



ECRB Report on  
State of Forward Markets in the Contracting Parties

November 2019

## Table of Contents

Introduction .....	3
1. About ECRB .....	3
2. Background.....	3
3. Methodology and scope.....	3
Findings .....	4
1. Overview.....	4
2. Findings per Contracting Party.....	4
3. Summary of findings .....	10
Conclusions and Recommendations .....	12

## Introduction

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### 1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Energy Community Treaty. As an institution of the Energy Community<sup>1</sup> 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 and measures that ensure open and liquid markets.

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 considering market coupling mechanism.

While spot market provides important price signals for optimisation of portfolio and efficient use of resources, it is the forward markets that provides possibility to market participants to manage their long term price risks and release volume and/or their needs to the market. This, in turn facilitates price formation on forward basis which serves also as an investment signal.

As part of ECRB Work Program for 2018 and 2019, the ECRB Electricity Working Group (EWG), worked on assessing the state of forward national market in the Contracting Parties of the Energy Community. The aim of this activity is to identify the level of openness of forward market and its potential and use the outcome to design and implement measures on national or regional level that can support liquidity.

### 3. Methodology and scope

Although forward markets are in theory open in most of the Contracting Parties and trading can take place, it is generally agreed that in practice there is very little activity in the market on forward basis. In order to perform an assessment and the state of play on forward markets a request for information is submitted and the feedback is provided by the stakeholders the Contracting Parties through the NRAs.

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<sup>1</sup> 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

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### 1. Overview

As a general observation almost all the Contracting Parties allow bilateral trading activity in the market, with exception of Ukraine.

Electricity markets in the Western Balkans Contracting Parties differ in design from the markets in Ukraine, Moldova and Georgia.

The design of the markets in Western Balkans is quite homogenous, i.e. bilateral trading complemented with spot market based on auctions for day-ahead and continuous intraday. Currently only Serbia has in place a day-ahead centralised market based on auctions, whereas intraday is under-developed in general. This region is very well interconnected and has in place coordinated cross-border capacity allocation. Balancing responsibility is well developed and the right incentives seems to be in place despite the fact that mechanisms need to evolve towards fully market based balancing mechanisms.

In Ukraine, Moldova and Georgia, the markets seems to lack the regulatory framework and also the basic incentive for self-dispatch. In the absence of hourly imbalance settlement period and balancing incentive, market participants' positions are not efficiently managed. This is then aggravated due to the lack of cross-border mechanisms that hinder cross-border trading activity. In any case, even in the existing environment some market activity on forward or short term basis take place.

### 2. Findings per Contracting Party

#### **ALBANIA**

Albanian wholesale electricity market is based on bilateral contracts.

The incumbent producer is obliged to offer all its volume to the incumbent supplier, under public service obligation, to the extent the supplier needs it. Depending from the weather conditions, given that all Albanian electricity production is hydro based, the percentage of the generator's portfolio allocated to incumbent supplier is between 70%-90%. Although the price for this part of generation portfolio is bilateral, it can be considered as regulated given that it is set on the basis of costs without any correlation with market prices.

There is no platform for trading forward products for Albanian market and therefore no standardised contracts, products or forward price signals. In fact, any trading by incumbent generator or supplier is done to sell surpluses or cover shortages of their portfolio, which is less than 20%. Sale or purchase is done via tenders with different lots and bespoke products. This is usually done on shorter term basis, weekly and on some instances within month, but always after consumers' needs are forecasted by incumbent supplier which has priority.

Trading companies are present and their activity is linked with management of regional portfolio. The trading activity is mainly around tenders of incumbent generator and supplier through bespoke contracts, traded mainly for cross-border exchanges.

Conclusion:

- Between 70%-90% of the generation is reserved for incumbent supplier through a bespoke contract with quasi regulated prices.
- The other part of the portfolio of incumbents is traded via tenders as a short term, mainly within month, contracts. No platform or standardised contracts.
- Forward market in Albania does not exist, therefore no forward price index and the only price correlation with regional market is achieved through short term tenders which are dedicated mainly for import or export.
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument for Albanian market.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **BOSNIA AND HERCEGOVINA**

The wholesale electricity market in Bosnia and Hercegovina is based on bilateral contracts.

The incumbents are vertically integrated companies with generation, supply and trade functions. The entire portfolio of generation is dedicated to supplying end users through intra-company transfer. The percentage of the generator's portfolio allocated to supply function is between 50% - 70%. There is no price as the volume is an intra-company transfer, it can be considered there is no correlation with market prices.

There is no platform for trading forward products for market in Bosnia and Hercegovina and therefore no standardised contracts, products or forward price signals. In fact, any trading by incumbent companies are mainly to sell surpluses or on some situations cover shortages in case of outages. This is between 30%-50% of their production portfolio, which is sold via tenders as monthly, quarterly and up to year ahead non-standard products. Part of the volume that is sold on the market is done through short term bespoke profile, few days or week ahead, as part of asset optimisation strategy.

Trading companies are present and their activity is linked with management of regional portfolio. The trading activity is mainly around tenders of incumbent companies through adopted version of EFET master agreement<sup>2</sup>, traded mainly for cross-border exchanges.

Conclusion:

- Between 50%-70% of the generation is reserved for supply through an intra-company transfer of electricity.
- The other part of the portfolio, 30%-50% is traded via tenders as a short term and up to a month or quarter, with little trading on yearly contracts. No platform or standardised contracts.
- There is no forward price index for Bosnia and Hercegovina. The only price correlation with regional market is achieved through this activity which is dedicated mainly for export.
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument in the electricity market in Bosnia and Hercegovina.
- In line with their competences, the Regulator should identify measures that would facilitate

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<sup>2</sup> EFET master agreement is a framework contract that sets terms and conditions of entering into electricity purchase/sale.

establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **GEORGIA**

The wholesale electricity market in Georgia is based on bilateral contracts.

Generation companies sell to supplier under deregulated contracts and prices. There are caps applicable on smaller and old generators and around 10% of the sales are regulated. With almost all dedicated for national supply. Due to lack of market integration with neighbouring system, there is little activity on import and export.

There is no platform for trading forward products for market in Georgia and therefore no standardised contracts, products or forward price signals. Majority of volume is sold through bilateral negotiations and mainly for shorter term weekly products.

A trading company that has also supply function uses EFET master agreement for 30-50% of its purchase portfolio. The longer term contracts are year ahead and then quarter and month ahead contracts. Optimisation is done on weekly contracts.

Conclusion:

- Wholesale market is deregulated, however it is mainly national with little activity on import and export.
- No platform or but there is some activity on contracts which are based on EFET master agreement with some level of standardisation, however, there is no forward price index for Georgian market.
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument in the electricity market in Georgia.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **KOSOVO\***

Wholesale electricity market in Kosovo\* is based on bilateral contracts.

The incumbent producer is obliged to offer all its volume to the incumbent supplier, under bulk supply agreement, to the extent the supplier needs it for supplying regulated consumers in Kosovo\* under universal supply service. The percentage of the generator's portfolio allocated to incumbent supplier is between 70%-90%. Although the price for this part of generation portfolio is bilateral, it can be considered as regulated given that it is set on the basis of historic regulated prices and based on an opinion by the Regulator.

There is no platform for trading forward products for Kosovo's\* market and therefore no standardised contracts, products or forward price signals. In fact, any trading by supplier (who acts also for on behalf of incumbent generator in the market) is done to sell surpluses or cover shortages of their portfolio, which is less than 10%-30%. This is procured via brokers and tenders using EFET master agreement.

The market traded contracts are done only on short term basis as part of optimisation of generation portfolio.

Trading companies are active in fulfilling the needs of the incumbent supplier and their activity is linked with management of regional portfolio, so in the market in Kosovo\* only for import and export.

Conclusion:

- Between 70%-90% of the generation is reserved for incumbent supplier through a bespoke contract with quasi regulated prices.
- The other part of the portfolio of incumbent generator and supplier is traded via tenders and in particular through brokers as short term products. No platform is used for these trades.
- Forward market in Kosovo\* does not exist, therefore no forward price index and the only price correlation with regional market is achieved through short term contracts which are dedicated mainly for import or export.
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument for Kosovo\* market.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **MOLDOVA**

The wholesale electricity market in Moldova is based on bilateral contracts.

Tenders for supplying the consumers in Moldova are organised on yearly basis by the incumbent supplier. Following the outcome of the tender the bulk supply contracts are executed with one or more generators and/or traders with no specific profile of delivery.

There is no functioning balancing mechanism which hinders development of the market.

Conclusion:

- Yearly tenders for bulk supply of electricity dedicated to end users in Moldova.
- No functioning balancing mechanism which hinders establishment of the market and trading.
- Regulator need to establish hourly balancing mechanism and identify measures that would facilitate establishment of a market place with standardised contracts to substitute yearly tenders.

## **MONTENEGRO**

The wholesale electricity market in Montenegro is based on bilateral contracts.

The incumbent is a vertically integrated company with generation, supply and trade functions. The generation portfolio is mostly dedicated to supplying end users through intra-company transfer. The percentage of the generator's portfolio allocated to supply function is between 70% - 90% and there are no price available for the volumes that are subject to these intra-company transfer.

There is no platform for trading forward products for market in Montenegro, However the incumbent

company uses the services of brokers to procure purchases or sales, around 30% of their market broker traded portfolio. About 20% of market portfolio is via tenders and the other part through bilateral negotiation. Tenor of the concluded contracts is yearly (maximum year-ahead), quarterly, monthly and shorter term. Though not on its entirety, EFET master agreement is used for these market trades.

Trading companies are active mainly in the market portfolio of the incumbent. Their activity is linked with managing regional portfolio.

Conclusion:

- Between 70%-90% of the generation is reserved for supply through an intra-company transfer of electricity.
- The other part of the portfolio of the incumbent is traded via tenders as a short term and up to year ahead contracts. No platform or standardised contracts for trading.
- There is no forward price index for Montenegro. The only price correlation with regional market is achieved through cross-border activity of trading company and incumbent.
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument in the electricity market in Montenegro.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **NORTH MACEDONIA**

Wholesale electricity market in North Macedonia is based on bilateral contracts.

The incumbent producer is obliged to offer all its volume to the incumbent supplier for supplying tariff consumers. The percentage of the generator's portfolio allocated to incumbent supplier is between 50%-70%. The price for this part of generation portfolio is regulated, but with the new changes (effective in 2019) this obligation is removed and substituted with the obligation to offer at a non-regulated price.

There is no platform for trading forward products for North Macedonia market and therefore no standardised contracts, products or forward price signals. However brokers are used to central points to facilitate bilateral trading activity. Trading participants act mainly on the market portfolio of the incumbents using provisions of EFET master agreement. The tenor of the contracts goes up to year ahead, but mainly it is the shorter term bespoke products that are contracted.

However brokers are used to central points to facilitate bilateral trading activity. Trading participants act mainly on the market portfolio of the incumbents using provisions of EFET master agreement. The tenor of the contracts goes up to year ahead, but mainly it is the shorter term bespoke products that are contracted.

Trading companies are active in managing their regional portfolio as part of their hedging and speculative strategies.

Conclusion:

- Between 50%-70% of the generation is offered to the incumbent supplier through bilateral contracts. According to the most recent changes in the legal framework, the price of these



contracts is not regulated.

- The other part of the portfolio of incumbent generator and supplier is traded via tenders and in particular through brokers. No platform is used for these trades.
- Forward market in North Macedonia does not exist, therefore no forward price index and the only price correlation with regional market is achieved through cross-border activity of trading company and incumbent
- In the absence of forward as well as spot index, financial contracts are not used as price hedging instrument for the market.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## **SERBIA**

Wholesale electricity market in Serbia is based on bilateral contracts with organised hourly spot market (SEEPEX).

The incumbent producer offers its volume to the incumbent supplier for supplying tariff consumers. The percentage of the generator's portfolio allocated to incumbent supplier is between 50%-55%. There is no price as the volume is an intra-company transfer, it can be considered there is no correlation with market prices. The remaining part of the portfolio is managed by the trading arm of the incumbent company. In 2028 the concentration is lowered compared to 2017 for both directions of trade (HHI<sup>3</sup> purchased/sold 659/688). The longer term activity in the market of the incumbent is up to year-ahead contract. The market portfolio is spread more or less equally over year-ahead, quarter ahead, month ahead and week ahead. The remaining part is then optimised on the spot market. Serbian incumbent is the only incumbent that is active and manages regional portfolio.

SEEPEX, which is the power exchange that administers the hourly day-ahead market in Serbia represents the key platform for spot market. Day-ahead market is becoming more liquid<sup>4</sup> and in coming years the share of the volume executed centrally on day-ahead market is expected grow. Serbian market is available on broker platform but it is very illiquid. Market activity by the incumbent and other trading participants is done via brokers or tenders with very little activity executed via platform under EFET master agreement. Serbian TSO purchases electricity for covering the network losses through an electronic auction platform, while as of July 2018 the losses portfolio is managed and optimised also on the day ahead market - SEEPEX.

Trading companies that are active in Serbian market have a mixed portfolio of hedging and speculative activity. Serbian market, being the biggest among Western Balkans Contracting Parties, is the only market where trading companies may find opportunities for hedging regional portfolio. Day-ahead played an important role in offering physical hedging possibility which in turn reduces the risk of taking

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<sup>3</sup> *Herfindahl-Hirschman Index is a common measure of market concentration, and is used to determine market competitiveness*

<sup>4</sup> *The total amount of electricity traded on SEEPEX in 2018 was 2,318,341 MWh, what is 2.7 times more than in 2017. The largest monthly trade volume of 259,995 MWh was achieved in December 2018, and the daily maximum was realized on November 25, 2018 with 12,367.6 MWh. The smallest volume of monthly trade was in February and amounted to 95,978.4 MWh, even 370 times higher than in the previous year.*

forward positions in the market.

Conclusion:

- Between 50%-55% of the generation is offered to the incumbent supplier which is part of the company. According to the most recent changes in the legal framework, the price of these contracts is not regulated.
- The other part of the portfolio of incumbent generator and supplier is traded via tenders and in particular through brokers. Very little, insignificant volume is executed via broker platforms.
- Forward market of standardised products in Serbia is very illiquid, therefore no forward price index and the only price correlation with regional market is achieved through cross-border activity of trading company and incumbent.
- Financial contracts are currently not used as hedging instrument, though future contracts are expected to be launched soon demonstrating level of confidence on SEEPEX index.
- In line with their competences, the Regulator should identify measures that would facilitate establishment of a market place with standardised contracts and undertake measures that boost liquidity.

## UKRAINE

During the reported period wholesale electricity market in Ukraine was in the centrally despatched pool and single buyer. Bilateral trading was not allowed and balancing responsibility not applied.

There are some cross-border activity, export only, on Bursthyn Island, whereas the other part of Ukraine has commercial exchanges with Moldova, but these are limited to availability of cross-border capacity.

As of 1 July 2019 self-dispatched bilateral market model is launched in Ukraine.

### 3. Summary of findings

Table below represents a summary of findings:

<b>Contracting Party</b>	<b>Generation 'reserved' for end users</b>	<b>Procurement process for the remaining part (incumbents)</b>	<b>Contract / product</b>	<b>Delivery tenor/period</b>	<b>Portfolio of market participants/traders</b>
Albania	70%-90%	Tenders	Bespoke profile	Short term, weekly	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-

					border activity
Bosnia and Hercegovina	50%-70%	Tenders	Bespoke profile	Short term, up to yearly contracts	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-border activity
Georgia	NA	Bilateral using also EFET master agreement	Bulk supply	Up to year ahead	National portfolio and little cross-border activity
Kosovo*	70%-90%	Tenders and bilaterally through brokers using EFET master agreement	Bespoke profile	Mainly short term	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-border activity
Moldova	NA	Tender	Bulk supply	yearly	Participation on yearly tenders
Montenegro	70%-90%	Bilateral through brokers	Bespoke profile	Short term, up to yearly	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-border activity
North Macedonia	70%-90%	Bilateral through brokers	Bespoke profile	Short term, up to yearly	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-border activity
Serbia	50%-55%	Tenders, bilateral through brokers and spot PX	Bespoke (non-standardised) profile, little activity on standard contracts and on PX	Short term, up to yearly contracts	Regional portfolio & trading on the surpluses or shortages of incumbents as cross-border activity, including hedging and some speculative activity
Ukraine	NA	Single buyer <sup>5</sup>	centrally dispatched pool	Short term	Some export activity on Bursthyn Island

<sup>5</sup> During the development of this report, the new market model in Ukraine is launched.

## Conclusions and Recommendations

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The report shows that the transfer of title of electricity from incumbent generator to incumbent supplier does not go through transparent market mechanism. Considering the size of the incumbents in Western Balkans compared to the size of the market, this leaves little volume to be traded through market mechanism either via tenders or bilaterally, also with the involvement of brokers, but anyway off the screen/platform. Such market activity is mainly linked with regional activity where market participants act on the surpluses or shortages of incumbents through import and/or export.

Significant part of trading activity is done via bespoke profiles usually short term up to month ahead with insignificant activity on yearly contracts. In the absence of standard contracts there is no forward (yearly or monthly) price signal, therefore also the pricing of cross-border capacity does not reflect the market spreads which is likely to result in a non-efficient use of cross-border capacity. The exception would be Serbian market where day-ahead price index through SEEPEX.

Activity of incumbents, with some exception, seems to be mainly on national markets, which shows that most of cross-border activity is done by trading companies who take speculative position on the forward cross-border transmission rights offering shorter term hedging to national incumbents.

Considering the above, ECRB recommends to the national regulatory authorities, in line with their competences under the applicable national legislation, to identify and implement measures that would facilitate establishment of market places, i.e. screen trading with standardised contracts and deploy measures that support liquidity in the market, with the aim to enhance competition and facilitate forward price formation.