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Official Gazette dated 28 May 2016, numbered 29725

From the Energy Market Regulatory Authority:

BOARD DECISION

Decision No : 6282-2

Decision Date: 13/05/2016

In the Energy Market Regulatory Board meeting dated 13 May 2016, it has been resolved to approve the attached "Procedures and Principles Regarding the Structure of the Day-Ahead Market Orders and Evaluation of Orders" and to publish these Procedures and Principles in the Official Gazette.

ANNEX-1

PROCEDURES AND PRINCIPLES REGARDING THE STRUCTURE OF THE DAY-AHEAD MARKET ORDERS AND EVALUATION OF ORDERS

Purpose

ARTICLE 1 - (1) The purpose of these Procedures and Principles is to designate the procedures and principles regarding the structure, content and evaluation of the purchase bids and sales offers submitted to the day-ahead market.

Scope

ARTICLE 2 - (1) These Procedures and Principles cover the procedures and principles regarding the structure of hourly block and flexible orders submitted to the day-ahead market, evaluation of the offers submitted and determination of prices.

Legal Basis

ARTICLE 3 - (1) These Procedures and Principles have been prepared based on the Electricity Market Balancing and Settlement Regulation.

Definitions

ARTICLE 4 - (1) The following definitions shall apply in the implementation of these Procedures and Principles:

a) Daily total surplus: The daily total surplus of generators and consumers to arise as a result of matching;

b)¹ Optimization software: The software included in the MMS, which calculates the prices and volumes in the day-ahead market, in view of the transmission capacities between the bidding zones, in a way to obtain the highest daily total surplus value;

c) Consumer surplus: The difference between the amount offered by a participant to the market for the purchase volume resulting from the matching and the amount that it will pay to purchase said volume;

ç) Generator surplus: The difference between the amount that a participant will obtain in return for the sales volume resulting from the matching and the amount offered to the market to sell said volume;

d)² Block order acceptance condition price: The threshold price value taken as basis for the acceptance of a block order;

e)³ Flexible order acceptance condition price: The threshold price value taken as basis for the acceptance of a flexible order.

(2) Terms and concepts that are used in these Procedures and Principles but not defined herein shall have the meanings and scope attributed to them in the relevant legislation.

Structure and Content of Hourly Orders

ARTICLE 5 - (1) Market participants participating in the day-ahead market shall notify their hourly purchase bids-sales offers for hourly active electricity purchase and sales to the Market Operator via the Market Management System (MMS) for every hour of the next day.

(2) Each hourly purchase bid-sales offer submitted to the day-ahead market shall consist of a maximum of 32 price-volume pairs, separately in the buy and sell directions.

(3) In an hourly order, each price-volume pair in the buy direction shall indicate the price offered by the market participant to purchase the relevant volume of electricity; each price-volume pair in the sell direction shall indicate the price offered by the market participant to sell the relevant volume of electricity.

(4) When an hourly order is ranked from the minimum price limit until the maximum price limit, it shall be submitted in a way that the purchase volumes are not increased and the sales volumes are not decreased.

(5) A market participant participating in the day-ahead market may have only one hourly purchase or sales volume valid for each price level. A market participant participating in the day-ahead market may not have both hourly purchase volume and hourly sales volume valid for the same price level.

(6) The minimum and maximum price limits to be used to submit hourly orders to the day-ahead market shall be designated by the Market Operator in accordance with the “Procedures and Principles for the Determination of the Minimum and Maximum Price Limits in the Day-Ahead Market and the Balancing Power Market” which entered into force with the approval of the Board, and shall be announced to the market participants via the MMS. Prices for all hourly purchase bids-sales offers to be submitted to the day-ahead market shall include price limits.

¹ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

² Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

³ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

(7)⁴ It is deemed that a participant submitting an hourly order has also offered all price-volumes over the line defined between two consecutive price-volume pairs.

Structure and Content of Block Orders

ARTICLE 6⁵- (1) Market participants participating in the day-ahead market shall notify their block purchase bids and sales offers regarding active electricity purchase or sales valid for the order time period they set to the Market Operator via the MMS.

(2) The block purchase bid shall include the purchase volumes of the market participant participating in the day-ahead market for a certain order time period in terms of lots, which may vary on a settlement period basis, as well as the maximum unit price (TL/MWh) it offers to pay for these volumes.

(3) The block sales offer shall include the sales volumes of the market participant participating in the day-ahead market for a certain order time period in terms of lots, which may vary on a settlement period basis, as well as the minimum unit price (TL/MWh) it requests for these volumes.

(4) Market participants participating in the day-ahead market may submit more than one block order at the same or different order time periods of a day. Block orders consist of consecutive whole hours. Block orders that can be submitted by market participants participating in the day-ahead market shall be designated and applied by the Market Operator. Market participants participating in the day-ahead market may be granted the right to define their own block orders via the MMS, however it is essential that the block orders to be defined in this way cover a time period of minimum three⁶ hours. Market participants participating in the day-ahead market may submit a maximum of 50 block orders in total in one day.

(6)⁷ Link may be established between the block orders, valid for a maximum of six block orders and three levels deep. The orders, to whom another block order or orders are linked but they themselves are not linked to a block order, shall be classified as first level, the block orders that are linked to the first level block orders shall be classified as second level, and the block orders that are linked to the second level block orders shall be classified as third level block orders. There may be maximum of three block orders at the second and third levels individually. The second and third level block orders may be evaluated together with the block orders at higher levels to which they are linked and accepted accordingly. It is essential that all of the block orders associated with each other in this way are block purchase bids or sales offers and are related to the same portfolio and bidding zone.

(7) There may not both be a purchase and sales volume valid within the order time period of a block order.

(8) Block orders associated with each other may not create a loop.

(9) The order volume of a block order submitted to the day-ahead market may not exceed 600 MWh in any hour. The order time period for block orders shall cover at least 3 hours. In a block order, the volume offered for the hour following successive hours may not be greater than three times or less than one third of the volume offered for the previous hour.

⁴ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

⁵ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

⁶ Amended pursuant to the EMRA Decision published in the Official Gazette dated 28 April 2017 and numbered 30051.

⁷ Amended pursuant to the EMRA Decision published in the Official Gazette dated 28 April 2017 and numbered 30051.

Structure and Content of Flexible Orders

ARTICLE 7⁸ - (1) Market participants participating in the day-ahead market shall notify their flexible purchase bids and sales offers for active electricity purchase or sales valid for the order time period they set to the Market Operator via the MMS.

(2) The flexible purchase bid shall include the purchase volumes of the market participant participating in the day-ahead market for a specified order period within a certain order time period in terms of lots, which may vary on a settlement period basis, and the maximum unit price (TL/MWh) it offers to pay for these volumes.

(3) The flexible sales offer shall include the sales volumes of the market participant participating in the day-ahead market for a specified order period within a certain order time period in terms of lots, which may vary on a settlement period basis, and the minimum unit price (TL/MWh) it requests for these volumes.

(4) Market participants participating in the day-ahead market may submit maximum of 6 flexible orders at the same or different order time periods of a day. The order volume of a flexible order submitted to the day-ahead market may not exceed 100 MWh in any hour. The order time period for flexible orders shall cover a minimum of 8 hours and a maximum of 24 hours. The order period for flexible orders may cover maximum of 4 hours.

(5) The number of settlement periods within the order time period for each flexible order shall be determined in a way to be higher than the order period.

(6) For each flexible order, either all of the order volumes shall be accepted during the order period within the order time period in which the order is valid or they shall not be accepted at all. Flexible orders may not be accepted for a shorter period than the specified order period.

(7) There may not both be a purchase and sales volume valid within the order period of a flexible order.

Matching in the Day-Ahead Market and Determination of the UMCP (Undetermined Market Clearing Price)

ARTICLE 8⁹ - (1) For all bidding zones, the hourly, block and flexible orders shall be evaluated through the optimization software, and the UMCPs and matching volumes shall be determined in a way to obtain the highest daily total surplus.

(2) Until the following orders are accepted, other orders shall not be accepted:

a) the block order registered into the MMS earlier, among the block orders whose volumes are equal on an order time period, price and settlement period basis, from the block orders submitted to the MMS that are not associated with any order;

b) the flexible order registered into the MMS earlier, among the flexible orders whose volumes are equal on the basis of the order time period in which it is valid, order period, price and settlement period.

(3) Acceptance priority shall not sought for block orders that are associated with any order.

The Purpose Function of the Optimization Model

⁸ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

⁹ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

ARTICLE 9 – (1) The optimization model shall determine the prices and transaction volumes in a way to ensure the highest daily total surplus.

(2) The determined prices shall be rounded with a sensitivity of Kuruş and the transaction volumes shall be rounded with a sensitivity of lots.

Evaluation of Hourly Orders

ARTICLE 9/A¹⁰ - (1) The volume corresponding to the UMCP in the settlement period in which the order is valid shall be matched by using the line consisting of the price-volume pairs pertaining to an hourly order.

Evaluation of Block Orders

ARTICLE 10 - (1)¹¹

(2)¹² The optimization software shall make calculations in a way:

a) that block sales offers are accepted when the block sales offer price is equal to or lower than the block order acceptance condition price, and may be accepted when it is higher,

b) that block purchase bids are accepted when the block purchase bid price is equal to or higher than the block order acceptance condition price, and may be accepted when it is lower.

(3)¹³ In the event that equality of supply and demand volume cannot be achieved at any hour and the cuts in hourly orders are insufficient to achieve this equality, the second paragraph of this Article shall not be applied for block orders.

(4)¹⁴ While the first level block order may be accepted individually, the second and third level block orders shall be evaluated together with the higher level block orders to which they are linked and accepted accordingly. In the event that a block order at any level is not accepted, the second paragraph of this Article shall not be applied for the block orders at the next level, which are linked to such block order.

(5)¹⁵

(6)¹⁶ The block order acceptance condition price shall be calculated by dividing the sum of the values found as a result of multiplying the order volume corresponding to each hour in the order time period of a block order with the FMCP (*Final Market Clearing Price*) calculated for the relevant hour, by the sum of the volumes of the said block order.

Evaluation of Flexible Orders

ARTICLE 11¹⁷ - (1)¹⁸ The optimization software shall make calculations in a way;

a) that flexible sales offers are accepted when the flexible sales offer price is equal to or lower than the flexible order acceptance condition price price, and may be accepted when it is higher,

¹⁰ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹¹ Repealed pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹² Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹³ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹⁴ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹⁵ Repealed pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹⁶ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹⁷ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

¹⁸ Amended pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

b) that flexible purchase bids are accepted when the flexible purchase bid price is equal to or higher than the flexible order acceptance condition price, and may be accepted when it is lower.

(2)¹⁹

(3)²⁰

(4)²¹ In the event that equality of supply and demand volume cannot be achieved at any hour and that cuts in hourly orders are insufficient to achieve this equality, the first paragraph of this Article shall not be applied for flexible orders.

(5)²² When calculating the flexible order acceptance condition price, the sum of the values found as a result of multiplying the order volumes in consecutive hours as long as the order period, starting from the first hour of the order time period, with the FMCPs calculated for the relevant hour shall be divided by the sum of the volumes of the said flexible order. Price values shall be found by repeating the above stated procedure for all possible order starting hours during the order time period. The flexible order acceptance price shall be equal to the highest of said prices for sales offers and the lowest of said prices for purchase bids.

Determination of the Unit Prices that are the Basis for Advance Payments for Block or Flexible Sales Offers

ARTICLE 12²³ - (1) The weighted average market clearing price in the period in which a block or flexible order is valid shall be calculated in accordance with the formula below:

$$AOPTF_{p,t,r} = \frac{\sum_{u=a}^b (PTF_{t,u} \times GÖPSM_{p,t,r,u})}{\sum_{u=a}^b GÖPSM_{p,t,r,u}}, u = [a, b]$$

(2) The expressions used in the formula in the first paragraph shall have the following meanings:

$AOPTF_{p,t,r}$: refers to the weighted average market clearing price (TL/MWh) which is valid for block or flexible order “r” of market participant “p” in bidding zone “t”.

$PTF_{t,u}$: refers to the market clearing price (TL/MWh) in settlement period “u” for bidding zone “t”.

$GÖPSM_{p,t,r,u}$: refers to the accepted sales volume (MWh) of block or flexible order “r” of market participant “p” in bidding zone “t” for settlement period “u”.

a: refers to the start time at which block or flexible order “r” of market participant “p” in bidding zone “t” was accepted.

b: refers to the end time at which block or flexible order “r” of market participant “p” in bidding zone “t” was accepted.

(3) The unit price to be accrued to the relevant market participant in order for the generator surplus of a block or flexible sales offer not to be negative, shall be calculated in accordance with the formulas below:

¹⁹ Repealed pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

²⁰ Repealed pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

²¹ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

²² Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

²³ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

$$\ddot{U}F_{p,t,r} = \sum_{u=a}^b (PTF_{t,u} - GÖPSTF_{p,t,r}) \times GÖPSM_{p,t,r,u} + \sum_{y=1}^m \text{maks}(\ddot{U}F'_{p,t,y}, 0)$$

$$\ddot{U}FB_{p,t,r} = (-1) \times \min\left(0, \frac{\ddot{U}F_{p,t,r}}{\sum_{u=a}^b GÖPSM_{p,t,r,u}}\right)$$

$$u = [a, b)$$

(4) The expressions used in the formulas in the third paragraph shall have the following meanings:

$\ddot{U}F_{p,t,r}$: refers to the generator surplus (TL) obtained by market participant “p” with block or flexible sales offer with other block or flexible sales offers associated with this offer (if any) in bidding zone “t”.

$PTF_{t,u}$: refers to the market clearing price (TL/MWh) in settlement period “u” for bidding zone “t”.

$GÖPSTF_{p,t,r}$: refers to the offer price (TL/MWh) of block or flexible sales offer “r” of market participant “p” in bidding zone “t”.

$GÖPSM_{p,t,r,u}$: refers to the accepted sales volume (MWh) of block or flexible sales offer “r” of market participant “p” in bidding zone “t” for settlement period “u”.

$\ddot{U}F_{p,t,y}$: refers to the generator surplus (TL) obtained by market participant “p” with block or flexible sales offer “y” at one level below associated with block or flexible sales offer “r” (if any), with other block or flexible sales offers associated with this offer (if any) in bidding zone “t”.

$\ddot{U}FB_{p,t,r}$: refers to the unit price (TL/MWh) to be added to the sales price in order for the generator surplus for block or flexible sales offer “r” of market participant “p” in bidding zone “t” not to be negative.

a: refers to the start time at which block or flexible sales offer “r” of market participant “p” in bidding zone “t” was accepted.

b: refers to the end time at which block or flexible sales offer “r” of market participant “p” in bidding zone “t” was accepted.

m: refers to the number of the block and flexible sales offers at the same level as block or flexible sales offer “y” associated with block or flexible sales offer “r” of market participant “p” in bidding zone “t”.

Determination of the Unit Prices that are the Basis for Advance Payments for Block or Flexible Purchase Bids

ARTICLE 13²⁴ - (1) The weighted average market clearing price in the period in which a block or flexible purchase bid is valid shall be calculated in accordance with the formula below:

$$AOPTF_{p,t,r} = \frac{\sum_{u=a}^b (PTF_{t,u} \times GÖPAM_{p,t,r,u})}{\sum_{u=a}^b GÖPAM_{p,t,r,u}}, u = [a, b)$$

(2) The expressions used in the formula in the first paragraph shall have the following meanings:

$AOPTF_{p,t,r}$: refers to the weighted average market clearing price (TL/MWh) which is valid for block or flexible order “r” of market participant “p” in bidding zone “t”.

$PTF_{t,u}$: refers to the market clearing price (TL/MWh) in settlement period “u” for bidding zone “t”.

$GÖPAM_{p,t,r,u}$: refers to the accepted purchase volume (MWh) of block or flexible order “r” of market participant “p” in bidding zone “t” for settlement period “u”.

a: refers to the start time at which block or flexible order “r” of market participant “p” in bidding zone “t” was accepted.

b: refers to the end time at which block or flexible order “r” of market participant “p” in bidding zone “t” was accepted.

(3) The unit price to be offset against the debt of the relevant market participant in order for the consumer surplus of a block or flexible purchase bid not to be negative, shall be calculated in accordance with the formula below:

$$TF_{p,t,r} = \sum_{u=a}^b (GÖPATF_{p,t,r} - PTF_{t,u}) \times GÖPAM_{p,t,r,u} + \sum_{y=1}^m \max(TF_{p,t,y}, 0)$$

$$TFB_{p,t,r} = (-1) \times \min \left(0, \frac{TF_{p,t,r}}{\sum_{u=a}^b GÖPAM_{p,t,r,u}} \right)$$

$u = [a, b)$

(4) The expressions used in the formulas in the third paragraph shall have the following meanings:

$TF_{p,t,r}$: refers to the consumer surplus (TL) obtained by market participant “p” with the block or flexible purchase bid with other block or flexible purchase bids associated with this order (if any) in bidding zone “t”.

$PTF_{t,u}$: refers to the market clearing price (TL/MWh) in settlement period “u” for bidding zone “t”.

$GÖPATF_{p,t,r}$: refers to the order price (TL/MWh) of block or flexible purchase bid “r” of market participant “p” in bidding zone “t”.

²⁴ Inserted pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

$GÖPAM_{p,t,r,u}$: refers to the accepted purchase volume (MWh) of block or flexible purchase bid “r” of market participant “p” in bidding zone “t” for settlement period “u”.

$TF_{p,t,y}$: refers to the consumer surplus (TL) obtained by market participant “p” with block or flexible purchase bid “y” at one level below associated with block or flexible purchase bid “r” (if any), with other block or flexible purchase bids associated with this bid (if any) in bidding zone “t”.

$TFB_{p,t,r}$: refers to the unit price (TL/MWh) to be offset against the purchase price in order for the consumer surplus for block or flexible purchase bid “r” of market participant “p” in bidding zone “t” not to be negative.

a: refers to the start time at which block or flexible purchase bid “r” of market participant “p” in bidding zone “t” was accepted.

b: refers to the end time at which block or flexible purchase bid “r” of market participant “p” in bidding zone “t” was accepted.

m: refers to the number of the block and flexible purchase bids at the same level as block or flexible purchase bid “y” associated with block or flexible purchase bid “r” of market participant “p” in bidding zone “t”.

Enforcement

ARTICLE 14²⁵ - (1) These Procedures and Principles shall enter into force on 01/06/2016.

Execution

ARTICLE 15²⁶ - (1) The provisions of these Procedures and Principles shall be executed by the President of the Energy Market Regulatory Authority.

²⁵Article number harmonized pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.

²⁶Article number harmonized pursuant to the Regulation published in the Official Gazette dated 9 August 2019 and numbered 30857.