbalance settlement of all Balance Groups for the purpose of financial settlement of recalculation of the imbalance settlement within the deadline stipulated in the previous paragraph.
- (4) Within the recalculation of the imbalance settlement, the differences are calculated between the values of the first imbalance settlement and the values of recalculation of imbalance settlement.
- (5) The recalculation of the imbalance settlement is calculated for each Balance Group separately.
- (6) The Market Operator also makes a recalculation of the imbalance settlement in case of a final decision issued by the Energy Regulatory Commission concerning the request to resolve a dispute with the Transmission System Operator.

# Article 118

(Request for a decision to resolve a dispute with the Market Operator)

- (1) In accordance with the Article 37 of the Energy Law the Balance Responsible Party has a right to submit a request to the Energy Regulatory Commission within 15 days after receiving the imbalance settlement report or recalculation of imbalance settlement, to take a decision to resolve a dispute with the Transmission System Operator.
- (2) The lodging of the request to resolve the dispute with the Transmission System Operator shall not suspend the execution of the financial settlement. The financial settlement shall take place on the basis of the imbalance settlement report.
- (3) After the decision taken by the Energy Regulatory Commission has become final, the next financial settlement shall also provide compensation for a possible difference, following the final decision on this matter.

## Article 119

(Objection to the recalculation of imbalance settlement)

(1) Balance Responsible Parties have a right of objection to the recalculation of imbalance settlement within five (5) working days after receipt from the Transmission System Operator.



(2) The procedure of objection, together with the deadlines for decisions made by Transmission System Operator, submission of corrected data by System Operators, requests to Energy Regulatory Commission to take a decision to resolve a dispute with the Transmission System Operator and calculation based on corrected data, is in accordance with the procedure for the first calculation of imbalance settlement.

### 3.4.3. Allocated Volume

#### Article 120

(Allocated Volume of a Balance Scheme Member)

(1) The allocated volume of production sites of a Balance Scheme Member in an individual ISP equals the sum of allocated volumes of all delivery points of production sites which belong to a Balance Scheme Member:

$$W_{production} = \sum_{i=1}^{n} W_i$$

Where:

 $W_{production}$ .....is the allocated volume of produced electricity of a Balance Scheme Member;  $W_i$ ......is the allocated volume of a delivery point of production site i; n......is a number of delivery points of production sites of a Balance Scheme Member.

(2) The allocated volume of consumption of a Balance Scheme Member in an individual ISP equals the sum of allocated volumes of all consumers which belong to a Balance Scheme Member.:

$$W_{consumption} = \sum_{j=1}^{m} W_j$$

Where:

 $W_{consumption}$ .....is the allocated volume of consumed electricity of a Balance Scheme Member;  $W_j$ ......is the allocated volume of consumption at the delivery point j; m......is a number of delivery Points of a Balance Scheme Member.

(3) Total allocated volume of a Balance Scheme Member in an individual ISP equals the difference between allocated volume of consumption and allocated volume of production of the delivery points which belong to a Balance Scheme:

$$W_{allocated\;volume} = W_{consumption} - W_{production}$$

Where:

 $W_{allocated\ volume}$  ......is the total allocated volume of a Balance Scheme Member;  $W_{consumption}$  ......is the allocated volume of consumed electricity of a Balance Scheme Member;  $W_{production}$  ......is the allocated volume of produced electricity of a Balance Scheme Member.



# Article 121 (Allocated Volume of a Balance Group)

(1) The allocated volume of a Balance Group in an individual ISP equals the sum of allocated volumes of all delivery points of consumption and production sites which belong to the Balance Group:

$$W_{allocated\ volume\ of\ BG} = \sum_{l=1}^{r} W_{allocated\ volume\ l}$$

### Where:

 $W_{allocated\ volume\ of\ BG}$  .... is the total allocated volume of a Balance Group;

 $W_{allocated\ volume\ l}$  ......is the allocated volume of each Balance Scheme Member within the Balance Group;

# 3.4.4. Methodology for calculation of imbalances

Article 122 (Imbalances)

(1) For each Balance Group Market Operator calculates imbalances that equal to the difference between the final position of that Balance Group and the total allocated volume attributed to that Balance Group, including any imbalance adjustment applied to that Balance Group, within a given ISP:

$$W_{imbalances} = W_{final\ position} - W_{allocated\ volume}$$

### Where:

 $W_{imbalances}$  .....are the quantities of imbalances of a Balance Group;

 $W_{final\ position}$ .....is the final position of a Balance Group;

 $W_{allocated\ volume\ }...$  is the total allocated volume of a Balance Scheme Member.

(2) A negative imbalance means that the allocated volume is higher than the final position of a Balance Group (higher consumption or lower production than planned). A positive imbalance means that the allocated volume is lower than the final position (lower consumption or higher production than planned).

# Article 123 (Imbalance volume)

- (1) Imbalance adjustment is the energy volume representing the activated balancing energy from a Balancing Service Provider for an imbalance settlement period which is allocated to the Market Participant.
- (2) Changes to the final positions in the values of imbalance are managed on the basis of accounting data received from the Transmission System Operator on the activation of balancing capacities.

# Article 124 (Imbalances of System Operators)

(3) The imbalances on the borders are calculated on the basis of the difference between the announced power flows on the borders and the accounting data of measured power flows on the borders.



- (4) The Transmission System Operator's imbalances are calculated on the basis of the difference between its allocated volume (the sum of the realisation of losses and the emergency supply where relevant) and the final position.
- (5) The Distribution System Operator's imbalances are calculated on the basis of the difference between its allocated volume (the sum of the realisation of losses in the distribution system and the emergency supply) and the final position.

# Article 125 (Forecasted imbalances)

- (1) Forecasted imbalances are determined for Balance Groups with no affiliated production or consumption delivery points and that are regarded as traders.
- (2) In each ISP, the forecasted imbalances are calculated in the following manner:

 $W_{forecasted\ imbalances} = W_{final\ position}$ 

#### Where:

 $W_{forecasted\ imbalances}$  .....is the quantities of forecasted imbalances of a Balance Group;  $W_{final\ position}$  .......is the final position of a Balance Group.

# 3.4.5. Methodology for calculation of imbalance prices

### Article 126

(Balancing costs of the Transmission System Operator)

- (1) For the purposes of the imbalance settlement, the Transmission System Operator submits to the Market Operator the measurement of electricity, the activated amounts of balancing services for each balancing service provider, the settlement price and the final daily schedule.
- (2) The deadlines for submission of metering and accounting data from the previous paragraph shall be defined by the Market Operator and the System Operators.
- (3) The balancing costs settled by the Market Operator within the imbalance settlement shall not include the costs covered from other financial sources such as the network charges.

# Article 127 (Imbalance price)

- (1) The Transmission System Operator calculates the basic imbalance prices on the basis of the prices of activated balancing energy within the imbalance price area of Macedonian Transmission System Operator.
- (2) The imbalance price can be positive, zero or negative, as defined in the next table:

	Positive imbalance price	Negative imbalance price
Positive imbalance	Payment from TSO to BRP	Payment from BRP to TSO
Negative imbalance	Payment from BRP to TSO	Payment from TSO to BRP

(3) The costs are settled separately by the Transmission System Operator through the imbalance settlement for each accounting period.



(4) For the imbalance prices the single price mechanism is used. For positive and negative imbalances the same price is used and is marked as  $C_{imbalances}$ .

# Article 128 (Calculation of imbalance prices)

(1) The price  $C_{imbalances}$  shall be calculated depending on the volumes of activated balancing energy and total imbalance within the imbalance price area of Macedonia, applying the following equations:

Volumes of activated balancing energy in ISP	$C_{imbalances}$
Volume of activated	
positive balancing energy	
exceeds the volume of	$WAP_{pos}$
activated negative	w III pos
balancing energy	
$W_{pos} + W_{neg} > 0$	
Volume of activated	
negative balancing energy	
exceeds the volume of	
activated positive	$WAP_{neg}$
balancing energy	
$W_{pos} + W_{neg} < 0$	
No activated balancing	
energy or	VAA
$W_{pos} + W_{neg} = 0$	

### Where:

VAA .......is the Value of Avoided Activation in ISP;  $WAP_{pos}$  ......is weighted average price of activated positive balancing energy in ISP;  $WAP_{neg}$  ......is weighted average price of activated negative balancing energy in ISP;  $W_{pos}$  .......is the volume of activated positive balancing energy;  $W_{neg}$  ......is the volume of activated negative balancing energy.

# Article 129 (Weighted Average Price)

(1) The weighted average price of activated positive balancing energy is calculated for each individual ISP from the prices of aFRR, mFRR and RR applying the following equation:

$$WAP_{pos,i} = \frac{\sum_{type}^{n}(Price_{pos,type,i} \cdot W_{pos,type,i})}{\sum_{type}^{n}W_{pos,type,i}}$$

### Where:

 $WAP_{pos}$  .......is weighted average price of activated positive balancing energy in ISP;  $Price_{pos,type,i}$  ......is the price of a specific type of activated positive balancing energy in ISP;  $W_{pos,type,i}$  .......is the volume of a specific type of activated positive balancing energy in ISP.

(2) The weighted average price of activated negative balancing energy is calculated for each individual ISP from the prices of aFRR, mFRR and RR applying the following equation:



$$WAP_{neg,i} = \frac{\sum_{type}^{n}(Price_{neg,type,i} \cdot W_{neg,type,i})}{\sum_{type}^{n}W_{neg,type,i}}$$

Where:

 $WAP_{neg}$ .....is weighted average price of activated negative balancing energy in ISP;  $Price_{neg,type,i}$ ......is the price of a specific type of activated negative balancing energy in ISP;  $W_{neg,type,i}$ ......is the volume of a specific type of activated negative balancing energy in ISP.

# Article 130 (Value of Avoided Activation)

(1) The Value of Avoided Activation is defined for each ISP. It is defined in the following manner:

	Positive imbalance price	Imbalance price
Positive imbalance	Payment from TSO to BRP	HUPX – 50%
Negative imbalance	Payment from BRP to TSO	HUPX + 50%

# Article 131 (Public nature of imbalance prices)

- (1) The Transmission System Operator shall regularly publish on its web site the data on calculated values of the imbalance prices  $C_{imbalances}$  for each accounting interval separately.
- (2) The Transmission System Operator shall publish the imbalance prices after receiving all required data for calculating the imbalance prices.

(1)

# Article 132 (Imbalance settlement calculation)

- (1) Imbalance settlement is a process of calculating the values of Balance Group imbalances for each accounting interval separately and is carried out once in the monthly accounting period on the basis of:
  - imbalances of Balance Groups;
  - forecasted imbalances of Balance Groups;
  - tolerance bands of Balance Groups; and
  - imbalance prices.

# Article 133 (Value of imbalances of a Balance Group)

(1) For an individual accounting interval t, the value of imbalances  $Z_t$  of a Balance Group is calculated using the equation:

$$Z_t = -C_{imbalances} \cdot W_{imbalances}$$

Where:

 $W_{imbalances}$ .....are the quantities of imbalances of a Balance Group;  $Z_t$ .....is the value of imbalances of a Balance Group in ISP t.



## (Total value of imbalances of a Balance Group)

(1) The total amount of imbalance settlement in the monthly accounting period shall be equal to the sum of the amounts of imbalances from all individual ISPs in the accounting period:

$$Z = \sum_{t=1}^{u} Z_t$$

W	h	Δ	r	Δ	•

 ${\it Z}$  ......is total amount of imbalance settlement of a Balance Group in the monthly accounting period;

 $Z_t$  ......is the value of imbalances of a Balance Group in ISP t;

*t* .....is individual ISP;

u ......is the number of ISPs in the monthly accounting period.

#### Article 135

(Total value of forecasted imbalances of a Trader)

- (1) The value of tolerance band for Balance Groups with no affiliated delivery points (also referred to as Traders) equals 0 MWh.
- (2) For physically unbalanced schedule after completing the process day- ahead (D-1) for Day D latest until 15:30, the BRP pays to TSO.
- (3) If the value of imbalance is in the range -0.5MWh to + 0.5MWh, the BRP does not charge a fee.
- (4) The value of forecasted imbalances  $Z_t$  of a Balance Group for positive forecasted imbalances in an individual t is calculated using the equation:

$$Z_{forecast-t} = 2 \cdot C \cdot W_{forecasted\ imbalances}$$

(5) The value of forecasted imbalances  $Z_t$  of a Balance Group for negative forecasted imbalances in an individual ISP t is calculated using the equation:

$$Z_{forecast-t} = -5 \cdot C \cdot W_{forecasted\ imbalances}$$

#### Where:

 $Z_t$ .....is the value of forecasted imbalances of a Balance Group in ISP t;

 $W_{forecasted\ imbalances}$ ....is the quantities of forecasted imbalances of a Balance Group;

t .....is individual ISP

C.....price of HUPEX for the same hour and the same day, when there was imbalance

### Article 136

(Values of imbalances on the borders)

- (1) The imbalances on the border of a transmission network are negative when more electricity is exported or less electricity is imported than forecasted in the operating schedule of the transmission network.
- (2) The imbalances on the border of a transmission network are positive when less electricity is exported or more electricity is imported than forecasted in the operating schedule of the transmission network.



(3) The imbalance quantities on the borders are part of the market balance sheet and are calculated for each ISP separately.

# 3.5. Financial settlement of imbalance settlement

#### 3.5.1. Financial liabilities and collaterals

Article 137 (Clearing agent)

(1) As the clearing agent, the Transmission System Operator carries out the settlement of financial claims and liabilities of the financial settlement participants, and implements the settlement of liabilities and claims through a settlement account in accordance with these Rules.

# Article 138 (Transmission System Operator's accounts)

- (1) At the Settlement Bank, the Transmission System Operator has a settlement account and deposit account.
- (2) For the purposes of the financial settlement of imbalance settlement, the Transmission System Operator may open a new account.

# Article 139 (Deposit account)

- (1) The financial guarantee in the form of cash deposits, submitted by financial settlement participants, shall be administered on a deposit account.
- (2) The Transmission System Operator opens a deposit sub-account within the main deposit account for each financial settlement participant who submits a financial guarantee in the form of a cash deposit.
- (3) The funds on the deposit account are administered separately from the Transmission System Operator's funds.
- (4) On the basis of an irrevocable authorisation issued by a financial settlement participant for using funds on the deposit sub-account for financial settlements arising from imbalance settlement, these funds may only be disposed of by the Transmission System Operator as the manager of the deposit account.
- (5) The Transmission System Operator shall recognise interest on paid-in financial guarantees in the amount of the interest rate agreed with the Settlement Bank. The Transmission System Operator shall inform in writing all financial settlement participants with financial guarantees in the form of cash deposits of any change in the remuneration.
- (6) The interests are accounted and credited on the deposit sub-account monthly and are credited to the financial settlement participant's business account at least once a year.
- (7) If interest income is subject to the withholding tax and the Balance Scheme member fails to submit a confirmed request for reduction or exemption of tax on interest based on provisions of the treaty on avoidance of double taxation of interest income, the Transmission System Operator may pay the interest on the financial settlement participant's business account, taking into account the general tax rate on the date of interest payment.



(8) The interest is kept and treated separately from the submitted financial guarantees, unless the Transmission System Operator and the financial settlement participant agree otherwise.

### 3.5.2. Financial settlement of imbalance settlement

#### Article 140

(Financial settlement of imbalance settlement)

- (1) The financial settlement of imbalance settlement is carried out on the settlement day on the basis of calculated amounts of the imbalance settlement report in a selected monthly accounting period.
- (2) The provisions relating to the financial settlement of imbalance settlement shall apply, mutatis mutandis, to recalculation of imbalance settlement.
- (3) On the basis of the imbalance settlement report of an accounting period, the Transmission System Operator invoices when Balance Responsible Party is obliged to pay for imbalances in a selected monthly accounting period to the financial settlement participants. An annex to the invoice is the imbalance settlement report in the selected period for an individual Balance Group.
- (4) On the basis of the imbalance settlement report of an accounting period, the Balance Responsible Parties issues an invoice when Transmission System Operator is obliged to pay for imbalances in a selected monthly accounting period to the Transmission System Operator. An annex to the invoice is the imbalance settlement report in the selected period for an individual Balance Group.
- (5) Due date to issue an invoice is no sooner and no later than in three working days after receiving imbalance settlement report.
- (6) The settlement due date is the eight (8) working days from the invoice date.

## 3.5.3. Financial risk management

## Article 141

(Financial risk management)

- (1) The Transmission System Operator ensures the fulfilment of financial liabilities arising from the financial settlement of imbalance settlement and balancing of the electricity system in the extent of submitted and redeemable guarantees.
- (2) As the clearing agent, the Transmission System Operator carries out the methods and instruments of risks management; namely restricting the maximum liquidity exposure of an individual financial settlement participant to the Transmission System Operator, and prescribing mandatory financial guarantees for financial settlement participants according to the liquidity exposure.
- (3) For the purpose of financial risk management, the recalculation of the imbalance settlement is regarded as imbalance settlement.

# Article 142

(Financial guarantees)

(1) The financial settlement participant shall provide basic and variable financial guarantees upon the Transmission System Operator's request.



- (2) The financial settlement participant shall deposit and maintain financial guarantee in the amount and form defined by the Transmission System Operator as collateral for the fulfilment of the participant's liabilities arising from the imbalance settlement.
- (3) All financial guarantees provided or deposited by a financial settlement participant to the Transmission System Operator as coverage in accordance with these Rules are de jure and de facto property of a financial settlement participant and are free of obligations for other purposes.
- (4) The submission of the prerequisite financial guarantees is the condition for the inclusion into the Balance Scheme as a Balance Group.
- (5) The data on delivery points, the data on quantitative values of forecasted imbalances, the data on quantitative and financial values of past imbalances, and other information on an individual financial settlement participant, serve as the basis for the calculation of financial guarantees.
- (6) The Transmission System Operator may require additional financial guarantees from financial settlement participants who do not fulfil the financial liabilities.
- (7) On justified grounds, the Transmission System Operator is entitled to change the level of financial guarantees to the maximum of 50 % or to change the type of guarantees prior to including the financial settlement participant into the Balance Scheme, as well as during its operation.
- (8) If the Balance Scheme membership is ceased, all financial guarantees shall be returned to the financial settlement participant when all his financial liabilities to the clearing agent have been settled, including the liabilities arising from the recalculation of the imbalance settlement for the calendar months when the balancing agreement of the Balance Scheme participant ceases to be valid.

# Article 143 (Basic financial guarantee)

- (1) The submission of a basic financial guarantee is the requirement for the inclusion to the Balance Scheme.
- (2) The basic financial guarantee amounts to MKD 3.000.000 and can be submitted by financial settlement participants in the form of a cash deposit or a bank guarantee.

# Article 144 (Variable financial guarantee)

- (1) Variable financial guarantee must be submitted by the financial settlement participant at the Transmission System Operator's request.
- (2) Transmission System Operator may request that the variable financial guarantee is submitted in the form of a cash deposit into the deposit account opened at the Settlement Bank or in the form of a bank guarantee with validity from the date of issuing till 31<sup>th</sup> of March next year.
- (3) If the financial settlement participant has settled all its financial liabilities and has no current imbalances, it can request, in writing, the return of the part of submitted variable financial guarantees, provided that the financial guarantees are not lower than the limit referred to in these Rules.
- (4) On the basis of the data available to the Transmission System Operator, and the data submitted by the financial settlement participant, the Transmission System Operator evaluates the maximum possible load of consumers or maximum possible production power of producers which have balancing affiliation to the financial settlement participant.



- (5) For the newly established Balanced Group the Transmission System Operator determines the monthly exposure of financial settlement participant which is calculated upon its inclusion to the Balance Scheme with amount of the totally consumed electricity in the last month, multiplied by the average price for the universal supplier.
- (6) For the existing Balanced Group the Transmission System Operator determines the monthly exposure of financial settlement participant which equals double the amount of the average invoiced value to Balance Responsible Party for the deviations made in the preceding twelve months.
- (7) If the financial settlement participant is included in the balance scheme for less than twelve months and more than two months, the monthly exposure of financial settlement participant equals double the amount of the average invoiced value to Balance Responsible Party for the deviations made in the preceding months of their inclusion into the balance scheme.

(Variable financial guarantees upon imbalance settlement)

- (1) If a financial settlement participant is a net debtor the Transmission System Operator calculates new requisite variable financial guarantee.
- (2) If the financial guarantees already submitted by financial settlement participant are lower than the amount of issued invoice for imbalance settlement, the new requisite variable financial guarantee is the same as the amount of issued invoice for imbalance settlement otherwise it remains the same as the value of financial guarantees already submitted.

# Article 146 (Bank guarantee)

- (1) The beneficiary of the bank guarantee submitted by the financial settlement participant is the Transmission System Operator. The bank guarantee must contain a "no objection" or "at first call" clause or words with the same meaning. The bank guarantee must contain an unconditional and irrevocable undertaking by the bank to ensure the payment of the amount stipulated in the bank guarantee to the beneficiary at the first request. A bank guarantee shall also contain a clause under which partial realisation of a bank guarantee is possible.
- (2) Prior to submitting a bank guarantee, the financial settlement participant shall inform the Transmission System Operator of the purpose of the submission of a bank guarantee and shall acquire a written consent stating that the bank guarantee of the bank in question is acceptable for the Transmission System Operator.
- (3) The Transmission System Operator reserves the right to deny a bank guarantee from the bank which is not classified according to the assessment system of a reputable assessment company. The acceptance or refusal of a bank guarantee shall be the discretionary right of the Transmission System Operator.
- (4) The Transmission System Operator may realise the bank guarantee if the financial settlement participant fails to settle its liabilities within the agreed deadline.
- (5) All costs incurred in the procedure of the financial guarantee issuance and realisation shall be borne by the financial settlement participant whose banking guarantee has been realised.



(6) The financial settlement participant shall provide the Transmission System Operator with a new guarantee at least three working days prior to the expiry of the currently valid bank guarantee and/or shall submit a cash deposit instead of a bank guarantee.

# Article 147 (Cash deposit)

- (1) Cash deposits submitted by financial settlement participants as financial guarantees are kept on the deposit account separately from the Transmission System Operator's funds.
- (2) When submitting a cash deposit, a financial settlement participant shall sign the irrevocable authorisation with which the Transmission System Operator is authorised to manage the funds on the deposit account.

# Article 148 (Non-fulfilment of liabilities)

- (1) The non-fulfilment of financial liabilities shall be deemed to be in particular the following events or circumstances:
  - if a financial settlement participant fails to carry out or fulfil one of its obligations to settle its outstanding liabilities;
  - if a financial settlement participant fails to submit requested financial guarantees; or
  - if a financial settlement participant fails to pay its outstanding debts, acknowledges an inability to pay its debts or remains actually incapable of payment;
- (2) In the event that a financial settlement participant fails to settle its financial liabilities, the Transmission System Operator shall avail the submitted financial guarantees.
- (3) In the event that the Transmission System Operator uses the financial guarantees to meet the financial settlement participant's liabilities, the participant shall pay or provide additional financial guarantees in the amount determined by the Transmission System Operator at the first call.
- (4) The financial settlement participant shall be obliged to reimburse the Transmission System Operator all costs and expenses incurred by the measures in case of non-fulfilment of financial liabilities.
- (5) The Transmission System Operator may also contact third parties for cooperation regarding the non-fulfilment of liabilities.

# Article 149 (Default interest payment)

If a financial settlement participant fails to meet financial liabilities on time, the Transmission System Operator is entitled to charge default interest stipulated by law. The interests shall be charged from the day the payment falls due to the day the debt is actually settled.



## 4. TRANSITIONAL AND FINAL PROVISIONS

# Article 150 (Transitional period)

- (1) To define the transitional period for bid submission before the platform established fo aFRR and mFRR
- (2) The Transmission System Operator informs The Energy Regulatory Commission about the end of transitional period from Article 46.

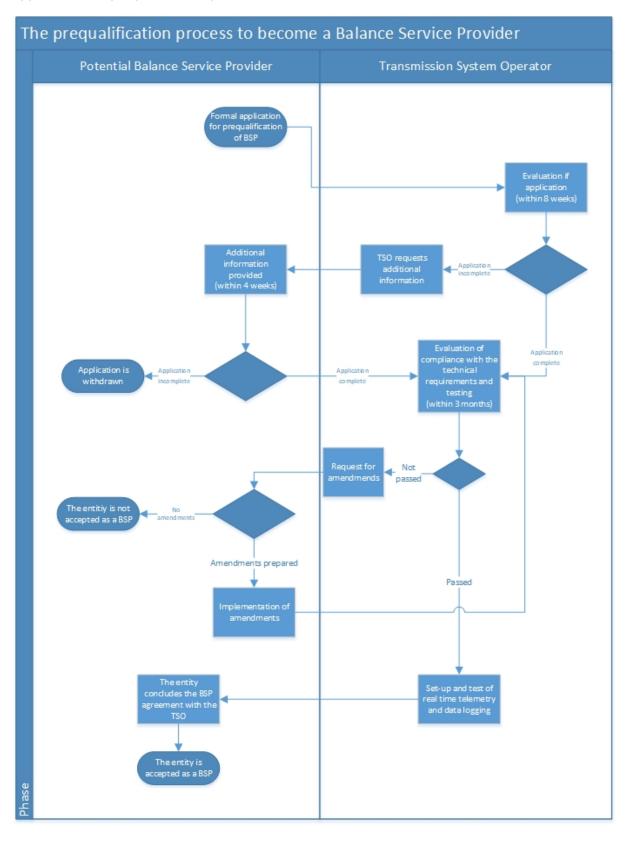
# Article 151 (Entry into force)

This Rules shall enter into force on the fifteenth day following its publication in the Offical Gazettte of the Republic of Macedonia.

Number: Date:



Appendix I: The prequalification process to become a Balance Service Provider



THE TRANSMISSION SYSTEM OPERATOR OF MACEDONIA, a joint stock company for electricity transmission and power system control, in state ownership - SKOPJE, bb Orce Nikolov St. 1000 Skopje a holder of a license as to organizing and management of the electricity market, represented by
AD MEPSO President of Board of Directors (hereinafter: the Transmission System Operator)
Account no.: 200001086598648
Registration number
ID no: MK 4030004529600
VAT ID:
and
responsible party (hereinafter: the Balance Service Provider),
Registration number:
VAT ID:
hereby conclude the following
BALANCING SERVICE AGREEMENT FOR MACEDONIAN BALANCING MARKET
WHEREAS:
- The Transmission System Operator is competent to establish and operate the Macedonian balancin
market and to issue The Rules for the electricity balancing market in FYR of Macedonia (Official Gazett
) (here after: the Rules);
- The Participant has applied for Balancing Market Participation in the Macedonian balancing Market o (hereinafter referred to as "Macedonian Balancing Market");
- The Participant has successfully completed prequalification process under the Rules and Transmissio
System Operator has about notification of the requisite criteria.
THE PARTIES AGREE AS FOLLOWS:

# **Objective of the Agreement**

Article 1.

By this Agreement Parties agree in detail their rights and obligations arising from Market Participation in the Macedonian Balancing Market.

On the day the present Agreement enters into force, the Transmission System Operator shall grant Participant the status of Balance Service Provider end enter the Participant into the register of Balance Service Providers.

The Market Participant can participate as a Balancing Service Provider ir	n the f	ollowing	segments	of the
Macedonian Balancing Market:				
C CDD				

☐aFRR; ☐mFRR; ☐FCR.

## **Obligations of Participant**

Article 2.

Participant shall be continuously fulfilling all the requirements for market participation in the Macedonian Balancing Market in accordance with the Rules, in particular, it shall:

- Hold Market Participation status;
- Participate in auctions or tenders (procurement process);
- Obtain all state approvals, permissions, licenses and admissions or similar agreements that are required for trading in the Macedonian market and the subsequent handling of the concluded transactions according to the Rules;
- Provide the personnel and technical facilities required for trading and take satisfactory precautions;
- Fulfil all other requirements stated in the Rules.

# **Obligations of the Transmission System Operator**

Article 3.

The Transmission System Operator shall enable the Participant to use its services related to trading in the Macedonian Balancing Market in accordance with the Rules.

The Transmission System Operator shall enter the Participant into the Register of Balance Service Providers when this agreement comes into force.

## **Validity and Termination of Agreement**

Article 4.

This Agreement shall enter into force on the day determined by Transmission System Operator upon fulfilment of all conditions for the Market Participation in the Macedonian Balancing Market in accordance with the Rules.

The Transmission System Operator shall notify the Participant on the day of this Agreement entering into force by a written notice and entering the Participant into the Register of Balance Responsible Parties.

# This Agreement is concluded for indefinite period of time.

This Agreement may be terminated in accordance with the Rules as follows:

- 1. The Transmission System Operator may terminate this Agreement by a written notice of termination entering into force immediately:
- i) with the occurrence of the legal consequences deriving from Participants receivership, bankruptcy or other insolvency proceedings;
- ii) with the termination of Participants balance scheme membership;
- iii) if the Participant breaches the Rules in any way.
- 2. The Transmission System Operator may terminate this Agreement by a written notice of termination entering into force on a day specified at Transmission System Operator own discretion if:
- i) Admission of Participant to Macedonian Balancing Market has been withdrawn;
- ii) Admission of Participant to Macedonian Balancing Market has been revoked.
- Participant of Macedonian Balancing Market does not allow representatives of the Transmission System Operator to monitor compliance of the documentation pertinent to trades concluded at Slovenian Balancing Market with the Rules.
- 3. The Participant may terminate this Agreement by a written notice of resignation from admission to Macedonian Balancing Market delivered to the Transmission System Operator, entering into force one month from the day of receipt of the aforementioned notice.

## **Governing Law and Jurisdiction**

Article 5.

The valid Rules form constituent part of this Agreement.

This Agreement shall be governed by, construed and enforced in accordance with the valid Rules and other laws of the FYR of Macedonia.

All Disputes related to application of provisions in this Contract shall be settled by the Contracting Parties in an amicable manner.

If the dispute is not settled in an amicable manner, the unsatisfied Contracting Party may submit a request to the Energy Regulatory Commission in the Republic of Macedonia to resolve the dispute in compliance with the Law on Energy and the Regulations on Method, Conditions and Procedure of Dispute Settlement and the amount for justified reimbursement of costs incurred in the procedure.

If The Contracting Party not satisfied with the outcomes from the procedure referred to in previous Paragraph of this Contract may initiate proceedings to the competent court.

## **ANTI-CORRUPTION CLAUSE**

Article 6.

The Parties undertake not to promise, offer or provide any kind of undue benefits, directly or indirectly, to any representative or intermediary of another Party, with the purpose of securing a deal, signing a deal on more favorable terms, failing to exercise due supervision of contract performance, or in order to facilitate any other action or failure to act that would cause damage to a Party or would allow a Party, its agent, representative or intermediary to gain undue benefits.

If any action from the previous paragraph is undertaken or attempted, an already concluded contract shall become null and void; if not yet in effect, the contract

#### **Final Provisions**

Article 7.

This Agreement may not be modified or amended except in writing executed by the Parties.

This Agreement is executed in four (3) originals of which each Party receives two (2) originals.

transmission and power system control, in state ownership - SKOPJE, bb Orce Nikolov St. 1000 Skopje, a holder of a license as to organizing and management of the electricity market, represented by AD MEPSO President of Board of Directors (hereinafter: the Transmission System
Operator)
Account no.: 200001086598648
Registration number
ID no: MK 4030004529600
VAT ID:
and
represented by (Position/First and Last Name), as the balance responsible party (hereinafter: the Balance Responsible Party),
Registration number:
VAT ID:
hereby conclude the following
BALANCING AGREEMENT no
Introductory Provision
Article 1
The contracting parties conclude this Balancing agreement on the basis of the The Rules for the electricity balancing market in FYR of Macedonia (Official Gazette) (here after: the Rules) in order to include the Balance Responsible Party in the Register of Balance Responsible Parties and Balance Groups.
Meaning of Expressions
Article 2
The expressions used in this Agreement shall have the meaning as stipulated by the Energy Act and the applicable Rules.

## Subject of the Agreement

#### Article 3

The subject of this Agreement is:

- The inclusion of the Balance Responsible Party in the Register of Balance Responsible Parties and Balance Groups;
- Balancing of the Balance Responsible Party and its Balance Group;
- The Balance Group definition;
- Defining how the Balance Responsible Party exercises its rights and obligations;
- Defining how the Transmission System Operator exercises its rights and obligations;
- The imbalance settlement:
- The financial settlement of imbalance settlement; and
- The provisions of the required financial guarantees to the Transmission System Operator.

## **Balance Group**

### Article 4

By concluding the Balancing Agreement and complying with other conditions stated in Article 5 of this Agreement, the Balance Responsible Party establishes a Balance Group for which it is responsible to the Transmission System Operator.

For as long as this Agreement remains valid, the Balance Responsible Party cannot be included in the Balance Scheme neither with another Balancing Agreement nor as the hierarchically inferior Balance Group Member of other Balance Groups.

The Balance Responsible Party shall be obliged to inform the Transmission System Operator of the a statement of inclusion into a balance group which forms the basis for establishing the hierarchically inferior Balance Group Member, and in accordance with the Rules.

## **Balancing Agreement**

## Article 5

This Balancing Agreement shall be recorded in the Register of Balance Responsible Parties and Balance Groups established at Transmission System Operator within 5 working days from the fulfilment of all requisite conditions for the inclusion in the Balance Scheme.

The conditions for inclusion in the Balance Scheme are a concluded Balancing Agreement, a submitted required financial guarantee.

The Balance Responsible Party shall provide the required financial guarantees to the Transmission System Operator within three months from the date of the Balancing Agreement conclusion, or the Agreement shall be considered rescinded.

Transmission System Operator informs the Market Operator on the date when the required financial guarantees were provided by the Balancing Responsible Party.

## Obligations and Responsibilities of the Balance Responsible Party

### Article 6

The Balance Responsible Party is primarily responsible for:

- submitting a statement of inclusion into a balance group signed by the Balance Responsible Party and Market Participant which serves as the basis for the inclusion of individual hierarchically inferior Balance Group Member;
- adequate adjustment of financial guarantees on Transmission System Operator's call;
- sending nominations of Trade Party Schedules, Consumption Party Schedules, and Production Party Schedules to the Transmission System Operator for the entire Balance Group including hierarchically inferior Balance Group Members of the Balance Group in accordance with the Energy Law;
- a financial settlement of imbalance settlement for the Balance Group;
- compliance with the obligations arising from financial settlement of imbalance settlement; and
- submission of data and documentation upon the Transmission System Operator's or Market Operator's request on the basis of these Rules.

The Balance Responsible Party shall bear non-fault liability for any loss or damage (including the costs incurred in the process) caused by the infringement of the applicable Rules or this Contract.

## **Exclusion of the Transmission System Operator's Liability**

## Article 7

The contracting parties agree that Transmission System Operator shall not be liable for any damage or loss arising from the implementation of any actions or suspension regulated by regulations, provided that its actions were not intentional or due to considerable negligence.

The contracting parties agree that the Transmission System Operator shall in no case be liable for any damage or loss arising from events that are the outcome of amendments to regulations in force or actions of the competent authorities, and any other events beyond the control of the Transmission System Operator.

The contracting parties agree that the Transmission System Operator may temporarily technically prevent the Balance Responsible Party from operating on the electricity market in events that require such action in accordance with the Rules. In these cases the Transmission System Operator shall not be liable to Balance Scheme members for damage or loss that might result from technical prevention from operating of Balance Responsible Party on the electricity market.

The contracting parties agree that the Transmission System Operator shall in no case be liable for disabled or impeded transactions on the electricity market resulting from a malfunction in communications, equipment, the central data processing system, etc.

Unless otherwise provided by the applicable Rules or by any other applicable regulation or agreement, the Transmission System Operator shall not be liable to any Balance Scheme member for damages, including all direct and indirect damages, loss of profit, or delay due to the circumstances or events described in this Article.

### **Imbalance Settlement**

#### Article 8

The imbalance settlement shall be carried out in accordance with the Rules.

## The Financial Settlement of Imbalance Settlement with the Transmission System Operator

#### Article 9

By concluding this Agreement, the Balance Responsible Party shall also agree on the performance of the financial settlement of imbalance settlement with the Transmission System Operator.

On the basis of this Agreement, the Balance Responsible Party acquires the status of the Financial Settlement Participant on the day this balancing Agreement enters into force.

As the Clearing Agent, the Transmission System Operator ensures the financial settlement of claims and liabilities of the Balance Responsible Party, who is acting as the Financial Settlement Participant, arising from the imbalance settlement in the extent of the submitted and redeemable guarantees, in accordance with the applicable Rules.

In accordance with the applicable Rules, the Balance Responsible Party acting as the Financial Settlement Participant is obliged to:

- notify the Transmission System Operator of any change that could affect its financial liability and
  of any changes of data or circumstances that affect the implementation of the liabilities referred
  to in this Agreement;
- to inssue invoices in accordance with the Rules;
- submit the required financial guarantees in the prescribed time limit and
- settle the financial liabilities within the prescribed time limits.

By concluding this Agreement and in the event of submitting a deposit, the Balance Responsible Party undertakes to sign an irrevocable authorisation for using its deposited funds on a deposit account managed by the Transmission System Operator.

## **Obligation to Inform**

### Article 10

The Balance Responsible Party is obliged to immediately report, in writing, any changes that could affect the validity of this Agreement.

All financial and other consequences resulting from late reporting of changes shall be borne by the Balance Responsible Party.

The Transmission System Operator may at any time request that the Balance Responsible Party provides appropriate evidence of the fulfilment of conditions for the Balance Scheme membership within 8 working days.

#### Submission of Data and Information

The Balance Responsible Party shall be obliged to provide the communication and information equipment at its cost necessary for data and information exchange including for communication with the Transmission System Operator that should be compatible with the equipment of the Transmission System Operator.

Upon request the Balance Responsible Party shall provide the Transmission System Operator with all information or documentation on the conduct on the electricity market within 8 working days, including all contracts that were concluded by the Balance Responsible Party on the market and are relevant for the uninterrupted operation of the electricity market as a whole.

By signing this Agreement the Transmission System Operator undertake to use all data and information that were gathered directly or indirectly during the imbalance settlement and the financial settlement of imbalance settlement solely for the purposes relating to clearing and imbalance settlement, and shall not disclose them to third parties, unless performing the obligations that arise from the regulations in force, respecting the principles of confidentiality in compliance with the Energy Law, the Electricity Market Rules and the appropriate Grid Code.

# **Specific Provision on Mutual Relations**

#### Article 12

The Balance Responsible Party and the Transmission System Operator exchange contact information for persons responsible for the reporting of closed contracts, operational forecasts, financial settlement of imbalance settlement, and other communication purposes.

The Balance Responsible Party should plan and deliver notification regarding physical timetables to the Transmission System Operator whereby generation and supply, including electricity imports for all intervals, correspond to consumption and selling and to electricity export made by all registered participants in the electricity market for which BRP has undertook the balance responsibility.

Physical timetables of Balance Responsible Party should contain the following information, in particular:

- totally planned production of all generating units for which the Balance Responsible Party has a balance responsibility,
- totally planned production of all generating units associated with dispatching for which the Balance Responsible Party has a balance responsibility,
- totally projected consumption of consumers for which meters are installed having a possibility
  of hourly and remote reading, for which the Balance Responsible Party has a balance
  responsibility,
- totally projected consumers consumption having loads foreseen for dispatching for which Balance Responsible Party has a balance responsibility,
- totally projected consumption that should also contain information for each consumer separately at locations in which no meters have been installed with the possibility for
- hourly and remote reading and which use standard daily load curves, for which the Balance Responsible Party has a balance responsibility,
- exchange with other Balance Responsible Parties in the power system of R. Macedonia for each the Balance Responsible Party separately, cross border nominations.

## **Termination of the Agreement**

### Article 13

The Transmission System Operator may terminate a Balancing Agreement concluded with the Balance Responsible Party on the basis of a justified termination of the Balancing Agreement without notice and with effect from the moment the cessation of the Balance Scheme membership is entered into the Record of Balance Scheme membership agreements and in the Register of Balance Responsible Parties and Balance Groups established at Transmission System Operator:

- if the Balance Responsible Party was admitted on the basis of untrue or false information;
- if legal consequences occur as a result of the bankruptcy or liquidation proceedings of a Balance Responsible Party;
- if a Balance Responsible Party violates the provisions of the regulations in force concerning the electricity market, or the provisions of other applicable regulations which can influence the Balance Responsible Party's ability to act according to these Rules;
- if a Balance Responsible Party member fails to fulfil its obligations under the balancing agreement;
- if a Balance Responsible Party fails to act on the basis of the Transmission System Operator's warning in the event that hierarchical inferior members of the Balance Scheme violate these Rules,
- if the Balance Responsible Party member does not conclude an Annex to the balancing agreement on the Transmission System Operator's call in accordance with the Rules, or
- if a Balance Scheme member breaches these Rules in any other way.

When a hierarchically inferior Balance Group Member of the Balance Responsible Party breaches the provisions of the applicable regulations governing the electricity market, or the provisions of other applicable regulations which can influence the Balance Scheme member's ability to act in accordance with the Rules, the Transmission System Operator shall warn the Balance Responsible Party and require the infringements to be brought to an end. If the infringements are not rectified, the Balance Responsible Party shall terminate any agreement as a basis for Balance Scheme membership concluded with such a member on the basis of the Transmission System Operator's warning. If the infringements are not remedied despite the Transmission System Operator's warning, the Transmission System Operator may terminate the Balancing Agreement concluded with the Balance Responsible Party.

The Balance Responsible Party may terminate the Balancing Agreement if its obligations to the Transmission System Operator are fulfilled and settled, and

- it has no hierarchically inferior Balance Group Members, it is not a supplier to any consumer or producer, and it does not supply any self-owned Delivery points, all of which ceases its membership in a Balance Scheme, or
- it it signs of a statement of inclusion into a balance group with another Balance Responsible Party which becomes a new foundation for its membership in a Balance Group, which makes it a Balance Group Member.

The termination of the Balancing Agreement by the Balance Responsible Party becomes effective on the day of the entry of the termination into the Register of Balance Responsible Parties and Balance Groups established at Transmission System Operator. The entry of the termination shall be made within five (5) working days from receipt of the notification of the termination of the Balancing Agreement.

In the case of the termination of the Balancing Agreement by the Balance Responsible Party, the latter can indicate the desired day of the entry into the Record of Balance Scheme membership agreements and into the Register of Balance Responsible Parties and Balance Groups at Transmission System

Operator which also specifies the date when the termination of the Balancing Agreement shall take effect, and which shall in no case be prior to the expiry of 5 working days referred to in the previous paragraph.

The financial guarantees submitted by the Balance Responsible Party shall remain valid and/or the Transmission System Operator shall retain them until potential liabilities arising from imbalance settlement, including annual imbalance settlement recalculation, have been settled.

In the event of transition of the Balance Responsible Party to another Balance Groups the Balance Subgroup Responsible Party, it shall acquire a statement from the superior Balance Responsible Party stating that the financial guarantees of the superior Balance Responsible Party may also be used to cover the liabilities arising from the recalculation of imbalance settlement of the Balance Group Member, in accordance with the Rules.

## **Temporary Technical Prevention from Operating on the Electricity Market**

#### Article 14

The Transmission System operator may temporarily technically prevent the Balance Responsible Party or a hierarchically inferior Balance Group Member from operating on the electricity market:

- if the Balance Scheme member fails to meet outstanding financial obligations;
- if the Balance Scheme member fails to submit financial guarantees required by the Transmission System Operator;
- if the Balance Scheme member does not conclude an Annex to the Balancing Agreement on the Transmission System Operator's call, which would ensure compliance of the agreement content with the Rules;
- if the Balance Scheme member fails to act in accordance with paragraph 1 of Article 11 of this Agreement;
- if the Balance Scheme member fails to meet technical, staff and other conditions necessary to ensure the use of the Transmission System Operator's information systems or the settlement system;
- upon the request of the Transmission System Operator if the operations of the Balance Scheme member threaten the stability of the operation of the electricity system;
- if the the Transmission System Operator cancels the Balancing Agreement in accordance with this Agreement and the Rules when the reasons arise for the cancellation of the Balancing Agreement; or
- due to a request from the Energy Regulatory Commission.

A temporary technical prevention from operating on the electricity market shall be immediately entered into the Register of Balance Responsible Parties and Balance Groups established at the Transmission System Operator agreements and shall apply as long as the reasons from the previous paragraph persist. Every time a temporary technical prevention from operating on the electricity market is implemented, the Transmission System Operator shall inform by email the Balance Responsible Party, the Market Operator and the Energy Regulatory Commission, which in the event of a request stated in Article 17 of this Agreement decides on the measures to be taken.

In the event of a temporary technical prevention from operating on the electricity market, a member shall be prevented from reporting of bilateral contracts and to deliver notification regarding physical timetables in the period of limited operation on the electricity market; the measure shall be published on the Transmission System Operator 's website.

# **Enforcement of the Agreement**

## Article 15

By signing this Agreement, the contracting parties undertake to act professionally and adhere to the applicable Energy Law and statutory acts issued on its basis, and the applicable Rules.

The contracting parties agree that the provisions from the applicable Rules relating to the mutual rights and obligations of the contracting parties constitute an integral part of this Agreement.

If the Balance Responsible Party does not agree with the amendment of the Rules, it is allowed to withdraw from this Agreement within 15 days after the publication of the amendment. If the Balance Responsible Party does not withdraw from this Agreement it shall be deemed that it agrees with the amendment of the Rules and consents that the amendment becomes a constituent part of this Agreement.

The contracting parties undertake to make every effort to ensure the enforcement of this Agreement.

The contracting parties undertake to interpret the provisions of this Agreement in the spirit of the applicable Energy Law and statutory acts issued on its basis, and the applicable Rules.

## Power Crises and Condition of High Perating Risk in Power System

## Article 16

The Transmission System Operator shall be entitled to suspend completely, or partially the transactions in the electricity market in case of force majeure, whereas under conditions of extremely high prices in the electricity market the Energy Regulatory Commission has the right on the Market Operator recommendations to suspend the transactions in the electricity market fully or partially.

In case of power crisis, the Contracting Parties shall be obliged to act in compliance with the Regulation on Criteria and Conditions to Proclaim Power Crisis, with the method of electricity supply in these conditions, the measures that are undertaken in cases of a crisis condition and the rights and conditions of the holders of licenses to do energy business and activity.

In case of a condition of a high operating risk in the power system, the Contracting Parties shall be obliged to act in compliance with the Electricity Market Rules and the Appropriate Grid Code.

In case of force majeure, the Balance Responsible Party is obliged to follow the Transmission System Operator instructions and guidelines which shall not be subjected to settlement for imbalances by the Transmission System Operator in the amount of the assigned instructions. In case of force majeure, Balance Responsible Party shall not be entitled to indemnity of damage.

# The Amendments and Supplements to the Agreement

### Article 17

The contracting parties shall settle all prospective amendments and supplements of this Agreement with a written annex to this Agreement.

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The contracting parties shall settle all prospective amendments and supplements of this Agreement with a written annex to this Agreement.

## **Dispute Settlement**

### Article 19

Disputes related to application of provisions in this Contract shall be settled by the Contracting Parties in an amicable manner.

If the dispute is not settled in an amicable manner, the unsatisfied Contracting Party may submit a request to the Energy Regulatory Commission in the Republic of Macedonia to resolve the dispute in compliance with the Law on Energy and the Regulations on Method, Conditions and Procedure of Dispute Settlement and the amount for justified reimbursement of costs incurred in the procedure.

The Contracting Party not satisfied with the outcomes from the procedure referred to in Article 16 of this Contract may initiate proceedings to the competent court.

# **Original Copies of the Agreement**

## Article 20

This Agreement is written and signed in two (3) identical copies in the Macedonian language; one (1) for each contracting party.

## **Validity of the Agreement**

## Article 21

This Agreement shall enter into force on the day it is signed by all contracting parties, and shall enter into service in accordance with Article 5 of this Agreement.

General Manager

