

# MARKET MONITORING REPORT

## Market for Allocation of Cross-Border Capacities

February 2021

## Abbreviations

- ANRE - Romanian Energy Regulatory Authority
- HHI - Herfindahl-Hirschman Index
- BRP - Balance Responsible Party
- BM - Balancing Market
- DAM - Day Ahead Market
- TSO - Transmission System Operator
- DU – Dispatchable Unit
- PN – Physical Notification
- NDC - National Dispatching Center
- C1 – The market share of the largest market participant
- C3 – Total market share of top 3 market participants
- NPS – Minimum number of residual generators
- TTC – Total Transfer Capacity
- NTC – Net Transfer Capacity
- ATC – Available Transfer Capacity



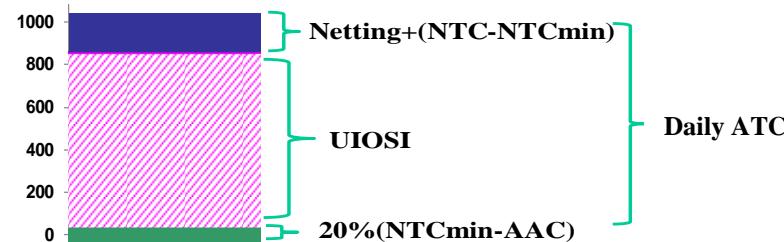
Transelectrica, the Romanian Transmission System Operator, operates and monitors the activity of 3 types of markets: Balancing Market, Ancillary Services Market and Market for Allocation of Cross-Border Capacities.

Using the records from the markets data base, Transelectrica prepares daily, weekly and monthly monitoring reports. A part of the data included in these reports (those data which are not confidential) is published on the website [www.transelectrica.ro](http://www.transelectrica.ro)

## General Remarks

- According to the agreements between Transelectrica and neighbors for year 2021 :
  - ✓ on the Bulgarian border, the bilateral coordinated allocation is done for 100% of total capacity by Transelectrica for daily auctions. Starting with 20.11.2019, implicit intraday allocation with continuous trading is organized on the Bulgarian border, due to the integration of Romanian intraday market in SIDC (Single Intra-Day Market). In the event of decoupling, no explicit intraday auctions are organized on RO – BG border; the “netting” is applied to daily and intraday allocation.
  - ✓ on the Hungarian border, starting with 20.11.2019 implicit intraday allocations are held with continuous trading, due to the integration of Romanian intraday market in SIDC (Single Intra-Day Market). Starting with the delivery day 11.02.2021 the 15-minute cross-border product with continuous intraday trading was launched on RO-HU border, in cooperation with the Hungarian parties, MAVIR and HUPX. In the event of decoupling, no explicit intraday auctions are organized on RO – HU border. Implicit daily allocations are held since the CZ-SK-HU-RO day-ahead market coupling. In the event of decoupling, MAVIR is in charge with the explicit daily auctions (shadow auctions) for RO-HU border. The “netting” is applied to daily and intraday allocation.
  - ✓ on the Serbian border, the bilateral coordinated allocation, is done for 100% of total capacity by EMS (Serbia) for daily auctions and by Transelectrica for long term and intraday auctions. The “netting” is applied to daily and intraday allocation. The intraday allocation is done in six auction sessions for time intervals: 00:00-04:00, 04:00-08:00, 08:00-12:00, 12:00-16:00, 16:00-20:00, 20:00-00:00 CET.
  - ✓ *UIOSI* („use it or sell it”) principle is applied on Hungarian, Bulgarian and Serbian borders.
  - ✓ the long term auctions on Hungarian and Bulgarian borders are held by Joint Allocation Office (JAO) based on Allocation Rules for Forward Capacity Allocation (HAR) and border specific Annex. On these borders it is applied:

- ✓ reservation of a percentage of interconnection capacity for short term auction, offered capacity being calculated as 80% of the minimum of available capacities of all periods of the month;



- Transelectrica's auctions are held on Damas platform, with euro currency trading;
- On Romania – Bulgaria, Romania – Serbia and Romania – Hungary border, the use of the physical transport rights is performed in accordance with the m:n nomination principle, for all time horizons.

- Long term auction results on the Hungarian and Bulgarian borders are provided by JAO and daily auction results on the Serbian border (auction prices, allocated capacities) are provided by the respective TSO.
- Usage of allocated capacity on Ukrainian and Moldavian border is restricted by Ukrainian TSO agreement and respectively by the approval of the distribution operator of the passive consumption islands.
- Monthly auctions for February 2021 were held as: import/export Hungary, import/export Bulgaria, import/export Serbia and import/export Ukraine for the period 01.02 – 28.02.2021.
- In February 2021 there were no auctions held on Moldavian border.

## Monthly auction Results of 01 – 28 February 2021

	Prices [euro/MWh]	Capacities [MW]								
	Results	TTC	NTC	ATC	AAC	Reserved	Offered	Requested	Allocated	Final Rights*
<b>Hungary export</b> <b>01 - 28 February 2021</b>	0.63	800	700	350	350	0	280	2653	279	629
<b>Hungary import</b> <b>01 - 28 February 2021</b>	0.42	800	700	351	349	0	280	2543	280	629
<b>Bulgaria export</b> <b>01 - 28 February 2021</b>	0.14	1100	1000	602	398	0	480	2558	480	878
<b>Bulgaria import</b> <b>01 - 28 February 2021</b>	0.14	1100	1000	601	399	0	480	2907	479	878
<b>Serbia export</b> <b>01 - 28 February 2021</b>	0.13	900	800	550	250	-	550	1145	550	800
<b>Serbia import</b> <b>01 - 28 February 2021</b>	0.26	900	800	550	250	-	550	1374	550	800
<b>Ukraine export</b> <b>01 - 28 February 2021</b>	0.01	300	200	100	100	-	100	155	100	200
<b>Ukraine import</b> <b>01 - 28 February 2021</b>	0.05	500	400	300	100	-	300	695	300	400
<b>Moldavia export</b> <b>01 - 28 February 2021</b>	-	-	-	-	-	-	-	-	-	-
<b>Moldavia import</b> <b>01 - 28 February 2021</b>	-	-	-	-	-	-	-	-	-	-
<b>RO_Vulcanesti</b> <b>01 - 28 February 2021</b>	-	-	-	-	-	-	-	-	-	-
<b>RO_Costesti</b> <b>01 - 28 February 2021</b>	-	-	-	-	-	-	-	-	-	-
<b>RO_Cioara</b> <b>01 - 28 February 2021</b>	-	-	-	-	-	-	-	-	-	-

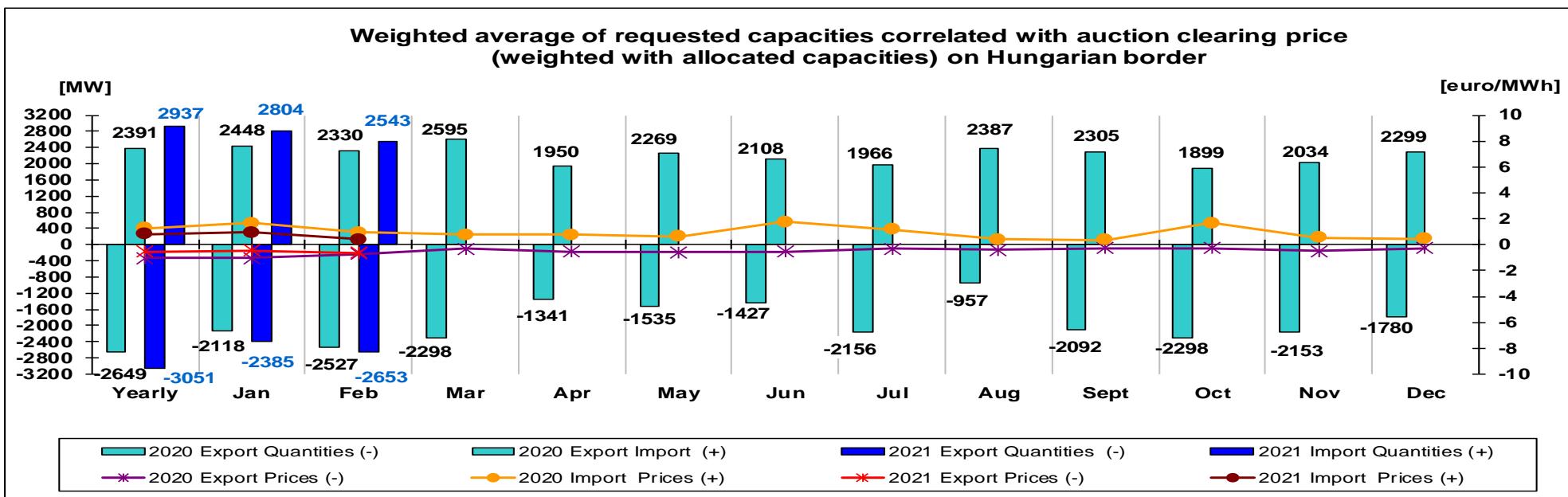
Notes:

ATC values on Hungarian and Bulgarian borders are calculated before the reservation of capacity. Offered capacity includes reservation and returned capacity.

Requested = requested capacity that remains after automatic rejection of the offers with credit limit exceeded

Final rights = monthly allocated capacity + yearly allocated capacity after returns and withdrawals.

# Market for Allocation of Cross-Border Capacities

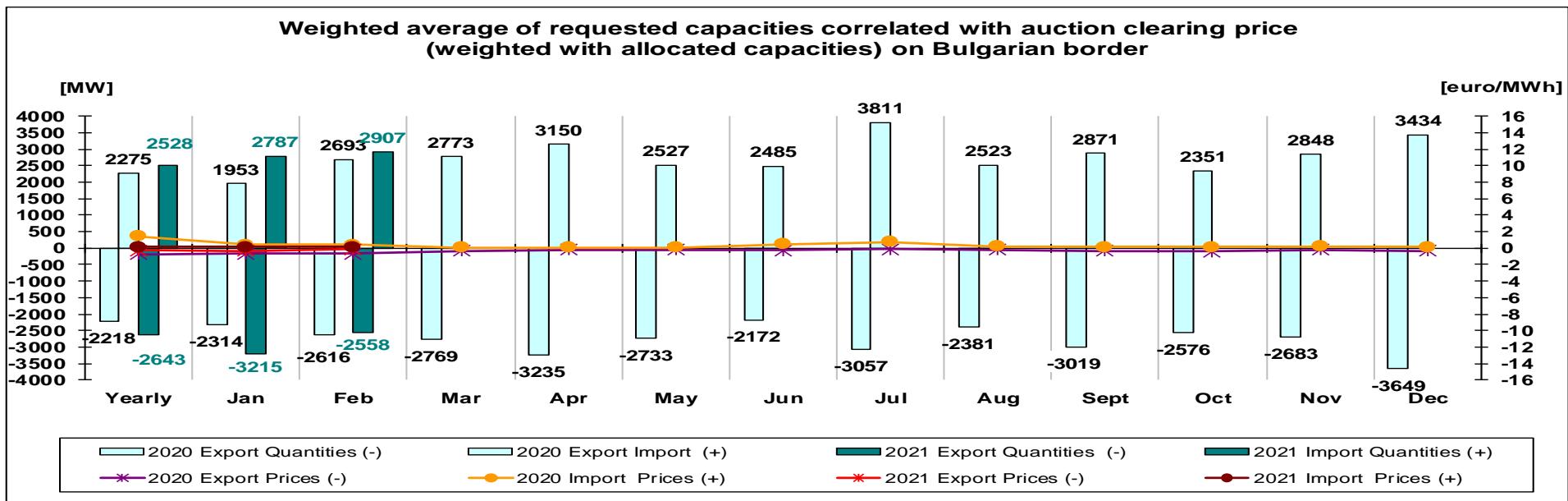


Border	Yearly	Jan. 21	Feb. 21	Mar. 21	Apr. 21	May 21	Jun. 21	Jul. 21	Aug. 21	Sept. 21	Oct. 21	Nov. 21	Dec. 21
Hungary export	0.55	0.46	0.63										
Hungary import	0.83	0.93	0.42										

Border	Yearly	Jan. 20	Feb. 20	Mar. 20	Apr. 20	May 20	Jun. 20	Jul. 20	Aug. 20	Sept. 20	Oct. 20	Nov. 20	Dec. 20
Hungary export	1.03	1.05	0.72	0.33	0.54	0.58	0.53	0.33	0.40	0.25	0.25	0.49	0.29
Hungary import	1.28	1.67	0.96	0.78	0.77	0.64	1.77	1.18	0.43	0.38	1.67	0.55	0.44

- Compared with previous year, in February 2021 the auction price slightly decreased on export direction, while offered capacity did not vary and requested capacity was higher. On import direction, monthly auction price decreased compared with similar period of previous year, while offered capacity did not vary and requested capacity was higher.

# Market for Allocation of Cross-Border Capacities

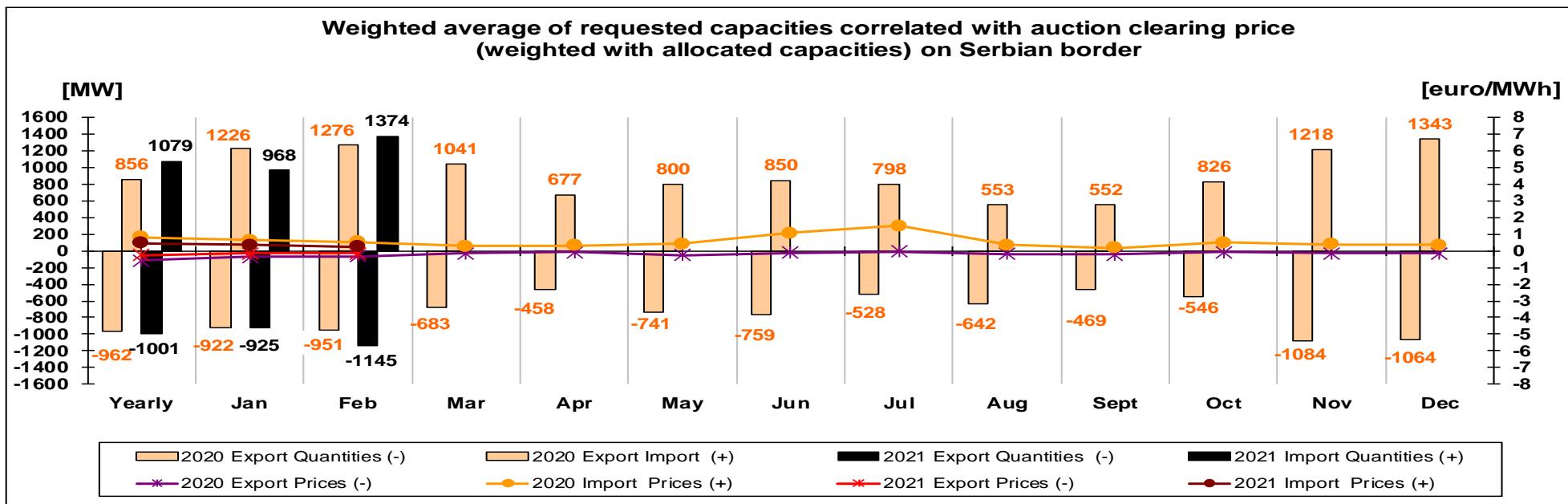


Border	Yearly	Jan. 21	Feb.21	Mar.21	Apr.21	May 21	Jun. 21	Jul. 21	Aug. 21	Sept. 21	Oct. 21	Nov.21	Dec. 21
Bulgaria export	0.28	0.34	0.14										
Bulgaria import	0.15	0.15	0.14										

Border	Yearly	Jan. 20	Feb.20	Mar.20	Apr.20	May 20	Jun. 20	Jul. 20	Aug. 20	Sept. 20	Oct. 20	Nov.20	Dec. 20
Bulgaria export	0.77	0.71	0.68	0.35	0.18	0.19	0.25	0.14	0.20	0.33	0.38	0.18	0.32
Bulgaria import	1.43	0.41	0.40	0.09	0.07	0.09	0.51	0.73	0.24	0.14	0.12	0.21	0.14

- Compared with previous year, in February 2021 the auction price decreased on export direction, while offered capacity was higher and requested capacity was lower. On import direction, monthly auction price decreased compared with similar period of previous year, while offered capacity and requested capacity were higher.

# Market for Allocation of Cross-Border Capacities

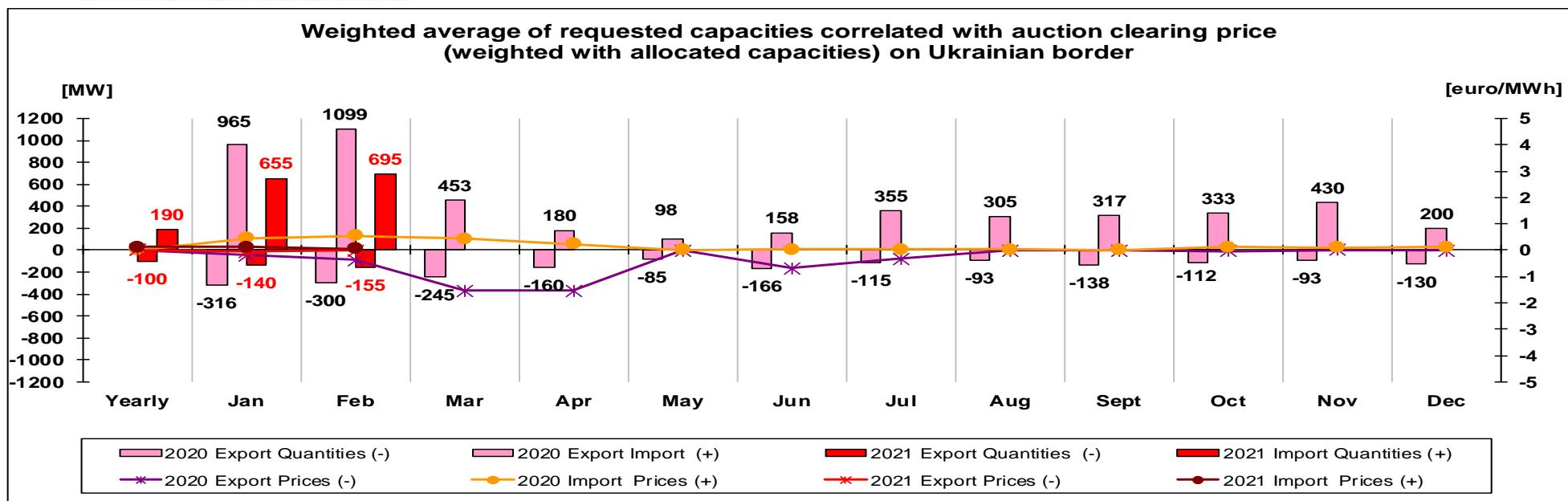


Border	Yearly	Jan. 21	Feb.21	Mar.21	Apr.21	May 21	Jun. 21	Jul. 21	Aug. 21	Sept. 21	Oct. 21	Nov.21	Dec. 21
Serbia export	0.27	0.13	0.13										
Serbia import	0.47	0.35	0.26										

Border	Yearly	Jan. 20	Feb.20	Mar.20	Apr.20	May 20	Jun. 20	Jul. 20	Aug. 20	Sept. 20	Oct. 20	Nov.20	Dec. 20
Serbia export	0.56	0.36	0.32	0.13	0.07	0.24	0.12	0.05	0.16	0.22	0.07	0.16	0.13
Serbia import	0.82	0.66	0.52	0.29	0.32	0.43	1.08	1.50	0.35	0.17	0.51	0.41	0.37

- Compared with previous year, in February 2021 the auction price decreased on export direction, while offered capacity and requested capacity were higher. On import direction monthly auction price decreased, while offered capacity and requested capacity were higher.

# Market for Allocation of Cross-Border Capacities



Border	Yearly	Jan. 21	Feb. 21	Mar. 21	Apr. 21	May 21	Jun. 21	Jul. 21	Aug. 21	Sept. 21	Oct. 21	Nov. 21	Dec. 21
Ukraine export	0.00	0.05	0.01										
Ukraine import	0.11	0.12	0.05										

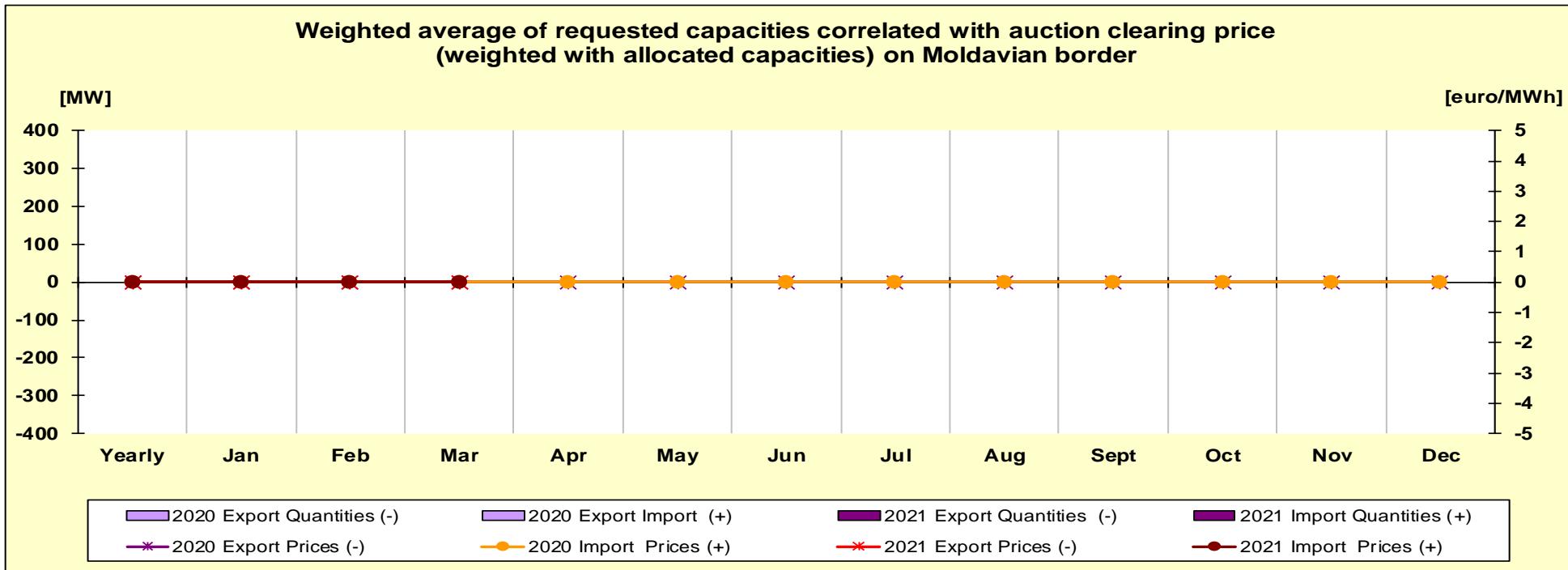
Border	Yearly	Jan. 20	Feb. 20	Mar. 20	Apr. 20	May 20	Jun. 20	Jul. 20	Aug. 20	Sept. 20	Oct. 20	Nov. 20	Dec. 20
Ukraine export		-	0.20	0.37	1.55	1.55	0.02	0.69	0.32	0.01	0.02	0.04	0.00
Ukraine import		-	0.45	0.55	0.44	0.23	0.02	0.03	0.02	0.02	0.02	0.12	0.09

- Compared with previous year, in February 2021 the auction price decreased on import direction, while offered capacity and requested capacity were lower. On export direction monthly auction price was close to zero, while offered capacity did not vary and requested capacity was lower than in February 2020.



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# Market for Allocation of Cross-Border Capacities



Border	Yearly	Jan. 21	Feb.21	Mar.21	Apr.21	May 21	Jun. 21	Jul. 21	Aug. 21	Sept. 21	Oct. 21	Nov.21	Dec. 21
Moldavia export	-	-	-	-	-	-	-	-	-	-	-	-	-
Moldavia import	-	-	-	-	-	-	-	-	-	-	-	-	-

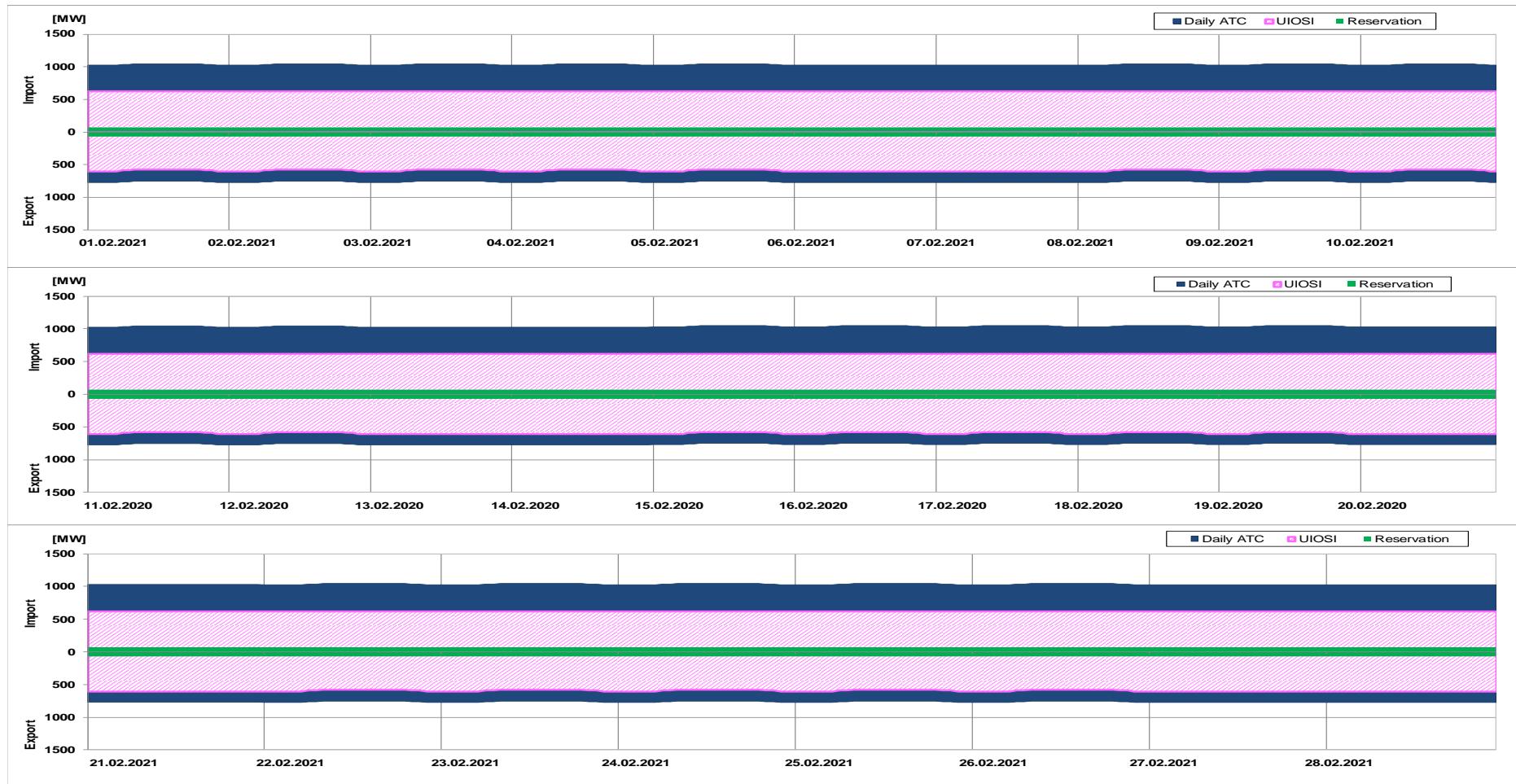
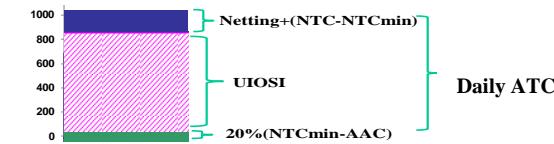
Border	Yearly	Jan. 20	Feb.20	Mar.20	Apr.20	May 20	Jun. 20	Jul. 20	Aug. 20	Sept. 20	Oct. 20	Nov.20	Dec. 20
Moldavia export	-	-	-	-	-	-	-	-	-	-	-	-	-
Moldavia import	-	-	-	-	-	-	-	-	-	-	-	-	-

# Market for Allocation of Cross-Border Capacities

## Daily implicit Auctions on Romanian – Hungarian border

Hungary February 2021

Reserved Capacity [MW] average value		Unused Capacity [MW] average value	
RO-HU	HU-RO	RO-HU	HU-RO
70	71	589	625

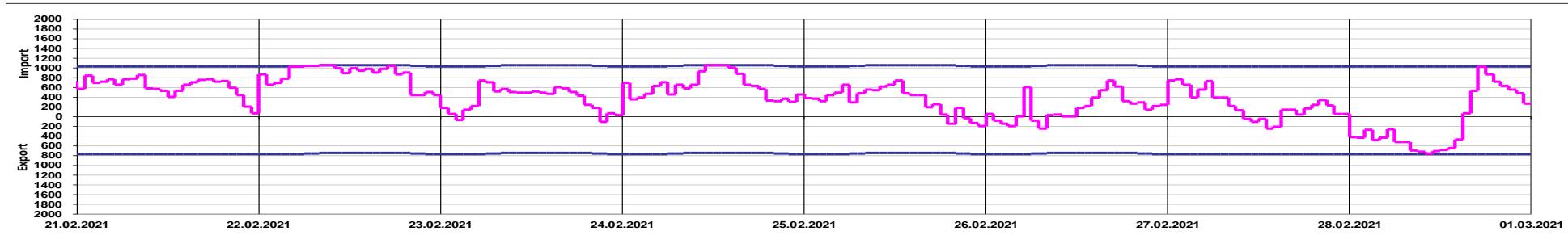
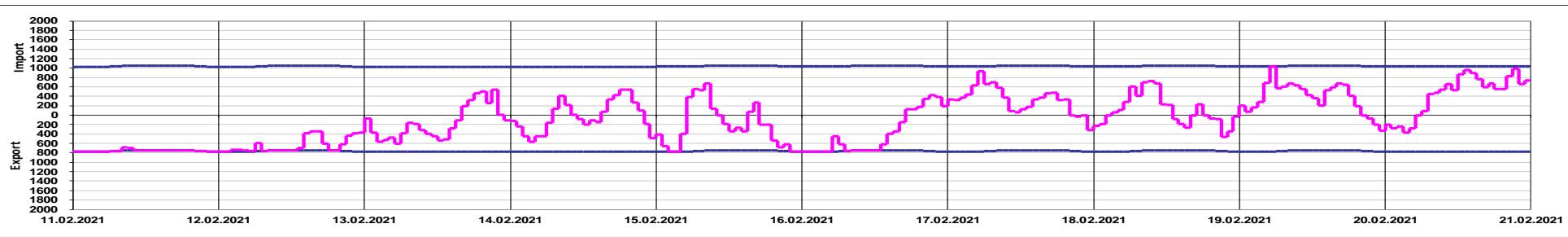
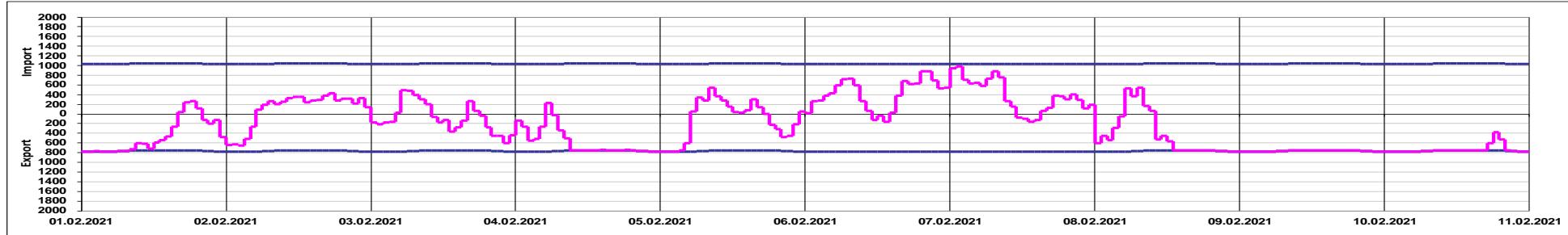




# Market for Allocation of Cross-Border Capacities

## Daily implicit Auctions on Romanian – Hungarian border

Hungary February 2021



Offered Capacity on Daily Auction [MW]

Net Position Border RO – HU [MWh]

Public





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# Market for Allocation of Cross-Border Capacities

## Daily implicit Auctions on Romanian – Hungarian border

### Congestion Prices [Euro/MWh]

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max
1	16.83	11.84	-	3.97	16.51	4.24	4.68	7.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.83	
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
4	-	-	-	-	-	-	-	-	0.27	0.71	3.36	2.56	1.78	-	2.50	0.36	1.52	-	2.51	2.61	2.33	3.31	3.88	3.88	
5	6.03	4.67	1.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.03	
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
8	-	-	-	-	-	-	-	-	-	-	-	-	-	4.48	9.48	18.90	23.15	14.34	15.95	20.59	24.13	34.13	35.89	46.49	46.49
9	40.21	47.68	46.41	44.89	43.05	27.43	38.11	30.12	23.00	16.90	20.74	20.53	17.45	18.82	11.59	6.52	5.95	2.87	8.64	6.05	7.40	11.07	12.03	24.80	47.68
10	24.30	19.39	27.17	28.93	24.34	13.14	16.26	13.99	24.09	28.94	32.02	31.46	27.39	24.39	18.35	7.87	3.04	-	-	-	5.50	11.40	21.70	32.02	-
11	24.30	25.53	22.75	25.06	25.56	19.46	19.52	6.43	-	-	4.48	17.66	13.09	16.38	18.67	12.75	16.17	-	13.00	24.99	25.29	28.59	45.00	42.40	45.00
12	28.48	23.90	-	-	-	-	-	6.31	16.05	17.03	14.71	9.90	4.25	-	-	-	-	-	5.02	2.05	-	-	-	-	28.48
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
15	-	-	-	1.24	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.99	0.02	1.99
16	2.12	2.85	6.04	8.57	6.30	-	-	-	0.10	1.90	4.50	3.06	0.46	-	-	-	-	-	-	-	-	-	-	-	8.57
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
19	-	-	-	-	-	-	-	0.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.90	
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
22	-	-	-	-	2.66	10.42	4.93	8.16	9.29	2.59	-	-	-	-	-	-	-	-	-	-	-	-	-	10.42	
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
24	-	-	-	-	-	-	-	-	-	-	-	2.78	2.41	0.70	-	-	-	-	-	-	-	-	-	2.78	
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.98	-	-	-	-	-	0.98	

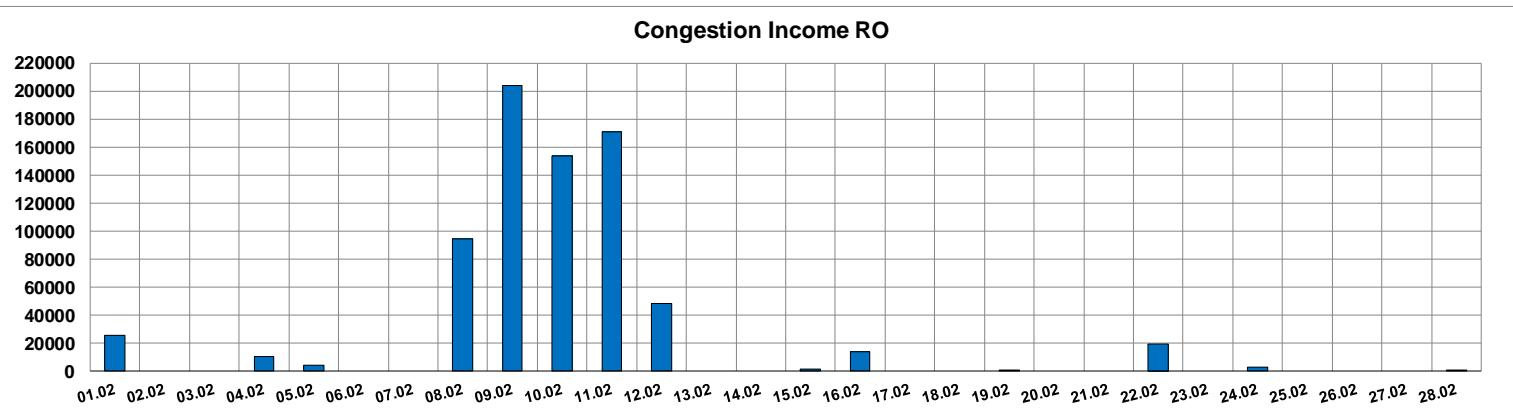
Average

14.54 EUR/MWh

February 2021

# Market for Allocation of Cross-Border Capacities

## Daily implicit Auctions on Romanian – Hungarian border



Day	Congestion Income border RO-HU [Euro]	Congestion Income RO [Euro]
01.02	50805	25403
02.02	0	0
03.02	0	0
04.02	21079	10540
05.02	9064	4532
06.02	0	0
07.02	0	0
08.02	188868	94434
09.02	407921	203961
10.02	308132	154066
11.02	342498	171249
12.02	97397	48698
13.02	0	0
14.02	0	0
15.02	2699	1350
16.02	27407	13703
17.02	0	0
18.02	0	0
19.02	928	464
20.02	0	0
21.02	0	0
22.02	39408	19704
23.02	0	0
24.02	6161	3080
25.02	0	0
26.02	0	0
27.02	0	0
28.02	1005	503
Total	1503371	751685

Daily Income [Euro]			
RO-HU	HU-RO	RO-HU	HU-RO
1455869	47502	1122868	28638
<b>1503371</b>		<b>1151506</b>	

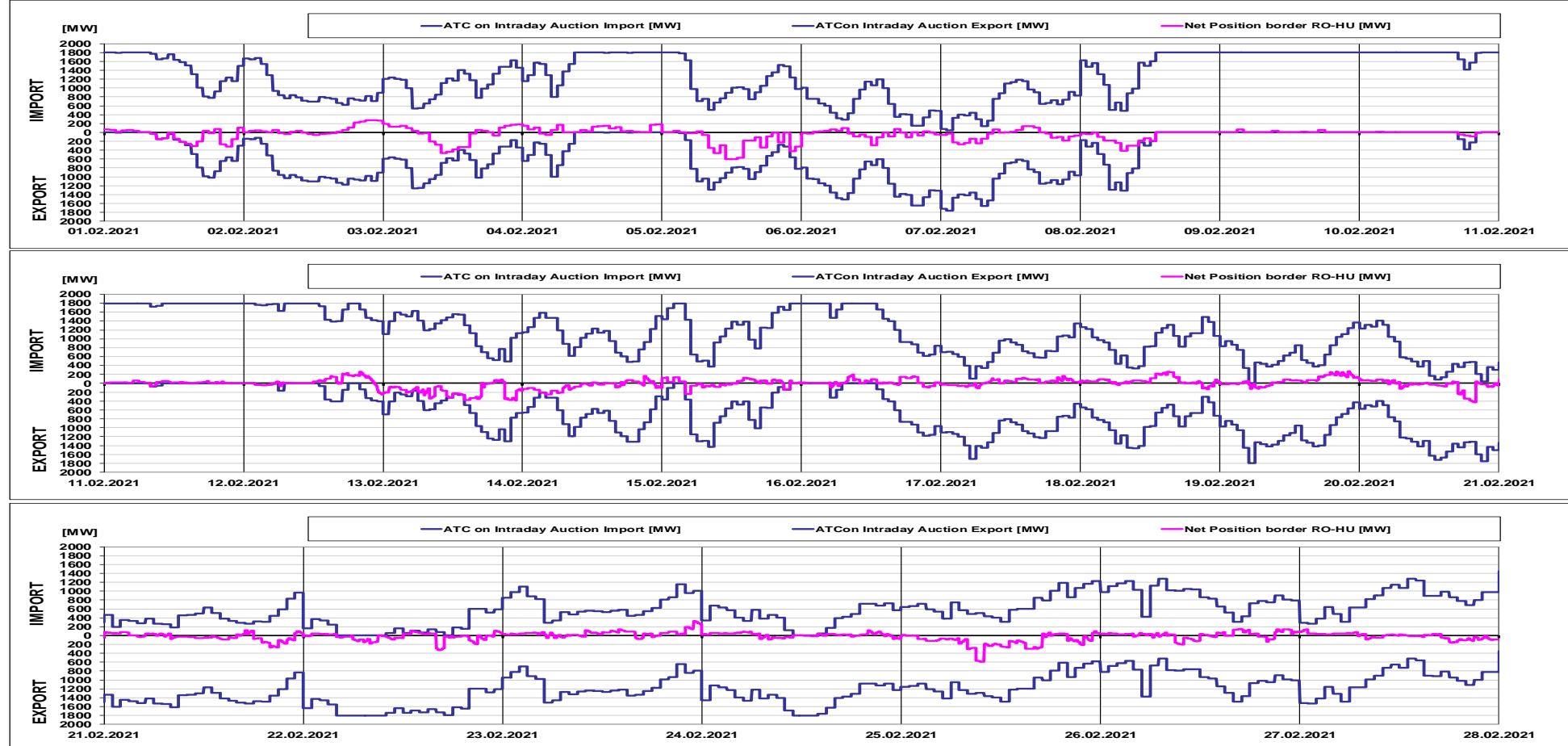
TSO Income (Z-R) [Euro]	RO TSO Income (Z-R) [Euro]
351865	175933



# Market for Allocation of Cross-Border Capacities

## Implicit Intraday Auctions on Romanian – Hungarian border

Hungary February 2021



**Note:** starting with the delivery day 11.02.2021, the 15-minute cross-border product was launched in the continuous intraday market on RO-HU border within the SIDC, in cooperation with the Hungarian parties MAVIR and HUPX.

Public

Offered Capacity on Intraday Auction [MW]  
Net Position border RO - HU [MWh]

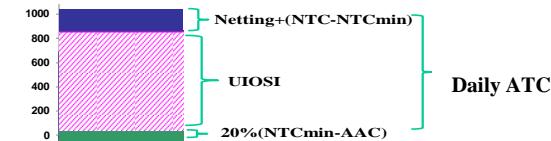


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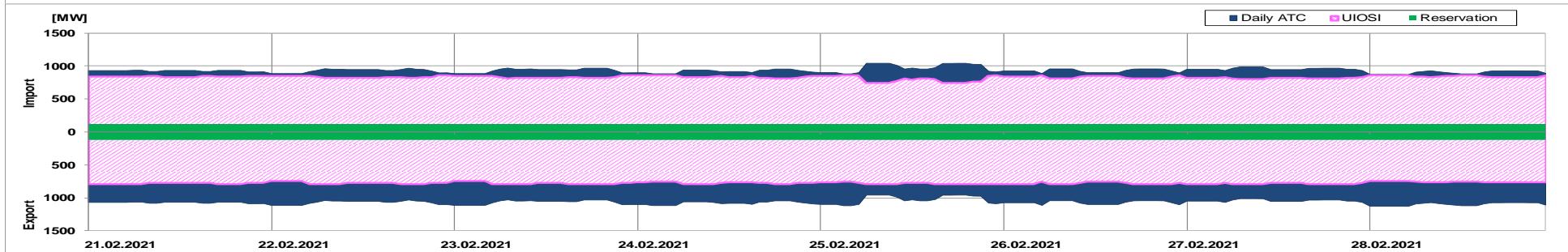
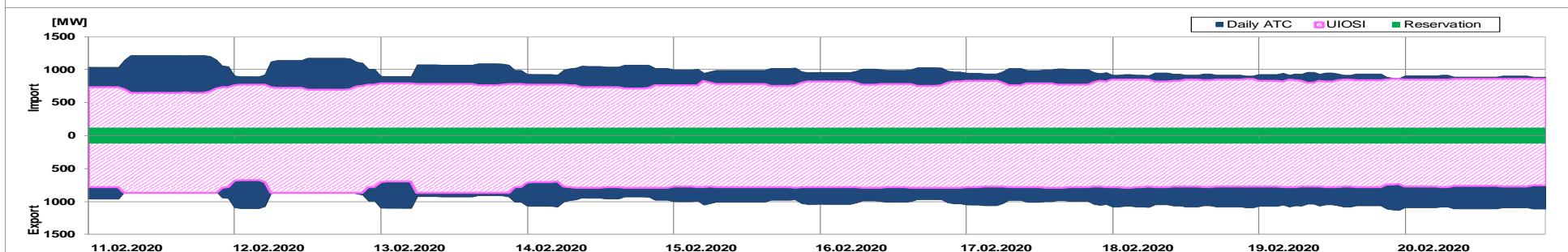
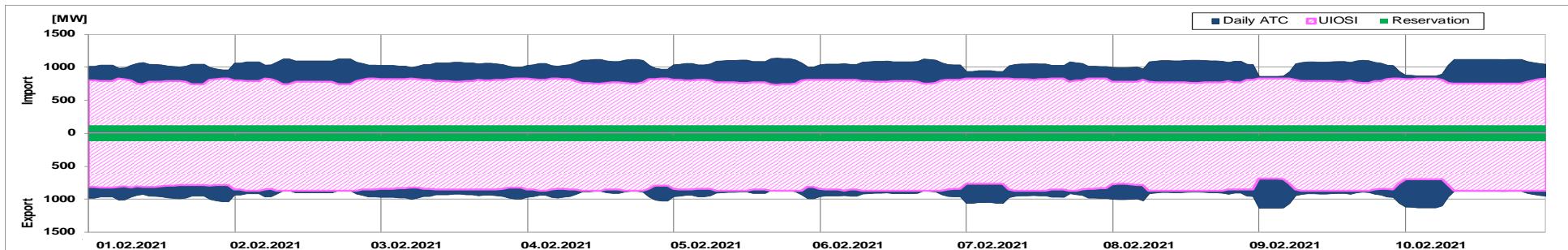
# Market for Allocation of Cross-Border Capacities

## Daily Auctions on Romanian – Bulgarian border

Reserved Capacity [MW] average value		Unused Capacity [MW] average value	
RO-BG	BG-RO	RO-BG	BG-RO
121	121	800	802



Bulgaria February 2021

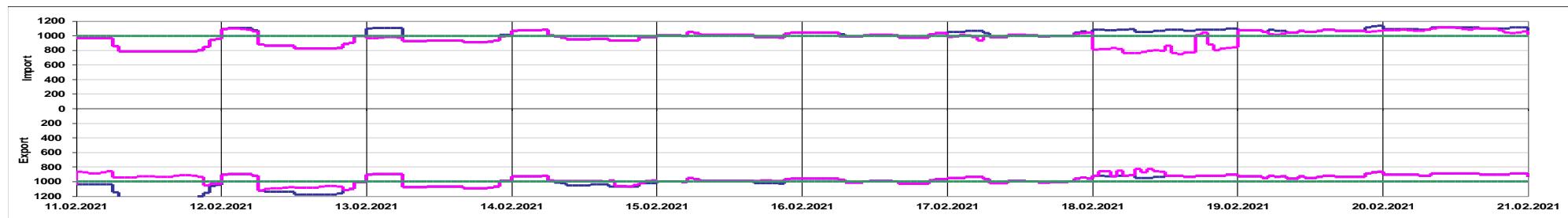
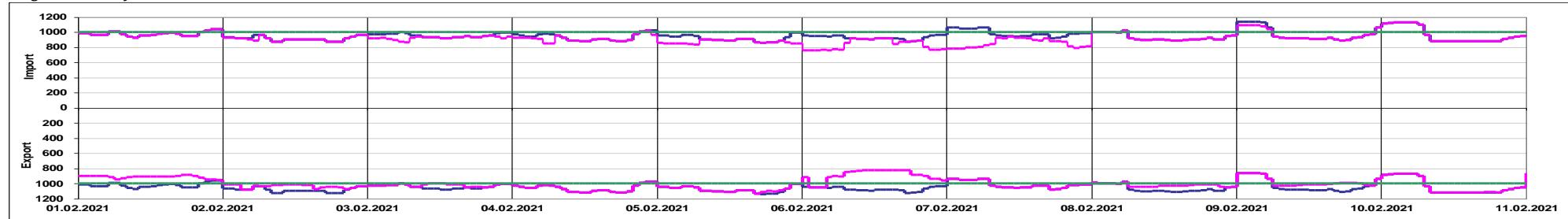




# Market for Allocation of Cross-Border Capacities

## Daily Auctions on Romanian – Bulgarian border

Bulgaria February 2021



Offered Capacity on Daily Auction Import (+) / Export (-) [MW]

Allocated Capacity on Daily Auction Import (+) / Export (-) [MW]

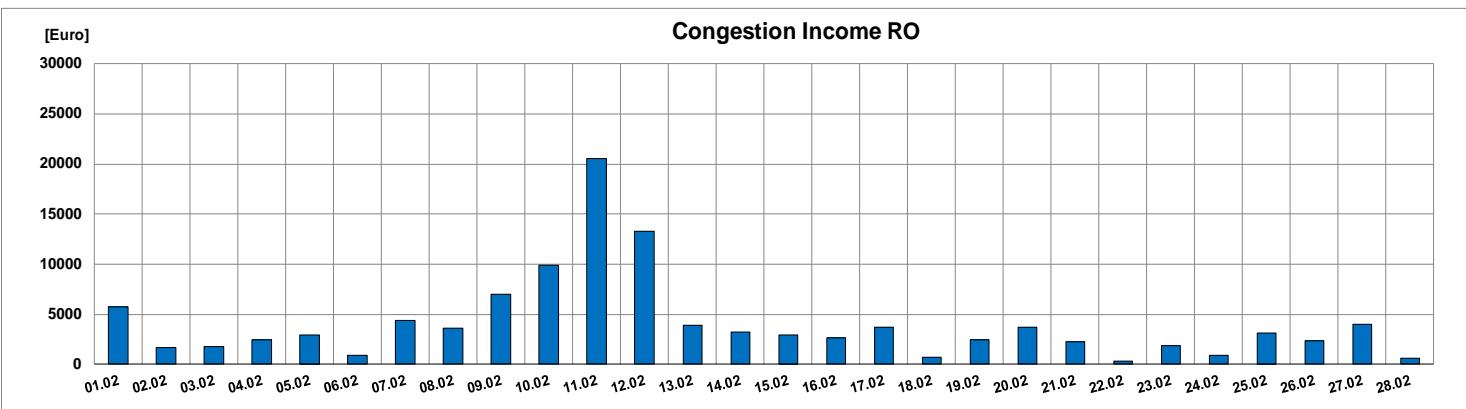
Net Transfer Capacity (NTC) Import (+) / Export (-) [MW]

Public





## Daily Allocation on Romanian – Bulgarian border



Daily Income [Euro]		Remuneration UIOSI [Euro]	
RO-BG	BG-RO	RO-BG	BG-RO
60417	164910	49258	135724
<b>225327</b>		<b>184983</b>	

TSO Income (Z-R) [Euro]	RO TSO Income (Z-R) [Euro]
40344	20172

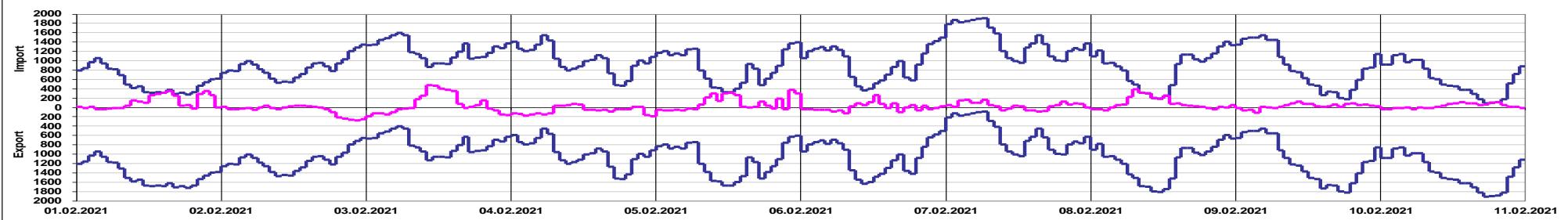
Day	Congestion Income border RO-BG [Euro]	Congestion Income RO [Euro]
01.02	11550	5775
02.02	3269	1635
03.02	3556	1778
04.02	4889	2444
05.02	5850	2925
06.02	1697	848
07.02	8753	4376
08.02	7281	3640
09.02	13969	6984
10.02	19814	9907
11.02	41134	20567
12.02	26652	13326
13.02	7831	3916
14.02	6339	3169
15.02	5760	2880
16.02	5335	2667
17.02	7375	3688
18.02	1340	670
19.02	4924	2462
20.02	7319	3659
21.02	4400	2200
22.02	659	329
23.02	3674	1837
24.02	1759	879
25.02	6220	3110
26.02	4722	2361
27.02	8018	4009
28.02	1241	620
Total	225327	112664



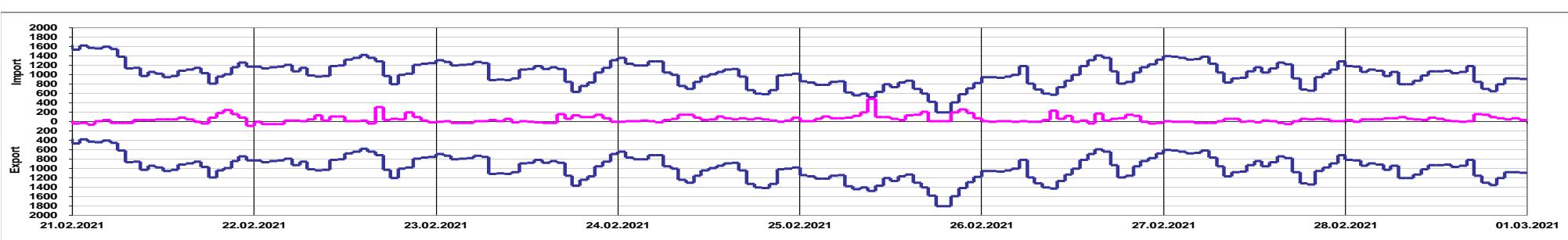
# Market for Allocation of Cross-Border Capacities

## Implicit Intraday Auctions on Romanian – Bulgarian border

Bulgaria February 2021



February 2021



Offered Capacity on Intraday Auction [MW]  
Net Position border RO - BG [MWh]

Public

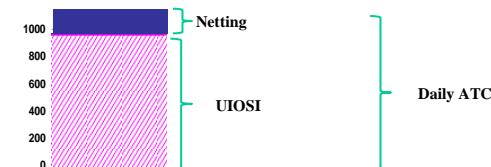


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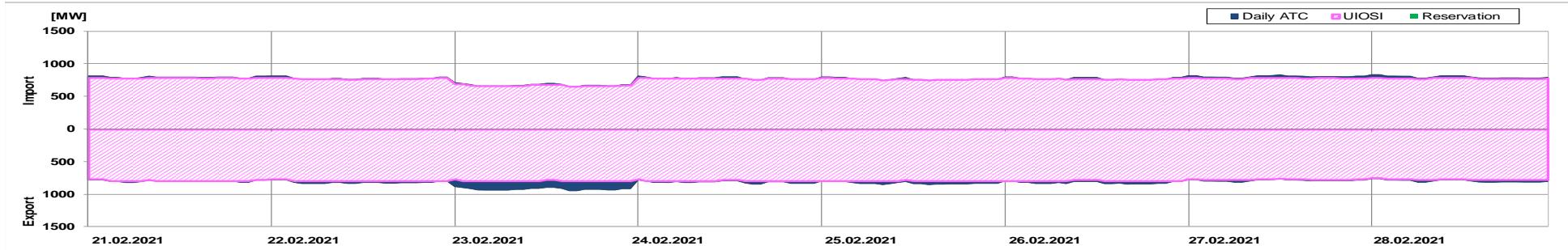
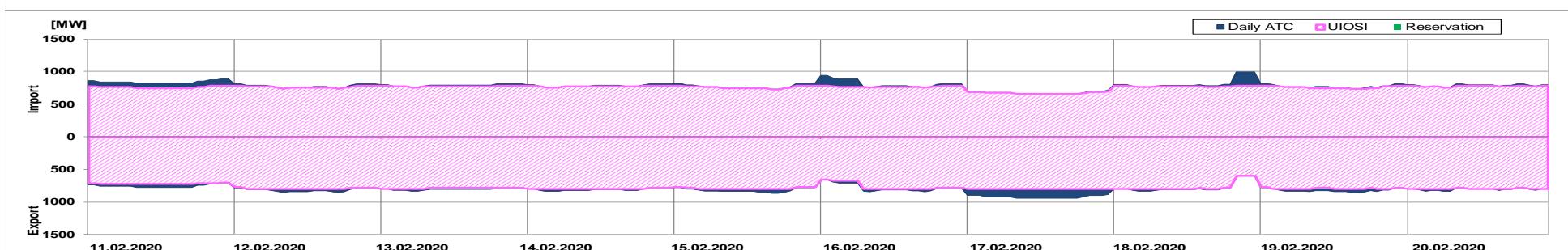
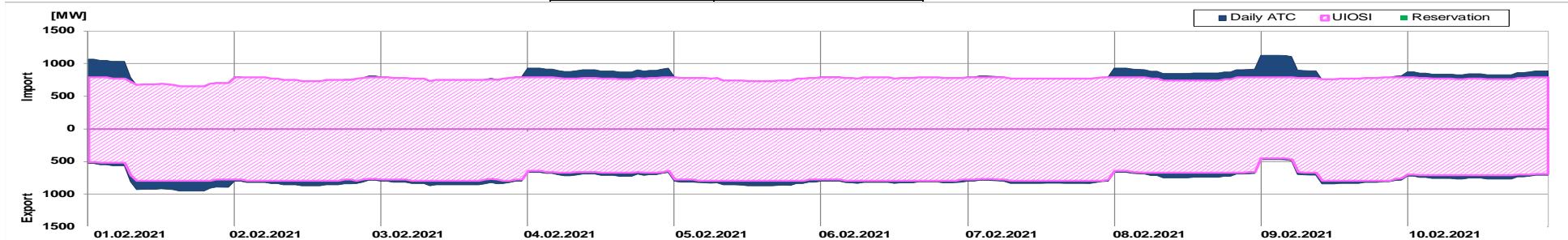
# Market for Allocation of Cross-Border Capacities

## Daily Auctions on Romanian – Serbian border

Unused Capacity [MW] average value	
RO-RS	RS-RO
767	760



Serbia February 2021

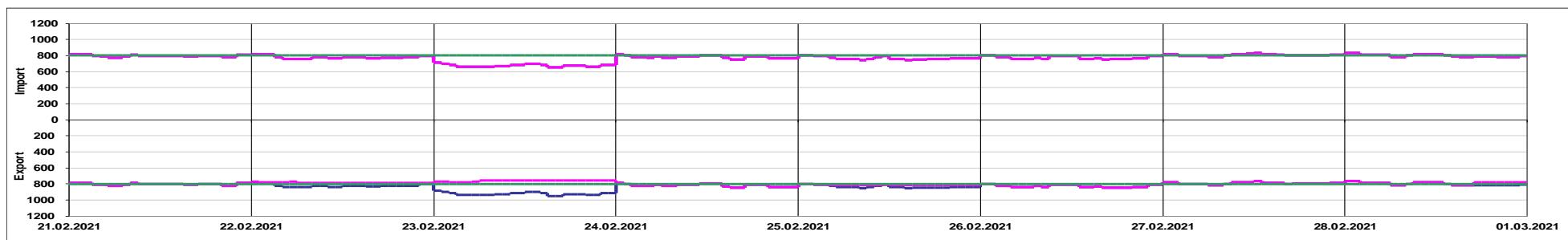
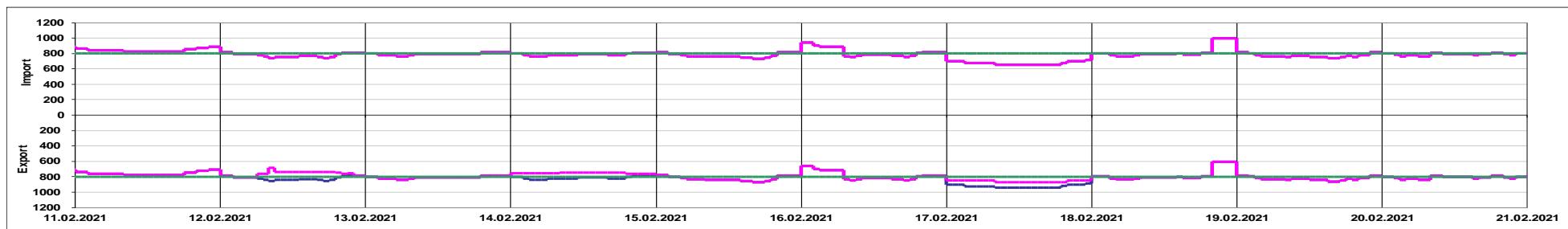
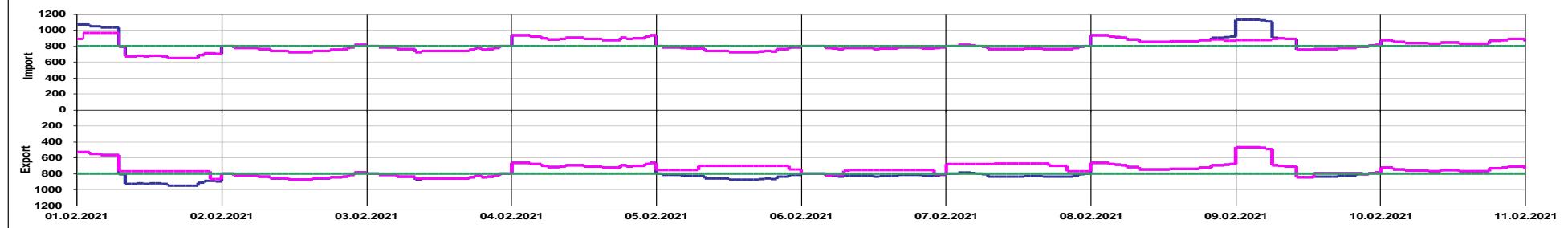




# Market for Allocation of Cross-Border Capacities

## Daily Auctions on Romanian – Serbian border

Serbia February 2021



Offered Capacity on Daily Auction Import (+) / Export (-) [MW]

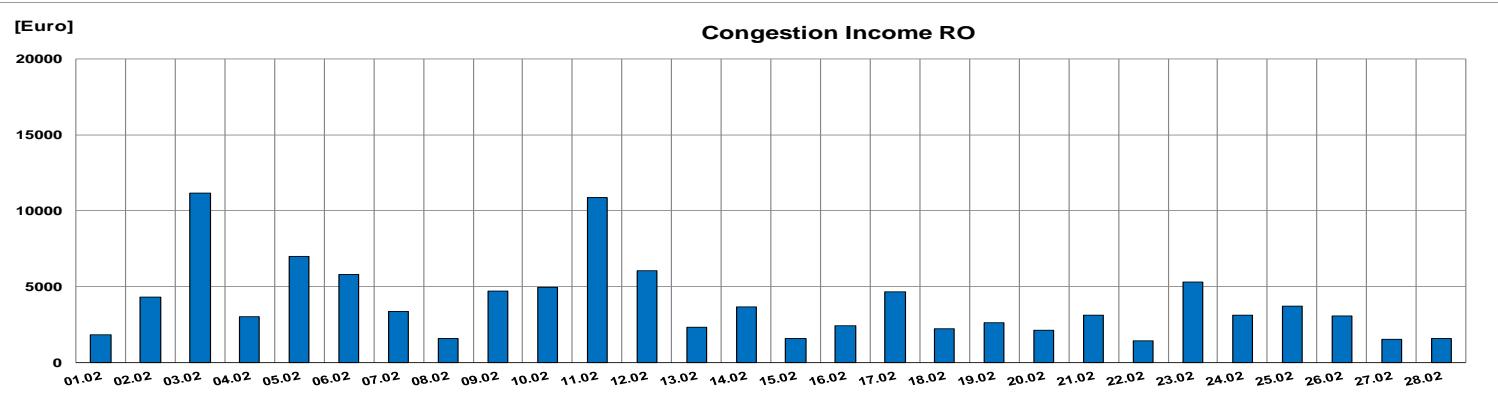
Allocated Capacity on Daily Auction Import (+) / Export (-) [MW]

Net Transfer Capacity (NTC) Import (+) / Export (-) [MW]





## Daily Allocation on Romanian – Serbian border

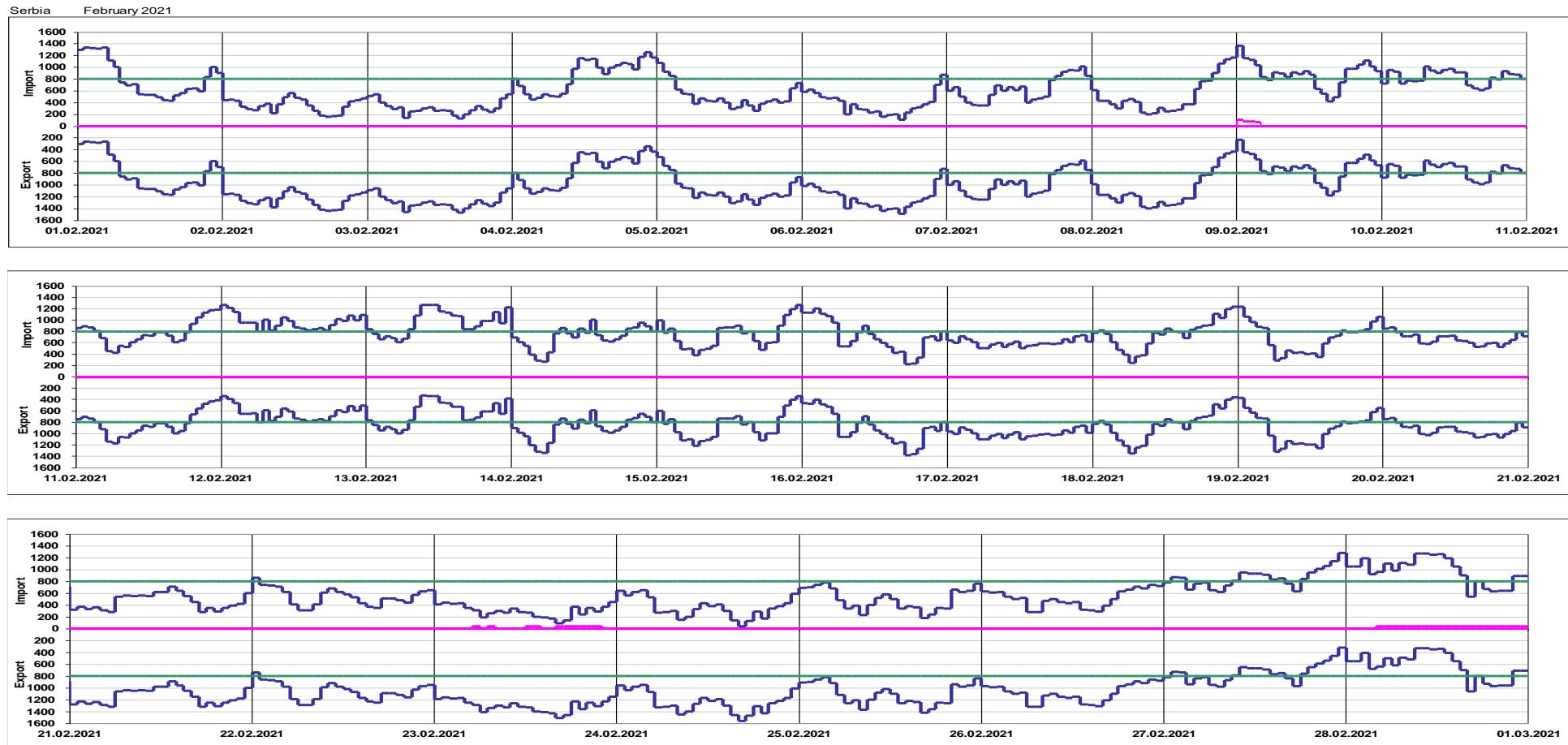


Day	Congestion Income border RO-RS [Euro]	Congestion Income RO [Euro]
01.02	3696	1848
02.02	8591	4295
03.02	22270	11135
04.02	6060	3030
05.02	14022	7011
06.02	11592	5796
07.02	6701	3350
08.02	3131	1566
09.02	9425	4713
10.02	9920	4960
11.02	21726	10863
12.02	12106	6053
13.02	4706	2353
14.02	7355	3677
15.02	3214	1607
16.02	4913	2456
17.02	9367	4684
18.02	4465	2232
19.02	5292	2646
20.02	4299	2149
21.02	6237	3119
22.02	2876	1438
23.02	10631	5315
24.02	6229	3114
25.02	7416	3708
26.02	6199	3099
27.02	3097	1548
28.02	3143	1572
Total	218677	109338

Daily Income [Euro]		Remuneration UIOSI [Euro]	
RO-RS	RS-RO	RO-RS	RS-RO
31936	186741	30818	182258
<b>218677</b>		<b>213076</b>	

TSO Income (Z-R) [Euro]	RO TSO Income (Z-R) [Euro]
5601	2800

## Intraday Auctions on Romanian – Serbian border



Offered Capacity on Intraday Auction Import (+) / Export (-) [MW]

Allocated Capacity on Intraday Auction Import (+) / Export (-) [MW]

Net Transfer Capacity (NTC) Import (+) / Export (-) [MW]







## Statistics on Daily Auctions

February 2021	Daily Auctions	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Serbia Export	<b>Maximum Number of Capacity Traders</b>	7	9	8	9	8	8	8	8	10	9	8	9	10	8	9	10	9	9	10	9	9	9	9	9	9	10	10	8
	<b>Maximum Number of Capacity Holders</b>	7	9	8	8	8	8	8	8	9	9	8	9	9	8	9	9	9	9	10	9	9	9	9	9	9	10	10	8
	<b>Maximum Number of Bids</b>	33	37	37	37	39	40	35	41	45	45	45	42	44	35	39	42	38	39	44	41	37	39	37	38	39	41	47	38
Serbia Import	<b>Maximum Number of Capacity Traders</b>	9	8	9	9	12	11	11	10	11	13	14	12	10	11	11	11	12	10	11	11	11	12	12	13	13	10	8	
	<b>Maximum Number of Capacity Holders</b>	9	8	9	9	11	11	10	10	11	12	13	12	10	10	11	10	12	10	11	11	11	11	11	11	13	13	10	8
	<b>Maximum Number of Bids</b>	38	48	49	43	51	49	43	43	44	57	58	52	43	43	42	42	45	45	51	55	51	49	48	49	52	51	44	39
Bulgaria Export	<b>Maximum Number of Capacity Traders</b>	13	16	16	17	16	15	16	14	15	15	12	15	18	14	14	16	14	14	16	18	13	14	16	17	16	17	17	14
	<b>Maximum Number of Capacity Holders</b>	13	16	16	17	15	15	14	14	15	15	12	15	17	14	14	15	14	14	15	17	13	14	16	16	16	16	16	14
	<b>Maximum Number of Bids</b>	33	41	40	43	40	37	41	36	38	36	28	39	44	39	37	39	39	30	41	45	35	34	43	40	39	39	47	39
Bulgaria Import	<b>Maximum Number of Capacity Traders</b>	15	18	18	19	18	18	14	17	17	18	17	19	17	15	15	16	16	15	16	15	15	19	20	20	20	19	15	
	<b>Maximum Number of Capacity Holders</b>	15	18	18	19	18	18	14	17	16	17	15	18	17	15	14	16	15	15	16	16	15	15	19	19	19	18	17	15
	<b>Maximum Number of Bids</b>	43	42	39	43	42	41	35	41	47	49	47	48	40	43	41	40	38	30	40	36	34	34	45	44	45	45	42	42

Note: In the table are presented the daily maximum hourly values.

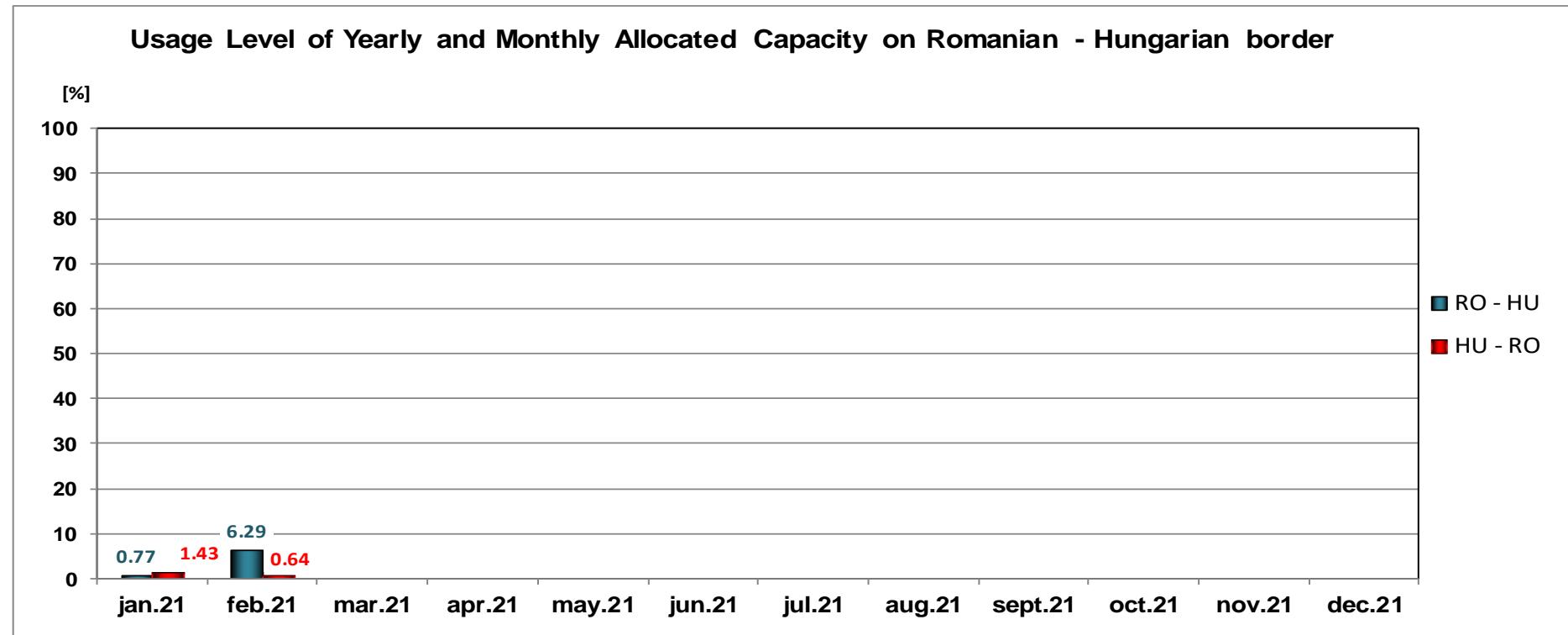
## Statistics on Intraday Auctions

Intraday Auctions		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Serbia Export	<b>Maximum Number of Capacity Traders</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<b>Maximum Number of Capacity Holders</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Serbia Import	<b>Maximum Number of Capacity Traders</b>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
	<b>Maximum Number of Capacity Holders</b>	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		

Note: In the table are presented the daily maximum hourly values.

## Long term Auction on Romanian – Hungarian border

### Usage Level of Allocated Capacity



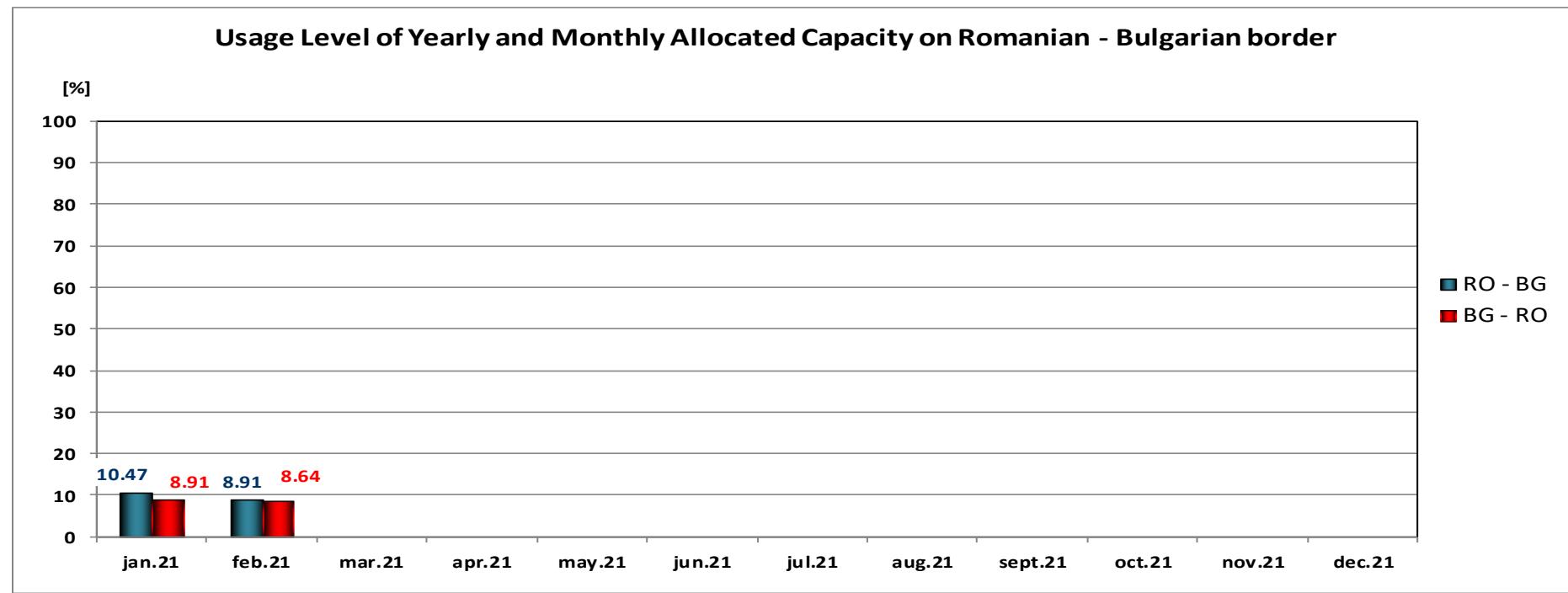
CET

Usage level of yearly and monthly allocated capacity was calculated as ratio between nominated capacity and sum of allocated capacity at yearly and monthly auctions after returns.

From the beginning of the year, the average values (arithmetic) of usage level are: 3.53% on export direction and 1.03% on import direction.

## Long term Auction on Romanian – Bulgarian border

### Usage Level of Allocated Capacity



CET

Usage level of yearly and monthly allocated capacity was calculated as ratio between nominated capacity and sum of allocated capacity at yearly and monthly auctions after returns.

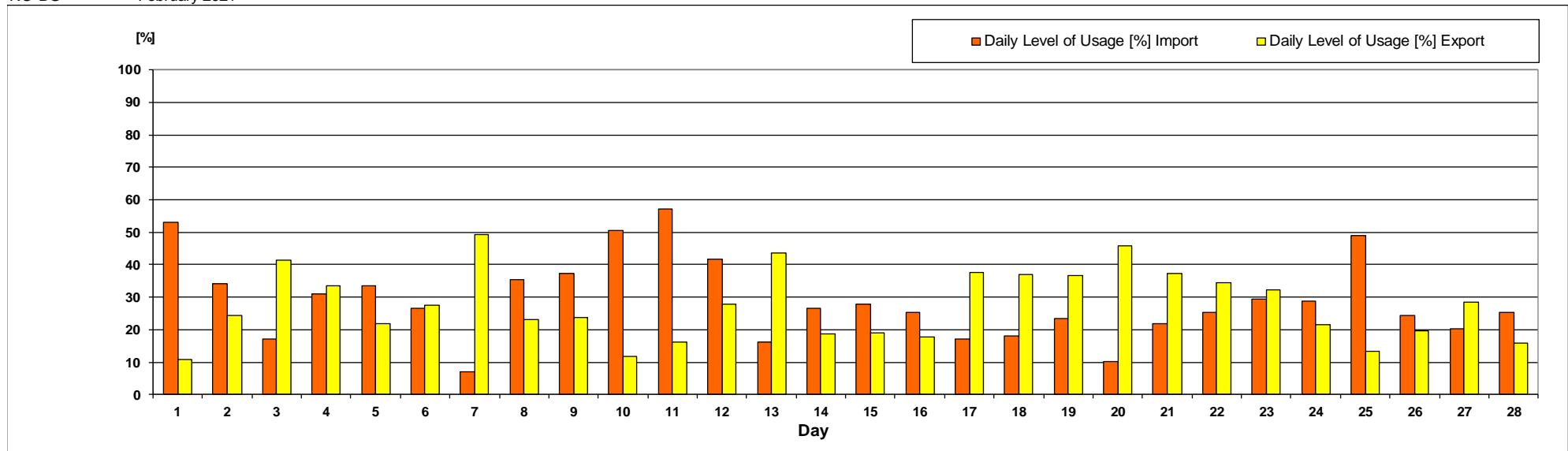
From the beginning of the year, the average values (arithmetic) of usage level are: 9.69% on export direction and 8.78% on import direction.

## Daily Auctions on Romanian – Bulgarian border

### Usage Level of Daily Allocated Capacity

RO-BG

February 2021



#### Daily Level of Usage [%]

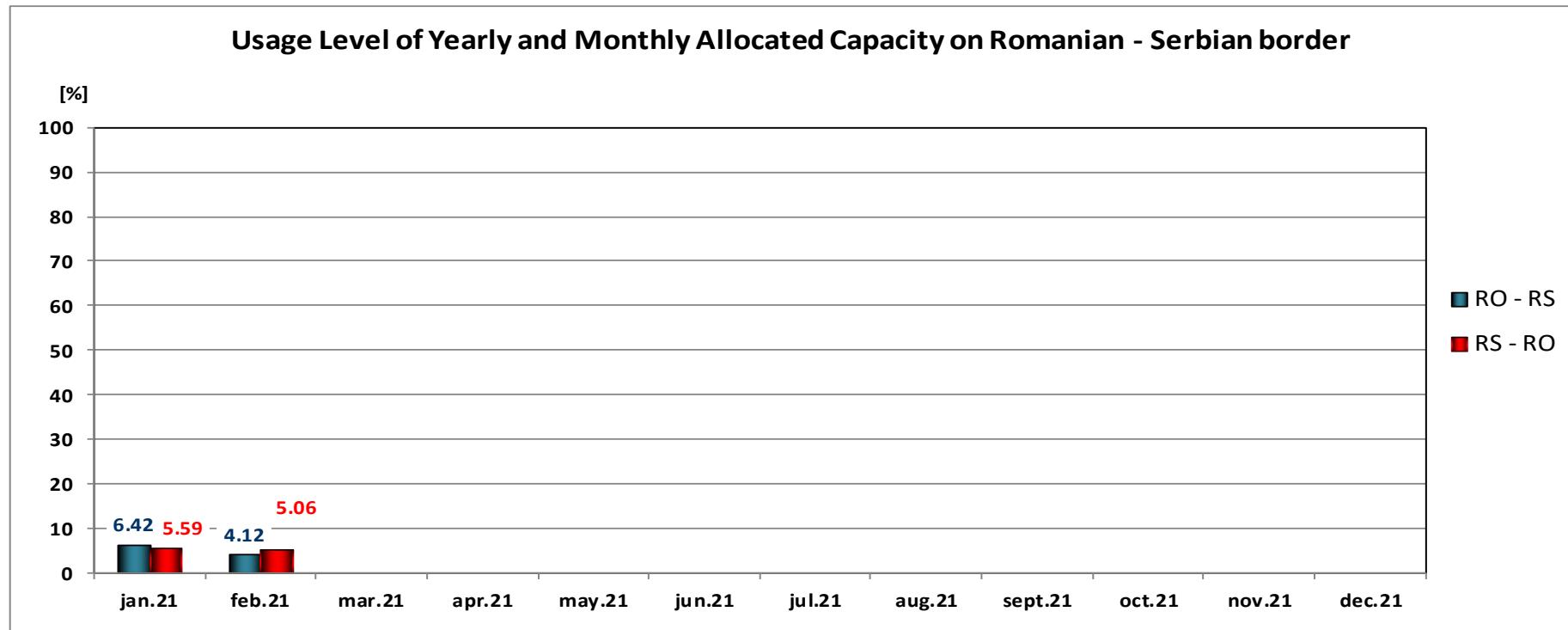
February 2021	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Import	53.16	34.26	17.19	31.10	33.63	26.74	7.06	35.39	37.15	50.48	57.09	41.69	16.27	26.56	27.81	25.31	17.14	18.19	23.45	10.33	21.75	25.46	29.30	28.79	48.89	24.51	20.37	25.30
Export	10.83	24.32	41.32	33.59	21.77	27.51	49.25	23.12	23.82	11.75	16.24	27.75	43.70	18.85	18.89	17.72	37.67	36.89	36.74	45.89	37.32	34.54	32.23	21.46	13.37	19.56	28.42	15.86

Level of usage of daily allocated capacity, calculated at monthly level, as ratio between sum of nominated daily capacities and sum of daily allocated capacities, has the following values:

- Import 28.94 [%]
- Export 27.54 [%]

## Long term Auction on Romanian – Serbian border

### Usage Level of Allocated Capacity



Usage level of yearly and monthly allocated capacity was calculated as ratio between nominated capacity and sum of allocated capacity at yearly and monthly auctions after returns.

From the beginning of the year, the average values (arithmetic) of usage level are: 5.27% on export direction and 5.32% on import direction.

# Market for Allocation of Cross-Border Capacities

## Daily Auctions on Romanian – Serbian border

### Usage Level of Daily Allocated Capacity

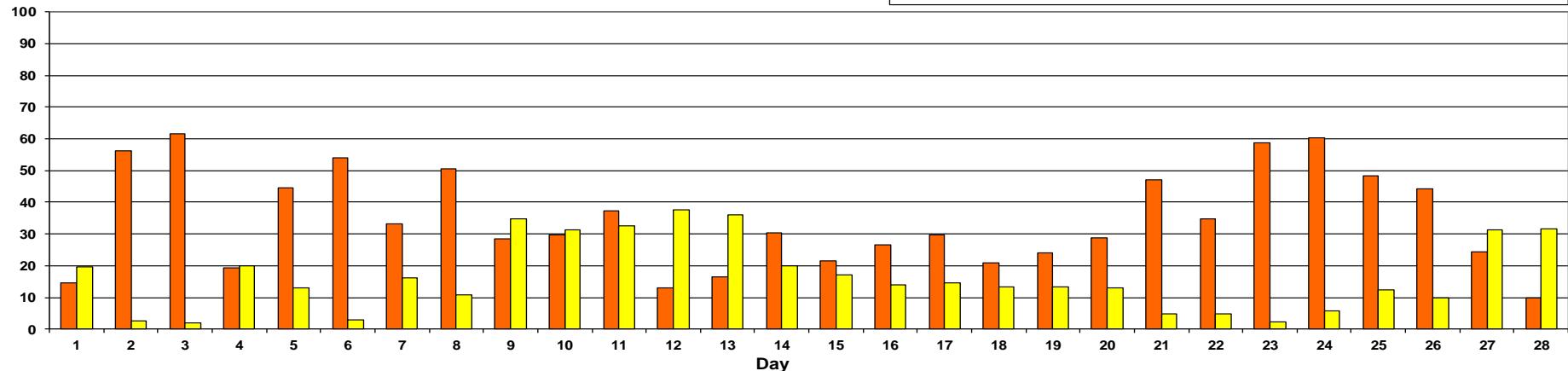
Serbia

February 2021

[%]

Daily Level of Usage [%] Import

Daily Level of Usage [%] Export



Daily Level of Usage [%]

February 2021	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Import	14.62	56.25	61.66	19.24	44.68	53.99	33.14	50.60	28.35	29.80	37.43	12.88	16.42	30.49	21.59	26.48	29.68	20.78	24.05	28.90	47.23	34.72	58.78	60.48	48.42	44.37	24.29	9.77
Export	19.51	2.53	2.12	19.90	13.14	2.98	16.13	10.88	34.80	31.42	32.64	37.66	36.19	19.88	16.97	13.84	14.68	13.37	13.20	12.94	4.69	4.73	2.39	5.84	12.42	9.78	31.26	31.68

Level of usage of daily allocated capacity, calculated at monthly level, as ratio between sum of nominated daily capacities and sum of daily allocated capacities, has the following values:

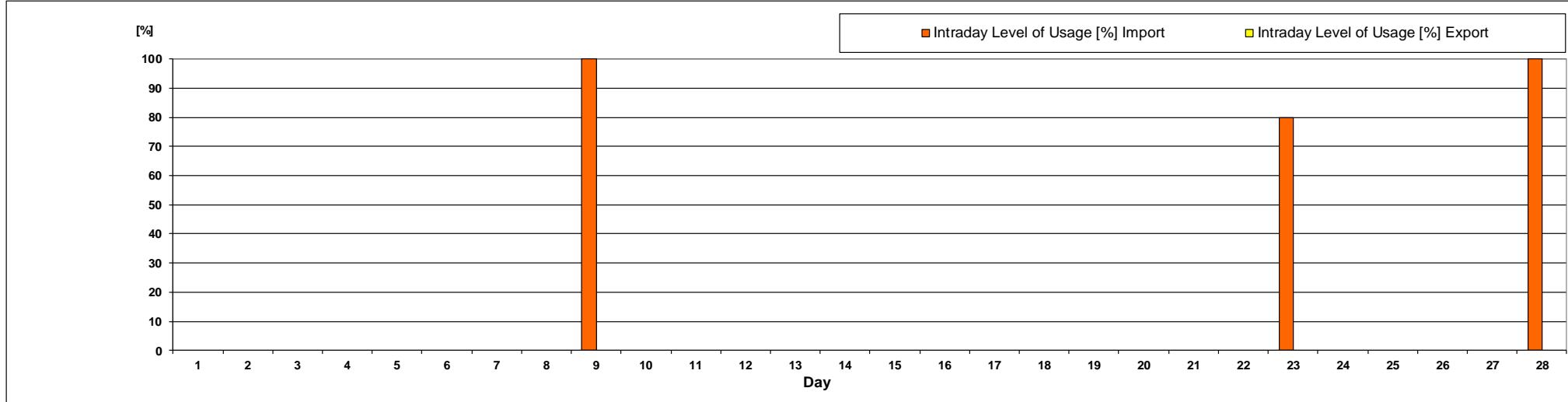
- Import 34.37 [%]
- Export 16.49 [%]

## Intraday Auctions on Romanian – Serbian border

### Usage Level of Intraday Allocated Capacity

Serbia

February 2021



Intraday Level of Usage [%]

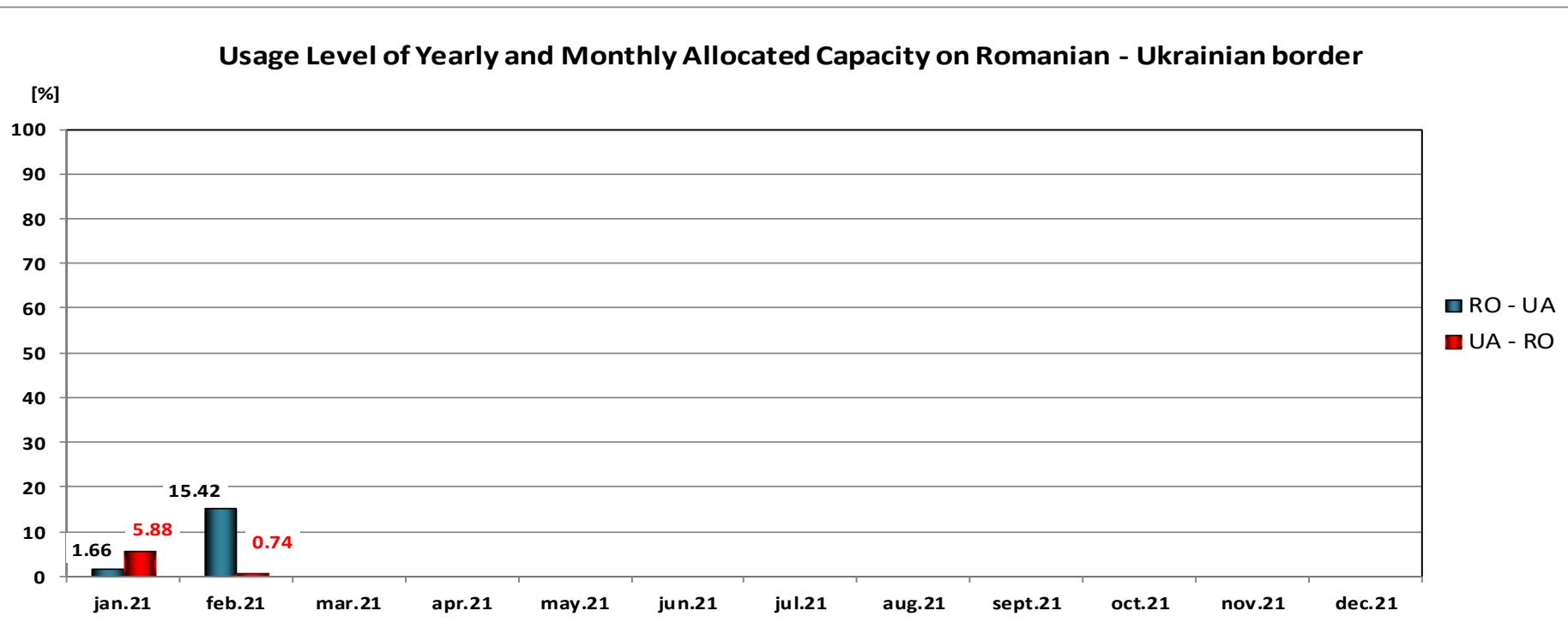
February 2021	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Import	-	-	-	-	-	-	-	-	100.00	-	-	-	-	-	-	-	-	-	-	-	-	80.00	-	-	-	-	100.00	
Export	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Level of usage of intraday allocated capacity, calculated at monthly level, as ratio between sum of nominated intraday capacities and sum of intraday allocated capacities, has the following values:

- Import 94.79 [%] (allocated only on 09, 23 and 28.02.2021)
- Export - [%] (there was no request of capacity)

## Long term Auction on Romanian – Ukrainian border

### Usage Level of Allocated Capacity

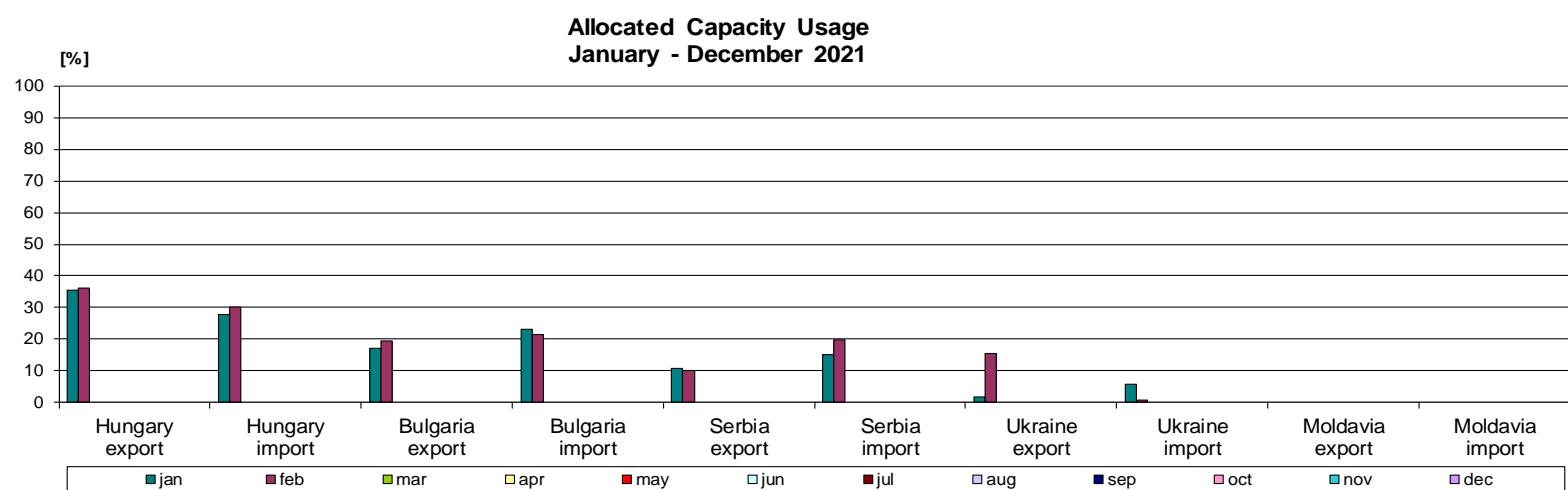


CET

Usage level of yearly and monthly allocated capacity was calculated as ratio between nominated capacity and sum of allocated capacity at yearly and monthly auctions.

From the beginning of the year, the average values (arithmetic) of usage level are: 8.54% on export direction and 3.31% on import direction.

## Usage level of capacity rights



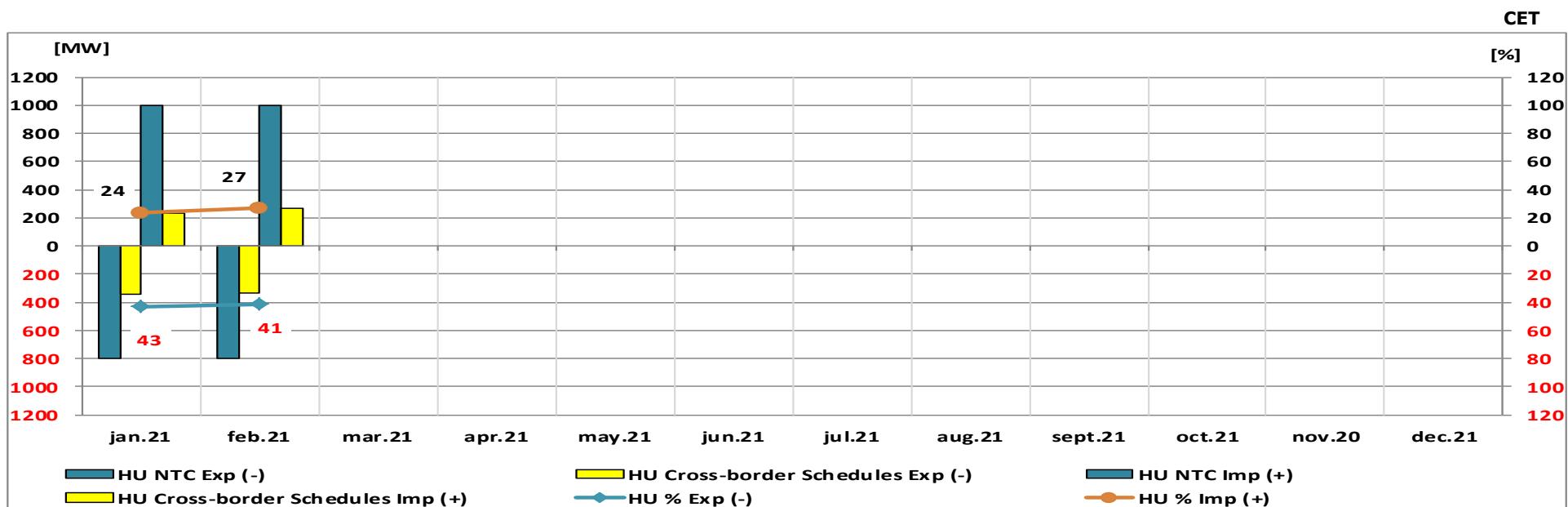
The level of usage of total capacity rights on one border and direction represent the percentage ratio between the energy associated with the commercial transactions, nominated during a month, and the energy associated with the total capacity rights.

[%]	Hungary export	Hungary import	Bulgaria export	Bulgaria import	Serbia export	Serbia import	Ukraine export	Ukraine import	Moldavia export	Moldavia import
jan	35.56	27.69	17.23	23.10	10.85	15.28	1.66	5.88	-	-
feb	36.00	30.23	19.44	21.46	10.22	19.72	15.42	0.74	-	-
mar										
apr										
may										
jun										
Jul										
aug										
sep										
oct										
nov										
dec										
average	35.78	28.96	18.34	22.28	10.53	17.50	8.54	3.31	-	-

In February 2021, it was noticed a low level of capacity usage. The highest level of usage was on export direction to Hungary.

# Market for Allocation of Cross-Border Capacities

## Usage Level of NTC on Romanian – Hungarian border

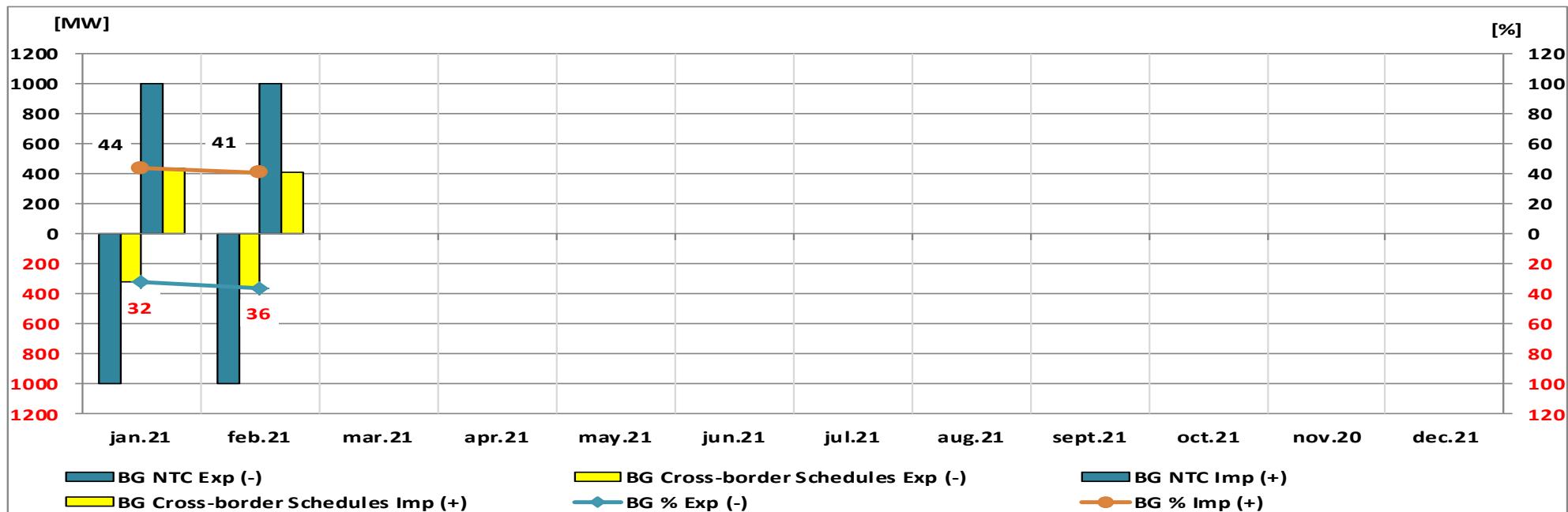


Hungary (monthly averages values, MW)	jan.21	feb.21	mar.21	apr.21	may.21	jun.21	jul.21	aug.21	sept.21	oct.21	nov.21	dec.21	sum
HU NTC Exp (-)	-800	-800											-1600
HU Cross-border Schedules Exp (-)	-345	-332											-677
HU NTC Imp (+)	1000	1000											2000
HU Cross-border Schedules Imp (+)	237	271											508

The level of usage was calculated as ratio between total cross-border schedules (capacity nominated on long and short term) and NTC. From the beginning of the year, the average values (arithmetic) of usage level are: 42.29% on export direction and 25.4% on import direction.

## Usage Level of NTC on Romanian – Bulgarian border

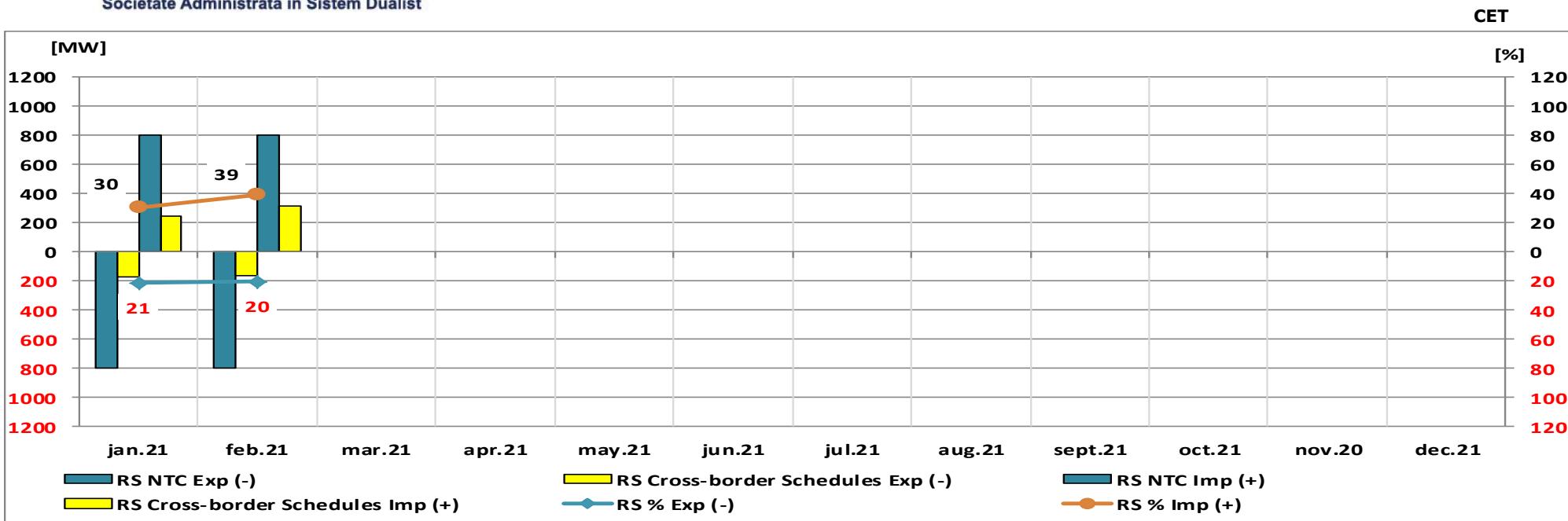
CET



Bulgaria (monthly averages values, MW)	jan.21	feb.21	mar.21	apr.21	may.21	jun.21	jul.21	aug.21	sept.21	oct.21	nov.21	dec.21	sum
BG NTC Exp (-)	-1000	-1000											-2000
BG Cross-border Schedules Exp (-)	-321	-362											-683
BG NTC Imp (+)	1000	1000											2000
BG Cross-border Schedules Imp (+)	440	408											847

The level of usage was calculated as ratio between total cross-border schedules (capacity nominated on long and short term) and NTC. From the beginning of the year, the average values (arithmetic) of usage level are: 34.15% on export direction and 42.37% on import direction.

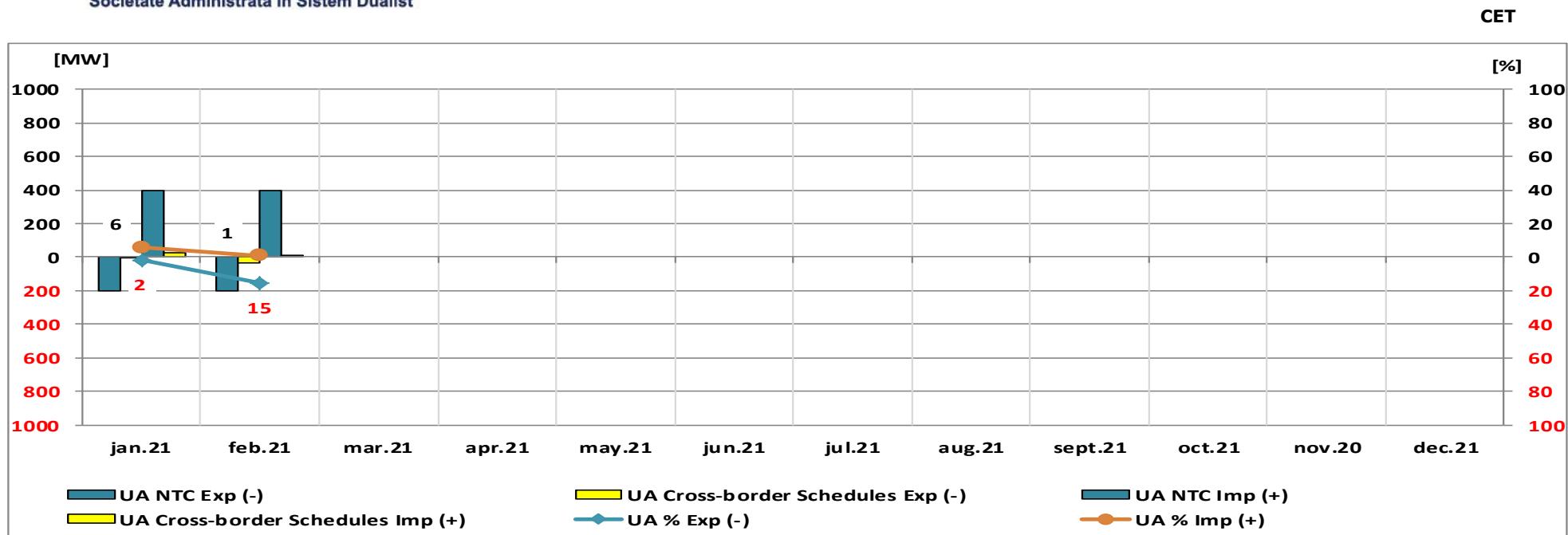
## Usage Level of NTC on Romanian – Serbian border



	jan.21	feb.21	mar.21	apr.21	may.21	jun.21	jul.21	aug.21	sept.21	oct.21	nov.21	dec.21	sum
Serbia (monthly averages values, MW)													
RS NTC Exp (-)	-800	-800											-1600
RS Cross-border Schedules Exp (-)	-169	-161											-330
RS NTC Imp (+)	800	800											1600
RS Cross-border Schedules Imp (+)	244	314											557

The level of usage was calculated as ratio between total cross-border schedules (capacity nominated on long and short term) and NTC. From the beginning of the year, the average values (arithmetic) of usage level are: 20.65% on export direction and 34.84% on import direction.

## Usage Level of NTC on Romanian – Ukrainian border



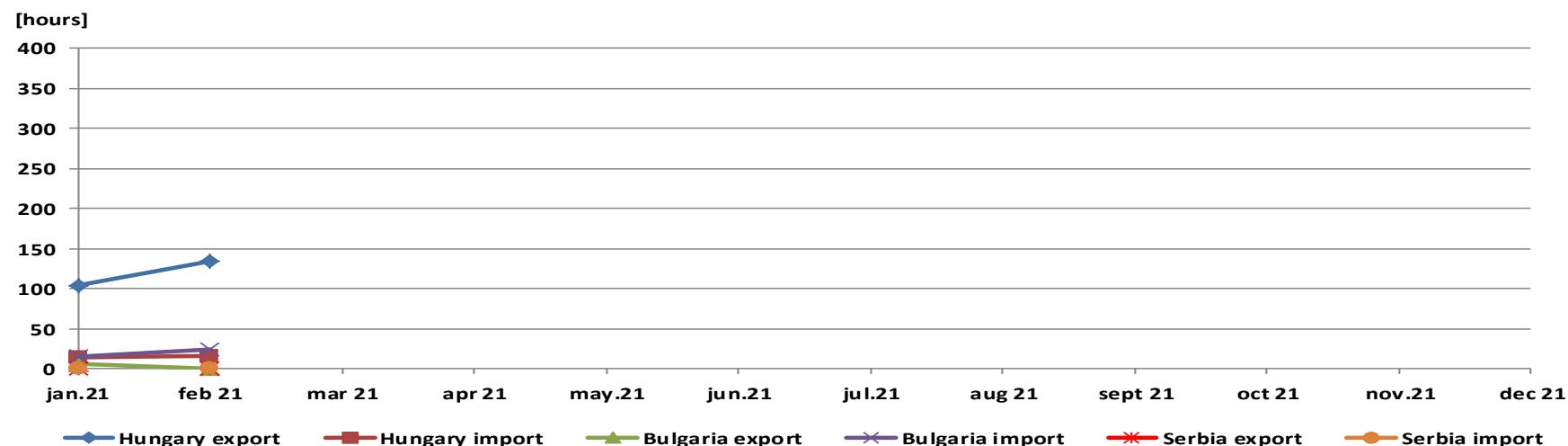
Ukraine (monthly averages values, MW)	jan.21	feb.21	mar.21	apr.21	may.21	jun.21	jul.21	aug.21	sept.21	oct.21	nov.21	dec.21	sum
UA NTC Exp (-)	-200	-200											-400
UA Cross-border Schedules Exp (-)	-3.3	-30.8											-34
UA NTC Imp (+)	400	400											800
UA Cross-border Schedules Imp (+)	24	3											26

The level of usage was calculated as ratio between total cross-border schedules (capacity nominated on long and short term) and NTC. From the beginning of the year, the average values (arithmetic) of usage level are: 8.54% on export direction and 3.31% on import direction.

## Maximization of NTC Usage

CET

**Number of hours in which the sum of nominated cross-border schedules is higher than NTC**



Number of hours	jan.21	feb 21	mar 21	apr 21	may.21	jun.21	jul.21	aug 21	sept 21	oct 21	nov.21	dec 21
Hungary export	104	134										
Hungary import	14	16										
Bulgaria export	6	0										
Bulgaria import	15	24										
Serbia export	0	0										
Serbia import	0	0										

By making efficient use of the interconnection (applying “netting” principle in daily and intra-day offered capacity calculation) there are some hours in which sum of nominated cross-border schedules is higher than the NTC.

## Synthesis (C1, C3, HHI) on type of auction and total values

February 2021

Border	Auction												Total		
	Yearly			Monthly			Daily			Intraday					
	C1 [%]	C3 [%]	HHI	C1 [%]	C3 [%]	HHI	C1 [%]	C3 [%]	HHI	C1 [%]	C3 [%]	HHI	C1 [%]	C3 [%]	HHI
<b>Hungary import</b>	51.58	78.51	3176	21.43	57.14	1411	-	-	-	-	-	-	31.80	54.85	1553
<b>Hungary export</b>	49.14	67.71	2720	35.84	70.61	2114	-	-	-	-	-	-	27.34	55.96	1412
<b>Bulgaria import</b>	22.56	48.87	1202	31.32	63.26	1767	15.55	41.85	929	-	-	-	13.30	31.88	642
<b>Bulgaria export</b>	22.61	46.48	1119	20.83	46.88	1064	17.76	46.65	1079	-	-	-	13.65	36.54	730
<b>Serbia import</b>	27.60	57.60	1573	45.45	79.27	2771	20.82	58.18	1473	78.13	100.00	6582	26.78	50.48	1323
<b>Serbia export</b>	35.60	82.80	2500	21.82	61.82	1701	24.34	64.70	1720	-	-	-	19.29	46.10	1184
<b>Ukraine import</b>	50.00	100.00	4398	50.00	78.33	3050	-	-	-	-	-	-	50.00	83.75	3205
<b>Ukraine export</b>	50.00	100.00	5000	50.00	85.00	3250	-	-	-	-	-	-	50.00	85.00	3313
<b>Moldavia import</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:

- On the Hungarian border the implicit daily allocation is done through the market coupling mechanism of CZ-SK-HU day-ahead electricity markets (starting with 20.11.2014) and implicit intraday allocation is organized due to the integration of Romanian intraday market in SIDC - Single Intra-Day Market (starting with 20.11.2019).
- On the Bulgarian border implicit intraday allocation is organized due to the integration of Romanian intraday market in SIDC (Single Intra-Day Market) (starting with 20.11.2019).



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