



JOINT STOCK COMPANY
ELEKTROMREŽA SRBIJE

THE PUBLICATION OF FUNDAMENTAL DATA IN ELECTRICITY MARKET



Market Division
EMS JSC Belgrade
November 2018



АКЦИОНАРСКО ДРУШТВО
ЕЛЕКТРОМРЕЖА СРБИЈЕ



Agenda

- ▶ Changes of the Rules on the publication of Electricity Market Fundamental data :
 - ▶ Year-ahead Forecast Margin;
 - ▶ Total Capacity Nominated;
 - ▶ Total Scheduled Commercial Exchanges;
 - ▶ Congestion Management –Redespaching;
 - ▶ Day-ahead Generation Forecast for Wind and Solar;
 - ▶ Planned and Actual Unavailability of Generation/Production Unit.

The Publication Of Fundamental Data In Electricity Market

- ▶ Changes of the Publication Of Fundamental Data In Electricity Market are in progress
- ▶ Text proposal is submitted to the Energy Agency of the Republic of Serbia

Year-ahead Forecast Margin

- ▶ The change relates to the description of the data:
 - ▶ A year-ahead forecast margin (“remaining capacity”) is calculated as the difference between yearly forecast of Reliable Available Capacity and yearly forecast of Total Load.
 - ▶ The Reliable Available Capacity (RAC) is the difference between the net generating capacity (NGC) and the Unavailable Capacity (UC).
 - ▶ The UC consists of Non-Usable Capacity, Maintenance and Overhauls, Outages and System Services Reserve.

Year-ahead Forecast Margin

Year-ahead Forecast Margin ?

Year-ahead Forecast Margin [8.1]

Year

< 2018 >

Control area

Bidding zone

Country

Area

- Montenegro (ME) ▼
- Netherlands (NL) ▼
- Norway (NO) ▼
- Poland (PL) ▼
- Portugal (PT) ▼
- Romania (RO) ▼
- Russia (RU) ▼
- Serbia (RS) ▼
- BZN|RS



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Area	Forecast margin
	[MW]
BZN RS	<u>224</u>

Total Capacity Nominated

- ▶ Transmission system operator shall publish for each border and direction:
 - ▶ The value for the **long-term** time horizons
 - ▶ consists of nominations from the following allocations: yearly, quarterly, monthly and weekly.
 - ▶ The value for the **day ahead** time horizon
 - ▶ consists of nominations from the following allocations: yearly, quarterly, monthly, weekly and daily.
 - ▶ The value for the **Intraday** time horizon
 - ▶ consists of nominations from the following allocations: yearly, quarterly, monthly, weekly, daily and intraday.

Total Capacity Nominated

Total Nominated Capacity ?

Total Capacity Nominated [12.1.B]

Day

< 01.11.2018

Border - Control Area

Border - Bidding Zone

Area

Serbia (RS) ▼

BZN|RS - BZN|AL

BZN|RS - BZN|BA

BZN|RS - BZN|BG

BZN|RS - BZN|HR

BZN|RS - BZN|HU

BZN|RS - BZN|ME

BZN|RS - BZN|MK

BZN|RS - BZN|RO

Slovakia (SK) ▼

Slovenia (SI) ▼



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Time	BZN RS > BZN HU				BZN HU > BZN		
	Long term [MW]	Daily [MW]	Intraday [MW]	Total (legacy) [MW]	Long term [MW]	Daily [MW]	Intra
00:00 - 01:00	n/e	n/e	n/e	254	n/e	n/e	
01:00 - 02:00	n/e	n/e	n/e	376	n/e	n/e	
02:00 - 03:00	n/e	n/e	n/e	396	n/e	n/e	
03:00 - 04:00	n/e	n/e	n/e	499	n/e	n/e	
04:00 - 05:00	n/e	n/e	n/e	448	n/e	n/e	
05:00 - 06:00	n/e	n/e	n/e	318	n/e	n/e	
06:00 - 07:00	n/e	n/e	n/e	437	n/e	n/e	
07:00 - 08:00	n/e	n/e	n/e	507	n/e	n/e	
08:00 - 09:00	n/e	n/e	n/e	430	n/e	n/e	
09:00 - 10:00	n/e	n/e	n/e	424	n/e	n/e	



Total Scheduled Commercial Exchanges

- ▶ Transmission system operator shall publish for each border and direction:
 - ▶ The value for the **day ahead** time horizon
 - ▶ consists of commercial exchanges in aggregated form from the following allocations: yearly, monthly, quarterly, weekly and daily.
 - ▶ The value for the **intraday** time horizon
 - ▶ consists of commercial exchanges in aggregated form from the following allocations: yearly, monthly, and quarterly, weekly, daily and intraday.

Total Scheduled Commercial Exchanges

Scheduled Commercial Exchanges ?

Total Commercial Schedules [12.1.F]
Day-ahead Commercial Schedules [12.1.F]

Day

< 01.11.2018 ⌵ >

Border - Control Area

Border - Bidding Zone

Border - Country

Area

 Serbia (RS) ⌵
 [BZN|RS - BZN|AL](#)
 [BZN|RS - BZN|BA](#)
 [BZN|RS - BZN|BG](#)
 [BZN|RS - BZN|HR](#)
 [BZN|RS - BZN|HU](#)
 [BZN|RS - BZN|ME](#)
 [BZN|RS - BZN|MK](#)
 [BZN|RS - BZN|RO](#)
 [Slovakia \(SK\)](#) ⌵
 [Slovenia \(SI\)](#) ⌵
 [Spain \(ES\)](#) ⌵
 [Sweden \(SE\)](#) ⌵

⌵ 🌐 📊 [Show fullscreen](#) [Export Data](#) ⌵

CET (UTC+1) / CEST (UTC+2) ⌵

Time	BZN HU > BZN RS		BZN RS > BZN HU	
	Day Ahead [MW]	Total [MW]	Day Ahead [MW]	Total [MW]
00:00 - 01:00	n/e	943	n/e	254
01:00 - 02:00	n/e	738	n/e	376
02:00 - 03:00	n/e	634	n/e	396
03:00 - 04:00	n/e	582	n/e	499
04:00 - 05:00	n/e	579	n/e	448
05:00 - 06:00	n/e	833	n/e	318
06:00 - 07:00	n/e	938	n/e	437
07:00 - 08:00	n/e	964	n/e	507
08:00 - 09:00	n/e	930	n/e	430
09:00 - 10:00	n/e	932	n/e	424
10:00 - 11:00	n/e	958	n/e	535
11:00 - 12:00	n/e	887	n/e	483

Congestion Management -Redispatching

- ▶ The following information shall be published:
 - ▶ Action taken (increase or decrease in generation, increase or decrease in consumption);
 - ▶ EIC of element which is the reason for applying redispatching measures;
 - ▶ Location – marking of border;
 - ▶ Name of asset;
 - ▶ Type of asset;
 - ▶ The reason for the action (2 possibilities): “Load flow overload” (current problem), “Voltage level adjustment”;
 - ▶ **Redispatched energy (MWh) resulting from changes of affected generation/load capacity.**
 - ▶ **The control area where energy is going**
 - ▶ **The control area where energy is taken from**
 - ▶ The start and end date (day, hour) of the action;
 - ▶ Comment or additional information, if any.

Congestion Management - Redespaching

Redispatching Cross Border ?

Redispatching Cross Border [13.1.A]

Day Range

From < 01.11.2018 >To < 11.11.2018 >

Control Area

Area

- Germany (DE) ▼
- CTA|DE(50Hertz)
- CTA|DE(Amprion)
- CTA|DE(TenneT_GER)
- CTA|DE(TransnetBW)

- Greece (GR) ▼
- Hungary (HU) ▼
- Ireland (IE) ▼
- Italy (IT) ▼
- Latvia (LV) ▼
- Lithuania (LT) ▼
- Luxembourg (LU) ▼
- Malta (MT) ▼
- Moldova (MD) ▼
- Montenegro (ME) ▼

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Time Interval	Action	In Area	Out Area	Impact		Reason	
				Quantity	Unit Of Measure		
02.11.2018 01:00 - 02.11.2018 07:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
02.11.2018 03:00 - 02.11.2018 06:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
02.11.2018 06:00 - 02.11.2018 16:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
02.11.2018 13:00 - 02.11.2018 16:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
02.11.2018 16:00 - 02.11.2018 18:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
05.11.2018 09:00 - 05.11.2018 19:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+
05.11.2018 13:00 - 05.11.2018 15:00 (CET)	Load decrease	CTA DK	CTA DE(50Hertz)	0	MAW	B24	+

Day-ahead Generation Forecast for Wind and Solar

- ▶ Electricity producer shall submit forecast data for generation connected to the transmission system:
 - ▶ **Current forecast:** The information is the last update of the current forecast. The information shall be regularly updated and published during intra-day trading;
 - ▶ **Day ahead forecast until 17.30:** This value is the most recent forecast at 17:30 the day before. The information shall be published no later than 18.00 Brussels time, one day before actual delivery takes place;
 - ▶ **Intraday forecast until 7.50:** This value is the most recent forecast at 7:50 the day of delivery. At least one update to be published at 8.00 Brussels time on the day of actual delivery for intra-day.

Day-ahead Generation Forecast for Wind and Solar

- ▶ Distribution system operator or closed distribution system operator shall submit forecast data for generation connected to the distribution system or closed distribution system:
 - ▶ **Current forecast:** The information is the last update of the current forecast. The information shall be regularly updated and published during intra-day trading;
 - ▶ **Day ahead forecast until 17.30:** This value is the most recent forecast at 17:30 the day before. The information shall be published no later than 18.00 Brussels time, one day before actual delivery takes place;
 - ▶ **Intraday forecast until 7.50:** This value is the most recent forecast at 7:50 the day of delivery. At least one update to be published at 8.00 Brussels time on the day of actual delivery for intra-day.

Day-ahead Generation Forecast for Wind and Solar

Generation Forecasts for Wind and Solar ?

Day-ahead Generation Forecasts for Wind and Solar [14.1.D]

Intraday Generation Forecasts for Wind and Solar [14.1.D]

Current Generation Forecasts for Wind and Solar [14.1.D]

Day and Time Range

< 01.11.2018 >

Control area

Bidding zone

Country

Area

Hungary (HU) ▼

BZN|HU

Ireland (IE) ▼

Italy (IT) ▼

Latvia (LV) ▼

Lithuania (LT) ▼

Luxembourg (LU) ▼

Malta (MT) ▼

Moldova (MD) ▼

Montenegro (ME) ▼

Netherlands (NL) ▼

Norway (NO) ▼

Poland (PL) ▼

Portugal (PT) ▼

Romania (RO) ▼



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MTU	BZN HU					
	Generation Forecast					
	Wind					
	Onshore [MW]			Offshore [MW]		
	Day ahead	Intraday	Current	Day ahead	Intraday	Current
00:00 - 00:15	<u>178</u>	n/e	n/e	n/e	n/e	n/e
00:15 - 00:30	<u>160</u>	n/e	n/e	n/e	n/e	n/e
00:30 - 00:45	<u>145</u>	n/e	n/e	n/e	n/e	n/e
00:45 - 01:00	<u>135</u>	n/e	n/e	n/e	n/e	n/e
01:00 - 01:15	<u>128</u>	n/e	n/e	n/e	n/e	n/e
01:15 - 01:30	<u>119</u>	n/e	n/e	n/e	n/e	n/e
01:30 - 01:45	<u>112</u>	n/e	n/e	n/e	n/e	n/e
01:45 - 02:00	<u>108</u>	n/e	n/e	n/e	n/e	n/e
02:00 - 02:15	<u>102</u>	n/e	n/e	n/e	n/e	n/e
02:15 - 02:30	<u>102</u>	n/e	n/e	n/e	n/e	n/e



Planned and Actual Unavailability of Generation/Production Unit

- ▶ If the actual unavailability have been planned and already reported with the correct available capacity, it's not necessary to deliver again the data.
- ▶ The “available capacity during the event” means the available generation capacity during the period specified.

Planned and Actual Unavailability of Generation/Production Unit

Unavailability of Production and Generation Units ?

Planned Unavailability of Generation Units [15.1.A]
 Changes in Actual Availability of Generation Units [15.1.B]
 Planned Unavailability of Production Units [15.1.C]
 Changes in Actual Availability of Production Units [15.1.D]

Day Range

From

To

Control area

Bidding zone

Area

Montenegro (ME) ▾

Netherlands (NL) ▾

Norway (NO) ▾

Poland (PL) ▾

Portugal (PT) ▾

Romania (RO) ▾

Russia (RU) ▾

Serbia (RS) ▾

CTA|RS

Slovakia (SK) ▾

Slovenia (SI) ▾

Spain (ES) ▾

Sweden (SE) ▾

Switzerland (CH) ▾

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Unit Name

Unit Code

Filter

Status	Nature	Type	Unavailability period	Area	Unit Name	Capacity		
						Start - End	Installed [MW]	
			01.01.2018 00:00 - 31.12.2018 23:59 (CET)	CTA RS	TETO Novi Sad G1	<u>135</u>	<u>0</u>	
			01.01.2018 00:00 - 31.12.2018 23:59 (CET)	CTA RS	TETO Zrenjanin G1	<u>0</u>	<u>0</u>	
			15.07.2018 00:00 - 01.11.2018 22:01 (CET)	CTA RS	TE Kolubara G5	<u>110</u>	<u>0</u>	
			05.09.2018 19:26 - 31.12.2018 01:00 (CET)	CTA RS	HE Đerdap 1 G2	<u>176</u>	<u>0</u>	
			12.09.2018 00:26 - 05.11.2018 15:31 (CET)	CTA RS	TENT A G2	<u>210</u>	<u>0</u>	
			23.10.2018 06:00 - 11.11.2018 23:59 (CET)	CTA RS	HE Đerdap 1 G6	<u>190</u>	<u>0</u>	



THANK YOU FOR YOUR TIME AND ATTENTION



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