PSE S.A. Reporting on Balancing pursuant to the Article 60 of the Commission (EU) Regulation 2017/2195 of November 23, 2017 establishing a guideline on electricity balancing

Edition 2020 for the period 2018-2019

I. Executive Summary

This executive summary for the Report on Article 60 of the European Commission Regulation 2017/2195 (Regulation 2017/2195) of 23 November 2017, in accordance with the paragraph 3 of this Article, is prepared in English, while the main content of the report is in Polish.

In addition to the executive summary, the report contains three main parts. The first main part of the report presents a description of the basic principles of the balancing market in Poland and contains five specific points. The second main part of the report contains an analysis of the mechanism for providing reserve capacity, which consists of explanations divided into four specific points. The third main part of the report presents analysis of the mechanism for the balancing energy activation and settlement mechanism in three specific points.

The first main part of the report

The first main part of the report describes the electricity market and the balancing market in Poland along with the tasks of the Polish Transmission System Operator - Polskie Sieci Elektroenergetyczne S.A. (PSE). The above items constitute an introduction to the description of the terms and conditions for Balancing Service Providers and Balance Responsible Parties following the Article 18(5-7) Regulation 2017/2195. The last two specific points in this part of the report characterize the integrated scheduling process, used by PSE as a TSO applying central dispatching model, in accordance with the Article 18(8) Regulation 2017/2195 and provide information on specific products in relation to the requirements of the Article 60(2)a of the Regulation 2017/2195 and the Article 60(2)d of the Regulation 2017/2195.

References and conclusions from the obligations arising from the individual components of the Article 18 (5-7) of the Regulation 2017/2195 are presented separately for each of these components. Key conclusions and observations from the first main part of the report are presented as below.

Referring to the Article 18(5)a of the Regulation 2017/2195 each balancing service provider (BSP) should have at least one scheduling unit that actively participates in the balancing market and a dedicated IT system used for the communication between BSP and TSO, a.o. for the purposes of the activation of balancing energy. BSP provides balancing services through the scheduling units. Only the scheduling unit representing a generation unit with appropriate technical capabilities can provide the frequency containment reserve and frequency restoration reserve. The replacement reserve can be provided by both generation and load units.

Referring to the Article 18(5)d of the Regulation 2017/2195 each BSP during the prequalification process should deliver the documentation confirming the technical capabilities of the scheduling unit to provide given types of reserves. During the operation of the balancing market BSP submits for each scheduling unit an integrated scheduling process bid.

Referring to the Article 18(5)e of the Regulation 2017/2195 each integrated scheduling process bid submitted by the BSP is assigned to the specific scheduling unit. Because imbalance area is equal to the scheduling unit, the balance responsible party (BRP) owning this scheduling units is responsible for balancing all bids provided for that unit. The evaluation of the provisions of balancing services (Article 18(5)f) is performed on the basis of the real-time measurements.

Referring to the Article 18(5)g of the Regulation 2017/2195 PSE does not use neither standard nor specific products within the meaning of the Regulation 2017/2195. Because PSE has not yet joined any of the platforms for the exchange of balancing energy, at present PSE only uses local products based on the integrated scheduling process bids submitted by BSPs.

With reference to Article 18 (6)a and 18(6)c of the Regulation 2017/2195, the definition of balancing responsibility for each connection is designed in such a way as to avoid any gaps or duplication of balancing liability for different market participants providing services under that connection. Each balancing market participant is a BRP, while imbalance area is defined on scheduling unit level. The only entity responsible for balancing the interconnections with the transmission systems of other operators is PSE that bears full responsibility for balancing them.

With reference to Article 18 (6)d of the Regulation 2017/2195 each BRP is obliged to deliver to the connecting TSO the information about the energy contracts concluded at the scheduling unit level with other BRPs and the measurement data for each BRP's scheduling unit.

With reference to the Article 18 (6)g of Regulation 2017/2195, one imbalance price is determined for the whole scheduling area, therefore the imbalance price area is equal to the scheduling area.

With reference to Article 18(6)e, 18 (7)a, 18 (7)c, 18 (8)a and 18(8)b of Regulation 2017/2195, the integrated scheduling process in Poland starts in the day-ahead timeframe and the integrated scheduling process bids are submitted by BSPs no later than by 14:30 the day before the electricity supply. Submission of integrated scheduling process bid for whole available capacity is mandatory for all generation units actively participating in the balancing market. BSPs do not offer unused generation capacities or other balancing measures after the gate closure time for the cross-zonal Intra-Day Market. Nevertheless, the integrated scheduling process bids submitted in the day-ahead market horizon are also valid in the intra-day horizon.

Referring to Articles 18 (5)j and 18 (6)f the settlements of balancing services and imbalance energy are performed for each decade of the month. Preliminary settlements data are available in the day d+1, while final ones in the day d+4. Settlements correction is possible in the following months: m+2, m+4, m+15.

The second main part of the report

The second main part of the report presents an analysis of the mechanism for reserve capacity provision. This analysis covers:

1. The summary analysis of the dimensioning of reserve capacity including the justification and explanation for the calculated reserve capacity requirements in accordance with the Article 60(2)b of the Regulation 2017/2195.

   Capacity reserves are determined for the: Annual Coordination Plan (18%), Monthly Coordination Plan (17%), Daily Technical and Trading Balance (14%) and Daily Coordination Plan (9%).

2. The summary analysis of the optimal provision of reserve capacity including the justification of the volume of balancing capacity in accordance with the Article 60(2)c of the Regulation 2017/2195.

   Due to the joint provision of energy and reserves as part of the integrated scheduling process that takes place after the closing of the stock market, the resources providing reserves are not excluded from the energy market. In addition, the joint provision of energy and reserves as part of the co-optimization process ensures optimal use of available resources to obtain electricity and ensure the required level of reserves.

3. An explanation and a justification for the procurement of balancing capacity without the exchange of balancing capacity or sharing of reserves in accordance with the Article 60(2)f of the Regulation 2017/2195.

   Due to the lack of contracting of balancing capacity, PSE does not purchase balancing capacity, therefore there is no need to provide explanations for its purchase without exchanging balancing capacity or sharing of reserves.

4. Analysis of the opportunities for the exchange of balancing capacity and sharing of reserves in accordance with the Article 60(2)e of the Regulation 2017/2195.

   PSE does not contract balancing capacities. Sharing reserves by the PSE with neighboring TSOs would be inefficient due to significant uncertainties arising from the lack of a sufficiently coordinated mechanism for the allocation of transmission capacity in the continental Europe region. Unscheduled power flows from Germany, through Poland, the Czech Republic and Slovakia towards Austria, being consequence of the meshed transmission grid in central Europe result in the inability to share power reserves due to the dynamic nature of unplanned loop flows and therefore the inability to ensure in advance that transmission capacity is available to provide electricity from shared reserves. Moreover, due to the fact that PSE acquires reserves in day-ahead timeframe within integrated scheduling process, while neighboring TSOs do it in longer time horizon the possibility of reserves sharing are very limited. However, even not sharing reserves, in case of urgent need PSE may provide energy to neighboring TSOs using operational measures like Agreed Supportive Power/ Emergency Deliveries.

The third main part of the report

The third main part of the report contains an analysis of the balancing energy activation and settlement mechanism. The analysis consists of three specific points, which include:

1. Analysis of the efficiency of the activation optimization functions for the balancing energy from frequency restoration reserves and for the balancing energy from replacement reserves in accordance with the Article 60(2)g of the Regulation 2017/2195.

   PSE uses efficient operation planning measures, which include IT systems enabling technically safe and economically optimal operation of this system. Used by the PSE primary, secondary and tertiary power reserves allow to react in an adequate manner to the changing conditions affecting the functioning of the Polish power system. Performed by the PSE control activities of frequency and power flows, in particular in cross-border connection lines, result from the need to balance the supply and demand for electricity and to comply with commercial contract terms.

2. Analysis of compliance of balancing energy and imbalance settlements with the requirements of the establishing a guideline on electricity balancing in accordance with the Article 44(1) of the Regulation 2017/2195.

   The pricing and settlement of balancing services on the balancing market is based on marginal prices and therefore faithfully reflects the situation of imbalance and the value of electricity in real time. Consequently it provides incentives to the entities participating in the balancing market to keep the system balance and take actions to restore the system balance. Marginal pricing mechanism by settling commodities at the price of the most expensive accepted offer also motivates participants of the balancing market to behave in line with competition rules by creating incentives to provide offers based on short-term marginal costs and to offer balancing services on the market. The settlements are also financially neutral for the PSE, as an entity responsible for balancing energy supply and demand in the Polish power system and cooperation with neighboring power systems, and provides incentives for PSE to meet the obligation to ensure the required levels of reserves. Because marginal pricing is used by most TSOs in Europe and is intended to be used for settling the balancing energy exchanged in the European balancing platforms, the mechanism used by PSE should allow for relatively easy harmonization of imbalance settlement mechanisms.

3. Additional settlement mechanisms separate from the imbalance settlement in accordance with the Article 44(3) of the Regulation 2017/2195.

   Currently no additional settlement mechanism separate from the imbalance settlement for the purposes of settling balancing capacity purchase costs, administrative costs and other balancing costs is used in the Polish balancing market. The lack of this mechanism is related to the fact that PSE does not procure the balancing capacity.