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Romanian gas and electricity market operator

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SYNTHESIS ANNUAL REPORT
REGARDING THE RESULTS OF THE
CENTRALIZED MARKETS OPERATED BY OPCOM
2016



Romanian gas and electricity market operator

Day-Ahead Market (DAM)

Spot Market relevant figures for the year 2016:

Number of registered participants until 31 December 2016:	337
Number of active participants [participants/year]:	283
Average price [RON/MWh]:	149.74
Average price [EUR/MWh]:	33.33
Weighted average price [RON/MWh]:	154.00
Weighted average price [EUR/MWh]:	34.27
Total traded volume [MWh]:	25,809,567.6
Average traded volume [MWh/h]:	2,938.2
Market share [%]:	47.01
Value of transactions [RON]:	3,974,713,504
Value of transactions [EUR]:	884,609,761

		Total volume Hourly average		Market	Market Closing Price		Market Closing Price			
ı	Period	traded on DAM	volume traded on DAM	Share	average	weighted average	average	weighted average	Va	llue
		[MWh]	[MWh/h]	[%]	[RON/MWh]	[RON/MWh]	[EUR/MWh]	[EUR/MWh]	[RON]	[EUR]
:	2015	22,496,040	2,568.041	42.20%	161.91	166.35	36.42	37.40	3,742,151,907	841,381,295
	2016	25,809,568	2,938.248	47.01%	149.74	154.00	33.33	34.27	3,974,713,504	884,609,761
Va	ariation	▲ +14.73%	▲ +14.42%	▲ +11.41%	-7.52%	-7.42%	V -8.49%	-8.36%	▲ +6.21%	▲ +5.14%

Absolute records registered in 2016:

Number of active participants [participants/day]:	28 November	241
Number of active participants [participants/month]:	December	253
Number of active participants [participants/year]:		283
Hourly traded volume [MWh/h]:	29 December, int.18	4,282.6
Daily traded volume [MWh]:	29 December	92,990.5
Hourly average volume traded at daily level [MWh/h]:	29 December	3,874.6
Monthly traded volume [MWh]:	January	2,349,928.8
Hourly average volume traded at monthly level [MWh/h]:	November	3,177.8
Yearly traded volume [MWh]:		25,809,567.6
Hourly average volume traded at yearly level [MWh/h]:		2,938.2
Value of daily electricity transactions [RON]:	22 December	21,863,078
Value of daily electricity transactions [EUR]:	22 December	4,837,564
Value of monthly electricity transactions [RON]:	December	453,527,930
Value of monthly electricity transactions [EUR]:	December	100,408,368
Value of yearly electricity transactions [RON]:		3,974,713,504
Value of yearly electricity transactions [EUR]:		884,609,761

Intraday Market (IDM) Number of registered participants until 31 December 2016:	118
Number of active participants [participants/year]:	73
Total traded volume [MWh]:	131,329.180
Average traded volume [MWh/h]:	14.951
Weighted average price [RON/MWh]:	126.12
Weighted average price [EUR/MWh]:	28.08
Value of transactions [RON]:	16,562,777
Value of transactions [EUR]:	3,687,135

Period	Total traded on IDM	Average traded volume on IDM	Market Share	Weighted average price		Valu	ue
	[MWh]	[MWh/h]	[%]	[lei/MWh]	[lei/MWh]	[lei]	[EUR]
2015	75,780	8.651	0.14%	139.46	31.39	10,568,015	2,378,786
2016	131,329	14.951	0.24%	126.12	28.08	16,562,777	3,687,135
Variaţie	▲ +73.30%	▲ +72.83%	▲ +68.29%	-9.57%	-10.56%	▲ +56.73%	+ 55.00%

Absolute records registered in 2016:

Number of active participants [participants/day]:	6, 20 October	36
Number of traded contracts [number/day]:	23 November	301
Monthly traded volume [MWh]:	April	16,351.600
Hourly average volume traded at monthly level [MWh/h]:	April	22,711
Yearly traded volume [MWh]:		131,329.180
Hourly average volume traded at yearly level [MWh/h]:		14.951
Value of yearly electricity transactions [RON]:		16,562,777.460
Value of yearly electricity transactions [EUR]:		3,687,134.604

Centralized Market for Electricity Bilateral Contracts

Centralized Market for Electricity Bilateral Contracts - Extended Auctions Mechanism - CMBC - EA CMBC relevant figures in the year 2016:

Number of registered participants until 31 December 2016:	358
Number of traded contracts [number/year]:	719
Average number of active participants [participants/month]	58
Number of active participants [participants/year]	166
Weighted average price [RON/MWh]:	156.54
Weighted average price [EUR/MWh]:	34.85
Total traded volume [MWh]:	16,817,235
Value of transactions [RON]:	2,632,591,771
Value of transactions [EUR]:	586,039,376

Period	Traded volume on CMBC-EA in the year	Traded contracts	Weighted average price		Va	lue
	[MWh]		[RON/MWh]	[EUR/MWh]	[RON]	[EUR]
2015	24,221,929	777	162.41	36.55	3,933,775,750	885,250,373
2016	16,817,235	718	156.54	34.85	2,632,591,771	586,039,376
Variation	-30.57%	-7.59%	-3.61%	V -4.65%	-33.08%	-33.80%

Absolute recorde	aistared in 2016					
Adsolute records	registered in 2016:					
Number of active	participants [partic	ipants/month]:		October		87
Number of trade	d contracts in the m	onth [number/m	nonth]:	October		121
Maximum values	recorded in 2016:					
Monthly traded v	olume [MWh]:			October		3,388,654
Value of monthly	electricity transacti	ons [RON]:		October		535,451,287
Value of monthly	electricity transacti	ons [EUR]:		October		119,125,063
CMBC-EA releva	nt figures for the ye	ar 2016:				
Number of tradeo	d contracts [number	/year]:				941
Average number	of active participant	s [participants/n	nonth]:			155
Number of active	participants [partici	pants/year]:				198
Weighted averag	e price [RON/MWh]					161.83
Weighted average	e price [EUR/MWh]:					36.34
Total traded volume [MWh]: 21,350,3						21,350,361
Market share [%]: 38.89						
Value of transactions [RON]: 3,455,092,083						
Value of transact	ions [EUR]:					775,768,506
Period	Traded volume on CMBC-EA in the year	Traded contracts	Weighted a	verage price	Va	lue
T CHOC	[MWh]	[%]	[RON/MWh]	[EUR/MWh]	[RON]	[EUR]
2015	7,950,562	14.91	162.25	36.50	1,289,989,579	290,197,61
2016	21,350,361	38.89	161.83	36.34	3,455,092,083	775,768,50
Variation	▲ +168.54%	+ 160.76%	-0.26%	-0.45%	▲ +167.84%	▲ +167.32 ⁰
Maximum values	recorded for 2016:					
Number of active	participants [partic	ipants/month]:		Decembe	r	171
Number of trade	d contracts [number	/month]:		Decembe	r	491
Traded volume for	or the month [MWh]	:		Decembe	r 2	,320,300.800
Value of electricit	ty transactions for tl	ne month [RON]	:	Decembe		378,499,740
Value of electricit	ty transactions for tl	ne month [EUR]:		Decembe	r	84,694,872
CMBC-CN releva	rket for Electricity	nr 2016:		nuous Negoti	ation Mechanis	
Number of regist	ered participants un	til 31 December	2016:			177
Number of active	participants [partic	ipants/year]:				123
Number of trade	d contracts [number	/year]:				15,458
						15,628,592
					156.01	
—	e price [EUR/MWh]					34.77
Value of transact					2	,438,216,879
Value of transact						543,436,060
. s.ac or a dribact						2 13, 130,000
Period	Traded volume on CMBC-NC in the yea	Traded contracts	Weighted average price Va			ue
renou	[MWh]		[RON/MWh]	[EUR/MWh]	[RON]	[EUR]
2015	8,938,48	8 13,935			1,450,413,697	325,854,1
2015	0,938,48	13,935	162.27	36.46	1,730,617,09/	323,034,

Period	Traded volume on CMBC-NC in the year	Traded contracts	Weighted average price		Valu	ıe
	[MWh]		[RON/MWh]	[EUR/MWh]	[RON]	[EUR]
2015	8,938,488	13,935	162.27	36.46	1,450,413,697	325,854,144
2016	15,628,592	15,458	156.01	34.77	2,438,216,879	543,436,060
Variation	▲ +74.85%	▲ +10.93%	V -3.86%	V -4.62%	▲ +68.10%	▲ +66.77%

Absolute	records	registered	in	the	vear	2016:

Traded volume for the month [MWh]:	April	3,794,050
Number of traded contracts [number/month]:	April	3,164
Value of electricity transactions for the month [RON]:	April	606,737,777
Value of electricity transactions for the month [EUR]:	April	135,640,466

CMBC-CN relevant figures for the year 2016:

Number of traded contracts [number/year]:	15,625
Total traded volume [MWh]:	13,177,009
Weighted average price [RON/MWh]:	156.26
Weighted average price [EUR/MWh]:	34.90
Market share [%]:	24.00
Value of transactions [RON]:	2,059,035,831
Value of transactions [EUR]:	459,924,127

Period	Traded volume on CMBC-NC for the year	Market share	Weighted average price		Va	lue
	[MWh] [%] [RON/MWh] [EUR/MV		[EUR/MWh]	[RON]	[EUR]	
2015	5,190,539	9.74	166.06	37.39	861,937,636	194,090,491
2016	13,177,009	24.00	156.26	34.90	2,059,035,831	459,924,127
Variation	▲ +153.87%	▲ +146.51%	-5.90%	-6.66%	+ 138.88%	▲ +136.96%

Absolute records registered for 2016:

Traded volume for the month [MWh]:	December	1,632,080
Number of traded contracts [number/month]:	October	3,856
Value of electricity transactions for the month [RON]:	December	261,074,353
Value of electricity transactions for the month [EUR]:	December	58,247,278

Centralized Market with double continuous negotiation for Electricity Bilateral Contracts (CM-OTC)

Number of registered participants until 31 December 2016: 103

CM-OTC relevant figures in the year 2016:

Number of market participants with concluded trades [participants/month]	74
Total traded volume [MWh]:	39,954,562
Weighted average price [RON/MWh]:	156.24
Weighted average price [EUR/MWh]:	34.79
Value of transactions [RON]:	6,242,583,955
Value of transactions [EUR]:	1,390,171,397

Perioada	Traded volume on CM- OTC in year	Weighted average price		Valu	е
	[MWh]	[RON/MWh]	[EUR/MWh]	[RON/MWh]	[EUR/MWh]
2015	23,240,271	165.40	37.18	3,844,013,091	864,100,351
2016	39,954,562	156.24	34.79	6,242,583,955	1,390,171,397
Variation	▲ +71.92%	-5.54%	-6.42%	▲ +62.40%	▲ +60.88%

Absolute records registered in the year 2016:

Traded volume for the month [MWh]:	April	7,267,426
Number of traded contracts [number/month]:	February	1,387
Value of electricity transactions for the month [RON]:	April	1,126,600,941
Value of electricity transactions for the month [EUR]:	April	168,316,693

CM-OTC relevant figures for the year 2016:

Total traded volume [MWh]:	31,342,399
Weighted average price [RON/MWh]:	158.74
Weighted average price [EUR/MWh]:	35.45
Value of transactions [RON]:	4,975,371,204
Value of transactions [EUR]:	1,111,131,546

Period	Contracted volume on CM-OTC for year	Market share	re Weighted average price [RON/MWh] [EUR/MWh]		Va	lue
	[MWh]	[%]			[RON/MWh]	[EUR/MWh]
2015	17,456,079	32.75%	167.48	37.75	2,923,588,047	658,905,740
2016	31,342,399	57.09%	158.74	35.45	4,975,371,204	1,111,131,546
Variation	▲ +79.55%	▲ +74.35%	-5.22%	-6.08%	▲ +70.18%	▲ +68.63%

Absolute records registered for the year 2016:

Traded volume for the month [MWh]:	December	3,134,792
Value of electricity transactions for the month [RON]:	December	532,140,029
Value of electricity transactions for the month [EUR]:	December	118,690,626

Centralized Market for Universal Service PCSU

PCSU relevant figures in the year 2016:

Number of registered participants until 31 December 2016:	
Number of traded contracts [number/year]:	4,902
Average number of active participants [participants/month]	27
Number of active participants [participants/year]:	33
Weighted average price [RON/MWh]:	162.12
Weighted average price [EUR/MWh]:	36.15
Total traded volume [MWh]:	8,629,017
Value of transactions [RON]:	1,398,953,454
Value of transactions [EUR]:	311,908,222

PCSU relevant figures for the year 2016:

Number of traded contracts [number/year]:	4,547
Total traded volume [MWh]:	8,045,822
Weighted average price [RON/MWh]:	163.31
Weighted average price [EUR/MWh]:	36.43
Value of transactions [RON]:	1,313,949,941
Value of transactions [EUR]:	293,134,967

Green Certificates Market (GCM)

Number of registered participants to GCM until 31 December 2016:

901

Centralized Market for Green Certificates (CMGC)

CMGC relevant figures in the year 2016:

Number of traded Green Certificates:

8,468

Weighted average price [RON/certificates]:

132.25

Weighted average price* [EUR/certificates]:

29.40

Period	Number of Green Certificates traded in year	Weighted average price		Va	lue
		[RON/CV]	[EUR/CV]*	[RON]	[EUR]*
2015	36,618	130.95	29.36	4,795,268	1,075,054
2016	8,468	132.25	29.40	1,119,899	248,935
Variation	-76.87%	▲ +0.99%	▲ +0.13%	-76.65%	-76.84%

^{*} The price in Romanian currency was converted to EUR using the average exchange rate for the last month of the previous year published by National Bank of Romania (NBR). This reference exchange rate respects the provisions of the Law 220/27.10.2008. For January - February 2016, the value of the average exchange is equal to 4.4591 and for March - December 2016, the value of the average exchange rate is equal to 4.504 RON.

Centralized Market for Green Certificates Bilateral Contracts (GCBCM)

CMGCBC relevant figures in the year 2016:

Number of traded Green Certificates:	7,019,976
Weighted average price [RON/certificates]:	132.30
Weighted average price* [EUR/certificates]:	29.40

Period	Number of Green Certificates traded in year	Weighted average price		Va	lue
		[RON/CV]	[EUR/CV]*	[RON]	[EUR]*
2015	10,070,686	131.04	29.38	1,319,707,797	295,901,846
2016	7,019,976	132.30	29.40	928,748,531	206,373,647
Variation	-30.29%	▲ +0.96%	▲ +0.05%	-29.62%	-30.26%

^{*} The price in Romanian currency was converted to EUR using the average exchange rate for the last month of the previous year published by National Bank of Romania (NBR). This reference exchange rate respects the provisions of the Law 220/27.10.2008. For January - February 2016, the value of the average exchange is equal to 4.4591 and for March - December 2016, the value of the average exchange rate is equal to 4.504 RON.

Centralized Market for Natural Gas (PCGN)

Number of registered participants to GCM until 31 December 2016:

13

Centralized Market for Natural Gas - Trading Mechanism PCGN-LN

PCGN-LN relevant figures in the year 2016:

Number of traded contracts [number/year]:	0
Total traded volume [MWh]:	0

Centralized Market for Natural Gas - Trading Mechanism PCGN-LP

PCGN-LP relevant figures in the year 2016:

Number of traded contracts [number/year]:	0
Total traded volume [MWh]:	0

Day Ahead Market Prices (EUR/MWh) 2016					
Base (1-24)		Peak (7-22)		Off-Peak (1	-6 & 23-24)
33.33	▼ -8.49%	37.49	▼-9.98%	29.17	V -6.50%

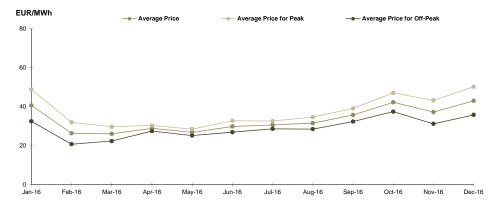


Figure 1: Average Prices Development (base, peak and off-peak)

Day Ahead Market Volumes (DAM)		2016
Average Volume [MWh/h]		Market Share [%]
2,938.248	▲ +14.42%	47.01

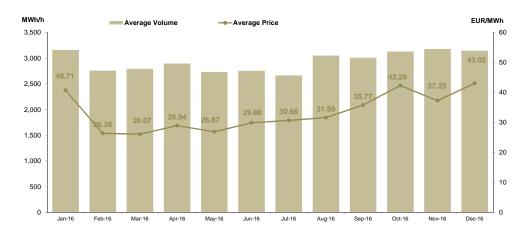


Figure 2: Average Price and Volume Development

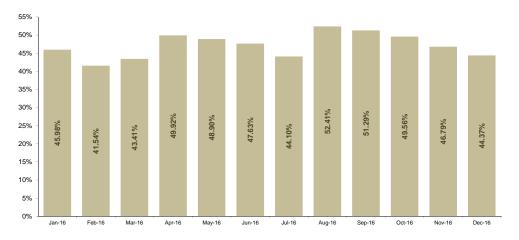


Figure 3: Market Share Development

Centralized Market for Bilateral Contracts – Public Auction (CMBC-EA)			2016
Delivery Volume [MWh]		Market Share [%]	
21,350,361	▲ +168.54%	38.89	

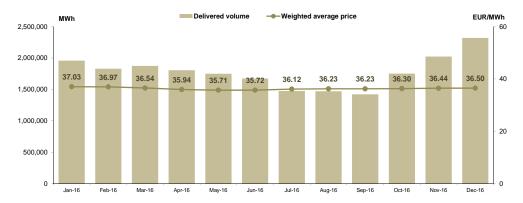


Figure 4: Electricity Deliveries according to Contracts Concluded in CMBC-EA and average price

Centralized Market for Bilateral Contracts – Continuous Negotiation (CMBC-CN) 201			2016	
	Delivery Volume [MWh]		Market Share [%]	
	13,177,009	▲ +153.87%	24.00	

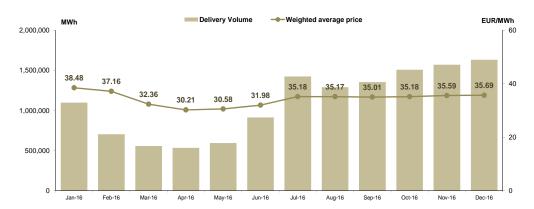


Figure 5: Electricity Deliveries according to Contracts Concluded in CMBC-NC and average price

Centralized Market with double continuous negotiation for Bilateral Contracts (CM-OTC)			2016
Delivery Volume [MWh] Market Share [%]			
31,342,399	▲ +79.55%	57.09	



Figure 6: Electricity Deliveries according to Contracts Concluded in CM-OTC and average price

Centralized market for bilateral contracts			2016
Delivery Volume [MWh]		ROPEX_FM_2016 [EUR/MWh]	
65,869,770	▲ +115.28%	35.63	

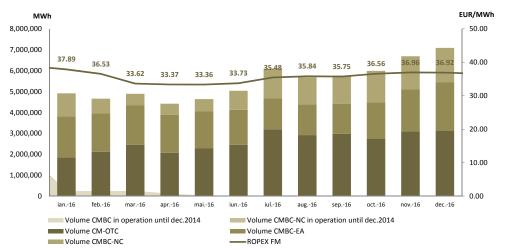


Figure 7: Electricity Deliveries according to Contracts Concluded on Centralized market and ROPEX_FM

Centra	Centralized Market for Green Certificates (CMGC)		
Numb	r of traded Green Certificates ROPEX_GC_2016	[EUR/certificate]	
8,468	▼ -76.87% 29.40	▲ +0.13%	



Figure 8: Monthly development for price and number of traded green certificates

Centralized Market for Green Certificates (GCBCM)			2016
Number of traded Green	Certificates	Price* [EUR/certificate]	
7,019,976	▼ -30.29%	29.40	▲ +0.05%

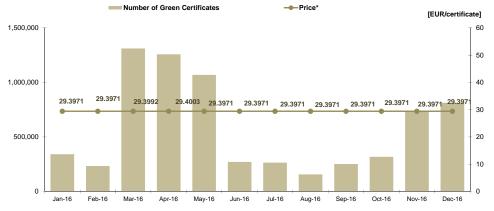


Figure 9: Monthly development for price and number of traded green certificates

^{*} The price in Romanian currency was converted to EUR using the average exchange rate for the last month of the previous year published by National Bank of Romania (NBR). This reference exchange rate respects the provisions of the Law 220/27.10.2008. For January-February 2016, the value of the average exchange is equal to 4.4591 and for March – December 2016, the value of the average exchange rate is equal to 4.504 RON.