



State of electricity imbalance price formation in the Energy Community

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Introduction

1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Energy Community Treaty. As an institution of the Energy Community¹ the ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and makes recommendations in the case of cross-zonal disputes between regulators.

ECRB is the independent regional voice of energy regulators in the Energy Community. Its mission builds on three pillars: providing coordinated regulatory positions to energy policy debates, harmonizing regulatory rules across borders as well as sharing regulatory knowledge and experience.

2. Background

One of the key role of ECRB is to promote the best regulatory practices through guidance and recommendations to national regulatory authorities (NRAs) aiming at harmonising regulatory mechanisms.

The importance of spot market is becoming crucial in the environment where the penetration of intermittent renewables is increasing and there is a need for short term optimisation, not only on the national markets, but also on cross-zonal basis. While day-ahead market provides an important price signal for efficient use of resources, the intraday market enables market participants to further optimise and balance their portfolio. The experience from the EU markets shows that the increase of volume exchanged on intraday, decreases the volume utilised in the balancing mechanism. For this to function, the right incentives need to be put in place. The most crucial is the imbalance price formation. The extent to which market participants will have the incentive to balance their portfolio depends on the balancing mechanism, i.e. imbalance prices formation.

As part of ECRB Work Program for 2018, the ECRB Electricity Working Group (EWG), worked on assessing the state of balancing mechanism and imbalance price formation in the Energy Community. The aim of this activity is to understand how the imbalance prices are formed in the Contracting Parties and identify the potential issues.

3. Methodology and scope

Contracting Parties have in place balancing mechanisms, nevertheless it is not clear how imbalance prices are formed and if the right incentives are in place. The report identifies the imbalance price formation and to what extent that is linked with the costs transmission system operators (TSOs) have to balance the system. Data reflect the state of development in the Contracting Parties in the third quarter of 2018.

¹ The Energy Community comprises the EU and Albania (AL), Bosnia and Herzegovina (BiH), North Macedonia (MK), Georgia (GE), Kosovo* (KS), Moldova (MD), Montenegro (MN), Serbia (RS) and Ukraine (UA). Armenia, Turkey and Norway are Observer Countries. [Throughout this document the symbol * refers to the following statement: *This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo declaration of independence*].

Findings

1. Overview

As a general observation almost all the Contracting Parties have in place balancing mechanisms and the associated rules on how TSOs balances the system. The exceptions are Georgia, Moldova and Ukraine. Ukraine foreseen a balancing mechanism to enter into force in July 2019.

In all Contracting Parties where balancing mechanism is in place, there is at least one service provider that is mainly the incumbent generation company. Bosnia and Herzegovina is the frontrunner in terms of the market-based mechanism applied.

A new balancing mechanism is expected to enter into force in North Macedonia in early 2019, therefore for this country sometimes only an outlook can be presented in the present report. Also Ukraine is planning to implement a balancing mechanism in the second half of 2019.

In general, TSOs are financially net from the balancing mechanism even when they apply dual imbalance pricing mechanism, meaning that the incomes from imbalance mechanism are equal to the costs of balancing over a period of time. Such financially net position is ensured through reconciliation of the TSOs tariffs.

2. Detailed findings

Findings are grouped and presented in tabular form as below.

TABLE 1: Provision of offering balancing services

Contracting Party	Is procurement of balancing services done via market based procedures?	Mandatory requirement for certain participants to offer balancing services?	Prices for balancing services – for capacity?	Prices for balancing services – for energy?
AL	No. Currently only incumbent producer provides such service.	Yes. Requirement on incumbent producer.	Predefined through regulatory decision.	Set according to balancing rules, i.e. linked with HUPX day-ahead prices multiplied by different factors.
BiH	Yes. All generators that fulfil technical conditions can participate.	No.	Offers include price and period. TSO uses pay as bid. Regulatory caps apply.	Offers include price and period. TSO uses pay as bid. Regulatory caps apply.
GE	No balancing mechanism in place			
KS*	Yes. For limited period and linked to availability.	No.	Prices for capacity pre-defined, but currently not applicable.	Prices set through auctions on day-ahead basis for limited periods.

Contracting Party	Is procurement of balancing services done via market based procedures?	Mandatory requirement for certain participants to offer balancing services?	Prices for balancing services – for capacity?	Prices for balancing services – for energy?
MK²	No. Currently only incumbent producer provides such service.	Services are procured in line with regulatory decision.	Currently non-market-based, but the new rules suggest that they will be based on offers from market participants through yearly and daily auctions.	Currently non-market-based, but the new rules suggest that they will be based on offers by market participants.
MD	No balancing mechanism in place			
MN	Yes. All generators that fulfil technical conditions can participate.	Yes.	According to methodology for setting prices for ancillary services.	According to methodology for setting prices determined on annual bases.
RS	Not for capacity. Yes, for energy.	Yes.	Prices are regulated by national regulator. The regulator is issuing its opinion on further need for regulation of these prices.	Prices offered for downward and upward should be within the spread of 30 €/MWh for dominant participant for range [-100MWh up to 100MWh]. Outside range no limitation.
UA	No balancing mechanism in place, but the new rules expected to come in force in the second half of 2019 will establish a market-based balancing mechanism.			

TABLE 2: Imbalance price

Contracting Party	Balancing responsible Parties (BRPs)	Imbalance prices	Collateral requirements
AL	All market participants that submit schedules to the TSOs are registered as BRPs.	Imbalance price for short and long are set according to balancing rules, i.e. linked with HUPX day-ahead prices multiplied by different factors. Imbalances that are in the opposite direction with imbalances of the system (ACE) are less punitive.	Collateral is required up to 50% of the total imbalance exposure calculated as average across the last three months. Minimum collateral required is equivalent of €25k in ALL.
BiH	All market participants that submit schedules to the TSOs are registered as BRPs.	Imbalance price for short and long are set based on marginal price of the offers regardless of the system's imbalances (ACE).	Collateral is required is calculated for a calendar year as the higher of the: <ul style="list-style-type: none"> - exposure based on the average of 3 days sell schedule using the average imbalance prices for short from the previous year. - exposure based on the average of 3 days purchase schedule using the average imbalance prices for long from the previous year.

² New balancing mechanism under development.

Contracting Party	Balancing responsible Parties (BRPs)	Imbalance prices	Collateral requirements
GE	No balancing mechanism in place		
KS*	Only participants that have metering points registered are subject to imbalances and considered BRPs. Wholesale traders are not considered BRPs.	Single imbalance price is applied for short and long. It is set as hybrid, based on offers but also linked with HUPX day-ahead prices. - When system (ACE) is short and there are no offer activation, imbalance price is the HUPX price increased by 30 %. - When system (ACE) is long and there are no bid activation, imbalance price is HUPX price decreased by 30 % - If there is activation of offers, imbalance price is calculated as weighted average.	No collateral requirement.
MK	All market participants that submit schedules to the TSOs are registered as BRPs.	Regulated, but expected to change once the new rules are implemented, i.e. to be set based on offers. Dual imbalance prices apply, for short and long, depending from the imbalances of the system (ACE).	Collateral required and calculated based on exposure, i.e. based on the portfolio of BRP as outlined in the rules and the agreement for balance responsibility between TSO and BRP.
MD	No balancing mechanism in place		
MN	All market participants that submit schedules to the TSOs are registered as BRPs.	Imbalance prices are set based on the methodology approved by the national regulator.	Collateral required and calculated as a product of average daily consumption/generation/transactions on a half year basis and imbalance price, multiplied by 15. For trades, this value is capped on 50.000 EUR.
RS	All market participants that submit schedules to the TSOs are registered as BRPs.	Single imbalance price is set based on engaged balancing energy (as per offers) in balancing mechanism and it is calculated as weighted average price of engaged balancing energy for certain hour. Tertiary regulation is paid through pay as bid rules and secondary regulation is paid based on value of engaged tertiary regulation (as per offers) and direction of tertiary and secondary regulation.	Collateral required and calculated as the higher of the below multiplied by 3 days and multiplied by the index price of engaged balancing energy: - average value of daily consumption during previous 12 months, - average value of generation during previous 12 months, - average value of daily purchase schedule, during the previous 12 months.
UA	No balancing mechanism in place, but the new rules expected to come in force in the second half of 2019, establish a market-based balancing mechanism.		

Conclusions and Recommendations

The report identifies that balancing mechanisms exist in general in all markets of Contracting Parties from the Western Balkans. In Ukraine, Moldova and Georgia balancing mechanisms, which include imbalance prices, are not applicable. Ukraine, Albania and North Macedonia plan to reform their markets and apply a fully market based mechanism in 2019 but the go live seems to be uncertain.

Considering the above ECRB recommends the following to the national regulatory authorities:

1. Implementation of market based mechanism, which provides incentives to balance responsible parties to be balanced, moving away from regulated imbalance prices.
2. Open the balancing mechanism to all potential balancing service providers, considering Bosnia and Herzegovina as a benchmark for successful implementation.
3. Further coordination and assessment, taking into account the views of market participants, of the need to harmonise the balancing services, balancing products, etc. as a step towards cross-border balancing mechanism.