Electricity Trading Rules

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Chapter One General provisions

- **Article 1.** (1) (Amended SG, issue 39 of 2014) These Electricity Trading Rules, hereinafter referred to as the "Rules", shall regulate:
 - 1. the electricity market structure;
 - 2. the conditions for participation in the electricity market;
- 3. (amended SG, issue 39of 2014) the rules for execution of electricity transactions through bilateral contracts at regulated and freely negotiated prices;
- 4. (amended SG, issue 90 of 2015, effective 20.11.2015) the transactions on the power exchange market;
- 5. the rules for registration of balancing group coordinators, suppliers of ancillary services and balancing energy suppliers;
- 6. (amended SG, issue 39 of 2014, amended and supplemented, issue 100 of 2017, effective 15.12.2017) the procedures to register schedules on the day before the day of delivery and on the day of delivery and to make settlement between the trade participants and the independent transmission operator;
- 7. the requirements to the submission of data for metered quantities of electricity to the independent transmission operator and balancing groups coordinators;
 - 8. the requirements to data exchange between trade participants;
 - 9. the rules for balancing energy market organisation;
 - 10. the rules for reserve and ancillary services market organisation;
- 11. the rules for settlement, the balancing principles and the methodology for determining the balancing energy prices;

- 12. the rules for supply from end suppliers;
- 13. (amended SG, issue 90 of 2015, effective 20.11.2015) the interconnection capacity allocation market:
 - 14. the procedure for changing the electricity supplier;
 - 15. procedure for changing the balancing group coordinator;
 - 16. electricity market monitoring.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Trade participants, within the meaning of these Rules, shall be the electricity producers, electricity traders, balancing group coordinators, end consumers, electricity public provider, electricity end suppliers, the independent transmission operator, the power exchange market operator, the distribution system operators, the suppliers of last resort and the distribution company of traction power.

Chapter two ELECTRICITY MARKET STRUCTURE

Section I Market types

- **Article 2.** (1) The electricity market includes the following interrelated elements:
- 1. (supplemented SG, issue 100 of 2017, effective 15.12.2017 г.) electricity market through bilateral contracts executed outside the power exchange market;
 - 2. power exchange market;
 - 3. balancing energy market;
 - 4. reserve and ancillary services market;
 - 5. interconnection capacity allocation market.
- (2) (Amended SG, issue 39/2014) Subject of the transactions according to these Rules shall be:
- 1. (amended and supplemented SG, issue 100 of 2017, effective 15.12.2017) electricity for sale through bilateral contracts executed outside the power exchange;
 - 2. electricity for sale on the power exchange market;

- 3. electricity for sale on the balancing energy market;
- 4. availability for participation in primary and secondary control;
- 5. cold reserve availability;
- 6. interconnection capacity;
- 7. ancillary services;
- 8. service "access to the network, including system services";
- 9. service "electricity transmission and other network services";
- 10. "balancing responsibility".

Article 3. (Amended - SG, issue 39 of 2014) Trade participants shall acquire right to register electricity transactions after registration in accordance with the requirements of these Rules by the relevant network operator who operates the network to which the generation/consumption units are connected.

Section II Electricity market through bilateral contracts

- **Article 4.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) Trade participants under art. 1 paragraph 2 shall execute electricity transactions at freely negotiated prices and/or at regulated prices for each delivery period.
- (2) Schedules notification to the independent transmission operator of transactions under paragraph 1 shall be made on the day before the day of delivery (day ahead) and/or within the day of delivery (intraday).
- (3) (Amended SG, issue 39 of 2014) The independent transmission operator (TSO) and the distribution system operators (DSOs) shall only purchase electricity to cover the technological losses in the networks for each separate delivery period.

Section III Power exchange market

- **Article 5.** (1) (Amended and suppl. SG, issue 39 of 2014) Trade participants registered for participation in the power exchange market may execute electricity transactions on the power exchange market in accordance with chapter four of these Rules.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, amended and supplemented, issue 100 of 2017, effective 15.12.2017) Transactions under paragraph 1 shall be

executed at price determined for each interval/delivery period and for each market segment administered by the power exchange market operator licensed for power exchange market organisation.

(3) (Repealed - SG, issue 39 of 2014).

Section IV Balancing energy market

- **Article 6.** (1) The independent transmission operator shall execute purchase and sale transactions in electricity with trade participants who owe dispatchable generating and /or consuming units to cover the imbalances in the national market area.
- (2) (Supplemented SG, issue 39 of 2014) Trade participants under paragraph 1, registered on the balancing energy market as suppliers of balancing energy, as a result of participation in secondary control, shall provide availability (range) for upward regulation. The range shall be determined by the independent transmission operator and shall be stated in the contracts under art. 131, paragraph 2 of the Rules. It shall be updated on a monthly basis and the trade participants shall not be entitled to execute transactions within this range through bilateral contracts or on the power exchange market.
- (3) (Amended and suppl. SG, issue 39 of 2014, amended, issue 100 of 2017, effective 15.12.2017) Trade participants under paragraph 1, registered on the balancing energy market as suppliers of balancing energy, as a result of participation in secondary control, shall be obliged to provide their available ranges for downward regulation and shall pay the unproduced electricity at prices offered to and accepted by the independent transmission operator.
- (4) (Amended SG, issue 39 of 2014) Trade participants under paragraph 1, registered for participation in the balancing energy market as energy suppliers for tertiary control, shall be obliged to provide to the balancing energy market, in the form of bids for upward regulation, the total gross capacity which they haven't contracted on the market through bilateral contracts and/or on the power exchange market.
- (5) (New- SG, issue 39 of 2014) Trade participants under paragraph 1, registered for participation in the balancing energy market as energy suppliers for tertiary control, shall be obliged to provide to the balancing energy market, in the form of bids for downward regulation, the total gross capacity till the technical minimum of the aggregates.
- (6) (Previous paragraph 5 SG, issue 39 of 2014) The independent transmission operator shall activate balancing energy sources to maintain the balance and to ensure reliable and safe operation of the electric power system.
- (7) (Previous paragraph 6, amended SG, issue 39 2014) The coordinators of balancing groups shall be financially responsible for the created imbalances in balancing groups to the independent transmission operator.

- (8) (Previous paragraph 7, amended SG, issue 39 of 2014) Trade participants under art. 1 paragraph 2 shall share the financial responsibility with the balancing group coordinators in accordance with the contracts for participation in the balancing group.
- (9) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator, in respect to the implementation of his obligations to execute transactions for purchase and/or sale of balancing energy with trade participants who owe dispatchable generating and /or consuming units, in order to cover the imbalances in the national market area, shall develop an internal instruction to determine the costs that do not form part of the balancing energy prices. The internal instruction, and its subsequent amendments, shall be submitted to EWRC.
- **Article 7.** (1) Balancing energy market shall be administered by the independent transmission operator.
- (2) The independent transmission operator shall be a party to the balancing energy transactions with the balancing energy suppliers and the balancing group coordinators.

Section V Reserve and ancillary services market

- **Article 8.** (1) (Amended SG, issue 39 of 2014) In order to ensure secure and reliable electricity supply to the end consumers, the independent transmission operator shall execute transactions for ancillary services with trade participants who have generation and/or demand facilities, registered for participation in the ancillary services market, in accordance with the requirements of the Rules for Electric Power System Operation and these Rules.
- (2) The participation of the trade participants in the transactions under paragraph 1 shall be in accordance with the provisions of chapter nine.
- **Article 9.** (Amended SG, issue 39 of 2014) The independent transmission operator shall execute transactions for cold reserve with trade participants who have dispatchable generation and/or demand facilities in accordance with the requirements of the Energy Act, Rules for Electric Power System Operation and these Rules.

Section VI Capacity Allocation Market

- **Article 10.** (1) (Amended SG, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall organise explicit auctions for cross-border transmission capacity allocation in accordance with the requirements of Regulation (EC) 714/2009 in coordination with the system operators of the neighbouring countries pursuant to the Auction Rules approved by SEWRC and published on the internet page of the independent transmission operator.
 - (2) (Amended SG, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of

- 2017, effective as of 15.12.2017) In case agreement is not reached for the execution of bilateral coordinated explicit auctions with any of the neighbouring system operators, the independent transmission operator shall apply temporary rules for allocation of 50 % of the transmission capacity on the relevant border. The rules shall be coordinated with EWRC and shall be published on the internet page of the independent transmission operator.
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall implement the requirements of Regulation EU 2016/1719, related to the introduction of Harmonised Auction Rules for cross-border transmission capacity allocation through single European allocation platform.
- (4) (New- SG, issue 100 of 2017, effective 15.12.2017) In case of market coupling of the Bulgarian market area with a neighbouring market area, the independent transmission operator shall determine interconnection transmission capacity for allocation through implicit auctions by the power exchange market operator.

Chapter Three ELECTRICITY MARKET CONTRACTS

Section I Contract types

Article 11. Electricity market contracts shall be:

- 1. contract for access to the electricity transmission network and provision of system services:
 - 2. contract for electricity transmission through the electricity transmission network;
- 3. contracts for access and electricity transmission through the electricity distribution network;
 - 4. contract for sale of electricity;
 - 5. contract for provision of cold reserve;
 - 6. contract for provision of ancillary services;
 - 7. contract for participation in the balancing market with balancing energy supplier;
 - 8. balancing contract with balancing group coordinator;
- 8a. (New SG, issue 100 of 2017, effective 15.12.2017) balancing contract with electricity trader without physical generation/consumption units;

- 9. contract for participation in balancing group;
- 10. combined services contract:
- 11. (amended SG, issue 100 of 2017, effective 15.12.2017) contract for participation on the power exchange market;
 - 12. contract with market-maker providing liquidity on the power exchange market;
 - 13. framework contract;
- 14. (amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) contract for settlement of electricity exchange in respect to the participation in combined balancing group of RES producers with units with total installed power capacity less than 4 MW;
 - 15. contract for electricity metering data exchange;
 - 16. contract for compensation with premiums under article 36i, paragraph 1 of EA;
 - 17. contract under art. 100 paragraph 6 of the Energy Act.

Section II Parties and subject of the contract

- **Article 12.** (1) Subject of the contracts under art. 11 paragraph 1 is the provision of the service "access to the transmission network" and system services.
- (2) Contracts under paragraph 1 shall be concluded between the independent transmission operator, on one side, and:
 - 1. end consumers connected to the transmission network;
 - 2. producers connected to the transmission network;
 - 3. distribution system operators;
 - 4. electricity traders and producers who execute import and export transactions;
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) The contract under paragraph 2 point 3 shall regulate also the procedure and the conditions for the transfer by the distribution system operators to the independent transmission operator of the amounts for access to the electricity transmission network due by consumers and producers for units connected to the electricity distribution network.
- **Article 13.** (1) Subject of the contracts under art. 11 point 2 is the provision of the service "electricity transmission through the transmission network".

- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) Contracts under paragraph 1 shall be executed between the independent transmission operator, on one side, and:
 - 1. end consumers connected to the transmission network;
 - 2. producers connected to the transmission network in their capacity of end consumers;
 - 3. distribution system operators;
- 4. (amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) electricity traders and producers who execute import and export transactions.
- (3) (Repealed SG, issue 39 of 2014, new, issue 100 of 2017, effective 15.12.2017) The contract under paragraph 2 point 3 shall regulate the procedure and the conditions for the transfer by the distribution system operators to the independent transmission operator of the amounts for transmission through the electricity transmission network due by consumers for units connected to the electricity distribution network.
- **Article 14.** (1) (Amended SG, issue 39 of 2014) Subject of the contracts under art. 11 point 3 shall be the provision of the services "access to the distribution network" and "electricity transmission through the electricity distribution network".
- (2) Contracts under paragraph 1 shall be concluded between the distribution system operator, on one side, and:
- 1. (supplemented SG, issue 39 of 2014) end consumers connected to the electricity distribution network under general conditions;
 - 2. producers connected to the electricity distribution network;
 - 3. (repealed SG, issue 39 of 2014);
 - 4. (repealed SG, issue 39 of 2014).
- (3) (Amended SG, issue 39 of 2014) The distribution system operator and the end supplier shall settle their financial relations in respect to the payment of the network services through a contract.
- (4) The service electricity transmission through the electricity distribution network is provided to the producers in their capacity of end consumers.
- **Article 15.** (1) (Amended SG, issue 90 of 2015, effective 20.11.2015) The contracts for sale of electricity under art. 11 point 4 shall be concluded at regulated prices, freely negotiated prices, prices under the approved by EWRC methodology and under long-term contracts for purchase of electricity and availability.
 - (2) Contracts at regulated prices shall be concluded between:

- 1. (amended SG, issue 39 of 2014) producers, within the availability determined under art. 21, paragraph 1, point 21 of the Energy Act, on one side, and the public provider;
- 2. the public provider, on one hand, and the end suppliers for the quantities of electricity determined by EWRC pursuant to art. 21, paragraph 1, point 21 of the Energy Act;
- 3. end suppliers, on one side, and household and non-household end consumers for units connected to the electricity distribution network at low voltage level, provided these consumers haven't changed the supplier;
- 4. (supplemented SG, issue 100 of 2017, effective 15.12.2017) producers with units with total installed power capacity not less than 4 MW who produce electricity from renewable sources, up to the net specific electricity generation, and co-generation producers, on one side, and:
 - a) the public provider;
 - b) the end supplier.
 - (3) Contracts at freely negotiated prices shall be concluded between:
 - 1. producers, on one side, and:
 - a) electricity traders;
 - b) end consumers registered on the market at freely negotiated prices;
- c) (amended SG, issue 39 of 2014) the public provider, in the cases provided for in the Energy Act;
 - d) other electricity producers;
 - e) (new SG, issue 90 of 2015, effective 20.11.2015) supplier of last resort;
 - f) the power exchange operator;
 - g) the independent transmission operator;
 - h) distribution system operator.
 - 2. (amended SG, issue 39 of 2014) the public provider, on one side, and:
 - b) (amend. SG, issue 39 of 2014) suppliers of last resort;
 - c) electricity traders;

- d) (new SG, issue 100 of 2017, effective 15.12.2017) power exchange market operator;
- e) (new SG, issue 100 of 2017, effective 15.12.2017) end consumers registered on the market at freely negotiated prices;
 - f) the independent transmission operator;
 - g) distribution system operator.
 - 3. electricity traders, on one side, and:
 - a) end consumers registered on the market at freely negotiated prices;
 - b) other electricity traders;
 - c) (new SG, issue 90 of 2015, effective 20.11.2015) supplier of last resort;
 - d) (new SG, issue 100 of 2017, effective 15.12.2017) power exchange market operator;
 - e) the independent transmission operator;
 - f) distribution system operator.
- 4. (New SG, issue 100 of 2017, effective 15.12.2017) power exchange market operator, on one side, and:
 - a) electricity traders;
 - b) end consumers registered on the market at freely negotiated prices;
 - c) the public provider in the cases provided for in the Energy Act;
 - d) electricity producers;
 - e) supplier of last resort.
 - f) the independent transmission operator;
 - g) distribution system operator;
 - h) balancing group coordinator in cases provided for in the Energy Act.
 - 5. balancing group coordinator, on one side, and:
 - a) the power exchange operator;

- b) electricity traders;
- c) end consumers registered on the market at freely negotiated prices;
- d) the public provider in the cases provided for in the Energy Act;
- e) electricity producers;
- f) supplier of last resort;
- g) the independent transmission operator;
- h) distribution system operator.
- (4) (Amended SG, issue 90 of 2015, effective 20.11.2015) Contracts at prices determined according to methodology approved by EWRC shall be concluded between the suppliers of last resort and end consumers who haven't selected another electricity supplier or have no supplier.
- (5) The presence of concluded contract for electricity supply by supplier of last resort is mandatory condition for the participation of end consumers on the market at freely negotiated prices and is part of the procedure for registration on the market.
- **Article 16.** (1) Subject of the contracts under art. 11 points 5 and 6 shall be the provision of ancillary services and cold reserve.
- (2) Contracts under paragraph 1 shall be concluded between the independent transmission operator, on one side, and:
- 1. trade participants who have dispatchable generation and/or demand facilities meeting the requirements of the Rules for Electric Power System Operation;
 - 2. public provider.
- **Article 17.** (1) Subject of the contracts under art. 11 point 7 shall be the provision of balancing energy to the independent transmission operator from secondary, tertiary and activated cold reserve.
- (2) Contracts under paragraph 1 shall be concluded between the independent transmission operator, on one side, and:
 - 1. trade participants who have dispatchable generation and/or demand facilities;
 - 3. public provider.
- **Article 18.** (1) Subject of the contracts under art. 11 point 8 shall be the physical and financial settlement of the imbalances for the metering points which form the virtual electricity

metering device determined for the relevant balancing group.

- (2) Contracts under paragraph 1 shall be concluded between the independent transmission operator, on one side, and the coordinators of balancing groups or trade participants who are responsible for the imbalances of their own units, on the other side.
- **Article 18a.** (New SG, issue 100 of 2017, effective 15.12.2017) (1) Subject of the contracts under art. 11 point 8a shall be the physical and financial settlement of the imbalances for the metering points that form the virtual electricity metering device of the trade participant.
- (2) Contracts under paragraph 1 shall be concluded between the independent transmission operator and an electricity trader without physical units.
- **Article 19.** (1) Subject of the contracts under art. 11 point 9 shall be the conditions for participation in a balancing group, the transfer of balancing responsibility and the methodology for allocation of the total imbalance within the balancing group between the separate members of the balancing group.
- (2) Contracts under paragraph 1 shall be concluded between the coordinator and the members of the balancing group.
- (3) (Supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) Contracts under paragraph 1 between the end suppliers, in their capacity of special balancing group coordinators, and household and non-household end consumers at low voltage level, when these clients haven't changed the supplier, shall be concluded under the general conditions approved by EWRC.
- (5) (Amended SG, issue 90 of 2015, effective 20.11.2015) Contracts under paragraph 1 between suppliers of last resort, in their capacity of balancing group coordinators, and end consumers who haven't selected another electricity supplier or have no supplier, shall be concluded under general conditions approved by EWRC.
- **Article 20.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) Subject of the contracts under art. 11 point 10 shall be the sale of electricity and the payment of services used by the end consumer: "access to the electricity transmission and/or electricity distribution network", "electricity transmission through the transmission network and/or to the electricity distribution network" and "balancing responsibility", in cases where the electricity trader and the balancing group coordinator are one and the same entity. These contracts shall regulate the relations in respect to the payments due for network services for the relevant price period.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Contracts under paragraph 1 shall be concluded between:
- 1. suppliers of last resort and end consumers who haven't selected another electricity supplier or they have no supplier under general conditions;

- 2. electricity trader and end consumer with standardized load profile.
- (3) (New-SG, issue 90 of 2015, effective 20.11.2015, amended, issue 100 of 2017, effective 15.12.2017) Contracts under paragraph 1 may be concluded between end consumers without standardized load profile and an electricity trader who is also coordinator of the consumer's balancing group.
- (4) (New- SG, issue 90 of 2015, effective 20.11.2015) Contracts under paragraph 1 shall be concluded after the conclusion of framework contract under art.11 point 13.
- **Article 21.** (Amended SG, issue 39 of 2014) (1) (Amended SG, issue 90 of 2015, effective 20.11.2015, amended and supplemented, issue 100 of 2017, effective 15.12.2017) Subject of the contract under art. 11 point 11 shall be the rights and obligations in regard to the participation in the market segment forming part of the power exchange market.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The contract under paragraph 1 shall be concluded between the power exchange market operator, on one side and the respective trade participant pursuant to chapter four of these Rules, in accordance with the Operational Rules of the respective market segment published on the internet page of the power exchange market operator.
- **Article 22.** (1) (Amended SG, issue 39 of 2014, amended, issue 100 of 2017, effective 15.12.2017) Subject of the contract under art. 11 point 12 shall be the rights and obligations in regard to the participation of a trade participant providing liquidity to any of the market segments administered by the power exchange market operator (market maker).
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Contract under paragraph 1 shall be concluded between the power exchange market operator, on one side and one or more market-makers, on the other side.
- **Article 23.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Subject of the framework contract under art. 11 point 13 shall be the settlement of the financial relations related to network services for end consumers.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) Framework contract shall be concluded between the distribution system operator or the transmission system operator, on one side and a supplier of last resort/trader.
- (3) (New- SG, issue 90 of 2015, effective 20.11.2015, amended, issue 100 of 2017, effective 15.12.2017) The supplier of last resort/the trader shall notify the distribution system operator within five working days of the conclusion/termination of a contract under art. 11 point 10.
- **Article 24.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Subject of the contract under art. 11 point 14 shall be the settlement of the relations in regard to the difference between the produced quantity of electricity by RES producers with units with total installed power capacity less than 4 MW and the registered schedules for each settlement period.

- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) The contract under paragraph 1 shall be concluded between the public provider and a coordinator of combined balancing group.
- **Article 25.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) Subject of the contract under art. 11 point 15 shall be the provision of data from the electricity metering devices, validation and aggregation by balancing groups, deadlines for provision and format of the files.
- (2) The contract under paragraph 1 shall be executed between the independent transmission operator, on one side, and the distribution system operators, on the other side.
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) Contract under paragraph 1 shall include also the responsibility of the distribution system operators and the independent transmission operator in the event of errors in the metering data that lead to additional costs for the independent transmission operator or the distribution system operators, as well as the methods and deadlines for compensation of these costs.
- **Article 26.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) (1) Subject of the contract under art. 11 point 11 shall be the rights and obligations in regard to the provision of premiums for generated electricity from renewable sources and from high efficiency combined generation of electric and heating power.
- (2) The contract under paragraph 1 shall be concluded between the Security of the Electricity System Fund, on one hand, and producers from RES and from high-efficiency CHP with units with total installed capacity 4 MW and over 4 MW, on the other hand.
- Article 26a. (1) Subject of the Contract under art. 11, paragraph 17 shall be the sale of the generated electricity by RES producers with units with total installed capacity 4 MW and over 4 MW to a balancing group coordinator pursuant to art. 100, paragraph 6 of the Energy Act.
- (2) The contract under paragraph 1 shall be executed between producers under art. 162a of the Energy Act or RES producers with units with total installed capacity 4 MW and over 4 MW, on one hand, and a coordinator of standard or combined balancing group in which the producers are members, on the other hand.
- (3) The balancing group coordinator is obliged to sell the electricity purchased with a contract under paragraph 1 through separate registration on the power exchange market under the conditions of these Rules.

Section III Network services contracts

Article 27. (1) Contracts under art. 11 points 1, 2, 5, 6 and 7 between the independent transmission operator and producers connected to the electricity transmission network can be

combined.

- (2) Contracts for transmission and access between the independent transmission operator, on one side, and the public provider and the distribution system operators, on the other side, shall regulate the form and the amount of the guarantee security under them.
- **Article 28.** (1) (Amended SG, issue 39 of 2014) Household and non-household end consumers of end suppliers shall pay all network services for the relevant price period to the end supplier.
- (2) (Amended SG, issue 39 of 2014) The end supplier/the supplier of last resort shall collect and pay to the distribution system operator sums for transmission, access, other network services for the relevant price period, for the total quantity of electricity invoiced by the end supplier/the supplier of last resort.
- (3) (Amended SG, issue 39 of 2014) The distribution system operator shall pay to the independent transmission operator the network services relevant to the electricity transmission network, for the total quantity of electricity transmitted to end consumers connected to the respective electricity distribution network.
 - (4) (Repealed SG, issue 39 of 2014).
- **Article 29.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Network services shall be paid by consumers and producers on the invoiced quantities of active power, in accordance with the electricity metering devices and/or provided power in the metering points, determined in accordance with the Electricity Metering Rules and the contracts under art. 11 points 1, 2 and 3, at prices approved by EWRC.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Consumers and producers connected to the electricity transmission network shall pay to the independent transmission operator prices, approved by EWRC, for access to the electricity transmission network, for transmission through the electricity transmission network and other network services for the respective price period.
- (3) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Consumers and producers connected to the electricity distribution network shall pay prices, approved by EWRC, for access to the electricity transmission network, for transmission through the electricity transmission network, for access and transmission through the electricity distribution network and other network services for the respective price period. Prices shall be paid to the distribution system operator and/or the end supplier and /or the supplier of last resort. For these consumers and producers, the price for access to the electricity transmission network and the price for transmission through the electricity transmission network shall be paid by the distribution company to the independent transmission operator, in accordance with the contracts under art. 12 and 13.
- (4) Producers who supply energy to their own units through networks which are not ownership of the transmission or the distribution company do not pay price for transmission

through the respective network.

- (5) For electricity consumed by PSHPPs, price for transmission and access through/to the respective network shall not be due.
- **Article 30.** (1) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) In order to determine the quantities of electricity with origin Bulgaria according to a cross-border exchange schedule as a result of explicit auction, the trade participants shall send statements according to a template approved by the independent transmission operator.
- (2) Trade participants under paragraph 1 shall pay price for network services through the transmission network for the quantities according the validated cross-border exchange schedule, taking into account the statements under paragraph 1.
- (3) (Amended and suppl. SG, issue 90 of 2015, effective 20.11.2015) Transactions for transit of electricity through the electric power system of Bulgaria can be executed only within one balancing group, by one legal entity.
- **Article 31.** (1) Consumers registered on the market at freely negotiated prices, who have concluded a contract for combined services under art. 11 point 10, shall pay the amounts due for network services to the respective trader or supplier of last resort.
- (2) Traders and suppliers of last resort shall pay the amounts due for network services to the respective network operator regardless of whether they have received payment from the consumer.
- Article 31a. (1) All trader participants who sell electricity to end consumers connected to the electric power system of the Republic of Bulgaria, including the transmission system operator and the distribution system operators, shall pay to SESF price for "public service obligation" in BGN/MWh invoiced electricity. Price for public service obligations shall not be paid for the consumed electricity by PSHPP.
- (2) The entities under paragraph 1, excluding the transmission system operator and the distribution system operators, shall pay price for public service obligations to SESF on the invoiced electricity for the sites of the end consumers which they supply with electric power.
- (3) The transmission system operator and distribution system operators shall pay price for public service obligations on the approved metered values of the quantity of electricity for technological losses in accordance with art. 92.
- Article 31b. (1) The electricity traders may request from the end consumers a collateral for the obligation of the end consumers to pay price for public service obligations through provision of bank guarantee and/or cash deposit.
- (2) Refusal to provide collateral under paragraph 1 shall be a basis for termination of the contract under art. 11, point 4 and/or point 9, and/or point 10.
 - (3) Paragraph 2 shall not apply to contracts concluded on the power exchange.

- (4) Funds received as a collateral of the obligation of the end consumers to pay price for public service obligations shall be transferred to a special account of the trade participant and can be used only to perform payment to SESF.
- (5) Information for the quantities of metered electricity on which price for public service obligations is charged shall be provided to SESF by the independent transmission operator, for the units with hourly electricity metering, regardless of the network to which they are connected, within the 10th day following the month of metering, as well as information for the quantities of consumed electricity by the sites of the end consumers supplied by an end supplier. Information for the transferred and invoiced quantities of electricity according to the readings from the commercial metering device on which price for public service obligations is charged shall be provided to SESF by the distribution system operators for the units with standardized load profiles, within the 10th day of the month following the month of metering. Information shall be provided summarised by trade participants.
- (6) Where more than one supplier exists, the consumed quantity of electricity shall be allocated proportionally between the separate suppliers on the basis of schedules registered by the independent transmission operator.

Chapter Four POWER EXCHANGE MARKET

Section I

The Agreement between the Telecommunications Fund and Síminn 2.2.1. General

- **Article 32.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) The power exchange market operator shall administer all transactions on the power exchange market in accordance with these Rules and the operational rules of each market segment forming part of the power exchange market.
- (2) (Amended SG, issue 100 of 2017, effective 15.12.2017) The power exchange market operator shall adopt operational rules for each market segment administered by it and shall publish them on its internet page.
- (3) The Energy and Water Regulatory Commission may issue obligatory instructions to amend and supplement the rules under paragraph 2.
- **Article 32a.** (New SG, issue 90 of 2015, effective 15.12.2017) The power exchange market operator is member of the Price Coupling of Regions.
- Article 33. (1) (Amended SG, issue 39 of 2014) Trade participants who execute transactions at freely negotiated prices shall be entitled to participate in the power exchange

market organised within the market area of the Republic of Bulgaria by the power exchange market operator, or to participate in a power exchange market organised by another market operator in the region or jointly by two or more operators, in compliance with the operational rules of the power exchange market published on the site of the operator.

- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Transactions executed by the trade participants on the power exchange market, for the market segments, to which the power exchange operator is not a party according to art. 32 paragraph 2, shall be notified by the trade participants as nominations for exchange between the relevant trade participants and the group of the power exchange market, and the transactions are obligatory for the respective trade participant.
- (3) (New- SG, issue 39 of 2014, amended and supplemented, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Transactions executed on the power exchange market, for the market segments, to which the power exchange operator is a party according to the provisions of art. 32, paragraph 2, shall be notified to the independent transmission operator by the power exchange market operator on D-1 and/or day D within the terms set in an instruction of the independent transmission operator.
- (4) Paragraphs 2 and 3 shall not apply to transactions with electricity concluded under the conditions and the procedure provided for in art. 119, paragraph 2 of the Energy Act.
- (5) (New- SG, issue 90 of 2015, effective 20.11.2015, amended and supplemented, issue 100 of 2017, effective 15.12.2017) In case of emergency situations leading to inability of the power exchange operator to promptly notify the transactions executed on the power exchange market, the power exchange operator shall notify the independent transmission operator of the delay in accordance with the rules adopted by the Multi-regional Coupling -MRC, the Price Coupling of Regions -PCR and the Crossborder intraday -XBID.
- **Article 34.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) The Electricity Trading Rules provide for option for purchase and sale of electricity by the participants registered on the power exchange market in Bulgaria, executed on a market principle.
 - (2) The power exchange market shall aim at:
- 1. Creation of conditions for formation and operation of an electricity market in a competitive, transparent and non-discriminatory environment.
 - 2. Preventing exercise of market power.
- 3. (Amended SG, issue 100 of 2017, effective 15.12.2017) Determination of reference electricity prices on the basis of demand and supply.
- 4. Optimal usage of the limited interconnection transmission capacities with the neighbouring countries through coordinated allocation and implicit daily and intraday auctions through the power exchange market.

- (3) (Amended SG, issue 39 of 2014) Trade participants registered in accordance with these trading rules shall be entitled to participate in the power exchange market.
- **Article 35.** (1) (Amended SG, issue 39 of 2014, amended and supplemented, issue 100 of 2017, effective 15.12.2017) Transactions on the power exchange market shall be executed for each delivery period in accordance with the operational rules of each market segment forming part of the power exchange market.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
 - (3) (Amended SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).
- (4) (Amended SG, issue 100 of 2017, effective 15.12.2017) Transactions executed on the power exchange market shall represent firm commitment of the respective trade participant for electricity supply in case of executed sale transaction, or an obligation for acceptance of electricity supply in case of executed purchase transaction, for each market segment administered by the power exchange market operator.
- (5) (Amended SG, issue 100 of 2017, effective 15.12.2017) Any transaction shall be linked to delivery period, delivery interval and market area.
 - (6) (Amended SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).
- (7) (Amended SG, issue 100 of 2017, effective 15.12.2017) During the days of transition from summer to winter time or vice versa, the day of delivery shall be increased, respectively reduced, by the delivery periods corresponding to one hour.
- (8) (Amended SG, issue 39 of 2014, issue 100 of 2017, effective 15.12.2017) The power exchange market operator shall be entitled to conclude a contract under art.11 paragraph 12 with a registered trade participant (market-maker) who shall acquire the responsibility to ensure liquidity on the power exchange market in accordance with the provisions of the concluded contract.
- (9) (Amended SG, issue 39 of 2014) The conditions for liquidity on the power exchange market shall be determined by the power exchange market operator, and the trade participant, in the capacity of market-maker, shall accept the conditions and shall be obliged to comply with them by signing a contract under art.11 paragraph 12.
- **Article 35a.** (New SG, issue 90 of 2015, effective 20.11.2015) (1) The financial risk for the executed transactions on the power exchange market shall be managed by the power exchange market operator.
- (2) The power exchange market operator shall develop financial risk management mechanism.
 - (3) In order to manage the financial risk, the participants in the power exchange market shall

provide guarantee security pursuant to the requirement of the power exchange market operator.

Section II Conditions for participation and registration in the power exchange market

- **Article 36.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Trade participants registered by a power exchange market operator for participation in the power exchange market shall be entitled to submit bids for sale and/or bids for purchase of electricity.
 - (2) (Amended SG, issue 39/2014) Participants in the power exchange market can be:
- 1. (amended SG, issue 100 of 2017, effective 15.12.2017) trade participants who are entitled to execute transactions at freely negotiated prices, in accordance with the applicable legislation, registered on the free market administered by the independent transmission operator, as well as consumers with sites under art. 119, paragraph 2 of the Energy Act;
- 2. (amended SG, issue 100 of 2017, effective 15.12.2017) trade participants registered in neighbouring electricity markets, only where the power exchange market operator, jointly with the independent transmission operator, organises and operates a virtual import-export area on the respective border; in such case, the trade participants can be registered for participation in the power exchange market only in the respective area;
 - 3. (repealed SG, issue 100 of 2017, effective 15.12.2017);
 - 4. (repealed SG, issue 100 of 2017, effective 15.12.2017);
 - 5. (repealed SG, issue 100 of 2017, effective 15.12.2017);
 - 6. (repealed SG, issue 100 of 2017, effective 15.12.2017).
 - (3) (Repealed SG, issue 39 of 2014).
- **Article 37.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The conditions for participation, registration, withdrawal and suspension from the power exchange market, as well as the requirements for submission of bids, determination of the quantities of electricity and determination of the demand and supply curves under art. 32 paragraph 2.
- **Article 38.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).

Section III (Repealed - SG, issue 100 of 2017, effective 15.12.2017)

Conditions for withdrawal and suspension from the power exchange market

- **Article 39.** (Amended SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 40.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 41.** (Amended SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 41a.** (New SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).

Section IV

(Repealed - SG, issue 100 of 2017, effective 15.12.2017) Requirements for submission of bids to the power exchange market

(Title amended - SG, issue 90 of 2015, effective 20.11.2015)

- **Article 42.** (Amended SG, issue 39 of 2014, amended and supplemented, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 43.** (Amended SG, issue 39 of 2014, amended and supplemented, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 44.** (Amended SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Section V

(Repealed - SG, issue 100 of 2017, effective 15.12.2017) Determination of the quantities of electricity traded on the power exchange market

- **Article 45.** (Amended and supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
 - **Article 46.** (Repealed SG, issue 100 of 2017, effective 15.12.2017).
 - Article 47. (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015,

Section VI (Repealed - SG, issue 100 of 2017, effective 15.12.2017) Determination of demand and supply curves

Article 48. (Amended - SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).

Article 49. (Amended - SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).

Article 50. (Amended - SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Section VII

(Repealed - SG, issue 90 of 2015, effective 20.11.2015) Determination of demand and supply volumes

Article 51. (Amended - SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Section VIII

(Repealed - SG, issue 90 of 2015, effective 20.11.2015) Measures in case supply is not sufficient or there is no demand

Article 52. (Amended - SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Section IX

Confirmation of the transactions executed on the power exchange market

Article 53. (1) (Amended - SG, issue 39 of 2014, issue 100 of 2017, effective 15.12.2017) The power exchange market operator shall provide to the relevant trade participants access to information for the transactions executed by them on the trading day through the market platforms used on the respective market segments part of the power exchange market.

(2) (New- SG, issue 39 of 2014, repealed, previous para. 3, issue 90 of 2015, effective

- 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) The results from the trading on the power exchange market shall be used in the settlement process in accordance with chapter ten of these Rules, and the traded quantities by each trade participant on the power exchange market shall be aggregated with the quantities traded under bilateral contracts concluded outside the power exchange market.
- (3) (Previous para. 3, amended SG, issue 39 of 2014, previous paragraph 4, amended and supplemented, issue 90 of 2015, effective 20.11.2015) The power exchange market operator shall publish on its internet page information on the traded quantities and prices.

Section X Emergency procedures

- **Article 54.** (Amended SG, issue 39 of 2014, issue 100 of 2017, effective 15.12.2017) The power exchange market operator is entitled to terminate the operation of any market segment forming part of the power exchange market in case of:
- 1. (Amended SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Total or partial failure of the trading system or of other information system used to process the bids and to determine the price in accordance with the operational rules of the market segments administered by the power exchange market operator.
 - 2. Cessation of the market in an emergency situation.
- **Article 55.** (Amended SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Chapter Five BALANCING RESPONSIBILITY

Section I Balancing group coordinators

- **Article 56.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) (1) Formation of balancing groups shall aim at:
- 1. introduction of new organisation at electricity transactions administration, their actual execution and settlement:
- 2. improved generating capacity planning and determination of the balancing sources to maintain the power system balance;
- 3. separation of the obligations under the physical supply of electricity from the financial relations, in case of a deviation of the actual generation/consumption from the preliminary

forecasts, registered schedules and dispatch instructions of the independent transmission operator;

- 4. aggregation of the imbalances of the trade participants and smoothing the economic consequences from the balancing energy prices;
- 5. focused responsibilities for exchange of information with the independent transmission operator in case of small number of market participants.
 - (2) The groups shall be:
- 1. special balancing groups which shall be registered by the independent transmission operator and towards which equal balancing principles shall be applied;
 - 2. combined balancing groups;
 - 3. standard balancing groups;
 - 4. virtual trade balancing group of the public provider;
 - 5. group of the power exchange market operator.
- Article 56a. (1) The special balancing groups shall be the groups with coordinators: the independent transmission operator, the public provider, end suppliers, distribution system operators, the distribution company of traction energy and the suppliers of last resort.
- (2) The independent transmission operator can be coordinator of special balancing group with the following subgroups:
 - 1. group for compensation of the technological losses in the electricity transmission network;
 - 2. group for compensation of the unplanned exchanges;
 - 3. group for emergency deliveries.
 - (3) The public provider shall be coordinator of the following special balancing groups:
 - 1. group of RES producers with the following participants:
- 1.1. RES producers with units with total installed capacity less than 4 MW connected to the electricity transmission network, including producers connected both to the electricity transmission and the electricity distribution networks, when they haven't chosen another coordinator of balancing group;
 - 1.2. the groups under paragraph 5, p. 2, with coordinator the end suppliers;
 - 2. group of producers of electricity from HPPs ownership of NEK EAD;

- 3. group of the producers with which the public provider has long-term contracts for purchase of electricity and availability;
- 4. virtual trade balancing group created by the public provider to/from which exchange schedules are sent, including indicative schedules, which aims to accumulate all purchases and sales of the public provider executed according to the legislation.
- (4) The groups under paragraph 3 points 2 and 3 can be combined with common financial settlement. The public provider shall be entitled to transfer the balancing responsibility for these groups to a coordinator of standard balancing group.
 - (5) The end suppliers shall be coordinators of the following special balancing groups:
- 1. group of household and non-household end consumers connected to the electricity distribution network at low voltage level, which the end supplier supplies with electricity.
- 2. group of RES producers with units with total installed capacity less than 4 MW whose energy is purchased by the end supplier, when they haven't chosen another coordinator of balancing group.
- (6) Where RES producers with units with total installed capacity less than 4 MW have not transferred the balancing responsibility to combined balancing group coordinator, or the contracts under art.11 point 9 are terminated, they shall be in the balancing groups with coordinators the public provider or the end suppliers, depending on the concluded contracts for electricity purchase.
- (7) The suppliers of last resort shall be coordinators of special balancing groups with members end consumers which they supply with electricity.
- (8) The distribution system operator can be coordinator of special balancing group for compensation of the technological losses in the electricity distribution network.
- (9) The distribution company of traction energy can be coordinator of special balancing group including members users of the distribution network of the railway transport.
- (10) The distribution system operator shall be entitled to transfer the balancing responsibility to the end supplier for compensation of the technological losses in the electricity distribution network as part of the group under paragraph 5 point 1.
- (11) The coordinators under paragraphs 2, 8 and 9 can be combined in special balancing group through common financial settlement.
- (12) The coordinators under paragraphs 5, point 1 can be combined in special balancing group through common financial settlement.
 - Article 56b. (1) Combined balancing group is a group which includes only RES producers

with the following subgroups:

- 1. subgroup of RES producers with units with total installed capacity less than 4 MW which have not reached the amount of the net specific generation;
- 2. subgroup of RES producers with units with total installed capacity less than 4 MW which have reached the amount of the net specific generation;
- 3. subgroup of RES producers with units with total installed capacity 4 MW and over 4 MW.
- (2) The coordinators of combined balancing groups shall be obliged to notify separate aggregated schedules for each subgroup, in order to allow the independent transmission operator to perform separate settlement and to determine the created imbalances of the relevant subgroup.
- (3) The participants in the subgroup under paragraph 1, point 3, are direct members of this subgroup in the combined balancing group.
 - (4) Combined balancing groups can be merged with common financial settlement.
- Article 56c. (1) Standard balancing group shall be a group of trade participants with a coordinator registered by the independent transmission operator meeting the requirements of the Energy Act and towards which general balancing principles are applied.
- (2) Producers of electricity energy from highly efficient combined generation of heating and electric power shall transfer the balancing responsibility to a standard balancing group coordinator.
- (3) Where the standard balancing group includes producers of electricity from high-efficient CHP with units with total installed capacity 4 MW and over 4 MW, they are obligatory organised in a separate subgroup and the participants are direct members of this subgroup.
- (4) Where the standard balancing group includes producers of electricity from high-efficient CHP with units with total installed capacity 4 MW and over 4 MW, they are obligatory organised in a separate subgroup and the participants are direct members of this subgroup.
- (5) The independent transmission system operator, the distribution system operators and the distribution operator of traction energy can transfer the balancing responsibility to a coordinator of standard balancing group, and they are obligatory direct members of the group.
 - (6) Standard balancing groups can be combined with common financial settlement.

Article 56d. Where there is a coupling of balancing groups through common financial settlement, the coordinators shall be obliged to notify separate aggregated schedules for each group, in order to allow the independent transmission operator to perform separate settlement and to determine the created imbalances of the relevant group.

- Article 56e. (1) RES producers with units with total installed capacity less than 4 MW, members of special or combined balancing group, which have reached the amount of the net specific generation, may sell the electricity generated by them at freely negotiated prices under the following conditions:
- 1. without changing the balancing group, if they are members of combined balancing group or they are direct members of the special balancing groups under art. 56a, paragraph 3, point 1, sub-points 1.1 and 1.2;
- 2. after transferring from special balancing group to standard or combined balancing group; such change shall be implemented under the terms and conditions of chapter eight.
- (2) In cases of paragraph 1, point 2, where a producer has moved to a standard balancing group, annually as of 1 January of the new calendar year until the expiry of the term for the obligatory purchase under art. 31 paragraph 2 of the Renewable Energy Sources Act, the same is registered ex-officio by the independent transmission operator or by the distribution system operator in a special balancing group of the public provider or the end suppliers, except in case the producer has not stated choice of other balancing group coordinator in writing.

Article 56f. The participants in the balancing groups under art. 56a, paragraph 3, point 1, paragraph 5, point 2 and art. 56b, paragraph 1, point 1, shall not be entitled to participate on the intraday market.

- **Article 57.** (Amended SG, issue 39 of 2014) (1) Balancing responsibility shall be borne by:
 - 1. balancing group coordinators in accordance with the Energy Act;
- 2. trade participants who execute transactions at freely negotiated prices, for the time during which they haven't transferred their balancing responsibility to a balancing group coordinator and they solely are responsible for the imbalances of their units.
- (3) (Amended SG, issue 90 of 2015, effective 20.11.2015) Special balancing group coordinators, except cases under art. 56a, paragraphs 2, 4, 8, 9, 10, 11 and 12 and art. 56c, paragraph 5 shall not be entitled to transfer the balancing responsibility to another balancing group coordinator and shall be responsible before the independent transmission operator for the imbalances of each special balancing group separately.
- (4) (Amended SG, issue 90 of 2015, effective 20.11.2015) Coordinators of combined balancing groups, except cases under art. 56b, paragraph 4, shall not be entitled to transfer the balancing responsibility to another balancing group coordinator.
- **Article 58.** (1) Trade participants shall be entitled to register themselves as "standard balancing group coordinators" and/or "combined balancing group coordinators", providing they have fulfilled the following conditions:
 - 1. they hold license for generation and/or electricity trading under art. 39 paragraph 5 of the

Energy Act;

- 2. they have developed "common rules for imbalances allocation within the balancing group" of which they are registered as a coordinator, and have published them on their internet page;
- 3. (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) EWRC has adopted decision to supplement the current license with the rights and obligations related to the activity "standard balancing group coordinator" and/or "combined balancing group coordinator", in accordance with art. 39 paragraph 5 of the Energy Act;
- 4. the requirements are met and communication equipment and tools for exchange of information are maintained according to these rules;
- 5. they have no liabilities to SESF, the public provider, end suppliers, the independent transmission operator, the distribution system operator and the power exchange operator;
- 6. they have contract under art. 11 point 14, when registration is required for a combined balancing group coordinator.
- (2) Trade participants shall be entitled to register themselves as "special balancing group coordinators", providing they have fulfilled the following conditions:
- 1. (Amended SG, issue 90 of 2015, effective 20.11.2015) they hold licence for generation, transmission, distribution, public supply, supply from end supplier, supply from last resort and distribution of traction power according to art. 39 paragraph 1 points 1, 2, 3, 7, 10, 12 and 13 of the Energy Act;
- 2. they have developed "common rules for imbalances allocation within the special balancing group" and have published them on their internet page;
- 3. (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) EWRC has adopted decision to supplement the existing license with the rights and obligations related to the activity "special balancing group coordinator", in accordance with art. 39 paragraph 5 of the Energy Act;
- 4. the requirements are met and communication equipment and tools for exchange of information is maintained according to these rules;
- 5. they have no liabilities to the public provider, end suppliers, the independent transmission operator and distribution system operators.
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) Trade participants shall be entitled to register themselves as "electricity traders without physical (consumption/generation) units", if they have met the following conditions:
 - 1. they hold license for electricity trading;

- 2. the requirements are met and communication equipment and tools for exchange of information is maintained according these rules;
- 3. they have no liabilities to the public provider, the end suppliers, the independent transmission operator and the distribution system operators.
- **Article 59.** (Amended SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Trade participants who have met the requirements under art. 58 paragraphs 1, 2 and 3 shall submit an application for initial registration with appendices according to template approved by the independent transmission operator and published on its internet page.
- **Article 60.** (Amended SG, issue 100 of 2017, effective 15.12.2017) (1) The independent transmission operator shall consider the application within 15 days and shall send answer by:
- 1. accepting the application for registration and indicating the identification number/EIC code of the balancing group coordinator/the electricity trader without physical units;
 - 2. giving instructions for additional information and deadline for submission;
- 3. justified refusal to register the applicant as a coordinator of balancing group/electricity trader without physical units.
- (2) Within 30 days as of receipt of the notification for acceptance of the application for registration under paragraph 1 point 1:
- 1. the applicant under art. 58 paragraph 1 shall conclude the contract under art. 11 point 8 in which the amount of the initial guarantee security shall be indicated, and the suppliers of balancing energy in the balancing group shall conclude the contract under art. 11 point 7;
- 2. the applicant under art. 58 paragraph 2 shall conclude the contract under art. 11 point 8 in which the amount of the initial guarantee security shall be indicated. The applicant shall provide statement for the conclusion of the contracts under art. 11 points 1, 2 and 3 or statement for concluded contract under art. 11 point 10;
- 3. the applicant under art. 58 paragraph 3 shall conclude the contract under art. 11 point 8a in which the amount of the initial guarantee security shall be indicated.
- (3) In case the contracts under paragraph 2 are not concluded within the term specified in the same provision, the independent transmission operator shall be entitled to terminate the procedure.
- (4) At conclusion of the contracts under paragraph 2, the balancing group coordinator/electricity trader without physical units shall be entered in the register under art. 65 with status "registered".

- (5) After providing the security guarantee in the amount under paragraph 2, the balancing group coordinator/electricity trader without physical units shall be entered in the register under art. 65 with status "active".
- (6) The coordinators of standard and combined balancing groups shall submit to the independent transmission operator an application for registration of subgroup with units of producers under art. 162a of the Energy Act and /or subgroup of producers with units with total installed capacity 4 MW and over 4 MW according to the Renewable Energy Sources Act..
- **Article 61.** (Amended SG, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 62.** (1) Each unit of a producer or a consumer can be assigned only to one balancing group coordinator.
- (2) Trade participants registered on the market before enforcement of these trading rules shall be obliged to transfer the balancing responsibility for their units to a balancing group coordinator within 30 calendar days as of their enforcement.
- (3) In case the requirement under paragraph 2 is not fulfilled, the independent transmission operator shall consider that the trade participant is responsible for the imbalances of his units as a balancing group coordinator.
- (4) In cases under paragraph 3, the trade participant shall conclude the contracts under art. 11 points 1, 2, 3 and 8 of these rules as a balancing group coordinator with the same rights and responsibilities.
- (5) In case the contracts under paragraph 4 are not concluded, the trade participant shall not be entitled to execute transactions on the electricity market.
- (6) (New- SG, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) In case the term of the contract under art. 11 point 9 and/or point 10 between a trade participant and trader/coordinator has expired and is not renewed, respectively procedure for change of balancing group is not initiated by the trade participant, the latter shall remain in the balancing group of the same coordinator and shall share the financial responsibility according to the general principles for imbalances allocation within the balancing group of the coordinator. Not later than 5 working days before the end the relevant month, the trader/coordinator shall notify in written the respective network operator that the unit of such customer shall be transferred in the balancing group of the supplier of last resort as of the 1st day of the month following the notification.
- **Article 63.** (1) (Amended SG, issue 90 of 2015, effective 20.11.2015) End suppliers and suppliers of last resort shall ex-officio take the balancing responsibility for the end consumers which they supply, in accordance with the approved by EWRC general conditions.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Where RES producers with units with total installed capacity less than 4 MW have not transferred the

balancing responsibility to a combined balancing group coordinator, the end suppliers and the public provider, depending on the concluded contracts for electricity purchase, shall register them and shall balance them according to the general principles for imbalances allocation in the special balancing group approved by EWRC. Other trade participants shall not be allowed to participate in this group.

- **Article 64.** (1) (Supplemented SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall be responsible for the imbalances from transactions with balancing energy for compensation of the technological losses in the transmission network and the unplanned exchanges.
- (2) The independent transmission operator, except cases under paragraph 1, shall not be responsible for the imbalances of:
 - 1. another coordinator of balancing group;
 - 2. units of users connected to the electricity transmission and/or distribution network.
- **Article 65.** (1) (Previous text of art. 65 SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall keep public register of the coordinators of balancing groups. The register shall contain at least the following information: name and headquarters of the licensed party, coordinator of balancing group, identification number/EIC code, date of registration, number of the balancing contract with the independent transmission operator, status.
- (2) (New- SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall keep register of the trade participants -producers and consumers connected to the electricity transmission network and electricity traders not included in the registers of the balancing group coordinators.

Section II

Withdrawal or suspension of a balancing group coordinator registered under the provision of art. 58 paragraph 1

Article 66. (1) (Supplemented - SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) A coordinator of standard balancing group and/or combined balancing group shall be entitled to send notification of withdrawal of the registration for a coordinator of standard balancing group or combined balancing group.

- (2) Notification shall be sent to the independent transmission operator and to all balancing group members.
- (3) The date of withdrawal shall be stated in the notification of withdrawal, this date being not earlier than 40 days after sending the notification of withdrawal.
 - (4) The independent transmission operator shall issue daily and summarised settlement

excerpts, including on the day preceding the day of withdrawal, and the parties shall issue the relevant invoices and shall pay within the deadlines indicated in art. 178 of the rules.

- (5) The date of withdrawal of a balancing group coordinator shall be the first day of the calendar month after the expiration of the term under paragraph 3.
- (6) The independent transmission operator shall release the guarantee security after the settlement of all financial relations related to the termination of the registration of the "balancing group coordinator" within 7 days.
- (7) (Amended SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015, new, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall notify the network operators of the withdrawal of the balancing group coordinator not later than 7 working days before the date of withdrawal under paragraph 5.
- **Article 67.** (1) (Amended SG, issue 39 of 2014) A coordinator of balancing group who have applied for withdrawal in accordance with art. 66 paragraph 1 and its members shall be entitled to transfer the balancing responsibility to a balancing group coordinator according to the register under art. 65. For the purpose they shall send to the independent transmission operator an "application for transfer of balancing responsibility" according approved template. The application shall contain:
 - 1. name of the coordinator who shall acquire the balancing responsibility;
 - 2. statement of consent by the coordinator under point 1;
- 3. description of the units and the relevant code numbers of the entity who transfers the balancing responsibility.
- (2) (Amended and suppl. SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall verify the data stated in the application and shall answer in writing within 15 days to the applicant, the new balancing group coordinator and the operator of the network to which the units are connected.
- (3) The date as of which the transfer of balancing responsibility shall be in force, the same being the first day of a calendar month, shall be indicated in the answer under paragraph 2.
- (4) The independent transmission operator shall be entitled to request amendment of the concluded contracts under art. 11 point 8 with the new balancing group coordinator.
- (5) The independent transmission operator shall reflect the changes in the register under art. 65.
- (6) (Amended SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator and the distribution system operators shall exchange information within two working days before the expiry of the calendar month in regard to the range of the balancing groups and the relevant coordinators as of the next calendar month.

- (7) (New-SG, issue 90 of 2015, effective 20.11.2015) Within three working days before the expiry of the calendar month, the balancing group coordinators shall send to the independent transmission operator a list of the units of the trade participants that are part of their balancing group as of the following month.
- **Article 68.** (Amended SG, issue 90 of 2015, effective 20.11.2015) (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall be entitled to suspend a balancing group coordinator or trade participant under art. 62 paragraph 3 from the electricity market by three-day prior written notice to the respective distribution system operator, supplier of last resort, the balancing group coordinator and the coordinator with common financial settlement in any of the following cases:
- 1. the balancing group coordinator or the trade participant under art. 62 paragraph 3 does not fulfil his obligations according to these rules and/or does not meet the requirements for registration as a balancing group coordinator;
- 2. the balancing group coordinator or the trade participant under art. 62 paragraph 3 breaches the conditions of the balancing contract, including default payment within the specified deadline or in case the guarantee security is not recovered or is not provided within the deadlines under the contract;
- 3. the balancing group coordinator or the trade participant under art. 62 paragraph 3 has outstanding financial liabilities under the contracts for access and transmission and/or unpaid/not recovered/not updated guarantee securities;
- 4. the balancing group coordinator or the trade participant under art. 62 paragraph 3 has imbalances in his balancing group exceeding the amount of the provided security under chapter ten, after an explicit warning by the independent transmission operator;
 - 5. the balancing group coordinator is in bankrupt or in process of liquidation;
 - 6. schedules are not submitted within the deadlines specified in the rules.
- (2) The independent transmission operator shall suspend from the electricity market traders and producers with a three-day prior written notice to the respective distribution system operator, supplier of last resort, coordinator of balancing group and coordinator with common financial settlement at the request of SEF pursuant to art. 36g of the Energy Act. The independent transmission operator can refuse to suspend a producer from the electricity market in case the suspension leads or may lead to violation of the security of supply.
- (3) The coordinator of balancing group or the trade participant under art. 62 paragraph 3 shall be obliged to settle all financial liabilities with the independent transmission operator till the date of suspension from the electricity market.
- (4) The members of a balancing group with a coordinator who is suspended from the electricity market, and the same is their electricity supplier, shall be assigned to the balancing group of the supplier

of last resort as of the date of suspension. These members shall be entitled to transfer the balancing responsibility to another coordinator as of the next calendar month.

- (5) The members of a balancing group with coordinator who is suspended from the electricity market and who is not their electricity supplier shall be independently responsible for their imbalances as of the date of suspension, and they shall be obliged to immediately sign the contract under art. 11, point 8 and to provide collateral for implementation of their liabilities under the contract and they shall be entitled to transfer the balancing responsibility to another coordinator as of the frist date of the following calendar month.
- (6) The independent transmission operator shall reflect the suspension of a coordinator of balancing group or a trade participant under art. 62 paragraph 3 in the register under art. 65 on the day of suspension.
- (7) In cases under paragraphs 1 and 2, the independent transmission operator shall inform EWRC of the suspension of the trade participant from the market.
- (8) The notification under paragraphs 1 and 2 shall be also sent to the members of the balancing group. The independent transmission operator shall notify the direct members in the balancing group, and the distribution system operators -the indirect members of the group.

Section III

Participation of producers of electricity from renewable sources and from highly efficient combined generation in the balancing market

- **Article 69.** (Amended and supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) (1) The public provider and the end suppliers shall pay to the RES producers with total installed capacity less than 4 MW the quantities of electricity generated by them, according to the readings from the commercial metering devices and at price according to the conditions of art. 31 paragraph 5 of RESA.
- (2) RES producers may use the quantities of electricity exceeding the quantities under art. 31 paragraph 5 of RESA to supply their branches, enterprises and units or to sell them at freely negotiated prices.
- (3) The public provider and the end suppliers shall pay to the producers of electricity from highly efficient CHP with units with total installed capacity less than 4 MW the quantities of electricity generated by them according to registered schedule in the market management system and at price according to the conditions of art. 162 EA.
- (4) RES producers with total installed capacity 4 MW and over 4 MW and the electricity producers from highly efficient CHP with total installed capacity 4 MW and over 4 MW shall sell the electricity generated by them under registered schedule on the power exchange through physical delivery after the conclusion of contract with SESF.
 - (5) Paragraph 4 shall not apply to transactions with electricity concluded under the

conditions and the procedure provided for in art. 119, paragraphs 1 and 2 of the Energy Act.

(6) Producers under paragraph 4 can sell the total or part of the electricity generated by them through a balancing group coordinator. In such case, the coordinator shall obligatory sell the electricity purchased from them through a separate registration on the power exchange.

Article 69a. In cases under art. 69, paragraph 6, a balancing group coordinator can not sell more than 30% of the total generated electricity fed out to the transmission and the distribution networks for the previous calendar year by RES producers with units with total installed capacity 4 MW and over 4 MW. Until 20th of January each year, the independent transmission operator shall publish on its page information on the quantities of electricity generated by RES producers with units with total installed capacity 4 MW and over 4 MW for the previous year.

Article 69b. In cases under art. 69, paragraph 6, where producers under art. 69, paragraph 4 sell the total or part of the electricity generated by them through a balancing group coordinator, the coordinator shall not be entitled to close open positions on commercial transactions in the groups through the electricity generated by the members of the subgroups under art. 56c, paragraphs 3 and 4. The netted surplus of each subgroup under art. 56c, paragraphs 3 and 4 of the standard balancing group can not exceed 10% of the net measured position of the respective subgroup during more than 30% of the settlement periods during the respective calendar month.

Article 70. (Amended and supplemented - SG, issue 39 of 2014, amended, issue 90 of 2015, effective 1.01.2016) (1) RES producers who have chosen to transfer their balancing responsibility to a coordinator of combined balancing group/standard balancing group, should be granted access to the respective network and to be registered on the market through submission of an application to the relevant network operator according the conditions and the procedure of chapter eight and to conclude a contract under art. 11 point 9.

- (2) The public provider, the end suppliers, in their capacity of coordinators of special balancing groups, and the coordinators of combined balancing groups for RES producers with total installed capacity less than 4 MW shall conclude a contract under art. 11 point 9 with all members of the balancing group.
- (3) The producers under paragraph 2 who haven't concluded a contract under art. 11 point 9 shall be balanced by the relevant coordinator of special balancing group, in accordance with the applied methodology for imbalances allocation to the members in the special balancing group and the general principles for imbalances allocation approved by EWRC.
- (4) RES producers with units with total installed capacity less than 4 MW who sell the generated electricity at preferential prices and according to the readings from the commercial metering devices shall not be entitled to participate in standard balancing groups. RES producers with units with total installed capacity less than 4 MW shall be entitled to participate in standard balancing group only when they sell the generated electricity according to art.31 paragraph 12 RESA.
- (5) RES producers with units with total installed capacity less than 4 MW shall not be entitled to sell electricity under the conditions of art. 31 paragraph 12 RESA when they are

members of special balancing group, except cases of art. 56e paragraph 1 point 1.

- **Article 71.** (Amended and supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) (1) In respect to the participation of RES producers in the balancing market, the submission and the approval of schedules shall be pursuant to the provisions of chapter six.
- (2) The coordinators of the special balancing groups of the end suppliers with units of RES producers, when selling under the provisions of art. 31 paragraph 5 RESA, shall notify exchange schedules to the coordinator under art. 56a, paragraph 3, point 1. The coordinator under art. 56a paragraph 3 point 1 shall notify aggregated schedule to the virtual market balancing group for the forecast generation in the group. These schedules shall serve only to determine the imbalances of the groups of the RES producers and shall not lead to any financial payments.
- (3) The combined balancing group coordinator shall submit exchange schedules for electricity generated from renewable sources, with units with total installed capacity less than 4 MW, both to the coordinators of special balancing groups of the public provider and the end supplier who purchase the electricity from the RES producers with units with total installed capacity less than 4 MW.
- (4) The standard balancing group coordinator shall submit the exchange schedules, for units with total installed capacity less than 4 MW, for electricity generated from highly efficient combined generation both to the coordinators of special balancing groups of the public provider and the end supplier who purchase the electricity from the producers, for the quantities highly efficient generation.
- (5) The producers of electricity from highly efficient combined generation with units with total installed capacity less than 4 MW shall send hourly schedules both to the public provider/end supplier and the participants in the free market within the terms according to chapter six. Balancing shall be performed according to the aggregated schedules and the metered quantities of electricity, and the imbalances shall be delegated to the standard balancing group coordinator.
- (6) The schedule to the public provider /end supplier shall be in consistency with the hourly thermal load pursuant to the provisions of art. 84 paragraph 6 point 1 of EA and pursuant to the ordinance under art. 84 paragraph 7 of EA.
- **Article 72.** Based on the settlement, the coordinator of combined balancing group shall settle the relations between the coordinator of the balancing group and the independent transmission operator at prices for deficit/surplus on the balancing market.
- **Article 73.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) The relations between the public provider and the coordinators of combined balancing groups, as well as between the public provider and RES producers members of the special balancing group of the public provider, in terms of RES producers with total installed capacity less than 4 MW, in regard to the obligation under art. 69, shall be settled as follows:

- 1. for each settlement period, when the quantity of electricity produced by RES producers is higher than the registered under the schedule, the coordinators of combined balancing groups, as well as the RES producers members of the special balancing group of the public provider, shall pay to the public provider the value of difference in the quantity at price at which the public provider sells electricity to the end suppliers, in BGN/MWh.
- 2 . for each settlement period, when the quantity of electricity produced by RES producers is less than the registered under the schedule, the public provider shall pay to the respective coordinators of combined balancing groups, as well as to the RES producers members of the special balancing group of the public provider, the value of difference in the quantity at price at which the public provider sells electricity to the end suppliers, in BGN/MWh.
- (4) (New- SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) The end suppliers shall notify to the public provider the same indicative schedule which they have received from the coordinators of combined balancing groups under art. 71, for units of RES producers connected to the relevant electricity distribution networks.
- **Article 73a.** (New SG, issue 90 of 2015, effective 20.11.2015) (1) Until the 9th day of the month following the month of metering, the end suppliers shall send to the public provider a protocol from the metering and an invoice for the quantities of electricity purchased by the end suppliers under the conditions of art. 31 paragraph 5 points 1 and 2 of RESA and art. 162 EA, for each producer of electricity from renewable sources and highly efficient combined generation of heating and electric power.
- (2) Transmission system operator shall send to the public provider protocols for metered electricity for each producer of electricity from renewable sources and highly efficient combined generation of heating and electric power whose energy is purchased by the public provider under the conditions of art. 31, paragraph 5, points 1 and 2 of RESA and art. 162 of EA. Protocols shall be sent electronically not later than the 5th day of the month following the month of metering. A copy of the signed bilateral protocols shall be sent until the 25th day of the month following the month of metering.
- **Article 74.** The trade relations under art. 72 shall be settled with the bilateral contracts under art. 11 point 8.
- **Article 75.** The trade relations under art. 73 between the public provider and the coordinators of combined balancing groups shall be settled with the bilateral contracts under art. 11, p.14.

Article 76. (Repealed - SG, issue 39 of 2014).

Chapter Six RULES FOR SUBMISSION AND APPROVAL OF GENERATION SCHEDULES, CONSUMPTION SCHEDULES AND EXCHANGE

SCHEDULES

Section I

Generation schedules and consumption schedules

Article 77. (1) (Supplemented - SG, issue 90 of 2015, effective 20.11.2015, amended and supplemented, issue 100 of 2017, effective 15.12.2017) Generation schedules containing information on the total generation of the plant shall be sent to the independent transmission operator by all producers connected to the electricity transmission network or by their coordinator, according approved template (PPS file), the access to the system being indicated, within the deadlines specified in an instruction and data exchange schedule published by the independent transmission operator on its internet page.

- (2) Generation schedules containing information on the total generation by type of generation shall be sent to the independent transmission operator by all distribution system operators for producers connected to the electricity distribution network, according approved template (PPS file), the access to the system being indicated within the deadlines specified in an instruction and data exchange schedule published by the independent transmission operator on its internet page.
- (3) Generation schedules shall be sent to the coordinators of balancing groups by all producers connected to the electricity distribution network in the group of the respective coordinator, on the day preceding the delivery day and on the day of delivery, in a form approved by the coordinator of the balancing group.
- (4) Generation schedules shall be sent by the coordinators of balancing groups for all producers connected to the electricity distribution network, on the day preceding the delivery day and on the day of delivery, to the respective distribution system operator, in a form approved by the distribution system operator.
- (5) The suppliers of balancing energy shall send to the independent transmission operator hourly schedules for the planned total generation of each dispatchable block, in accordance with the concluded supply contracts, for coverage of the technological losses in the networks, according approved template (PPS file) and access to the system being indicated, within the deadlines specified in an instruction published by the independent transmission operator on its internet page and in accordance with the procedures provided for in the Rules for Electric Power System Operation and these rules.
- (6) The suppliers of balancing energy shall send to the independent transmission operator net generation schedules of each dispatchable block, in accordance with approved template (TPS file) and the access to the system being indicated, taking into account the concluded contracts for electricity supply, within the deadlines specified in an instruction published by the independent transmission operator on its internet page and according the procedures provided for in the Rules for Electric Power System Operation and these rules.

- (7) The amount of the commercial schedules of the suppliers of balancing energy under art. 6 from all market segments should be equal to the amount of all commercial schedules (TPS files) of the separate dispatched blocks.
- (8) In case of discrepancy in the commercial schedules under paragraph 7, participation of the supplier of balancing energy in system control or provision of cold reserve will not be recognised and it will be considered that the supplier is in commercial deficit which is settled at prices for deficit and surplus on the balancing market.
- (9) The generation schedules under paragraphs 1, 2 and 5 shall serve for the dispatching of the relevant aggregates.
- (10) Generation schedules of the suppliers of balancing energy under paragraph 5 (total) and paragraph 6 (net) should be comparable, taking into account the forecast own auxiliary, as well as to comply with the conditions of the contracts concluded under art. 11, p. 7 of these rules and the provided capacity availability for regulation. The operator shall be entitled to request amendment of the schedule or to impose limitation of the deadlines in accordance with an instruction published by the independent transmission operator on its internet page, in case the schedules are not in consistency with the planned operational modes and the determined availability for regulation.
- (11) The independent transmission operator shall send to the producers under paragraph 5 the required ranges (total availability) for regulation of each block for the next month, till the 10th day of the preceding month, and the producer shall not be entitled to execute transactions in the electricity market over the total capacity determined for each block, unless the parties haven't agreed otherwise in written.
- (12) Consumption schedules of balancing energy suppliers with consumer sites shall contain information on the planned consumption according the concluded contracts, the procedures provided in the "Rules for operation of the electric power grid" and these rules and shall be send in an approved template (TPS file), the access to the system being indicated, within the deadlines specified in para 6.
- (13) The coordinators of balancing groups and the trade participants under art. 62 paragraph 3 shall send total net hourly generation and total hourly consumption forecasts of the balancing group, according an approved template (TPS file), the access to the system being indicated, within the deadlines specified in an instruction published by the independent transmission operator on the internet page.
- (14) The generation schedules and the consumption schedules shall be sent on the day preceding the day of delivery and on the day of delivery and shall contain information on the quantities of electricity for each delivery period which the relevant producer (block of producer) or unit of a consumer shall supply to/consume from the network.
- (15) The independent transmission operator, on the basis of the generation and consumption schedules and own forecasts, shall determine the required reserve secondary, tertiary and cold, for the next day, required:

- 1. for real-time maintenance of the balance between generation and consumption;
- 2. to ensure secure and reliable electricity supply;
- 3. to maintain reserve capacity in cases of emergency situations in the network, the generation capacities and changes in the climate conditions;
 - 4. for congestion management.
- **Article 78.** (1) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) The end suppliers shall send to the public provider monthly forecasts for the quantity of electricity for the consumption of the end consumers:
- 1. (Amended SG, issue 90 of 2015, effective 20.11.2015) within 3 working days after the determination of the quotas by a decision of EWRC for the second half of the current calendar year;
 - 2. till 10 of December for the six months of the next calendar year.
- (2) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) Within 2 working days as of receipt of the information under paragraph 1, the public provider shall determine the monthly obligations of the "quota plants" till the end of the relevant year, as well as the obligations of the producers under art. 93a of EA, within the quota determined by a decision of EWRC, and till 10 of December the obligations for the sixth months of the next calendar year.
- (4) (Supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) The monthly forecasts under paragraph 1 can be updated by the end suppliers till the 22nd day of the preceding month.
- (5) (Amended SG, issue 90 of 2015, effective 20.11.2015) The monthly obligations under paragraph 2 can be updated by the public provider till the 10th day of the preceding month, taking into account repair programmes, emergency events of the aggregates, changes in the weather forecast, within the total availability approved by EWRC.
- (6) (Amended SG, issue 39 of 2014, amended and supplemented, issue 90 of 2015, effective 20.11.2015, amended, issue 100 of 2017, effective 15.12.2017) Each working day, the public provider shall determine the hourly quantities for the next day of the "quota plants" and of the producers under art. 93a of EA, taking into account the monthly obligations after their update. The hourly quantities must be within the generation characteristics of their aggregates and forecast operational modes. The quantities shall be determined based on the schedules of the end suppliers sent to the public provider on the same day.
- (7) The quantities under paragraph 6 shall be obligatory for the producers and shall be in consistency with the exchange schedules under art. 80.

- (8) The quantities under paragraph 6 shall be also obligatory for the producers in the balancing groups of the public provider.
- (9) (Amended SG, issue 39 of 2014) In case of discrepancy in the quantities in the schedules under paragraphs 6 and 7, the independent transmission operator shall register the schedule of the public provider.
- (10) (New- SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015, new, issue 100 of 2017, effective 15.12.2017) All schedules to the public provider shall be registered until 11.30 a.m. on the day before delivery according to the instruction under art. 79 paragraph 1.
- (11) (New- SG, issue 100 of 2017, effective 15.12.2017) In case of failure to meet the deadline under paragraph 10, the public provider shall accept zero schedule for the respective participant.
- (12) (New- SG, issue 100 of 2017, effective 15.12.2017) Registered schedule to the public provider till 11.30 a.m. on the day before delivery can not be amended.

Section II Electricity exchange schedules

- **Article 79.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) The electricity exchange schedules between two balancing groups within the electric power system of Bulgaria shall be sent to the independent transmission operator within the deadlines specified in an instruction published by the independent transmission operator on the internet page, according approved template (TPS file) and the access to the system being acquired, and they shall contain information on the quantity of electricity for each period in the day of delivery which the relevant balancing group will exchange with other balancing groups.
- (2) The exchange schedules between balancing group registered within the electric power system of Bulgaria and a legal entity entitled to exercise commercial activity in a neighbouring market area (cross-border exchange schedule) shall be sent to the independent transmission operator according approved template (TPS file and access to the system being acquired.
- (3) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) The deadline for submission of schedules for cross-border exchange, in accordance with the acquired transmission capacities from yearly and monthly auctions (long-term nominations) and daily auctions and intraday (short-term nominations) shall be according the Auction rules for the relevant control areas published by the independent transmission operator and the requirements of OH-Policy2 for the Continental European synchronous area.
- (4) The independent transmission operator shall verify whether the exchange schedules can be executed from the point of view of: forecast operational modes and technical capabilities of the aggregates, acquired interconnection capacity, comparability of the schedules of all coordinators of balancing groups, preliminary balance and correspondence between generation

schedules, consumption schedules and exchange schedules of each balancing group, capacity curtailments, requirements for reservation of range for regulation and presence of circumstances which can breach the safety or the quality and security of the electric power system according to the Rules for Electric Power System Operation and these rules.

- (5) Coordinators of balancing groups and balancing energy suppliers shall send corrected generation and consumption schedules and exchange schedules between two balancing groups within the electric power system of Bulgaria in accordance with the requirements of the independent transmission operator and within the deadlines specified in an instruction published by the independent transmission operator on the internet page.
- (6) The independent transmission operator shall be entitled to amend the instruction in respect to the process of acceptance, validation and registration of generation schedules, consumption schedules and exchange schedules, if necessary, by publishing the amendment not later than 2 weeks before the date of enforcement of the amendment.
- (7) Balancing groups coordinators shall be entitled to send generation schedules, consumption schedules and exchange schedules up to seven days in advance.
- (8) The highly efficient combined generation plants, which are technologically connected with units consuming the generated heating power, shall provide electricity to the market at freely negotiated prices after meeting the consumption needs of the technologically connected unit.
- **Article 80.** (Amended SG, issue 90 of 2015, effective 20.11.2015) Notification of the executed transactions on the power exchange market shall be in accordance with the provisions of art. 33.
- **Article 81.** (1) The independent transmission operator shall confirm the generation and consumption schedules of the balancing energy suppliers under art. 77 paragraphs 4, 5 and 9 within the deadlines specified in an instruction published by the independent transmission operator on the internet page.
- (2) Balancing group coordinators shall receive information on the registered schedules from the trading system of the operator within the deadlines according the instruction.
- (3) The independent transmission operator shall confirm exchange schedules under art. 79 to the coordinators of balancing groups within the deadlines according an instruction.
- (4) In case of discrepancy in the quantities stated by coordinators of balancing groups within the electric power system of Bulgaria, the lower value shall be valid.
- (5) In case of discrepancy in the quantities stated by coordinators of balancing groups in cross-border exchange schedules, the bilateral agreements between the independent transmission operator and the respective neighbouring operator shall apply (i.e. valid lower value or reduction to zero value).
 - (6) (Repealed SG, issue 100 of 2017, effective 15.12.2017).

- (7) The confirmed by the independent transmission operator exchange schedules, generation and consumption schedules, including the traded quantities on the power exchange market, shall present the basis to determine the imbalances of the coordinators of balancing groups, the electricity provided to/purchased on/from the electricity balancing market and the financial liabilities of the parties.
- (8) The generation schedules, consumption schedules and exchange schedules of a balancing group should be balanced, and the notified purchases from other balancing groups and scheduled generation in the group shall be equal to the notified sales to other balancing groups and forecast consumption.
- (9) (Amended SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall be entitled to request from the coordinators of balancing groups to correct the schedules in case the requirements under paragraph 8 are breached. In case measures to correct the schedules are not undertaken, the independent transmission operator shall be entitled not to register the schedules of the balancing group coordinators.
- (10) (New- SG, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall be entitled to request change in schedule of producer in D-1 and intraday in case the submitted schedule does not correspond to the operating information and forecast of the operator.
- (11) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall be entitled, on the day of delivery, to permit reduction and/or termination of a block of a producer due to unsecured primary resource, as well as commissioning of an aggregate in case of non-admission of energy unprocessed primary energy resource. In such cases, deviations from the registered schedules shall be imbalance.
- (12) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator, taking into account the current state of the primary resource in the day of delivery, shall be entitled to re-dispatch by technology type the operation of the separate units of a producer, within the total schedule within one balancing group, in order to optimise the mode of operation. The difference between the total commercial schedule of the respective producer and the total generation as a result of the re-dispatching shall be regulating power.
- (13) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall be entitled on the day of delivery to accept replacement of a block of a thermal power plant with another block and the deviations from the total generation and the registered schedule shall be imbalance of the trade participant.
- **Article 82.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall introduce procedure for notification, validation and registration of generation schedules, consumption schedules and exchange schedules within the day of delivery.
- (2) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) The number of the sessions within the day shall be set by the independent transmission operator, and their number

should be in compliance with the methodologies and the rules developed pursuant to Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management in the day-ahead and intraday market coupling.

- (3) (New- SG, issue 90 of 2015, effective 20.11.2015, amended, issue 100 of 2017, effective 15.12.2017) The independent transmission operator shall develop a separate instruction specifying the number of the sessions, the requirements for intraday schedules nomination and validation, and shall publish it on its internet page.
- (4) (New- SG, issue 100 of 2017, effective 15.12.2017) Notification of executed intraday transactions shall be only made by the power exchange market operator who shall be always a party to such kind of transactions, and the notification shall be with exchange schedules under the conditions of paragraph 1.
- **Article 83.** (1) In case of a local emergency situation and/or force majeure, the coordinators of balancing groups shall undertake the required measures to match the exchange schedules for the next unclosed period of delivery taking into account the changed circumstances.
- (2) The independent transmission operator shall not terminate or amend exchange schedules between the coordinators of balancing groups in cases under paragraph 1 after their registration.
- **Article 84.** (1) The independent transmission operator shall be entitled to terminate and/or curtail exchange schedules of the coordinators of balancing groups in the following cases:
 - 1. failure of the market management system;
- 2. at occurrence or for prevention of emergency situations in electricity generation and transmission equipment;
 - 3. network congestion;
 - 4. at long-term deficit of energy resources;
 - 5. regulatory measures by competent authorities;
- 6. inability to maintain the balance of the electric power system and after all other measures in accordance with the requirements of ENTSO-E were undertaken;
 - 7. in cases referred to in art. 73 of the Energy Act and other cases of force majeure.
- (2) In cases under paragraph 1, the independent transmission operator shall comply with the deadlines for notification according the legislation.
- (3) (Amended and suppl. SG, issue 90 of 2015, effective 20.11.2015) In cases under paragraph 1, the relations in terms of electricity consumption in the electric power system for the period of termination of the market shall be settled with the suppliers of last resort, end suppliers respectively, providing services of public interest.

- (4) The relations under paragraph 3 shall be settled according to the readings from the commercial electricity metering devices.
- (5) (Amended SG, issue 90 of 2015, effective 20.11.2015) In cases under paragraph 1, the producers shall sell at prices determined by EWRC and/or in the long-term contracts. In case such prices are not determined, producers shall sell at price equal to the price at which the public provider sells to the end suppliers.
- (6) (New- SG, issue 90 of 2015, effective 20.11.2015) In cases under paragraph 1, transactions for coverage of technological losses in the electricity transmission network and the electricity distribution networks shall be settled under art. 84 paragraph 3.
- (7) (Previous paragraph 6, amended SG, issue 90 of 2015, effective 20.11.2015) End consumers shall purchase the consumed electricity at price set by the supplier of last resort in the sale contracts and prices of the end suppliers pursuant to decision of EWRC.
- (8) (Previous paragraph 7 SG, issue 90 of 2015, effective 20.11.2015) Trade participants shall not be subject to balancing for the period under paragraph 1.

Chapter seven METERING. DATA PROVISION

Section I Aims

- **Article 85.** (1) Aggregation and provision of data for the metered quantities of electricity shall serve the processes of settlement of the quantities traded on the electricity market through bilateral contracts or on the power exchange market, the balancing energy market, the bilateral exchanges with neighbouring control areas/blocks, imbalance settlement, ancillary services, payments for access and transmission and all other services according these rules.
 - (2) This chapter shall regulate the procedures for:
 - 1. aggregation of metered values;
 - 2. submission of aggregated metered values;
- 3. (Amended SG, issue 100 of 2017, effective 15.12.2017) provision of consumption and generation data.
- (3) (Amended SG, issue 100 of 2017, effective 15.12.2017) The settlement process on the electricity market shall be based on a settlement period and all aggregated and submitted values of the load profile shall refer to the same time interval.

(4) (Amended - SG, issue 90 of 2015, effective 20.11.2015) These rules shall regulate the usage of data from the commercial metering devices, ownership of the transmission system operator or the relevant distribution system operator, information systems and mechanisms in the settlement process on the electricity market. These procedures shall not be applicable to data from metering devises and systems which are of operational purpose or are not ownership of the relevant network operator.

Section II Requirements to the metering systems

- **Article 86.** (1) Electricity metering devices with possibility for periodic metering of the supplied electricity for each settlement period should be installed in all metering points of units indicated in the rules under art. 86, paragraph 1, point 6 of EA.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) For units that are not covered by paragraph 1, standardised load profiles may be applied, developed by the distribution companies and submitted to the independent transmission operator.
- (3) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator and the distribution system operators shall agree instruction on the operation and application of standardised load profiles by the distribution system operators for the units under paragraph 2, published on the internet page of the independent transmission operator.
- **Article 87.** (1) The owners of metering systems shall store and submit aggregated and hourly metered values from the electricity metering devices under art. 86 paragraph 1 of the quantities of active power generated/consumed by the units of trade participants for each settlement period.
- (2) Each virtual electricity metering device shall have alphanumeric identification code. These codes shall be set by the independent transmission operator at registration of the trade participant and shall be provided to the relevant owners of metering systems together with a list of the metering points for each identification code.
- (3) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) At registration of a trade participant on the electricity market, the units indicated by the trade participant should include all metering points of these units, including the points representing back-up supply to these units (regardless of voltage level). Registration of an unit of a trade participant on the electricity market with incomplete list of the metering points for the relevant unit shall not be allowed.

Section III

Metering, certification and submission of metered quantities

Article 88. (1) (Previous text of art. 88 - SG, issue 90 of 2015, effective 20.11.2015) The metered value shall represent the quantity of electricity which is metered and registered by an electricity metering device for periodical metering or is set through a standardised load profile integrated for the

settlement period.

- (2) (New-SG, issue 90 of 2015, effective 20.11.2015) Data exchange for the quantities of electricity, as well as of other commercial and technical data, between all trade participants on the market shall be through a single electronic data exchange format.
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) The independent transmission operator and the distribution system operators shall develop an instruction specifying the requirements to the single electronic data exchage format.
- **Article 89.** (1) Each owner of metering system shall be responsible for the reading of all metered values according to the Electricity Metering Rules and the Electricity Trading Rules.
- (2) In cases under art. 86 paragraph 1, the owners of the metering systems shall validate, process and store the data in data bases with metered values. Aggregated and hourly data shall be submitted to the independent transmission operator until 05.00 p.m. on the second working day of the week for the days from Monday to Sunday, inclusive, of the preceding calendar week.
- (3) In cases under art. 86 paragraph 2, the coordinators of balancing groups shall submit to the independent transmission operator until 12:00 a.m. on the second working day of each month, for the period of the relevant month, aggregated number of units of trade participants under art. 86 paragraph 2, ordered by type of load profile and ownership of the electricity network in which the above-mentioned units are located.
- (4) At the end of each month, the owners of the metering systems shall validate, process and store the data in data bases with metered values. Aggregated data shall be submitted to the independent transmission operator till 12:00 a.m. on the second working day, but not later than the third calendar day, for the days from the preceding month for which there is no data.
- (5) In case of missing hourly data from the individual metering systems, in order to meet the deadlines for submission of information to the independent transmission operator, the owner of the metering systems may use replacing values, according to the Electricity Metering Rules, calculated on the basis of preceding settlement periods or otherwise as specified in the contract for access to the distribution /transmission network of the trade participant. In case of missing replacing values from the owner of the metering systems, the independent transmission operator shall apply ex-officio value 0 for the respective missing hourly data.
- (6) In case of missing data under paragraph 5 or in case of wrong data, the owner of the metering system shall assess, correct or replace the missing or wrong information in regard to the metered values according to the Electricity Metering Rules and shall submit the information to the independent transmission operator until 12.00 a.m. on the third working day, but nor later than the fifth calendar day after the end of the month.
- (7) Coordinators of balancing groups shall receive the metered values by units for each direct or indirect member of the balancing group from the owners of the metering systems within the deadlines for data submission to the independent transmission operator specified in paragraphs 2 and 4.
- (8) (Amended SG, issue 90 of 2015, effective 20.11.2015) Metered values received under paragraph 7 can be appealed through the coordinators of balancing groups before the owners of

the metering systems within two working days as of data receipt. The owner of the metering devices shall inspect and shall confirm or correct the metered values. Values which are not appealed within this deadline shall be considered confirmed for the relevant party.

- (9) All metered values, including values that were subject to change according paragraph 8, shall be considered by the independent transmission operator as confirmed by the parties not later than the eighth day of each calendar month following the month of reading and shall be considered as confirmed metered values. In case agreement is not reached after this date, the provisions of chapter ten, section VII shall apply.
- (10) (New-SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) Until the 9th day of the month following the month of reading, each owner of metering system shall send the metered hourly values for units with total installed capacity below 4 MW of producers of electricity from renewable sources and highly efficient combined generation, marked by file number/identification code, as follows:
 - 1. to the public provider, for any metering point for any producer;
- 2. to the end suppliers, for any metering point for any producer from whom they purchase electricity;
- 3. to the combined balancing group coordinators for any commercial metering point for any producer included in the combined balancing group;
- 4. to the standard balancing group coordinators for any commercial metering point for any producer included in the standard balancing group.
- (11) Until the 9th day of the month following the month of reading, each owner of metering system shall send the metered hourly values for units with total installed capacity 4 MW and over 4 MW of producers of electricity from renewable sources and highly efficient combined generation, marked by file number/identification code, as follows:
 - 1. to SESF, for each metering point for each producer;
- 2. to the combined balancing group coordinators for each commercial metering point for each producer included in the combined balancing group;
- 3. to the standard balancing group coordinators for each commercial metering point for each producer included in the standard balancing group.
- 4. to each producer for each commercial metering point of the relevant power generation unit.

- (12) (New-SG, issue 90 of 2015, effective 20.11.2015) Within the term under paragraph 10, the owners of metering systems shall provide to the public provider and the end suppliers documents, compiled in compliance with the contracts for usage of the respective network, for introduced adjustments in the provided hourly values for the producers' units from the commercial metering devices and/or changes in the commercial metering systems, change of constants, as well as for the accrued quantities of electricity at incorrect and/or inaccurate electricity metering.
- Article 89a. (1) The independent transmission operator and the distribution system operators shall provide to the trade participants metering data, in addition to the mandatory data under these rules, in case it is technically possible and under procedure, conditions and against payment pursuant to the instruction and price list adopted by the respective network operator.
- (2) The prices for the provision of the service under paragraph 1 should recover only the costs of the network operators and can not include profit.
- **Article 90.** The provisions of this section shall be applicable also for the metering points which correspond to units of producers and consumers who provide ancillary services to the independent transmission operator.

Section IV

Determination of the technological losses in the network

- **Article 91.** All metered values from the commercial electricity metering devices between the electricity transmission network and the electricity distribution networks, between the separate electricity distribution networks, between producers and electricity transmission/distribution network, shall be metered and used to determine the technological losses of the transmission company and the distribution companies.
- **Article 92.** (1) The technological losses in the network shall be determined separately for the electricity transmission network and each electricity distribution network.
- (2) The transmission company and the distribution companies, corresponding to the ownership of the network, shall determine the technological losses in the relevant network for each settlement period as the difference between the total quantity of electricity injected in the respective network at the metering points and the quantity of electricity consumed in the respective network or supplied in other networks, according to the confirmed metered values.
- (3) (Amended SG, issue 39 of 2014) The independent transmission operator shall calculate the imbalances of the quantities of electricity needed to cover the technological losses in the transmission network and the distribution networks on the basis of the determined technological losses under paragraph 2 and the approved delivery schedules.
- (4) All technological losses in the networks determined under paragraph 2 shall be considered as confirmed metered values.

Section V Aggregation and submission of metered values

- **Article 93.** (1) After determining the confirmed metered values under art. 89 paragraph 9 and art. 92 paragraph 4, each owner of metering system shall determine the total physical deliveries for each producer and each consumer/supplier of end consumer (as appropriate) for the relevant network for each settlement period.
- (2) The aggregated generation of a producer shall be equal to the sum of all confirmed metered values at the connection points of the generation blocks to the relevant network.
- (3) The total consumption of a consumer shall be equal to the sum of all confirmed metered values at the connection points /metering points of this consumer connected to the relevant network.
- **Article 94.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) (1) Owners of metering systems shall submit to the independent transmission operator validated data, aggregated by balancing groups, from the commercial electricity metering devices of units of trade participants connected to the relevant electricity network.
- (2) Owners of metering systems shall submit to the coordinators of balancing groups aggregated validated data from the commercial electricity metering devices of units of trade participants belonging to the relevant balancing group.
- (3) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) For customers with standardised load profiles, the owners of metering systems shall read the commercial metering devices according to the reading schedule of the respective owner of the metering system. The quantities of active power metered under the schedule shall be allocated hourly to the applicable standardised loan profile for the period from the 1st day till the last day of the calendar month, within which the reading was performed, and they shall be accepted as confirmed metered values under art. 89 paragraph 9. For the first month after the change of a supplier, the quantity of electricity that the owners of metering systems allocate hourly to the applicable standardised loan profile can be determined on the basis of the readings under the reading schedule.
- (4) Owners of metering system shall provide to the balancing group coordinators and to the independent transmission operator quantities of electricity under paragraph 3, aggregated by type of standardised loan profile and suppliers. Data provided by the owners of metering systems shall be used for settlement purposes and can be used by the suppliers for invoicing purposes.
- (5) The independent transmission operator shall submit to the distribution company, within the deadlines under art. 89 paragraph 2, the aggregated values for the metered electricity load profiles, read from each commercial electricity metering device which participates in the formation of the total quantity of electricity supplied from the transmission to the distribution network.
 - (6) The independent transmission operator shall submit to the end supplier, within the

deadlines under art. 89 paragraph 2, the aggregated and grouped by regions values for the metered load profiles, formed from each commercial electricity metering device, which participates in the formation of the total quantity of electricity which the end supplier purchases from the public provider.

Section VI

Aggregation of metered values in regard to a balancing group coordinator

- **Article 95.** (1) After receipt of confirmed metered values, the independent transmission operator shall determine the total physical deliveries of each balancing group in respect to the metering points of the relevant network, for each settlement period.
- (2) The aggregated generation of a coordinator of balancing group shall be equal to the total generation of the units of all producers for which the respective coordinator of balancing group bears the balancing responsibility.
- (3) The aggregated consumption of a coordinator of balancing group shall be equal to the total consumption of the units of all consumers for which the relevant coordinator of balancing group bears balancing responsibility.

Section VII

Aggregation of metered values in regard to the relevant network

- **Article 96.** (1) The net generation of the relevant network shall be equal to the sum of the total generation of all producers connected to this network.
- (2) The net consumption of the relevant network shall be equal to the sum of the total consumption of all consumers from this network.
- (3) The electricity supplied to other networks shall be equal to the sum of all metered values certifying the electricity exchange from the relevant network to other networks. In respect to the electricity transmission network, the electricity export shall be also included to the realised exchange with other networks.
- (4) The electricity received from other networks shall be equal to the sum of all metered values certifying the electricity exchange from the other networks to the relevant network. In respect to the electricity transmission network, the electricity import shall be also included to the realised exchange with other networks.

Section VIII Aggregation of metered values in regard to the

implementation of the activity "imbalance settlement" by the independent transmission operator

- **Article 97.** (1) The owners of metering systems shall submit to the independent transmission operator the following information in respect to the imbalance settlement, only for the respective network and separately for each settlement period:
- 1. confirmed metered values, separately for all dispatchable blocks and loads which provide ancillary services, including balancing energy;
- 2. confirmed metered values for other block which has submitted ancillary services to the electricity system operator.
- (2) The owners of metering systems shall submit to the independent transmission operator the following information, only for the respective network and separately for each settlement period:
- 1. total generation by type and total consumption in respect to each balancing group, determined in accordance with the provisions of art. 95 paragraphs 2 and 3;
- 2. technological losses in the network, determined according the provisions of art. 92 paragraphs 2 and 4;
- 3. net generation and net consumption in the respective network, determined according the provisions of art. 96 paragraphs 1 and 2;
- 4. electricity supplied to other networks, determined in accordance with the provisions of art. 96 paragraph 3.
- 5. electricity received from other networks, determined in accordance with the provisions of art. 96 paragraph 4.
- **Article 98.** (1) (Amended and suppl. SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall perform preliminary physical settlement on a weekly basis of each coordinator of balancing group, for all metering points equipped with commercial metering devices, till Thursday -for the days of the preceding calendar week.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall perform final physical settlement of each coordinator of balancing group, including the units under art. 86 paragraph 2, till the tenth day of each calendar month following the month of the metering devices reading.
- (3) (Amended SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall perform financial settlement on a monthly basis of each coordinator of balancing group, in accordance with the requirements of the Accountancy Law and VAT Act. The independent transmission operator shall be entitled to adjust data in the monthly financial

settlement for a period of up to two month as of the date of the last financial settlement, but only at change of data for units under art. 86 paragraph 1.

(4) (Amended - SG, issue 90 of 2015, effective 20.11.2015) The results from the physical and financial settlement according chapter ten shall be reflected in the daily and monthly settlement excerpts of the balancing group coordinators and the balancing energy suppliers.

Chapter eight CONDITIONS AND PROCEDURE TO CHANGE THE ELECTRICITY SUPPLIER AND THE BALANCING GROUP COORDINATOR. SUPPLIER OF LAST RESORT

Section I Change of electricity supplier and balancing group coordinator

Article 99. (1) (Amended - SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) The procedure for change of balancing group coordinator within the meaning of this section shall cover:

- 1. change of end supplier with a supplier on the liberalised market or with a supplier of last resort;
- 2. change of a supplier with another supplier on the liberalised market where the balancing group is changed;
- 3. change of a supplier on the liberalised market with a supplier of last resort in cases provided for in the Energy Act;
- 4. change of a supplier of last resort with a supplier on the liberalised market or with end supplier;
 - 5. change of a balancing group coordinator with another balancing group coordinator;
 - 6. change of a supplier on the liberalised market with an end supplier;
- 7. (New SG, issue 100 of 2017, effective 15.12.2017) transfer of balancing responsibility from one coordinator to another.
- (2) Change of a supplier shall be initiated by the end consumer or a person authorised by notarised power of attorney.

- (3) (Supplemented SG, issue 100 of 2017, effective 15.12.2017) The process of change of a supplier for consumers connected to the electricity transmission network shall be administered by the independent transmission operator, and for end consumers connected to the electricity distribution network—by the respective distribution system operator. The process of transfer of balancing responsibility from one coordinator to another shall be administered by the independent transmission operator.
- (4) (Amended SG, issue 3 of 2014) At first change of a supplier from the regulated market with a supplier on the liberalised market, the consumer shall be entitled to receive information for the hourly electricity consumption from the owners of the commercial metering devices within 5 days as of the date of submission of the request. Information can be requested for the previous two years as of the date of the request. This information shall be provided free of charge.
- **Article 100**. (Amended and supplemented SG, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 101.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) Electricity producers and end consumers shall pass an initial registration on the electricity market at freely negotiated prices under the procedure and the conditions of the Rules establishing conditions and procedure for provision of access to the electricity transmission and electricity distribution networks.
- (2) (Amended SG, issue 100 of 2017, effective 15.12.2017) The procedure for initial registration shall be implemented for all units for which the balancing responsibility is transferred from the public provider, end supplier and/or supplier of last resort to another supplier and coordinator, including the units of producers from renewable sources and highly efficient combined generation.
- (3) (Amended SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The independent transmission operator and the distribution system operators shall be entitled to agree additionally an instruction, published on the site of the independent transmission operator, which is not controversial to these rules and to the Rules establishing conditions and procedure for provision of access to the electricity transmission and electricity distribution networks, and which supplements the process for access granting.
 - (4) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
 - (5) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
 - (6) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
 - (7) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
 - (8) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
- **Article 102.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) (1) Where a request is filed for change of supplier and /or

balancing group coordinator according to art. 99 paragraph 1 points 1, 2, 4, 5 and 6 or 7, the independent transmission operator /the distribution system operator shall register the change only after submitted certificate of lack of liabilities or lack of justified appeal by the last supplier /balancing group coordinator.

- (2) The appeal under paragraph 1 may be based on the presence of liabilities, resulting from:
- 1. valid contract under art. 11 point 4 and/or
- 2. valid contract under art. 11 point 9 and
- 3. valid contract under art. 11 point 10,
- 4. liabilities for sanctions, if they are provided for in the contracts under points 1-3,
- 5. unpaid deposit securing the payment of the last invoice, if such is provided for in the contract.
- (3) The certificate of lack of liabilities under paragraph 1 shall be issued and provided from the current supplier within two working days as of the date of sending of notification from the relevant network operator to the supplier for the initiated procedure. In case there is no justified appeal or certificate of lack of outstanding liabilities is not sent by the current supplier within the specified term, the transmission operator, respectively the distribution operator, shall register the change without this certificate.
- (4) After change of supplier, if the end consumer has not fulfilled the obligations under the electricity sale contract to the previous supplier, the last one shall be entitled to request temporary termination of his electricity supply. Application shall be submitted pursuant to procedure set in the instruction of the respective network operator under paragraph 10.
- (5) In cases under paragraph 4, the respective network operator to whom the request is sent shall notify the consumer and new supplier/coordinator not later than 5 working days before the date of termination and shall implement the request for termination, the supplier being responsible for any damages in case of unjustified termination at his request.
- (6) When the consumer settles his liabilities under electricity sale contract to the previous supplier before the date of termination, the previous suppliers shall inform the respective network operator in due time, but not later than 1 working day as of the date of receipt of the payment.
- (7) In cases under paragraph 6, the network operator shall inform the new supplier/coordinator in due time, not later than 1 working day.
- (8) In cases where the consumer does not settle his liabilities under the electricity sale contract to the previous supplier till the date of termination, the new supplier shall be entitled to terminate the contract with the consumer. In such case, the supplier shall notify the respective network operator pursuant art. 62, paragraph 6.

- (9) In cases where the consumer does not settle his liabilities under the electricity sale contract to the previous supplier after the date of termination and the new has not enjoined his right pursuant to paragraph 8, the procedure set for in paragraphs 6 and 7 shall apply.
- (10) The procedures for temporary termination and recovery of supply pursuant to this article shall be settled in an instruction of the respective network operator.
- **Article 102a.** (New SG, issue 100 of 2017, effective 01.01.2018). (1) At submission of documents for change of owner or user of unit of a consumer on the free market, the new owner or user should have contracts under art. 11 points 1, 2,4, 9 and 10 or contracts under art. 11 points 3, 4, 9 and 10, in case they want the unit to be supplied by the current supplier.
- (2) In case the requirements of paragraph 1 are fulfilled not later than the 25th day of the current month, the transmission /distribution system operator shall register the change of the owner or the user as of 1st day of the following month, and the unit shall remain on the free market with the supplier of the previous user/owner.
- (3) In case the conditions under paragraphs 1 and/or 2 are not fulfilled, the transmission/distribution system operator shall transfer ex-officio the unit from the current supplier to a supplier of last resort as of the 1st day of the month following the submission of the documents for the change of owner or user.
- (4) In cases under paragraph 3, the transmission/distribution system operator shall notify the market participants within the terms specified in the instruction under art. 103 paragraph 2.
- (5) In case the owner or user of an unit concludes contract with new supplier, including cases as set for in paragraph 3, the transmission/distribution system operator shall register the change of supplier after submitted certificate of lack of liabilities or lack of motivated appeal by the supplier of the unit under paragraph 1.

Section II Change of balancing group

Article 103. (1) (Amended and suppl. - SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The procedure refers to trade participants who have received a notification for fulfilment of the conditions for access for the relevant units according to the Rules establishing conditions and procedure for provision of access to the electricity transmission and electricity distribution networks and they want to register them on the market at freely negotiated prices or to perform consecutive change of the supplier and/or the balancing group coordinator. The procedure shall be also applied in case the balancing responsibility is transferred/terminated between two balancing group coordinators.

(2) The independent transmission operator and distribution system operators shall be entitled to agree additionally an instruction, published on the site of the independent transmission operator, which is not controversial to these rules and supplements the process for change of balancing group.

- (3) (Supplemented SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The trade participant or a person authorised by notarised power of attorney shall send a request for change of balancing group according to the network to which the relevant unit is connected, to the independent transmission operator, the distribution system operator respectively. The request shall be submitted to the distribution system operator till the 10th day of the month preceding the month for which the change is requested, and to the independent transmission operator till the 15th day of the month preceding the month for which the change is requested.
- (4) (Amended SG, issue 90 of 2015, effective 20.11.2015) The change of a coordinator of balancing group shall be effective as of the first day of the month, except the cases under art. 104 paragraph 1.
 - (5) The request under paragraph 3 shall contain the following information at least:
- 1. for the trade participant name, EIC, ID code in the data base of the network operator, correspondence address, e-mail and telephone;
- 2. for the units of the trade participant ID code for each unit in the data base of the network operator, unit address and identifier of the metering point used at the relevant network operator;
 - 3. declaration for affiliation of direct or indirect member of balancing group;
- 4. certificate from the current balancing group coordinator and current supplier, if different from the coordinator, for lack of outstanding payments;
- 5. consent statement by the new coordinator and/or certificate for concluded contract for balancing/contract for combined service with the new balancing group coordinator.
- (6) In case the submitted data is full and correct, the network operator shall send notification for forthcoming change to the previous and the new balancing group coordinator within the terms according the instruction under paragraph 2.
- (7) As of the date of entry into force of the change of the balancing group coordinator, the owner of the commercial metering devices shall determine the consumed electricity in one of the following ways: the owner shall read the commercial metering devices, shall determine the quantity of electricity on the basis of a forecast consumption or on the basis of self-reading of the metering devices by the end consumer in case of change of coordinator of balancing group by a consumer with standardised load profile.
- (8) (Amended SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) The owners of commercial metering devices shall send the data under paragraph 7 not later than 7 days after the date of change of the supplier.
- (9) (Amended SG, issue 39 of 2014, amended and supplemented, issue 90 of 2015, effective 20.11.2015) In cases according EA, when the supply of electricity should be performed

by a supplier of last resort, the change of a coordinator of balancing group shall be registered exofficio by the independent transmission operator, the distribution system operator respectively, within 3 working days as of receipt of the information under art. 104 paragraph 2.

- (10) The independent transmission operator shall inform the trade participant, the current supplier, the current coordinator and the supplier of last resort of the ex-officio registration under paragraph 9.
- (11) (Amended SG, issue 39 of 2014) The distribution system operator shall inform the trade participant, the current supplier, the current coordinator, the supplier of last resort and the independent transmission operator of the ex-officio registration under paragraph 9.
- (12) (New- SG, issue 90 of 2015, effective 20.11.2015) In cases according to art. 56e, paragraph 2, the change of balancing group coordinator shall be registered ex-officio by the independent transmission operator, the distribution system operator respectively, except where the provider has not stated in written a choice of another balancing group coordinator.
- (13) (New- SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator and the distribution system operator shall inform the trade participant and the current coordinator of the ex-officio registration under paragraph 12.
- (14) (New- SG, issue 100 of 2017, effective 15.12.2017) Where the contract under art. 11 point 13 is terminated due to reasons for which the respective electricity trader is responsible, the respective network operator shall register ex-officio a change of supplier by a supplier of last resort for all units of consumers of this trader with standardised load profiles. The respective network operator shall inform the trade participant, the current coordinator and the supplier of last resort of the ex-officio registration.

Article 103a. (New - SG, issue 90 of 2015, effective 20.11.2015) The Energy and Water Regulatory Commission shall adopt an instruction on the procedure and the conditions for change of supplier of consumers with standardised load profiles.

Section III

Rules for electricity supply from end supplier and supplier of last resort

- **Article 104.** (1) (Amended SG, issue 39 of 2014) Supplier of last resort shall be an entity which holds license according the EA and supplies electricity when the main supplier under the contract for sale-purchase is not in condition to continue the supply due to announcement of bankruptcy, liquidation, revoked license or any other event which has led to temporary or constant termination of the electricity supply, as well as to end consumers who can not be clients of the end supplier till the choice of another supplier.
- (2) (Supplemented SG, issue 90 of 2015, effective 20.11.2015) The end consumer or the supplier shall notify in written the independent transmission operator, the distribution system

operator respectively, immediately, but not later than 24 hours of their effect, of the presence of circumstances which has led to or will lead to temporary or constant termination of the electricity supply and the date as of which the electricity supply under the current contract is terminated.

- (3) The independent transmission operator, the distribution system operator respectively, shall register ex-officio the change with the supplier of last resort according to the issued license.
- (4) (Amended SG, issue 90 of 2015, effective 20.11.2015) The price at which a supplier of last resort sells electricity to the end consumer shall be determined according approved by EWRC "Methodology for price determination of electricity supplied by a supplier of last resort".
- (5) The independent transmission operator, the distribution system operator respectively, shall send identifying information for the consumer and his units, as well as data for the monthly quantities consumed electricity, for the preceding 12 months.

SECTION IIIa (New - SG, issue 90 of 2015, effective 20.11.2015) Standardised load profiles

Article 104a. (New - SG, issue 90 of 2015, effective 20.11.2015) This section shall regulate the participation in the electricity market with freely negotiated prices of consumers who have expressed will to change the supplier of a service of public interest, without installed metering devices for hourly electricity metering.

Article 104b. (New - SG, issue 90 of 2015, effective 20.11.2015) (1) Standardised load profiles which are applied for the units under art. 86 paragraph 2 shall be developed by the distribution system operators.

- (2) Standardised load profiles shall be consistent with the climate specifics and the consumption specifics of the separate unit groups of consumers depending on the electric network on the territory of the Republic of Bulgaria to which these units are connected.
- (3) Standardised load profiles shall contain hourly coefficients set for a period of one calendar year, which can be updated on a yearly basis. The hourly coefficients for each profile may differ for the different distribution system operators and shall be determined by the relevant network operator to whose network the consumer's unit is connected.
- (4) Standardised load profiles that are applied by the respective network operator shall be submitted to EWRC and shall be published on the internet page of the respective operator not later than one month before their introduction.

- (5) The Energy and Water Regulatory Commission shall be entitled to give instructions for amendment and supplement of the submitted standardised load profiles, as well as instructions for the development of new profiles.
- **Article 104**c. (New SG, issue 90 of 2015, effective 20.11.2015) (1) (Amended and supplemented SG, issue 100 of 2017, effective 15.12.2017) The assignment of a standardised load profile to an unit shall be made by the distribution system operator according to type of profile stated by the consumer, in accordance with the purpose of the unit and the electricity consumption characteristics in it and shall be effective as of the date of registration upon the change of supplier/balancing group coordinator.
 - (2) All consumers under this section shall be indirect members of balancing groups.
- (3) (New- SG, issue 100 of 2017, effective 15.12.2017) The distribution system operator shall be entitled to change the standardised load profile type, if he establishes that the consumption does not correspond to the stated. The change shall be effective as of the first day of the month following the inconsistency establishment. The network operator shall inform the applicant and the supplier of the change not later than seven days before application of the change.
- **Article 104d.** (New SG, issue 90 of 2015, effective 20.11.2015) (1) For the consumers under this section, the applications for initial registration on the electricity market at freely negotiated prices and the applications for change of supplier/balancing group coordinator can be submitted by the new supplier/balancing group coordinator with attached notarised power of attorneys from the consumers.
- (2) In respect to the procedures for change of coordinator/supplier for these consumers, the distribution system operators shall submit to the transmission system operator information aggregated by coordinators of balancing groups for the number of the units for each profile.
- (3) Upon expiry of the contract under art. 11, point 10, in case the contract is not renewed and there is no procedure for change of supplier/coordinator that will be completed till the expiry of the contract, the current coordinator/supplier shall submit to the relevant network operator a request for change of supplier/coordinator with a supplier of last resort.
- (4) The network operator shall ex-officio perform the change of the current supplier and coordinator with a supplier of last resort by informing the consumer, the previous coordinator and the respective supplier of last resort.
- (5) After change of supplier, if the end consumer has not fulfilled the obligations under the electricity sale contract to the previous supplier, the last one shall be entitled to request temporary termination of his electricity supply. In such case, the procedure set for in art. 102, paragraphs 4-10 shall apply.

- (5) (Repealed SG, issue 100 of 2017, effective 15.12.2017).
- (6) The owners of metering systems shall submit aggregated hourly data under art. 94, paragraph 4 for each standardised load profile by coordinators of balancing groups to the independent transmission operator until 05.00 p.m. on the third working day for the days from the preceding month, but not later than the forth calendar day.
- (7) Within the term under paragraph 6, the owners of metering systems shall submit hourly data under art. 94 paragraph 4 for each unit to the coordinators of balancing groups.
- (8) The consumers under this section, data submitted by the owners of metering systems under paragraphs 6 and 7 shall be considered as metered quantities of active power.

Chapter nine BALANCING MARKET

Section I General conditions

- **Article 105.** (1) The balancing market shall be centralised and shall be organised by the independent transmission operator through the dispatcher on duty.
- (2) At the balancing market, the independent transmission operator shall sell and/or purchase electricity to/from the trade participants—suppliers of balancing energy in the national balancing market, and/or from/for the regional balancing market, in order to balance the deviation from the planned /matched generation and consumption schedules.
- (3) Bids and transactions on the balancing market shall be executed in separate dispatched aggregates/loads.
- (4) (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015) The electricity price on the national balancing market shall be determined according to the approved by EWRC "Methodology for balancing energy price determination", appendix to the Electricity Trading Rules.
- (5) (New- SG, issue 90 of 2015, effective 20.11.2015) Upon price determination under paragraph 4, the independent transmission operator shall apply also the instruction under art. 6 paragraph 9.
- (6) (Previous paragraph 5 SG, issue 90 of 2015, effective 20.11.2015) The balancing market can not be used to close open positions on commercial transactions on the contracting date.

Section II Balancing market rules

- **Article 106.** (1) The balancing market rules shall regulate the conditions for sale and purchase of balancing energy, in order to guarantee the security and sustainability of the national electric power system and the secure parallel operation of the electric power system of Continental Europe.
- (2) Electricity producers shall notify schedules pursuant to the concluded contracts, within the operational range of their aggregates and according to the expected net generation for the relevant period. Coordinators of balancing groups shall notify schedules for the quantities of electricity pursuant to the concluded contracts and the executed by them transactions on the power exchange market.
- (3) Upon electricity transit, in case of imposed curtailment on the import schedule by the relevant neighbouring operator, the corresponding external export schedule shall be curtailed accordingly, and in case of imposed curtailment of the external export schedule the import schedule shall be curtailed, respectively.
- (4) The independent transmission operator shall be entitled to refuse registration or to curtail "external" export schedule, if the quantities under this schedule are not secured by the relevant electricity quantities under "internal" schedule or by import.

Article 107. Balancing Energy (BE) traded on the balancing market shall include:

- 1. fed out energy as a result of participation in primary and secondary system control, set through the turbine controllers of the aggregates or the main controller of the electricity power system, integrally for the hour;
- 2. balancing by correcting the operational point of the aggregates (tertiary reserve), set by the dispatcher on duty of the independent transmission operator, integrally for the hour;
 - 3. fed out energy as a result of activated blocks from cold reserve, integrally for the hour;
- 4. balancing by changing the state (switched on/switched off) of the aggregates, following an order from the dispatcher on duty of the independent transmission operator, integrally for the hour;
 - 5. balancing by changing the load of consumers, following dispatchers order;
- 6. energy purchased from/sold to neighbouring electricity systems and energy as emergency delivery;
- 7. unproduced electricity as a result of activated installations of consumers from cold reserve, integrally for the hour;

- **Article 108.** (1) After the submission of generation schedules, consumption schedules, exchange schedules and bids for regulation, according to the Rules for Electric Power System Operation and these rules, the independent transmission operator shall assess the available reserves for secondary and tertiary control to ensure secure and sustainable system operation.
- (2) In case the available reserves or balancing energy are not sufficient, the independent transmission operator should act in accordance with the Rules for Electric Power System Operation.
- **Article 109.** (1) The independent transmission operator shall be responsible for the registration of the participants in the balancing market, for the collection, verification and validation of the bids, for the calculation of the required quantities of balancing energy for the day of delivery, as well as for the settlement of the mutual liabilities under transactions related to the balancing market.
- (2) Validated bids shall be submitted to the dispatcher on duty of the independent transmission operator who shall activate the bids in total or partially, according to the real time conditions.
- **Article 110.** (1) A transaction on the balancing market shall be considered as executed in the moment of partial or total activation of the bid of a balancing energy supplier, executed by the dispatcher on duty of the independent transmission operator.
- (2) In case the executed transaction on the balancing market may threaten the operational security and sustainability of the national power system and the secure parallel operation of the power system of Continental Europe, the dispatcher on duty shall be entitled to deactivate the bid of a balancing energy supplier.
- **Article 111.** (1) The independent transmission operator shall be a party to the contract with each participant in the balancing market balancing energy supplier, for all transactions executed on the balancing market.
- (2) The transaction executed on the balancing energy market shall establish the obligations of the relevant balancing energy supplier to supply or purchase energy to/from the independent transmission operator, according to the specificities of the bid and the order issued by the dispatcher of the independent transmission operator.
- (3) The executed transactions with balancing energy suppliers participating in secondary control or in system regulation through activation of cold reserve blocks, activated installations of consumers from cold reserve, activation of aggregates for tertiary reserve, shall be settled pursuant to the contracts with the independent transmission operator.
 - (4) The transaction shall refer to the relevant dispatching period.
- **Article 112.** (1) The payment obligations of the independent transmission operator to the trade participants-balancing energy suppliers, under the executed transactions on the balancing market, shall be based on:

- 1. the order of the dispatcher and the provided quantity of electricity on the balancing market by the supplier;
 - 2. the price of the relevant bid for upward regulation.
- (2) The payment obligations of the participants to the independent transmission operator under the executed transactions on the balancing market shall be based on:
- 1. the order of the dispatcher and the actual/effectively purchased quantity of electricity by the supplier on the balancing market;
 - 2. the price of the respective bid for downward regulation.
- **Article 113.** PSHPPs shall be considered as dispatchable load when the aggregate is in a pumping mode.
- **Article 114.** (1) Balancing energy traded on the balancing energy on the day of delivery shall be physically received at:
- 1. the point of connection where the dispatched aggregate is connected to the national electricity transmission network;
- 2. the moment after issued dispatch order, and which moment shall be agreed according the technical characteristics.
- (2) The balancing energy traded on the balancing market on the day of delivery by each balancing energy supplier shall be determined by the independent transmission operator for each dispatching period, provided there is validated net delivery schedule within the operational range of the aggregates, the corresponding total schedule, and after the requirements of art. 81 paragraph 8 and 9 are met.
- **Article 115.** (1) In cooperation with other transmission system operators or suppliers of balancing services from other control areas, the independent transmission operator may agree procedures for mutual usage of services offered on the balancing market or to use similar mechanisms applied in the other countries.
- (2) The procedures under paragraph 1 should be approved by the Energy and Water Regulatory Commission.

Section III Suppliers on the balancing market

Article 116. (1) Trade participants who operate dispatchable aggregates shall be obliged to become suppliers on the balancing market.

- (2) Consumers with dispatchable loads may become suppliers on the balancing market.
- **Article 117.** (Amended SG, issue 90 of 2015, effective 20.11.2015) (1) The participants in the balancing market should be determined as suppliers of balancing energy from secondary and/or tertiary control, in accordance with the Rules for Electric Power System Operation and these rules.
- (2) The independent transmission operator shall publish the prices offered by the balancing energy suppliers, but not later than two working days before the beginning of the period for which they will be applied.
- **Article 118.** (1) A trade participant who is obliged to become a supplier on the balancing market should submit written application to the independent transmission operator, in accordance with approved template, accompanied by the entire relevant technical information.
- (2) The procedure of submission, verification and acceptance of the application under paragraph 1 shall be determined by the independent transmission operator.

Section IV Register of the suppliers on the balancing market

- **Article 119.** The independent transmission operator shall establish and keep a register of the suppliers on the balancing market.
- **Article 120.** The registration of a new supplier on the balancing market and the registration under art. 119 shall be performed on the date on which the contract for participation in the balancing market with a supplier of balancing energy enters into force.
- **Article 121.** The register of the suppliers on the balancing market shall include at least the following information for each supplier on the balancing market:
- 1. (Amended SG, issue 100 of 2017, effective 15.12.2017) full name, headquarters and management address of the participant registered as a supplier on the balancing market;
- 2. number and date of the contract for participation in the balancing market of the balancing energy supplier;
- 3. (supplemented SG, issue 100 of 2017, effective 15.12.2017) identification number (EIC code) of the balancing energy supplier;
- 4. (Amended SG, issue 100 of 2017, effective 15.12.2017) a list of all dispatchable aggregates and dispatchable loads operated by the relevant supplier on the balancing market;
- 5. (Amended SG, issue 100 of 2017, effective 15.12.2017) type of regulation in which the dispatchable aggregates and loads operated by the relevant supplier on the balancing market participate;

- 6. (repealed SG, issue 100 of 2017, effective 15.12.2017);
- 7. (repealed SG, issue 100 of 2017, effective 15.12.2017);
- 8. (repealed SG, issue 100 of 2017, effective 15.12.2017).
- **Article 122.** (1) Each supplier on the balancing market shall be entitled to verify the information related to him from the register of the suppliers on the balancing market and to require change of any noticed discrepancy.
- (2) The information from the register of the suppliers on the balancing market shall be public.
- **Article 123.** (1) A supplier of balancing energy may terminate his participation in this market by an application in written form, only in case the relevant supplier will not operate the dispatchable aggregate.
- (2) The application under paragraph 1 shall be sent at least one month before the date on which the registration of the supplier shall be terminated.
- (3) After receipt of the application under paragraph 2, the independent transmission operator shall inform the coordinator of the balancing group to which the relevant supplier belongs.
- **Article 124.** (1) The independent transmission operator shall be entitled to terminate the registration of a supplier of balancing energy in any of the following cases:
- 1. if from a given moment of time onwards the supplier is not able to meet one or more of the necessary requirements for registration as a supplier of balancing energy;
- 2. if the supplier on the balancing market does not comply with the conditions of the contract for participation in the balancing energy;
- 3. if the supplier on the balancing market breaches again the rules applied on the balancing market or the rules for settlement of mutual obligations.
- (2) The registration of a supplier on the balancing market shall be considered as terminated as of the moment of revocation of the license for generation of the relevant supplier by the Energy and Water Regulatory Commission.
- **Article 125.** (1) If a supplier on the balancing market terminates his participation in this market in accordance with the provisions of art. 123 or his registration was terminated by the independent transmission operator in accordance with the provisions of art. 124, the provisions of art. 179 shall apply for the days till the termination of the registration.
- (2) The supplier of balancing energy shall settle all his obligations with the independent transmission operator till the date of termination of the registration.

(3) The independent transmission operator shall inform the coordinator of the balancing group of the change in the register under art. 119.

Section V Centralised market of ancillary services

- **Article 126.** (1) The required available quantity of ancillary services for the independent transmission operator and for the distribution system operators shall be ensured through auctions and/or bilateral contracts.
- (2) The balancing energy resulting from the regulation/balancing of the power system shall be purchased only by the independent transmission operator.
- (3) (Amended SG, issue 39 of 2014) The availability of ancillary services and cold reserve shall be obligatory provided by the network users in accordance with the Rules for Electric Power System Operation, and the relevant costs incurred by the independent transmission operator shall be reimbursed through the price for the service "access to the electricity transmission network". The other ancillary services, including full participation in the regulation of the power system, shall be obligatory provided by the network users in accordance with the Rules for Electric Power System Operation, and the relevant costs incurred by the users shall be reimbursed through the price of the balancing energy offered in the contracts under art. 131 or in the bids for regulation.
- (4) The contracts for access and ancillary services between the independent transmission operator and the network users shall specify the volume and the price of these services.
- (5) In case the volume and the price of the ancillary services under paragraph 4 can not be agreed, then the parties to these contracts shall refer to the Energy and Water Regulatory Commission for their ex-officio determination.
- **Article 128.** (1) The independent transmission operator shall receive and verify information from the coordination centres of ENTSO-E for the quantity of electricity and the schedule for compensation of unintentional deviations from the exchange programme.
- (2) The independent transmission operator shall execute transactions for purchase/sale of electricity on the power exchange to compensate these unintentional deviations from the exchange programme.
- (3) The schedule for compensation of unintentional deviations from the exchange programme shall refer to the subgroup under art. 56a, paragraph 2, point 2 or to the subgroup for compensation of unintentional exchanges, respectively, as a part of the standard balancing group in cases under art. 56c, paragraph 5.

Section VI

Purchase of primary and cold reserve

- **Article 129.** (1) The independent transmission operator shall ensure reserve for primary control from the joint participation of an aggregate group, based on the principle of centralised purchase with contracts between the independent transmission operator and the suppliers of this reserve.
- (2) The independent transmission operator shall ensure cold reserve, based on the principle of centralised purchase with contracts between the independent transmission operator and the suppliers of this reserve.
- (3) The independent transmission operator shall determine the producers whose aggregates are technically capable and are obliged to provide the required reserve for primary control, in accordance with the requirements of the operator.
- (4) (Amended SG, issue 39 of 2014) The independent transmission operator shall pay to the producers from thermal blocks the stated availability range for participation in primary control at price agreed in a bilateral contract. The reserve for primary control of HPPs shall not be paid.
- **Article 130.** The necessity and the parameters for primary control of future producers whose single installed capacity of an aggregate will exceed 10 MVA for hydro aggregates and 200 MVA for turbo aggregates shall be determined by the independent transmission operator.

Section VII Purchase of secondary reserve

- **Article 131.** (1) (Amended SG, issue 39 of 2014) All existing producers as of the date of entry into force of these trading rules, whose aggregates are technically capable to provide reserve for secondary control, shall be obliged to offer this reserve to the independent transmission operator at agreed prices for availability and regulating power.
- (2) The independent transmission operator shall conclude annual bilateral contracts with the producers under paragraph 1 for provision of reserve for secondary control.
- (3) The aggregates participating in secondary control shall be determined by the independent transmission operator.
- (4) (Amended SG, issue 39 of 2014) The independent transmission operator shall determine for each producer under paragraph 1, within the deadline under art. 77 paragraph 8, a range from the total available capacity for secondary control in accordance with art. 6 paragraph 2.
- (5) (Amended SG, issue 39 of 2014) The producers shall allocate the determined by the independent transmission operator range of the total available capacity for secondary control by

blocks and shall send a notification to the independent transmission operator not later than 12.00 a.m. on the day before the delivery.

- (6) (Repealed, previous paragraph 7 SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) EWRC shall be entitled to impose capped prices according the methodology of Appendix 1 to these rules.
- **Article 132.** The required reserve for secondary control in the control area of the Republic of Bulgaria shall be determined by the independent transmission operator.
- **Article 133.** Producers who have concluded direct bilateral contracts with the independent transmission operator for the provision of reserve for secondary control shall not be entitled to provide for one and the same settlement period bids for upward and downward regulation for the aggregates providing reserve for secondary control.

Section VIII

Purchase and bids of balancing energy from tertiary reserve

- **Article 134.** (1) The independent transmission operator shall purchase balancing energy from tertiary reserve for upward regulation, if recovery of the reserves for secondary control is required.
- (2) The independent transmission operator shall sell balancing energy from tertiary reserve for downward regulation, if recovery of the reserves for secondary control is required.
 - **Article 135.** (1) Sources of balancing energy from tertiary regulation shall be:
- 1. dispatchable units of producers that do not participate in the provision of primary and secondary reserve.
 - 2. dispatchable units of end consumers.
- (2) PSHPPs shall be considered as dispatchable load when the aggregate is in pumping mode.
- **Article 136.** Bids for regulation shall state the capability of a trade participant to deviate from the generation/consumption schedule against the relevant price for increase or reduction of the generation/consumption in case this is ordered by the dispatcher on duty.
- **Article 137.** (1) Bids for downward regulation, submitted from producers, shall be to reduce generation.
- (2) Activation of bids for downward regulation under paragraph 1 by the dispatcher on duty shall aim at reduction of active power output of the relevant unit against the level stated in the generation schedule.

- **Article 138.** (1) Bids for downward regulation, submitted from end consumers, shall be to increase consumption.
- (2) Activation of bids for downward regulation under paragraph 1 by the dispatcher on duty shall aim at increasing the electricity consumption of the relevant unit against the stated in the consumption schedule.
- **Article 139.** (1) Bids for upward regulation, submitted from producers, shall be to increase generation.
- (2) Activation of bids for upward regulation under paragraph 1 by the dispatcher on duty shall aim at increasing the active power output of the relevant unit against the level stated in the generation schedule.
- **Article 140.** (1) Bids for upward regulation, submitted by end consumers, shall be to reduce consumption.
- (2) Activation of bids for upward regulation under paragraph 1 by the dispatcher on duty shall aim at reduction of the electricity consumption of the relevant unit against the stated in the consumption schedule.

Section IX Merit order list of the balancing energy sources

- **Article 141.** (1) The independent transmission operator shall develop a merit order list and shall activate the balancing energy sources according to this list, taking into account the technological criteria related to the security of the supply and the sustainability and safety of the power system, in accordance with the rules under art. 83 paragraph 1 point 4 of the Energy Act.
- (2) The merit order list shall contain bids for regulation submitted by the suppliers registered under art. 119.
- (3) The ordering of the balancing energy sources, when compiling the merit order list for compensation of generation capacity deficit in the power system, shall be in ascending order of the price of the energy supplied by them.
- (4) The ordering of the balancing energy sources, when compiling the merit order list for compensation of generation capacity surplus in the power system, shall be in descending order of the price of the energy offered by them.
 - (5) In case of bids with equal prices, priority shall be given to the bids received earlier.

Section X Dynamic parameters

- **Article 142.** Suppliers on the balancing market shall be obliged to submit to the operator dynamic parameters, representing aggregated data and characteristics from the separate dispatchable units related to their capability to change the power output.
- **Article 143.** (1) The dynamic parameters shall be submitted by the balancing energy suppliers in a summarised form in a form approved by the independent transmission operator.
- (2) At change of the dynamic parameters, the suppliers of balancing energy shall inform the independent transmission operator in a timely manner.
- (3) The balancing energy suppliers shall send the information under paragraph 1 to the independent transmission operator via e-mail, fax or other approved means.

Article 144. The dynamic parameters shall include at least the following information:

- 1. velocity of power step up, MW/min;
- 2. velocity of power drop, MW/min;
- 3. highest possible quantity for delivery, MWh only for HPPs and PSHPPs;
- 4. delivery period of the quantity under item 3, in hours and minutes only for HPPs and PSHPPs;
 - 5. activation time of bid for downward regulation, min;
 - 6. activation time of bid for upward regulation, min;
- 7. time for execution of an order for change of power, given by the dispatcher on duty, as of the moment of receipt till the moment of beginning of the change, min;
 - 8. minimal step for power change, MW.

Section XI

Form for provision and registration of bids for regulation

- **Article 145.** (1) Registered balancing energy suppliers shall submit bids for upward regulation and bids for downward regulation for the deviation from the generation/consumption schedules for each separate dispatchable unit, in a form set by the independent transmission operator.
- (2) Bids for reduction of generation and for increase of consumption shall contain the deviation of the active power from the generation/consumption schedule, the dispatch periods and the bid price.
 - (3) Bids for increase of generation and for reduction of consumption shall contain the

deviation of the active power from generation/consumption schedule, the dispatch periods and the bid price.

- (4) (Amended SG, issue (4) Bids for upward regulation and bids for downward regulation shall be submitted by suppliers of balancing energy within the terms according to the instruction and the data exchange schedule under art. 77 paragraph 1 and shall refer to the separate dispatch periods in the day of delivery.
- **Article 146.** (1) The duration of a bid shall be equal to 15 minutes, and the supplier shall be obliged to submit bids for at least sixteen consequent dispatch periods (block).
 - (2) The start and end moments of each bid shall match to 15 minutes.
- **Article 147.** (1) The step of the bid submitted for a dispatchable unit of a producer or end consumer should be at least 5 MW.
- (2) The supplier may submit bids for upward or downward regulation only within the operational range of the dispatchable unit.
- **Article 148.** (1) A supplier on the balancing market may submit for any of his dispatchable units one bid for upward regulation and one bid for downward regulation for a block of sixteen dispatching periods.
 - (2) Each block of sixteen dispatch periods shall start every hour.
 - (3) The price of the bid for regulation shall be valid for the total block.
 - **Article 149.** (1) Registered bids for regulation can not be withdrawn.
 - (2) Price and quantities of activated bids shall be determined as follows:
- 1. producer shall sell to the independent transmission operator the quantity of electricity generated pursuant to an order of the dispatcher on duty, at the price of his activated bid for upward regulation;
- 2. producer shall purchase from the independent transmission operator the non-generated quantity of electricity pursuant to an order of the dispatcher on duty, at the price of his activated bid for downward regulation;
- 3. end producer shall sell to the independent transmission operator the unconsumed quantity of electricity pursuant to an order of the dispatcher on duty, at the price of his activated bid for upward regulation;
- 4. end consumer shall purchase from the independent transmission operator the quantity of electricity consumed pursuant to an order of the dispatcher on duty, at the price of his activated bid for downward regulation.

Section XII Activation of bids for regulation

- **Article 150.** (1) The dispatcher on duty shall activate bids for regulation, in order to maintain the required reserve for secondary control and/or the power system capacity balance.
- (2) The dispatcher on duty may activate together bids for upward and downward regulation, in order to prepare the generation capacities to ensure additional rotation reserve or in order to overcome curtailments in the system.
- (3) At activation of bids for regulation, the dispatcher on duty may change the operational capacity of an unit within these bids.
- **Article 151.** (1) The bid for regulation shall be activated via telephone or other communication tools approved by the independent transmission operator.
- (2) The operational activation of a bid for regulation and the subsequent instructions within their duration shall be documented in a registration table containing the instructed deviation from the generation/consumption schedule and the time of giving the instruction.
- (3) The registered instructions shall be used in the process of settlement of the supplier on the balancing market under the provisions of chapter ten.

Article 152. The dispatcher on duty shall activate a bid in accordance with:

- 1. the dynamic parameters of the relevant unit and the specific conditions in the power system;
 - 2. the ranking order in the merit order list of the balancing energy sources.
- Article 153. Where a supplier on the balancing market has activated bid for regulation and at the end of the dispatch period he has submitted a bid for regulation for the period following the current dispatch period, but he hasn't received an order from the dispatcher on duty for deactivation of his bid, it shall be considered that the dispatcher on duty has activated his bid for the next period.
- **Article 154.** (Amended SG, issue 100 of 2017, effective 15.12.2017) Suppliers on the balancing market submitting bids for regulation for a given day of delivery shall submit them in compliance with the instruction and schedule for exchange of information under art. 77 paragraph 1, developed and published by the independent transmission operator.

Chapter Ten BASIC PRINCIPLES FOR IMBALANCES CALCULATION AND SETTLEMENT

OF THE BALANCING GROUPS

Section I General conditions

Article 155. (1) The rules for calculation of the imbalances shall regulate the mechanism for calculation of the deviations between registered schedule, metered values of producers and consumers and physical exchanges between the respective networks and balancing group coordinators.

- (2) The independent transmission operator shall apply equal principles at determining the imbalances and the balancing energy prices toward the coordinators of standard and special balancing groups.
- (3) (Amended SG, issue 100 of 2017, effective 15.12.2017) The quantities under the registered schedules shall be quantities agreed between the trade participants, including the quantities registered for trading on the power exchange market and the quantities provided to the balancing energy and ancillary services market.
- (4) The metered values shall be the read and validated by the owners of the commercial metering devices values of producers, consumers and realised physical exchanges between the relevant networks or neighbouring power systems.
- (5) The imbalances shall be determined on the basis of aggregated metered values for production, consumption and physical exchanges referred to a coordinator of balancing group.
- (6) The producers and the consumers with dispatchable units shall be responsible for the created "imbalance against dispatching order" and the compliance with the agreed quantities and the dispatching orders received by the dispatcher on duty. The dispatching orders shall have priority before the agreed quantities.
- (7) The suppliers of balancing energy shall deliver or purchase the total energy to/from the independent transmission operator according to the orders issued by the dispatcher of the independent transmission operator.
- (8) At determining the imbalances, the unplanned exchanges with neighbouring control areas/blocks shall be taken into account.
- (9) (New- SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) The calculation and the allocation of the costs from imbalances shall be in compliance with the principles for allocation of the total imbalance between the separate balancing group members, provided for in the contracts under art. 11 point 9. The electricity producers, including the producers from renewable sources and highly efficient combined generation, shall pay costs for coverage of imbalances in the relevant balancing group of which they are members, only in case of a difference in the registered schedules and the actual generation. Where the producer doesn't

submit a generation schedule, the coordinator of the relevant balancing group shall compile it on his behalf.

Article 156. Imbalances shall be:

- 1. imbalance of a coordinator of balancing group determined on the basis of a net agreed position and net metered position;
- 2. imbalance against dispatching order, determined for each generation dispatchable block (plant) or dispatchable consumption unit, determined as the difference between the planned generation, according the net agreed position, the dispatching order and the actual generation according the net metered position; where a block of the producer participates in primary and /or secondary frequency control and exchange capacities or implements a dispatching order for reduction of power output below the required, in order to cover the quantities according his registered schedules, it shall be considered that the relevant producer has no imbalance;
- 3. in case a block of the producer participates in primary and /or secondary frequency control and exchange capacities or implements a dispatching order for reduction of power output below the required, in order to cover the quantities according his registered schedules, it shall be considered that the relevant producer has no imbalance.
- 4. system imbalance, which shall be determined as the total aggregated imbalance of the power system for each separate dispatching period.
- **Article 157.** In order to calculate imbalances, the independent transmission operator shall determine:
- 1. the net agreed position of each coordinator of balancing group, as a sum of all agreed supplies/purchases with/from other coordinators of balancing groups, including the transactions executed on the power exchange market and on the balancing energy and ancillary services market;
- 2. the net metered position of each coordinator of balancing group, as a sum of all metered approved values at the metering points and the energy exchange points;
 - 3. the unplanned exchanges.
- **Article 158.** (1) The agreed position shall be all supplies or purchases of electricity according to the last registered schedules and dispatching orders (ordered imbalance) of a coordinator of balancing group.
- (2) The agreed position shall include the following exchanges registered by the independent transmission operator:
- 1. exchange schedules between coordinators of balancing groups within the power system of Bulgaria;

- 2. export/import agreed by a balancing group coordinator;
- 3. energy supply for the electricity system operator from dispatched producer/consumer as a result of upward regulation, at participation in the secondary control, provision of cold reserve or in the balancing energy market with a bid for balancing energy;
- 4. purchase of energy by the electricity system operator from dispatched producer/consumer as a result of downward regulation, at participation in the secondary control or in the balancing energy market with a bid for downward regulation.
- (3) The net agreed position NAP_{jb} of a coordinator of balancing group b, for each settlement period s, shall be determined under the following formula:

$$\begin{aligned} NAP_{sb} &= \left(\sum QED_{pur(sb)} + \sum \llbracket QED_{sl(sb)}) \rrbracket + \left(\sum AEI_{sb} - \sum \llbracket AEE_{sb}\right) + \left(\sum QEDP_{pur(sb)} - \sum \llbracket QEDP_{sl(sb)}\right) + QEOU_{sb} - QEOD_{sb} \rrbracket \rrbracket \end{aligned}$$

where:

QEDpur(sb), respectively QEDsl(sb), is the agreed energy for purchase, respectively for sale, from/to another coordinator of balancing group for settlement period s;

AEIsb, respectively AEEsb, is the agreed energy for import, respectively for export, according external schedule for settlement period s;

QEDPpur(sb), respectively QEDPsl(sb), is the quantity of energy determined for purchase, respectively for sale, on the power exchange market for settlement period s;

QEOUsb is the quantity of energy from ordered bids for upward regulation for settlement period s of participants in the balancing market in the relevant balancing group;

QEODsb is the quantity of energy from ordered bids for downward regulation for settlement period s of participants in the balancing market in the relevant balancing group.

- **Article 159.** (1) The net agreed position shall be determined for each coordinator of balancing group, for each separate settlement period s and shall be the last validated and registered by the electricity system operator quantity for the relevant settlement period s, determined under art. 158 paragraph 3.
 - (2) The net agreed position shall be in *MWh*.

Article 160. The net metered position shall be delivery metered at the connection point of a producer or consumer, the point of energy exchange between one network and other network or approved standard load profile for one or a group of consumers, or approved coefficient representing technological losses, as appropriate.

Article 161. Net metered position shall be refer to:

- 1. net generation metered by a commercial electricity metering device of a generation block or plant, which was injected in the network;
- 2. net consumption metered by a commercial electricity metering device of a consumer, which was consumed from the network;
 - 3. net exchange between networks of two different operators;
 - 4. export, metered by a commercial electricity metering device, to other power system;
 - 5. import, metered by a commercial electricity metering device, from other power system;
 - 6. technological losses.
 - **Article 162.** (1) All metered values under art. 161 points 1 and 5 shall be positive values.
- (2) All metered values under art. 161 point 3, in case of a delivery from other networks, shall be positive values.
 - (3) All metered values under art. 161 points 2, 4 and 6 shall be negative values.
- (4) All metered values under art. 161 point 3, in case of a delivery to other networks, shall be negative values.
- **Article 163.** (1) The net metered position for a coordinator of balancing group who is not the independent transmission operator, transmission or distribution company, shall be determined as the difference between the aggregated net generation of producers for whom balancing responsibility is taken and the aggregated net consumption of consumers for whom balancing responsibility is taken.
- (2) The net metered position for a coordinator of balancing group who is transmission or distribution company and who is responsible for the coverage of the technological losses in the relevant network, shall be determined with a view to:
 - 1. technological losses in the relevant network, determined according art. 92;
 - 2. physical deliveries to other networks, including export;
 - 3. physical deliveries from other networks, including import;
 - 4. net generation of the producers connected to the relevant network;
 - 5. net consumption of the consumers connected to the relevant network.

Article 164. The net imbalance of a coordinator of balancing group who is not the independent transmission operator, transmission or distribution company, shall be the difference between the net agreed position determined under art. 158 paragraph 3 and the net metered position determined under art. 163 paragraph 1.

Article 165. The net metered position of a coordinator of balancing group who purchases energy from priority producers shall be determined as the sum of the net generation of all generation blocks from which the coordinator of the balancing group is obliged to purchase the priority generation.

Article 166. (1) The system imbalance shall be the total imbalance of the power system for each dispatching period.

- (2) The system imbalance shall be determined with a view to the total quantity of energy delivered by the suppliers of balancing energy and ancillary services, for each dispatching period, at upward and downward regulation, and the unplanned exchanges.
- **Article 167.** (1) The unplanned exchanges (*Eexchnage*) shall be the deviations from the registered by the independent transmission operator quantities for import and export according the external schedules and the actual physical exchanges for each dispatching period and shall be determined under the formula:

$$E_{exchange(s)} = (\sum Exp_{plan(s)} - \sum Exp_{real(s)}) - (\sum Imp_{real(s)} - \sum Imp_{plan(s)})$$

where:

Expplan(s), respectively Impplan(s), are the planned export, import respectively;

Expreal(s), respectively Impreal(s), are the realised export, import respectively.

(2) The unplanned exchanges shall be referred to the imbalances of the independent transmission operator as a coordinator of special balancing group.

Section II Settlement rules

Article 168. The settlement rules shall regulate the principles for calculation of the liabilities under the following transactions:

- 1. transactions executed on the power exchange market;
- 2. transactions executed on the balancing energy market with suppliers of balancing energy;
- 3. transactions for sale and purchase of balancing energy with the coordinators of balancing groups, in order to compensate the created imbalances;

- 4. transactions with the suppliers of ancillary services;
- 5. transactions for purchase of reserves (primary, secondary, cold);
- 6. transactions for purchase of energy for coverage of the technological losses in the networks.
- **Article 169.** In order to ensure open and non-discriminatory settlement process, the independent transmission operator shall:
- 1. (Amended SG, issue 39 of 2014) establish and keep energy accounts for each coordinator of balancing group and for each supplier of balancing energy;
 - 2. require provision of guarantee securities;
- 3. determine prices of balancing energy for energy deficit and energy surplus, for each settlement period;
- 4. perform preliminary settlement on a weekly basis and final physical and financial settlement on a monthly basis;
- 5. calculate the imbalances of the separate balancing groups and of the balancing energy actually provided from the suppliers of balancing energy;
- 6. re-allocate additional costs or incomes as a result of the implemented settlement processes according to the trading rules;
- 7. implement control in respect to the implementation of the financial liabilities and shall impose measures at non-compliance.
- **Article 169a.** (New SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015, supplemented, issue 100 of 2017, effective 15.12.2017) In order to ensure open and non-discriminatory settlement process and risk management at the power exchange market, the power exchange market operator shall:
 - 1. require provision of guarantee securities;
- 2. (Amended SG, issue 100 of 2017, effective 15.12.2017) publish prices for each separate market segment for a given period and market area;
- 3. (amended and supplemented SG, issue 100 of 2017, effective 15.12.2017) perform settlement and shall determine the liabilities and the receivables of the participants in the power exchange market for each separate market segment and delivery period;
- 4. shall implement control in respect to the implementation of financial liabilities and shall impose measures at non-compliance.

Article 170. (1) The energy accounts shall be:

- 1. (repealed, prev. point 2 SG, issue 90 of 2015, effective 20.11.2015) an energy account for each supplier of balancing energy;
- 2. (prev. point 3 SG, issue 90 of 2015, effective 20.11.2015) an energy account for each balancing group coordinator.
- (2) The metered generation, registered schedules for purchase of energy and the participation in the balancing energy market or the ancillary services market through purchase of energy at downward regulation shall be referred to the credit of an energy account under paragraph 1 point 3.
- (3) The metered consumption, registered schedules for sale of energy and the participation in the balancing energy market or the ancillary services market through sale of energy at upward regulation shall be referred to the debit of an energy account under paragraph 1 point 3.
 - (4) The independent transmission operator shall develop templates of:
 - 1. the excerpts for settlement of the transactions according art. 168 points 2 and 3;
- 2. (repealed, prev. point 3 SG, issue 39 of 2014) excerpts for provided capacity reserves under art. 168 point 5;
- 3. (prev. point 4 SG, issue 39 of 2014) excerpts for provided other ancillary services under art. 168 point 4.
 - (5) (New-SG, issue 39 of 2014, repealed, issue 100 of 2017, effective 15.12.2017).
- (6) (Previous paragraph 5 SG, issue 39 of 2014) The excerpts under paragraph 4 shall be integral part of the invoices issued under section V.
- **Article 171.** (Amended and supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015) (1) The independent transmission operator shall be entitled to require guarantee securities for the transactions under art. 168 points 1, 2, 3 and 4.
- (2) The independent transmission operator shall develop a procedure to determine the amount and the types of guarantee securities under paragraph 1, submission deadlines, update and the effects from non-fulfilment, which shall be public and accessible for the stakeholders.
- (3) The guarantee security from the participants in the power exchange market shall be determined according to the operational rules of the power exchange market.

Section III (Repealed - SG, issue 90 of 2015, effective 20.11.2015)

Rules for transaction settlement on the power exchange market

Article 172. (Amended - SG, issue 39 of 2014, repealed, issue 90 of 2015, effective 20.11.2015).

Article 173. (Repealed - SG, issue 90 of 2015, effective 20.11.2015).

Section IV Rules for imbalance settlement of the balancing group coordinators

Article 174. (1) (Amended - SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall determine the imbalances of the coordinators of balancing groups for each settlement period, after receipt of confirmed metered values from the owners of the commercial electricity metering devices according chapter seven.

- (2) The independent transmission operator shall compile for each calendar day, for each coordinator of balancing group, hourly daily excerpt for settlement of imbalances and shall determine the net value of the daily settlement.
- (3) The quantity of energy from metered imbalance (*QEMI*) shall be determined under the following formula:

$$QEMI_{SB} = \sum QED_{sb} + \sum QEM_{sb}$$
 where:

QEAsb is the quantity of energy according to the registered net exchange schedules of a coordinator of balancing group b, for settlement $period\ s$, stated under the provision of chapter six;

QEMsb - the metered quantity of energy of all units in balancing group b.

(4) The quantity of energy from activated imbalance (*QEAI*) shall be determined under formula:

$$QEAI_{sb} = \sum QEACR_{sb} + \sum QEASR_{sb}^{+} + \sum QEASR_{sb}^{-} + \sum QEOU_{sb}^{+} + \sum QEOU_{sb}^{-}$$

$$KEAH_{sb} = \sum KEACP_{sb} + \sum KEABP_{sb}^{+} + \sum KEABP_{sb}^{-} + \sum KEP\Pi_{sb}^{+} + \sum KEP\Pi_{sb}^{-} + \sum KEP\Pi_{sb}^{-}$$

where:

QEACRsb is the total quantity of energy with which the units of a balancing group b has actually increased their generation and/or decreased their consumption for settlement interval s as a result of activated cold reserve;

QEASR+ sb is the total quantity of energy with which the units of balancing group b have actually increased their generation for settlement interval s as a result of activated secondary upward regulation;

QEASR+ sb is the total quantity of energy with which the units of balancing group b have actually decreased their generation for settlement interval s as a result of activated secondary downward regulation;

QEOU+ sb is the total quantity of energy from ordered upward bid with which the units of balancing group b have increased their generation or have reduced their consumption for settlement interval s, as a result of activated upward regulation bids;

QEOD- sb is the total quantity of energy from ordered downward bid with which the units of balancing group b have decreased their generation or have increased their consumption for settlement interval s, as a result of activated downward regulation bids.

(5) The quantity of energy from net imbalance (*QEND*) for the balancing group b shall be determined under the formula:

$$QEND_{sb} = QEMI_{sb} - QEAI_{sb}$$

- (6) Depending on the value of the calculated net imbalance, the following marking shall be used:
 - 1. when QENDsb > 0, is marked by QEND+sb;
 - 2. when QENDsb -sb;
 - 3. when QENDss = 0, is marked by QEND0sb.
- (7) The net value of the daily settlement (*NVDSb*) of the coordinator of balancing group b shall be determined under the formula:

$$HCДC_b = KEHH_{sb}^+ ЦЕИ_s - KEHH_{sb}^- ЦЕН_s$$

Article 175. (1) The independent transmission operator shall compile, separately for each calendar day, for each supplier of balancing energy from secondary control and cold reserve, hourly daily excerpt for settlement and shall determine the net value of the daily settlement.

(2) The net value of the daily settlement of a supplier of balancing energy from secondary

control and cold reserve (NVDSSCCRk) shall be determined under the formula:

$$NVDSSCCR_k = \sum_{k=1}^{n} QEACR_{sk}PCR + (\sum_{k=1}^{p} QEASR_{sk}^{+} + \sum_{k=1}^{p} QEASR_{sk}^{-})PESR$$

- **Article 176.** (1) The independent transmission operator shall compile, separately for each calendar day, for each supplier of balancing energy from tertiary control, hourly daily excerpt for settlement and shall determine the net value of the daily settlement.
- (2) The net value of the daily settlement of a supplier of balancing energy from tertiary control (NVDSTCk) shall be determined under the formula:

$$\text{NVDSTC}_k = \sum_{l=1}^m QEOU^+_{skl}PEB + \sum_{l=1}^m QEOD^-_{skl}PED$$

Article 177. (1) (Amended - SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall compile, separately for each coordinator of balancing group, monthly excerpt for settlement of imbalances, till the 10th day of the month following the month of reading, which shall include the aggregated values from the daily settlement for the period. The monthly excerpt shall contain at least the following information:

- 1. date of compilation, period, ID number of the coordinator of the balancing group;
- 2. aggregated energy surplus for the period;
- 3. aggregated energy deficit for the period;
- 4. net monthly imbalance;
- 5. total value of the liabilities of a coordinator of balancing group;
- 6. total value of the receivables of a coordinator of balancing group.
- (2) The daily excerpt for settlement shall be compiled on a weekly basis, till Thursday for the days from Monday to Sunday inclusive, for the preceding calendar week.
- (3) In case of lack of data necessary for the compilation of the daily excerpt for settlement within the deadline under paragraph 2, not by fault of the independent transmission operator, the excerpt shall be issued within 3 working days as of the moment of receipt of the data.
- (4) In case of lack of data till the 3rd day of the month following the reading, the owners of the electricity metering devices shall be obliged to send replacing data according the procedures provided for in the Electricity Metering Rules and these trading rules.
 - (5) The sending of the daily and monthly excerpts shall be through means approved by the

independent transmission operator.

(6) (Amended - SG, issue 90 of 2015, effective 20.11.2015) The coordinators of balancing groups shall be entitled to appeal the data in the excerpts within two months as of their receipt.

Section V Invoicing of balancing energy

- **Article 178.** (1) The independent transmission operator and the coordinators of balancing groups shall issue invoices on the basis of monthly excerpt for settlement under art. 175, for the quantity of balancing energy which they have sold for the relevant metering period.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) All invoices shall be issued on the last day of the calendar month for which they refer and shall be submitted to the trade participants till the 10th day of the following month.
- (3) The deadline for payment of liabilities of the coordinators of balancing groups to the independent transmission operator shall be the 15th day of the month following the month of reading.
- (4) The deadline for payment of liabilities of the independent transmission operator to the coordinators of balancing groups shall be the 20th day of the month following the month of reading.

Section VI

Rules for settlement of imbalances of suppliers of balancing energy and ancillary services

- **Article 179.** (1) The independent transmission operator shall calculate, for each supplier of balancing energy and ancillary services, the quantity of balancing energy actually delivered for each dispatching period, after receipt of the confirmed metered net values of the dispatchable generation and consumption units.
- (2) The actually delivered /purchased balancing energy by the suppliers of balancing energy as a result of activated bid for regulation shall be determined according art. 4 and art. 5 of the methodology appendix no. 1.
- (3) The independent transmission operator shall calculate, for each dispatching period, the difference between the ordered imbalance (QEOI) and the quantity of balancing energy actually delivered as a result of activated downward bid (QEAD) or activated upward bid (QEAB).
- (4) The independent transmission operator shall pay/receive payment to/from suppliers of balancing energy for the total quantity of balancing energy activated according to the orders issued by the dispatcher of the independent transmission operator.

(5) The excerpts for settlement of the suppliers of balancing energy shall be issued within the deadlines under art. 177.

Section VII Appeals and recapitulation

- **Article 180.** (1) In case an excerpt for settlement is appealed within the deadlines under art. 177 paragraph 6 by a coordinator of balancing group, supplier of balancing energy or participant in the power exchange market, the independent transmission operator shall verify the information within two working days, and:
- 1. shall accept the appeal and shall issue new excerpts for settlement which will be send and confirmed within two working days as of the receipt of the notification for appeal;
- 2. shall not accept the appeal and shall inform the appealing party within two working days as of the receipt of the notification for appeal.
- (2) In case the dispute under paragraph 1 is not settled as of the date of issuance of the invoices, the invoices shall be issued on the basis of the appealed excerpt.
- **Article 181.** (1) After the settlement of a dispute on an excerpt for settlement, the independent transmission operator shall issue new excerpts for settlement.
- (2) At change of the tax basis at which the invoice was issued, after the dispute was settled, debit or credit notice shall be issued accordingly.
- (3) The liabilities under the issued tax debit or credit notices shall be paid within the deadlines under art. 178 paragraphs 3 and 4.
- **Article 182.** (1) (Amended SG, issue 90 of 2015, effective 20.11.2015) Recapitulation shall be made at retrospective change of the data for settlement, only for the units under art. 86 paragraph 1, resulting from incorrect metering, processing and validation of the data from the owners of the electricity metering devices, errors in transmitting the information to the independent transmission operator, malfunction of the commercial metering devices, technical errors in the settlement or amendments in the legislation.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) The recapitulation under paragraph 1 shall be for a period not longer than two months, preceding the date of establishment of the change in the data for settlement, only in respect to the concerned units.
- (3) The independent transmission operator shall not change the balancing energy prices, determined for the period under paragraph 2, during the recapitulation.
- Article 183. Metering, validation and sending of data from the electricity metering devices, ownership of the distribution companies, shall be in accordance with the Electricity Metering

Section VIII Guaranteeing of the balancing energy transactions

Article 184. (1) (Supplemented - SG, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Balancing group coordinators and electricity traders without physical units shall provide a guarantee security in favour of the operator for the transactions executed by them on the balancing energy market. The independent transmission operator shall not require security for the group of the power exchange market operator. The amount and the update of the guarantee security shall be determined by an instruction of the independent transmission operator.

- (2) The security under paragraph 1 shall be unconditional and irrevocable bank guarantee, opened in favour of the operator, according approved by the operator template, with validity of one year or cash deposit on the account of the operator.
- (3) The amount and the type of the security guarantee shall be determined in the balancing contract.
- (4) (Amended SG, issue 100 of 2017, effective 15.12.2017) In case a person under paragraph 1 does not pay a liability to the operator within the deadline under art. 178 paragraph 3, the operator shall be entitled to encash, via written request to the bank, the outstanding amount and the interest on it from the provided guarantee security.
- (5) (New- SG, issue 100 of 2017, effective 15.12.2017) The Energy and Water Regulatory Commission may issue obligatory instructions to amend and supplement the instruction under paragraph 1.
- **Article 185.** (Amended SG, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
 - **Article 186.** (Repealed SG, issue 100 of 2017, effective 15.12.2017).
- **Article 187.** (Supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 188.** (Supplemented SG, issue 39 of 2014, amended, issue 90 of 2015, effective 20.11.2015, repealed, issue 100 of 2017, effective 15.12.2017).
- **Article 189.** (Amended SG, issue 90 of 2015, effective 20.11.2015) The independent transmission operator shall send written notification for the amount of the updated guarantee security to the coordinator of the balancing group who shall be obliged to update the amount within 2 working days.

Section IX

Conditions for guarantee securities utilisation

- **Article 190.** (1) (Amended SG, issue 90 of 2015, effective 20.11.2015) In case a coordinator of balancing group fails to pay a liability invoiced under art. 178 paragraph 1 within the deadline, the independent transmission operator shall send request for encashment of the outstanding amount from the bank guarantee or shall encash the outstanding amount from the provided deposit not earlier than 2 working days after the maturity date under the invoice.
- (2) (Amended SG, issue 90 of 2015, effective 20.11.2015) Balancing group coordinators shall be obliged to recover the funds under the guarantee securities within two working days as of the notification by the independent transmission operator for sent request for encashment of guarantee.

Chapter eleven **ELECTRICITY MARKET MONITORING**

Section I Market monitoring target

- **Article 191.** (1) (Amended SG, issue 100 of 2017, effective 15.12.2017) Market monitoring shall be performed by the Energy and Water Regulatory Commission, the independent transmission operator and the power exchange market operator.
- (2) The coordinators of standard, combined and special balancing group shall provide to the commission regular information, as follows:
- 1. Data for the members of the balancing group, including headquarters, management address, contact person, EIC, registration code on balancing market, etc. (for household consumers only summarised information shall be provided).
 - 2. Quantities of traded electricity between the members of the balancing group.
 - 3. Prices at which the electricity is traded between the members of the balancing group.
 - 4. Quantities and prices for allocation of imbalances within the balancing group.
 - 5. Other information needed for monitoring purposes.
 - (3) The aim of the monitoring is to determine (assess):
 - 1. market structure and operation;
 - 2. market effectiveness;

- 3. presence of misuse of market power;
- 4. necessity to amend the trading rules and the market structure, arisen in the process of electricity market operation;
 - 5. necessity to amend the procedures of the transmission system operator.

Section II Information provided by trade participants to the commission

- **Article 192.** (1) Trade participants shall provide to the Commission information and documents necessary for market monitoring, in accordance with the indicated by the Commission scope, period and deadline on a case-by-case basis.
 - (2) Information shall be provided both on paper and in electronic form or electronically.
- (3) Trade participants can not refuse provision of requested information by the commission by refereeing to trade secret.
- (4) In respect to the rights of the Commission in the process of electricity market monitoring, the Commission may require additional information from the trade participants, if necessary.
- (5) The balancing group coordinators, through which the producers under art. 69 paragraph 4 sell the total or part of the electricity generated by them on the power exchange, shall provide to the Commission till the 10th day of the month following the month to which it refers, monthly information on the sold electricity on the power exchange by producer, according to a template approved by the Commission and published on its internet page.
- (6) (Amended SG, issue 90 of 2015, effective 20.11.2015) In case the provided information is false, incomplete, incorrect or is not provided within the specified deadline, EWRC shall be entitled to impose sanction to the trade participant according the provisions of the Energy Act.

Section III Information provided by the independent transmission operator

Article 193. The operator shall prepare, keep and regularly publish general and specialised information on the market activity, the transactions at freely negotiated prices and the energy traded on the balancing market.

Article 194. The operator shall establish and keep electronic registers and archive of:

- 1. trade participants;
- 2. coordinators of balancing groups;
- 3. balancing energy suppliers;
- 4. submitted and registered supply schedules;
- 5. refused or withdrawn supply schedules;
- 6. quantities of electricity traded through contracts at freely negotiated prices;
- 7. physical data and characteristics of the units of the trade participants;
- 8. submitted, refused and accepted bids and offers on the balancing energy market;
- 9. orders of the operator for activation of bids and offers;
- 10. orders for termination of market activity upon emergency situations;
- 11. data from the commercial electricity metering devices of the trade participants;
- 12. data from the settlement excerpts;
- 13. data for the due guarantee securities by the trade participants;
- 14. cash flows between the operator, on one side, and the coordinators of balancing groups and balancing energy suppliers, on other side.
- **Article 195.** The operator shall provide public information for the market activity, containing:
 - 1. register of the coordinators of balancing groups and balancing energy suppliers;
 - 2. total quantity of electricity traded at freely negotiated prices on a daily and monthly basis;
 - 3. quantities of electricity sold to end consumer;
 - 4. prices of balancing energy for the separate settlement periods.

Article 195a. The operator shall provide to the Commission till the 15th day of the month following the month to which it refers, monthly information, including hourly schedules of the producers participating in the subgroups under art. 56c, paragraphs 3 and 4, realised imbalances of these subgroups and the balancing group to which they belong, under a template approved by the Commission and published on its internet page.

Article 195b. The operator shall provide to the Commission till the 15th day of the month following the month of reading, monthly information, including hourly schedules of the producers other than the participants in the subgroups under art. 56c, paragraphs 3 and 4, realised imbalances of these subgroups and the balancing group to which they belong.

Article 196. The operator shall provide to each trade participant access to information related to his participation in the market within deadlines and content as follows:

- 1. registered delivery schedules till 06.00 p.m on the day preceding the day of delivery;
- 2. registered bids and offers till 06.00 p.m. on the day preceding the date to which they refer;
- 3. orders in relation to activation of bids and offers of the trade participant till 06.00 p.m. on the second working day after the dispatching date;
- 4. daily excerpts for settlement for the days from Monday to Sunday inclusive within 3 working days after the end of the week, and in case of lack of data not by fault of the operator the deadline shall start as of the moment of receipt of the data, but not later than 3 days after the end of the month of reading;
 - 5. aggregated excerpts for settlement within 5 days after the end of the calendar month.

SECTION IIIa

(New - SG, issue 100 of 2017, effective 15.12.2017) Information provided by the power exchange operator

Article 196a. (New - SG, issue 100 of 2017, effective 15.12.2017) (1) The operator shall compile, keep and regularly publish general information on the operation of the power exchange market and shall publish market data.

- (2) The operator shall compile and keep information for:
- 1. trade participants;
- 2. quantities of traded electricity;
- 3. reference prices.
- (3) The operator shall provide public information for the market activity, containing:
- 1. list of the registered participants in the power exchange market;
- 2. quantities of traded electricity in the separate market segments;

3. reference prices of the traded quantities of electricity in the separate market segments.

Article 196b. The operator shall provide to the Commission till the 10th day of the month following the month to which it refers, monthly information, including hourly proposed and realised quantities of electricity by the balancing group coordinators, through which producers under art. 69c, paragraph 4 sell the total or part of the electricity generated by them on the power exchange, under a template approved by the Commission and published on its internet page.

Section IV

Analysis and assessment of electricity market efficiency

- **Article 197.** On the basis of the information under sections two, three and five, the commission shall analyse the market efficiency and the free competition.
- **Article 198.** A trade participant with a significant influence on the market shall be a participant who solely or together with other participants has a position that is equal to masters position, i.e. a position of economic power allowing him independent behaviour from competitors, consumers and end consumers.
- **Article 199.** Effective competition is reached when none of the trade participants, solely or together with other trade participants, doesn't have significant influence on the liberalised market.
- **Article 200.** (1) During the analysis, the commission shall determine the market share of each participant who is active on the liberalised market.
- (2) The market share of each trade participant on the free market shall be calculated on the basis of some of the following indicators:
 - 1. net incomes from electricity sale;
 - 2. quantity of electricity sold to traders and to end consumers;
 - 3. number of consumers;
- 4. other applicable indicators, depending on the specifics of the relevant market in accordance with the legislation for competition protection.
- (3) Main indicator to determine the market share on the free market shall be the quantity of electricity sold to traders and end consumers.
- (4) Depending on the specifics of the market, the Commission may use other indicators, on the basis of which to determine the market shares. The need of additional indicators shall be reasoned in the decision of the Commission for the results from the performed market analysis.
- **Article 201.** (1) At the assessment of the market shares of the companies on the free market, the level of market concentration shall be also taken into account.

- (2) The level of market concentration shall be calculated through the Herfindahl-Hirschman Index (HHI) and the concentration ratio (CR).
 - (3) The Herfindahl-Hirschman Index shall be determined under the formula:

$$I_{HH} = 10000 \sum_{i=1}^{n} X_i^2$$

where:

Xi is the market share of the i-participant, in %;

- n the number of participants in the free market.
- (4) In accordance with the value of IHH, the liberalised market can be determined as:
- 1. normal competitive market with a low level of concentration at values of IHH below 1000;
- 2. reasonable competitive market with an average level of concentration at values of IHH from 1000 to 1800;
 - 3. low competitive market with a high level of concentration at values of IHH above 1800.
 - (5) The market concentration ratio shall be determined under the formula:

$$CRm = \sum_{i=1}^{m} Wi,$$

where:

Wi is the market share of the i-participant, in %;

- m the number of participants with largest market share; usually m = 1 and m = 3.
- (6) In accordance with the values of CR1 and CR3, the free market can be determined as:
- 1. value of CR1 > 20 % has influence on the level of competition;
- 2. value of CR1 > 40 % suggests master position on the market;

- 3. value of CR1 > 50 % unconditionally is considered as indication for master position on the market;
 - 4. value of CR3 equal to almost 0 % ideal competition;
 - 5. values of CR3 between 40% and 70% averagely competitive market;
 - 6. values of CR3 between 70% and 100% low competitive market.

Section V Results from the market monitoring

Article 202. The operator shall develop and provide to the Commission regular reports on the monthly, quarterly and annual market activity and additional reports requested by the Commission containing information for:

- 1. trade participants on the market and traded quantities of electricity by them at freely negotiated prices;
 - 2. total quantity of electricity traded at freely negotiated prices;
 - 3. prices of balancing energy for surplus and for deficit minimal, average and maximal;
 - 4. settlement of the operator;
 - 5. unauthorised activities on the market and non-compliance with the trading rules;
 - 6. other information requested by the Commission.
 - Article 203. Data shall be kept in data base of the operator for a period of 6 years.
- **Article 204.** All data, except the public information, shall be considered confidential and shall be subject to protection in accordance art. 114 of the Energy Act.
- **Article 205.** The Commission shall issue annual monitoring report on the market activity which shall contain:
 - 1. assessment of the structure and the operation of the monitored relevant markets;
 - 2. assessment of the incorrect operation of the market and the possible reasons for this;
- 3. analysis of the reasons that led to incorrect operation of the markets, in case such is established, including misuse of market power, practices and actions which are controversial with the good trade practices and harm or may harm the interests of the competitors, as well as any other violations of the obligations of the trade participants under these rules;

- 4. proposals for measures for elimination of established violations arisen as a result of the operation of the electricity market or suggested by the trade participants;
- 5. proposals for amendments in the electricity trading rules and/or any other legislation related to them.
- **Article 206.** (1) The commission shall apply effective counter sanctions against the trade participants who violated the trading rules and/or shall notify other competent authorities.
- (2) The Commission shall cooperate with other competent state authorities and other national regulation authorities.
- **Article 207.** (1) The operator shall publish officially monthly reports till the 15th day of the next month and an annual report on the market activity till 31.03 on its internet page.
- (2) The Commission shall publish officially the annual monitoring report on the electricity market till 15th of July, on its internet page.
- **Article 208.** (New SG, issue 90 of 2015, effective 20.11.2015) The Energy and Water Regulatory Commission shall exercise control for the compliance with these rules and the operational rules of the power exchange market.

SUPPLEMENT PROVISION

- **§ 1.** (Amended SG, issue 39 of 2014, issue 90 of 2015, effective 20.11.2015, issue 100 of 2017, effective 15.12.2017) Within the meaning of these rules:
- 1. "Power exchange" is the set of all organised market segments operated and administered by the power exchange operator, on which transactions with electricity with physical delivery are executed.
- 2. "Virtual electricity metering device" calculated aggregated values of the consumed and fed-out active power from the metering points of one or several units of a registered trade participant in the electricity market, determined in accordance with the Electricity Metering Rules.
- 3. "Group of the power exchange market operator" is a group of the power exchange market operator for the purposes of notification of the transactions executed on the power exchange market to the independent transmission operator, which does not create imbalances.
- 4. "Explicit and implicit auctions" are market based methods for congestion management applied in order to facilitate efficient cross-border trade. Through the explicit auctions, only capacity is allocated, and through the implicit auctions capacity and energy are allocated. Both methods may coexist on the same interconnection.

- 5. "Quota plants" are power plants under art. 93a of the Energy Act, which are capable to provide availability taking into account the generation characteristics of their aggregates and the forecast operational modes.
- 6. "Multi-regional coupling project MRC" is a project for coupling of the national electricity markets on the basis of the European target model (Single Price Market Coupling for DAM) with implicit allocation of the cross-border transmission capacity.
- 7. "Network services" are access to the electricity transmission network, transmission of electricity through the electricity transmission network, access to the electricity distribution networks and transmission of electricity through the electricity distribution networks.
- 8. "Indirect member of balancing group" is an unit of a trade participant for which schedules are not notified separately to the independent transmission operator. For this unit, the participant has transferred his balancing responsibility to a balancing group coordinator by a balancing contract with balancing group coordinator. For an unit of an end customer, it means that the customer has concluded contract for this unit only with one supplier and has transferred the balancing responsibility to this supplier in his capacity of a balancing group coordinator.
- 9. "Unit" is any separate, in respect to the electricity metering, electricity installation of a trade participant.
- 10. "Power exchange operator" is a company that holds licence for organisation of power exchange market pursuant to art. 39 paragraph 1 point 6 EA.
- 11. "Market segments operated and administered by the power exchange market operator" are day ahead market, centralised market for purchase and sale of electricity through bilateral contracts, intraday market and any other organized market within the scope of the license for power exchange market organisation pursuant to art. 39 paragraph 1 point 6 of EA.
 - 12. "Dispatching period" is an interval of time equal to 15 minutes.
- 13. "Period of settlement" is an interval of time equal to 1 hour or an interval of time set in an instruction of the independent transmission operator.
- 14. "Direct member of a balancing group" is an unit of a trade participant for which contract can be concluded with more than one supplier/consumer, but the balancing responsibility is transferred to only one of them, registered as a coordinator of balancing group. The trade participant shall be entitled to assign to the coordinator to notify the exchange schedules for this unit or independently to send notifications after received identification code from the independent transmission operator.
- 15. "Standardised loan profile" is a series of ratios that reflects the hourly allocation of the active power consumption for a type of unit for a period of time. The sum of the ratios for the period is equal to one. The standardised loan profile accounts for the type of the unit, external temperature, characterises of the day from the period (working, non-working, holiday) and the season (summer, winter, transition).

16. "Price coupling of region – PCR" is an initiative of the seven largest power exchange market operators in Europe, aiming at the implementation - through common rules and procedures - of the European target model for common electricity market.

TRANSITIONAL ARRANGEMENTS AND FINAL PROVISIONS

- § 2. The Electricity Trading Rules are developed on the grounds of art.91 paragraph 2 of the Energy Act and are adopted by the State Energy and Water Regulatory Commission by decision under protocol no. 110/18.07.2013 under point 1 and repeal the Electricity Trading Rules adopted by the State Energy and Water Regulatory Commission by decision under protocol no. 94/25.06.2010 under point 5 (SG, issue 64/2010)
- § 3. The Electricity Trading Rules shall enter into force as of the date of their publication in the State Gazette.
- § 4. (New SG, issue 39 of 2014) The independent transmission operator shall announce the date as of which the conditions for application of the electricity trading rules to all coordinators of balancing groups are implemented.
- § 5. (New SG, issue 39 of 2014) In case of ordered curtailment of the electricity generation, the determination of the imbalances shall be implemented under an instruction developed by and published on the internet page of the electricity system operator.
- § 6. (New SG, issue 39 of 2014) The Rules for amendment and supplement of the Electricity Trading Rules are adopted by SEWRC by decision under point 8 of protocol no. 54/08.04.2014.

TRANSITIONAL ARRANGEMENTS AND FINAL PROVISIONS

to the Rules for amendment and supplement of
the Electricity Trading Rules
(SG, issue 90 of 2015, effective 20.11.2015)

- § 92. (1) The rules for amendment and supplement of the Electricity Trading Rules shall enter into force as of the date of their publication in the State Gazette, except of: art. 56 paragraphs 17, 18 and 19 and art. 70, which shall enter into force as of 1 January 2016.
- (2) Until enforcement of art. 56 paragraphs 17, 18 and 19 and art. 70, RES producers members of special balancing group, who have reached the amount of the net specific generation, shall sell

the electricity generated by them at freely negotiated prices without changing the balancing group, and those who have moved to standard balancing group shall be registered ex-officio by the relevant network operator in the relevant special balancing group as of 1 January 2016.

- § 93. (1) Until 31 January 2016, electricity traders, balancing group coordinators and distribution system operators shall align their contract relations in respect to customer registered on the electricity market with standardised load profiles before the enforcement of the rules for amendment and supplement of the Electricity Trading Rules in accordance with the provisions of these Rules.
- (2) Until 31 January 2016, electricity traders supplying customers registered on the electricity market with standardised load profiles before the enforcement of the Rules for amendment and supplement of the Electricity Trading Rules shall align their contract relations with these customers in accordance with the provisions of these Rules.
- (3) For customers registered on the electricity market with standardised load profiles before entry into force of the Rules for amendment and supplement of the Electricity Trading Rules, art. 94 paragraphs 3 and 4 shall apply as of 1 February 2016.
- § 94. Until 31 January 2016, the distribution system operators shall undertake the required organisational and technical measures to ensure the application of standardised load profiles and the fulfilment of their obligations pursuant to art. 104b.
- § 95. Within six months of the entry into force of these Rules, EWRC shall adopt the instruction under art. 103a. Until the adoption of the instruction under art. 103a, chapter eight shall apply.
- § 96. "SEWRC" is replaced by "EWRC".

TRANSITIONAL ARRANGEMENTS AND FINAL PROVISIONS

to the Rules for amendment and supplement of

the Electricity Trading Rules

(SG, issue 100 of 2017, effective 15.12.2017)

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- § 71. The Energy and Water Regulatory Commission shall give instructions for application of the Electricity Trading Rules.
- § 72. Household and non-household end customers connected to the electricity distribution network at low voltage level members of balancing group of a coordinator who is suspended under the conditions and the procedure of art. 68 from the electricity market as of the moment of entry into force of these Rules or until 30.04.2018, who have not initiated a procedure under

chapter eight to transfer the balancing responsibility to another coordinator, shall be registered ex-officio in the balancing group of the relevant end supplier as of the 1st day of the month following the month in which they could initiate the procedure under chapter eight for the first time.

- § 73. Within 30 days of the entry into force of these Rules, the independent transmission operator shall suspend from the electricity market the trade participants who have not fulfilled their obligation for registration in the Central European register of the electricity market participants pursuant to art. 9, § 1 of Regulation (EU) 1227/2011 of the European Parliament and of the Council of 25.11.2011 on wholesale energy market integrity and transparency
- § 74. Trade participants whose units do not meet the requirements of art. 87 paragraph 3 of these Rules are obliged to align them in accordance with the legislative requirements until 1.02.2018.
- § 75. Within 45 days of the entry into force of these Rules, the independent transmission operator shall introduce procedure under art. 82 paragraph 1.
- § 76. Within 45 days of the entry into force of these Rules, the independent transmission operator shall adopt and publish on its internet page the instruction under art. 82 paragraph 3.
- § 77. The instruction under art. 88, paragraph 3 developed by the independent transmission operator and the distribution system operators shall be published on the internet page of the independent transmission operator not later than 30 October 2018.
- § 78. Within 10 days of the entry into force of these Rules, the independent transmission operator shall adopt and publish on its internet page the instruction under art. 184 paragraph 1.
- § 79. (1) The delivery interval shall be determined in an instruction of the independent transmission operator.
- (2) Until the publication of the instruction under paragraph 1, the delivery interval shall be equal to one hour.
- § 80. The provisions of art. 31 paragraph 4 shall apply as of 01.02.2018.
- § 81. The provisions of art. 102a shall apply as of 01.01.2018.

(SG, issue 72 of 2018, effective 31.08.2018)	

- § 76. These rules shall enter into force as of the day of their promulgation in "State Gazette", excluding § 41 that enters into force as of 1.10.2018.
- § 77. (1) For a RES producer with total installed capacity 4 MW and over 4 MW, till the enforcement of his contract for compensation with premiums, but not later than 1 January 2019, the provisions for RES producers generating electricity from an energy unit with total installed

capacity below 4 MW shall apply.

- (2) A producer under paragraph 1, member of a special balancing group, shall be obliged as of the date of enforcement of the contract for compensation with premiums, but not later than 1 January 2019, to transfer his responsibility for balancing to a coordinator of standard balancing group or to a coordinator of combined balancing group. In case the obligation is not fulfilled, the provisions of art. 62, paragraphs 3 and 4 of these rules shall apply.
- (3) In cases under paragraph 2, the provision of art. 103, paragraphs 3, 4, paragraph 5, p. 1, 2 and 5 and paragraph 6 of these rules. Disputable liabilities under the terminated contract for participation in the special balancing group shall be settled between coordinator of this balancing group and the producer within one month as of the change of the coordinator or under the general procedure.
- § 78. Until enforcement of the contracts with SESF for compensation with premium, but note later than 1 January 2019, art. 73a, paragraph 2 shall apply also to RES producers with total installed capacity 4 MW and over 4 MW.
- § 79. Till the enforcement of the contracts with SESF for compensation with premium of RES producers, but not later than 1 January 2019, the information under art. 89, paragraph 11 shall be sent also to the public provider /end suppliers.
- § 80. Within 60 days of the entry into force of these Rules, the network operators shall develop and publish instruction and price list pursuant to art. 82 paragraph 1.
- § 81. End consumers who are supplied by a supplier of last resort as of the date of enforcement of these rules, without concluded contract, or for whom a change of supplier/coordinator with a supplier of last resort is registered, shall conclude contract for electricity supply from supplier of last resort under art. 15, paragraph 5 within 10 days as of the receipt of written invitation.
- § 82. (1) Until enforcement of the contract for compensation with premiums with SESF, but not later than 1 January 2019, the public provider shall purchase the quantities of electricity exceeding the amount of the net specific generation of electricity produced from renewable resources with units with total installed capacity 4 MW and over 4 MW connected to the transmission network, at price for surplus on the balancing market.
- (2) Until enforcement of the contract for compensation with premiums with SESF, but not later than 1 January 2019, the end suppliers shall purchase the quantities of electricity exceeding the amount of the net specific generation of electricity produced from renewable resources with units with total installed capacity 4 MW and over 4 MW connected to the relevant distribution network, at price for surplus on the balancing market.
- (3) End suppliers shall sell the quantities of electricity under paragraph 2 to the public provider at the price at which they have purchased it.
- (4) The quantities of electricity exceeding the ones under paragraphs 1 and 2 can be used by the producers for the supply of own branches, entities and unites or to sell them at freely negotiated

prices according to the provisions of chapter ten, section VII of the Energy Act and/or on the balancing market.

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Appendix

to art. 105 paragraph 4

(Amended - SG, issue 39 of 2014)

Methodology for determination of balancing energy price

General provisions

This methodology regulates the way of determination of balancing energy price as part of the Electricity Trading Rules in accordance with art. 21 paragraph 11 of the Energy Act.

The methodology is developed in view of formulating standard and transparent rules at formation of the balancing energy price which shall be paid to the independent transmission operator by the coordinators of balancing groups and the trade participant who are responsible for the imbalances of their units as a balancing group coordinator.

Calculation method of balancing energy price

- Art. 1. (1) The agreed quantities of electricity indicated in exchange schedules shall be entered in the settlement formulas of the relevant balancing group coordinator with "-" when he is a seller under the contract, and with "+"- when he is a buyer.
- (2) The metered quantities of electricity shall be entered in the settlement formulas of the relevant balancing groups coordinator with "-" when their direction is from the transmission/distribution network to the balancing group, and with "+" when the direction is reverse.
- Art. 2. The total quantity of balancing energy (QEASR), with which producer k has actually increased/reduced his generation from unit l for settlement period s, shall be determined by the formula:

where:

 QED_{skl} - is the quantity of energy according to the registered delivery schedule of unit /aggregate 1 of trade participant k for settlement period s, stated pursuant to chapter six;

 QEM_{skl} -the metered quantity of energy of unit/aggregate l of trade participant k for settlement period s:

- 1. When QEASR_{skl} > 0, it is marked by QEASR⁺_{skl}
- 2. When QEASR_{skl} < 0, it is marked by QEASR_{skl}
- 3. When QEASR_{skl} = 0, it is marked by QEASR $_{skl}^{0}$
- Art. 3. (1) The quantity of energy from ordered bids for regulation QEOU_{jkl} for dispatching period j shall be determined under the formula:

$$QEOUj_{kl} = QEOU_{jkl} + QEOD_{jkl}$$

where:

QEOU_{skl} is the quantity of energy from ordered upward bid, by which trade participant k should increase his generation or reduce his consumption from unit/aggregate 1 for dispatching

period j as a result of an order of the dispatcher on duty for activation of upward regulation bid for the same period;

 $QEOD_{skl}$ - the quantity of energy from ordered downward bid, by which trade participant k should decrease his generation or increase his consumption from unit/aggregate 1 for dispatching period j as a result of an order of the dispatcher on duty for activation of downward regulation bid for the same period.

- (2) The quantity of energy from ordered bids for upward and downward regulation participating in the formulas of paragraph 1, shall be determined on the basis of the recorded dispatching orders and the generation/consumption schedule.
- (3) The activation time of upward and downward regulation bids is not less than 15 minutes before the beginning of the respective period of dispatching.
- (4) The de-activation time of upward and downward regulation bids is not less than 15 minutes before the end of the respective period of dispatching.
- (5) The total quantity of energy from ordered bids for regulation QEOU $_{skl}$ for settlement period s shall be determined under the formula:

$$QEOU_{skl} = \sum_{j=1}^{4} QEOU_{jkl}$$

Art. 4. (1) The quantity of energy from activated upward bids $QEAU_{skl}$ by which trade participant k has actually increased his generation or reduced his consumption from unit /aggregate 1 for settlement period s, as a result of activated upward balancing bids, shall be determined under the formula:

Where

$$QEOU_{skl} = \sum_{j=1}^{4} QEOU_{jkl}$$

Is the quantoty of energy from ordered upward bid, by which trade participant k should increase his generation or decrease his consumption from unit/aggregate 1 for settlement period s as a result of order of the dispatcher on duty for activation of bid for upward regulation for the same period;

$$QEOD_{skl} = \sum_{j=1}^{4} QEOD_{jkl}$$

Is the quantity of energy from ordered downward bid, by which trade participant k should decrease his generation or increase his consumption from unit/aggregate l for period of settlement s as a result of an order of the dispatcher on duty for activation of downward bid for the same period.

- (2) When QEAU_{skl}>0, it is market by QEAU⁺_{skl}.
- (3) The total quantity of energy which trade participant k has actually supplied for period

of settlement s as a result of activated upward bids from all his units/aggregates m shall be determined under the formula:

$$QEAU_{sk}^+ = \sum_{l=0}^m QEAU_{skl}^+$$

Art. 5. (1) The quantity of energy QEAD, by which trade participant k has actually decreased his generation or has increased his consumption for settlement period s, as a result of activated upward balancing bids, shall be determined under the formula:

$$QEAD_{skl}=max[QEAD_{skl};(QED_{skl}+QEM_{skl}-QEOU_{skl})]$$

- (2) When QEAD_{skl}<0, it is marked by $QEAD_{skl}^-$
- (3) The total quantity of energy, by which a trade participant k has actually decreased his generation or has increased his consumption for settlement period s, as a result of activated upward balancing bids, from all his units /aggregates m shall be determined under the formula:

$$QEAD_{sk}^{-} = \sum_{l=1}^{m} QEAD_{skl}^{-}$$

Art. 6. (1) The operator shall implement control over the execution of the dispatching orders for activation of bids for upward regulation and bids for downward regulation by determining the coefficient of non-execution of a dispatching order (CD) for each bid for regulation submitted by trade participant k, for dispatching period j, in which bids for regulation are activated:

$$C_{Dkl} = \left| \frac{QEOB_{jkl} - QEAU_{jkl}^{+} - QEAD_{jkl}^{-}}{QEOB_{jkl}} \right| 100,\%$$

- (2) The operator shall be entitled to impose prohibition for participation with bids for regulation on the balancing market to a trade participant who:
- 1. has 12 and more dispatching periods for which the coefficient of non-execution of dispatching order (CD) is higher than 30% within 24 hours;
- 2. has 20 and more dispatching periods for which the coefficient of non-execution of dispatching order (CD) is higher than 30% within 168 hours.
- Art. 7. (1) (Amended SG, issue 39 of 2014) The balancing energy price for deficit (IEHs) for settlement period s shall be determined as the ratio of all costs of the independent transmission operator for the purchase of balancing energy and the negative net imbalances of all balancing group coordinators for settlement period s, under the formula:

$$PED_{sp} = \frac{\sum_{k=1}^{n} QEACR_{sk}PCR + \sum_{k=1}^{p} QEASR_{sk}^{+}PESR + \sum_{k=1}^{r} \sum_{l=1}^{m} QEOU_{skl}^{+}PEB_{skl} + QENI_{sof}^{+*}PE^{+} + Q_{s}EIm P_{s}EIm + QEE_{s}D P_{s}EM}{\sum_{b=1}^{2} |QEND_{sb}^{-}|} k$$

where:

QEACR_{sk} is the quantity of energy from activated cold reserve by participant k for period

of settlement s, MWh;

PCR is single-component price for energy and availability from activated cold reserve of the relevant participant k, BGN/MWh;

n is the number of all participants who have provided energy to the balancing energy market from activated cold reserve for settlement period s;

 $QEASR_{sk}^+$ is the quantity of energy from activated secondary reserve by which producer k has actually increased his generation for period of settlement s, MWh;

PESR is the price for energy from activated secondary reserve of the relevant participant k, BGN/MWh;

p is the number of all participants who have provided energy on the balancing market from activated secondary reserve in period of settlement s;

 $QEOU_{skl}^+$ is the quantity of energy by which trade participant k should increase his generation for period of settlement s.

PEB_{skl} is the price of energy from bid for regulation for unit /aggregate 1 of trade participant k for period of settlement s, BGN/MWh;

r is the number of all trade participants who have provided energy from activated regulation bids for period of settlement s;

*QEND*_{sb} is the quantity of energy from energy deficit of coordinator of balancing group b for period of settlement s, MWh;

Z is the number of all coordinators of balancing groups who have energy deficit for period of settlement s;

 $QENI_s^+$ is the difference between the total quantity of sold balancing energy downwards and the positive net imbalances of all coordinators of balancing groups;

 PE_{of}^+ is the ex-officio price at which the independent transmission operator sells $QENI_s^+$, BGN/MWh;

QEIm_s is the quantity of energy purchased by neighbouring control areas for period of settlement s, MWh;

PEIms is price at which the independent transmission operator purchases energy from neighbouring control areas for period of settlement s, BGN/MWh;

QEEDs is the quantity of energy supplied from emergency delivery from neighbouring control areas for period of settlement s, MWh;

PEMs is the highest price of energy which the independent transmission operator purchases for period of settlement s, BGN/MWh;

kp is coefficient reflecting the costs of the independent transmission operator for balancing energy market administration.

(2) In case:

$$\sum_{k=1}^{n} \mathit{QEACR}_{sk} + \sum_{k=1}^{p} \mathit{QEASR}_{SK}^{+} + \sum_{k=1}^{r} \sum_{l=1}^{m} \mathit{QEOU}_{skl}^{+} + \mathit{QEIm}_{s} + \mathit{QEED}_{s} < \sum_{b=1}^{z} \mathit{QEND}_{sb}^{-}$$

The independent transmission operator determines:

$$QENI_{s}^{+*} = \sum_{k=1}^{p} QEASR_{sk}^{-} + \sum_{k=1}^{r} \sum_{l=1}^{m} QEOD_{skl}^{-} + QEEx_{s} + \sum_{b=1}^{z} |QEND_{sb}^{-}|$$

(3) The ex-officio price which the independent transmission operator determines for $QENI_s^{+*}$ is the arithmetic mean value between the highest and the lowest price for deficit for month M-1:

$$PE_{of}^{+} = \frac{maxPED_{(M-1)} + minPED_{(M-1)}}{2}$$

Art. 8. (1) The price of the balancing energy for surplus (PES_s) for period of settlement s shall be determined as the ratio of the total incomes of the independent transmission operator from sold balancing energy and the positive net imbalances of all balancing group coordinators for period of settlement s under the formula:

$$PES_{s} = \frac{\sum_{k=1}^{p} QEASR_{sk}^{-} PESR + \sum_{k=1}^{r} \sum_{l=1}^{m} QEOD_{skl}^{-} PED_{skl} + QEND_{skof}^{-*} PE^{-} + Q_{s}EEx P_{s}EEx}{\sum_{b=1}^{q} QENI_{sb}^{+}} \frac{1}{k_{p}}$$

Where $QEASR_{sk}^-$ is the quantity of energy from activated secondary reserve by which producer k has actually decreased his generation for period of settlement s, MWh;

PESR is the price for energy from activated secondary reserve of the relevant participant k, BGN/MWh;

p is the number of all participants who have not generated energy from activated secondary reserve and purchase it from the balancing market in period of settlement s;

PED_{skl} is the price of energy from downward bid for unit/aggregate l of trade participant k for period of settlement s, BGN/MWh;

r is the number of all trade participants who have consumed/not generated energy from activated bids for regulation and purchase it from the balancing market for period of settlement s;

 $QENI_{sb}^+$ is the quantity of energy from energy surplus of coordinator of balancing group b for period of settlement s, MWh;

q is the number of all coordinators of balancing group who have energy surplus for period of settlement s;

 $QEND_{sk}^{-*}$ is the difference between the total quantity purchased upward balancing energy and the negative net imbalances of all coordinators of balancing groups.

 PE_{of}^{-} is ex-officio price at which the independent transmission operator purchases $QEND_{of}^{-*}$, BGN/MWh;

QEEx is the quantity of energy sold to neighbouring control areas for period of settlement s, MWh;

PEExs is price at which the independent transmission operator sells energy to neighbouring control areas for a period of settlement s.

(2) In case:

$$\left|\sum_{k=1}^{p} QEASR_{jk}^{-} + \sum_{k=1}^{r} \sum_{l=1}^{m} QEOD_{jkl}^{-} + QEEx_{s}\right| \leq \sum_{b=1}^{q} QENI_{sb}^{+}$$

The independent transmission operator determines:

$$QEND_{s}^{-*} = \sum_{k=1}^{n} QEACR_{sk} + \sum_{k=1}^{p} QEASR_{sk}^{+} + \sum_{k=1}^{r} \sum_{l=1}^{m} QEOU_{skl}^{+} + QEIm_{s} + QEED_{s} + \sum_{b=1}^{z} QEND_{sb}^{-}$$

(3) The ex-officio price which the independent transmission operator determines for $QEND_s^{-*}$ is the arithmetic mean value between the highest and the lowest price for surplus for month M-1:

$$PE_{of}^{-} = \frac{\max PES_{(M-1)} + \min PES_{(m-1)}}{2}$$