

MONTHLY DAS TRADING SYSTEM REPORT

MAY 2020

TABLE OF CONTENTS

Monthly Report Highlights	2
1. Participation in DAS	3
1.1 Participants Register	3
1.2 Generation Units in Interconnected System	5
2. System Marginal Price (SMP) and Reserves Prices.....	9
3. DAS Energy Balance	15
4. Domestic Power Generation	17
4.1 Production and Credit per fuel type	17
4.2 Production and Credits per Participant.....	23
4.3 Production per Participant, fuel type and operation status	27
4.4 Production and Credits per Unit.....	28
5. Supply of Electricity	30
5.1 Load Declarations and Debits	30
5.2 Analysis on Supply per Participant, Load Zone and Voltage Level	32
6. Electricity Trading.....	34
6.1 Imports.....	34
6.2 Exports	35
6.3 Electricity Transit	36
6.4 Net Position of Interconnections Balance	37
6.5 Analysis on Trading per Participant and Interconnection.....	38
6.6 Wrong Direction Energy Flows	39

Monthly Report Highlights

Participation in DAS

- In Participants' Register for month May 2020, there were: **70** Participants from which **54** were active during the month: **8** Producers, **8** RES Aggregators, **1** RES Producer, **30** Suppliers and **15** Traders.

System Marginal Price (SMP) and Reserves Prices

- The average SMP for May is **34,27 €/MWh** which is 5,76 €/MWh **higher** than the SMP of the previous month and 31,64 €/MWh **lower** comparing to the same month of the previous year.

DAS Energy Balance

- For May *Domestic Demand* constitutes the **97,64%** of total monthly Load, *Exports* the **2,29%** and *Pumping* the **0,07%**. Generation from *Natural Gas Units* covered **38,50%** of the monthly Load, *RES* the **29,62%**, *Imports* covered **23,14%**, *Hydro Production* the **6,07%**, and *Lignite Units* the **2,66%**.
- Comparing to May 2019, *Natural Gas Units Generation* increased (**29%**). *Imports* increased significantly and *Exports* decreased (**-33% and -62% respectively**). *Lignite Generation* decreased significantly (**-87%**) and *Hydro Generation* increased (**8%**). Finally, *RES generation* increased (**30%**).
- Electricity demand decreased (**-9%**) relatively to May 2019 demand. The highest load appeared at 14:00 15/05/2020 (**6442 MW**) while the lowest load was **2956 MW** at 5:00 02/05/2020.
- The monthly DAS value for May reached **120,8 MEUR** while the daily average DAS value was **3,9 MEUR**.

Domestic Power Generation

- *Monthly Production Shares per fuel type* for May were: *Natural Gas Units* **50,10%**, *RES* **38,54%**, *Hydro Units* **7,90%**, and *Lignite Units* **3,46%**. Concerning Market Participants, the respective shares were: *DAPEEP* **31,92%**, *PPC* **30,64%**, and *ELPEDISON* **9,31%**.

Supply of Electricity

- The *Daily Average Load* for May was **109.563 MWh**.
- The monthly *Consumption Share of PPC* in May was **66,29%** (High Voltage: 19,13%, Medium Voltage: 6,22%, Low Voltage: 40,94%). The second higher consumption share belongs to *MYTILINEOS* **7,30%** (HV: 0,09%, MV: 4,12%, LV: 3,09%) and the third to *HERON* **6,27%** (HV: 0,00%, MV: 2,83%, LV: 3,44%). The relevant numbers for the previous month were *PPC*: 67,37%, *MYTILINEOS*: 6,84% and *HERON*: 5,81%.

Electricity Trading

- Total energy injections for May from *Imports* amounted **804 GWh** while *Exports* reached **80 GWh**.
- For the Interconnection with Italy, *wrong direction energy flows* were scheduled for **173 hours** (23% of total month hours) while for the Interconnection with Bulgaria *wrong direction energy flows* were scheduled for **191 hours** (26% of total month hours).

1. Participation in DAS

1.1 Participants Register

The following tables present the registered Participants from the Participants' Register at the end of the month. Participants who participated in DAS during the month with the specific Participant Type which is stated at the top of each table are indicated with blue color.

Producers

S/N	PARTICIPANT NAME	ABBREVIATION
1	ELPEDISON ΠΑΡΑΓΩΓΗ ΗΛΕΚΤΡΙΚΗΣ ΕΝΕΡΓΕΙΑΣ Α.Ε.	ELPEDISON
2	ΔΗΜΟΣΙΑ ΕΠΙΧΕΙΡΗΣΗ ΗΛΕΚΤΡΙΣΜΟΥ Α.Ε.	PPC
3	ΗΡΩΝ II ΒΟΙΩΤΙΑΣ Α.Ε.	HERON_II_VIOTIAS
4	ΗΡΩΝ ΘΕΡΜΟΗΛΕΚΤΡΙΚΗ Α.Ε	HERON
5*	ΚΟΡΙΝΘΟΣ POWER Α.Ε.	KORINTHOS_POWER
6*	ΛΙΓΝΙΤΙΚΗ ΜΕΓΑΛΟΠΟΛΗΣ Α.Ε.	LIG_MEGALOPOLIS
7*	ΛΙΓΝΙΤΙΚΗ ΜΕΛΙΤΗΣ Α.Ε.	LIG_MELITIS
8	ΜΥΤΙΛΗΝΑΙΟΣ ΑΝΩΝΥΜΟΣ ΕΤΑΙΡΕΙΑ – ΟΜΙΛΟΣ ΕΠΙΧΕΙΡΗΣΕΩΝ	MYTILINEOS

* LIG_MELITIS, LIG_MEGALOPOLIS and KORINTHOS_POWER, holders of production license, participated also in DAS as Suppliers for serving the auxiliary loads of their generation units. The RES and GOs Operator S.A. (DAPEEP) participated in DAS as a "Producer", as the credits for the RES production are transferred to the RES Special Account of Article 40 of Law 2773/1999.

RES Aggregators

S/N	PARTICIPANT NAME	ABBREVIATION
1	ELPEDISON ΠΑΡΑΓΩΓΗ ΗΛΕΚΤΡΙΚΗΣ ΕΝΕΡΓΕΙΑΣ Α.Ε.	ELPEDISON
2	EUNICE TRADING Α.Ε.	EUNICE_TRADING
3	FORENA ENERGY ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ	FORENAENERGYSA
4	INACCESS NETWORKS S.A.	INACCESS
5	ΜΟΤΟΡ ΟΙΛ (ΕΛΛΑΣ) ΔΙΥΛΙΣΤΗΡΙΑ ΚΟΡΙΝΘΟΥ ΑΕ	MOH
6	NRG TRADING HOUSE S.A.	NRG_TRADING_HOUS
7	OPTIMUS ENERGY ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ	OPTIMUS_ENERGY
8	RENOPTIPOWER ΑΝΩΝΥΜΗ ΕΝΕΡΓΕΙΑΚΗ ΕΤΑΙΡΕΙΑ	RENOPTIPOWER
9	SOLAR ENERGY	SOLARENERGY
10	ΜΥΤΙΛΗΝΑΙΟΣ ΑΝΩΝΥΜΟΣ ΕΤΑΙΡΕΙΑ – ΟΜΙΛΟΣ ΕΠΙΧΕΙΡΗΣΕΩΝ	MYTILINEOS

* The RES and GOs Operator S.A. (DAPEEP) participated also in DAS as Last Resort RES Aggregator (FOSETEK).

RES Producers

S/N	PARTICIPANT NAME	ABBREVIATION
1	ΒΙΟΛΑΡ Α.Ε.	VIOLAR

Suppliers

S/N	PARTICIPANT NAME	ABBREVIATION
1*	ALPIQ ENERGY SE	ALPIQ_ENERGY
2	EDELWEISS ENERGIA S.P.A.	EDELWEISS
3*	ELECTRADE S.P.A.	ELECTRADE SPA
4	ELPEDISON ΠΑΡΑΓΩΓΗ ΗΛΕΚΤΡΙΚΗΣ ΕΝΕΡΓΕΙΑΣ Α.Ε.	ELPEDISON
5	ENEL GREEN POWER HELLAS ΠΡΟΜΗΘΕΙΑ Α.Ε.	EGPH_SUPPLY
6*	EUNICE TRADING Α.Ε.	EUNICE_TRADING
7*	EVN TRADING SOUTH EAST EUROPE EAD	EVN_TRADING_SEE
8*	GEN-I ATHENS Μ.Ε.Π.Ε. (SMLLC)	GEN-I-ATHENS
9*	GREEK ENVIRONMENTAL & ENERGY NETWORK Α.Ε.	GREENENV

10	GREENSTEEL-CEDALION COMMODITIES A.E.	GREENSTEEL
11	NOVAERA ENERGY A.E.	NOVAERA_ENERGY
12*	NRG TRADING HOUSE S.A.	NRG_TRADING_HOUS
13	NECO A.E.	NECO_HELLAS
14	PROTERGIA ΘΕΡΜΟΗΛΕΚΤΡΙΚΗ Α.Ε.	PROTERGIA_THER
15	SOLAR ENERGY	SOLARENERGY
16*	VOLTERRA A.E.	VOLTERRA
17*	VOLTON ΕΛΛΗΝΙΚΗ ΕΝΕΡΓΕΙΑΚΗ Α.Ε.	VOLTON
18*	WATT AND VOLT A.E.	WATT_AND_VOLT
19	ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΤΣΙΜΕΝΤΩΝ TITAN	TITAN
20	BIENER A.E. ΕΝΕΡΓΕΙΑΚΕΣ ΕΠΙΧΕΙΡΗΣΕΙΣ Α.Ε.	VIENER
21	ΒΙΟΛΑΡ Α.Ε.	VIOLAR
22*	ΔΗΜΟΣΙΑ ΕΠΙΧΕΙΡΗΣΗ ΗΛΕΚΤΡΙΣΜΟΥ Α.Ε.	PPC
23	ΕΛΙΝΟΙΛ ΕΛΛΗΝΙΚΗ ΕΤΑΙΡΙΑ ΠΕΤΡΕΛΑΙΩΝ Α.Ε.	ELINOIL
24	ΕΛΛΗΝΙΚΑ ΤΑΧΥΔΡΟΜΕΙΑ Α.Ε.	ELTA
25	ZENIO GAS & LIGHT	EPA_THESS
26*	ΗΛΕΚΤΡΟΠΑΡΑΓΩΓΗ ΣΟΥΣΑΚΙΟΥ Α.Ε.	SUSAKI_POWER
27*	ΗΡΩΝ ΘΕΡΜΟΗΛΕΚΤΡΙΚΗ Α.Ε.	HERON
28*	ΙΝΤΕΡΜΠΕΤΟΝ – ΔΟΜΙΚΑ ΥΛΙΚΑ Α.Ε.	INTERBETON
29*	ΚΕΝ ΠΑΡΑΓΩΓΗ ΚΑΙ ΕΜΠΟΡΙΑ ΕΝΕΡΓΕΙΑΚΩΝ ΠΡΟΪΟΝΤΩΝ Α.Ε.	KEN
30	ΚΩΝΣΤΑΝΤΙΝΟΣ Β. ΜΑΡΚΟΥ Α.Β.Ε.Ε.	KVMARKOUSA
31	ΜΟΤΟΡ ΟΙΛ (ΕΛΛΑΣ) ΔΙΥΛΙΣΤΗΡΙΑ ΚΟΡΙΝΘΟΥ ΑΕ	MOH
32*	ΜΥΤΙΛΗΝΑΙΟΣ Α.Ε. – ΟΜΙΛΟΣ ΕΠΙΧΕΙΡΗΣΕΩΝ	MYTILINEOS
33	ΟΤΕ ΑΚΙΝΗΤΑ Α.Ε.	OTEESTATE
34	ΠΕΤΡΟΓΚΑΖ ΕΛΛΗΝΙΚΗ ΕΤΑΙΡΙΑ ΥΓΡΑΕΡΙΩΝ, ΒΙΟΜΗΧΑΝΙΚΩΝ ΠΡΟΪΟΝΤΩΝ & ΓΕΝΙΚΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ Α.Ε.	PETROGAZSA
35	ΠΡΟΜΗΘΕΥΤΗΣ ΚΑΘΟΛΙΚΗΣ ΥΠΗΡΕΣΙΑΣ	PPC_USS
36	ΠΡΟΜΗΘΕΥΤΗΣ ΤΕΛΕΥΤΑΙΟΥ ΚΑΤΑΦΥΓΙΟΥ	PPC_LRS
37	ΦΥΣΙΚΟ ΑΕΡΙΟ-ΕΛΛΗΝΙΚΗ ΕΤΑΙΡΕΙΑ ΕΝΕΡΓΕΙΑΣ	ATTIKI_GSC

* Participants who are holders of supply license, participated in DAS as Traders.

Traders

S/N	PARTICIPANT NAME	ABBREVIATION
1	ALPIQ ENERGY HELLAS A.E.	ALPIQ_HELLAS
2	AYEN ENERGIJA D.O.O.	AYEN_ENERGIJA
3	AXPO ENERGY ROMANIA S.A.	AXPO_ROMANIA
4	CEZ A.S.	CEZ A.S.
5	DANSKE COMMODITIES A/S	DANSKECOM
6	DUFERCO ENERGIA S.P.A.	DUFERCO
7	EDISON S.P.A	EDISON_TRADING
8	EDF TRADING LIMITED	EDF_TRADING_LTD
9	ELEKTRICNI FINANCNI TIM D.O.O.	EFT_SLOVENIA
10	ENEL TRADE S.P.A.	ENEL_TRADE
11	ENERGY MT EAD	ENERGY_MT_EAD
12	ENSCO S.A.	ENSCO_ENERGY
13	EZPADA S.R.O.	EZPADA
14	HSE D.O.O.	HSE
15	INTERENERGO D.O.O.	INTERENERGO
16	LE TRADING A.S.	LE TRADING
17	NVALUE A.G.	NVALUE
18	PROTERGIA ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΠΡΟΜΗΘΕΙΑΣ ΚΑΙ ΕΜΠΟΡΙΑΣ ΗΛΕΚΤΡΙΚΗΣ ΕΝΕΡΓΕΙΑΣ	PROTERGIA-ENERGY
19	SENTRADE A.E.	SENTRADE
20	STATKRAFT MARKETS GMBH	STATKRAFT_MARKET
21	VITOL GAS AND POWER B.V.	VITOL
22	ΣΟΛΑΡΙΣ ΕΝΕΡΓΕΙΑΚΗ Α.Ε.	SOLARIS
23	ΤΕΡΝΑ ΕΝΕΡΓΕΙΑΚΗ ΑΒΕΤΕ	TERNA_ENERGY

1.2 Generation Units in Interconnected System

	UNIT	OWNER	INSTALLED CAPACITY (MW)
Lignite Units	AG. DIMITRIOS I	PPC	274.0
	AG. DIMITRIOS II	PPC	274.0
	AG. DIMITRIOS III	PPC	283.0
	AG. DIMITRIOS IV	PPC	283.0
	AG. DIMITRIOS V	PPC	342.0
	AMYNDEO I	PPC	273.0
	AMYNDEO II	PPC	273.0
	MELITI	LIG_MELITIS	289.0
	KARDIA I	PPC	271.1
	KARDIA II	PPC	270.8
	KARDIA III	PPC	280.0
	KARDIA IV	PPC	280.0
	MEGALOPOLI III	LIG_MEGALOPOLIS	255.0
	MEGALOPOLI IV	LIG_MEGALOPOLIS	256.0
	Total of Lignite Units		3,903.9
Natural Gas Units	KOMOTINI	PPC	476.0
	LAVRIO 4	PPC	550.0
	ELPEDISON THESS	ELPEDISON	400.2
	ELPEDISON THISVI	ELPEDISON	410.0
	HERON 1	HERON	49.0
	HERON 2	HERON	49.0
	HERON 3	HERON	49.0
	Subtotal of bi-fuel Natural Gas Units		1,983.2
	LAVRIO 5	PPC	378.0
	ALIVERI V	PPC	417.0
	MEGALOPOLI V	PPC	500.0
	HERON CC	HERON_II_VIOTIAS	422.0
	PROTERGIA CC	MYTILINEOS	432.7
	KORINTHOS POWER	KORINTHOS POWER	433.4
	ALOUMINIO	MYTILINEOS	334.0
	Total of Natural Gas Units		4,900.3
Hydro Units	AGRAS	PPC	50.0
	ASOMATA	PPC	108.0
	P_AOOU	PPC	210.0
	EDESSAIO	PPC	19.0
	THESAVROS	PPC	384.0
	ILARIONAS	PPC	153.0
	KA STRAKI	PPC	320.0
	KREMASTA	PPC	437.2

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

	LADONAS	PPC	70.0
	PLASTIRAS	PPC	129.9
	PLATANOVRYSI	PPC	116.0
	POLYFYTO	PPC	375.0
	POURNARI 1	PPC	300.0
	POURNARI 2	PPC	33.6
	STRATOS 1	PPC	150.0
	SFIKIA	PPC	315.0
	Total of Hydro Units		3,170.7
RES	WIND	RES	3,569.3
	PV	RES	2,381.6
	PV ROOFS	RES	351.5
	HYDRO	RES	233.2
	BIOMASS	RES	88.9
	CHP	RES	109.5
	Total of RES Units		6,733.9
	Total of Thermal Units		8,804.2
	Total of RES & Hydro Units		9,904.6
	Total of all Units		18,708.8

Source: DAPEEP, ADMIE

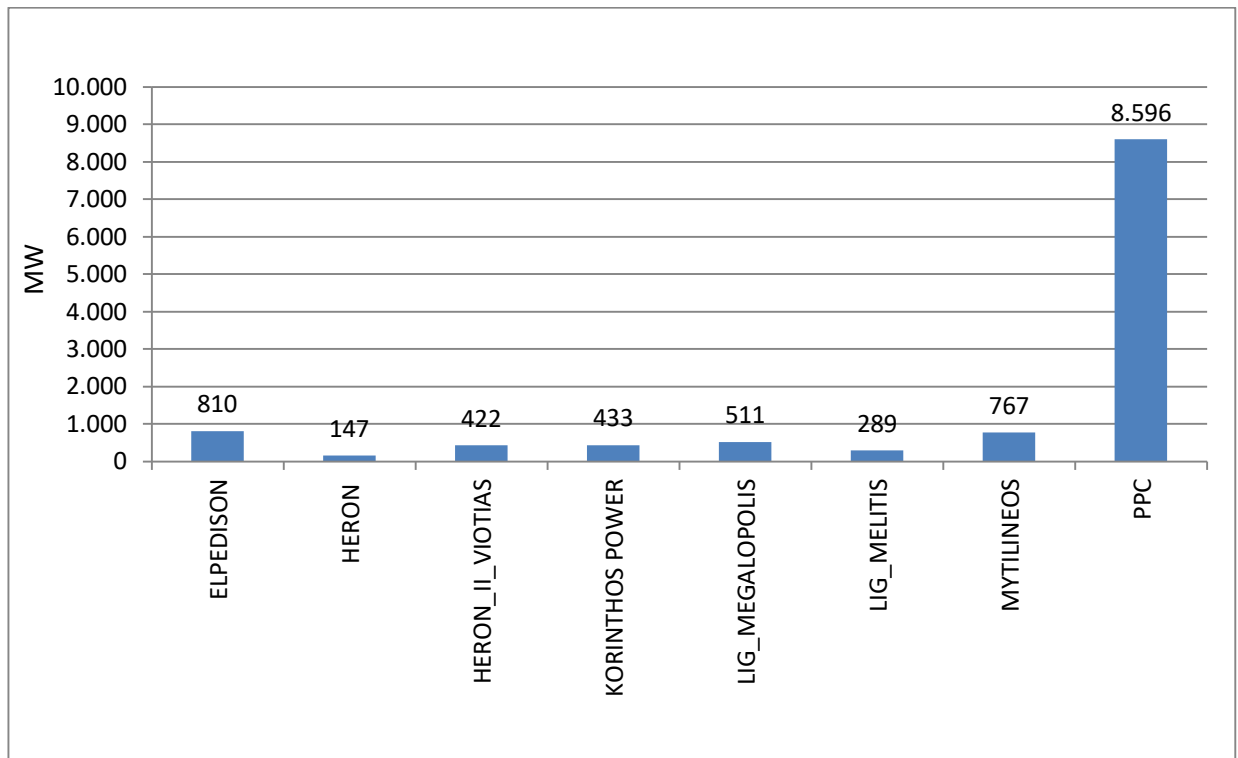


Figure 1: Total Installed Capacity of Units per Producer (RES excluded)

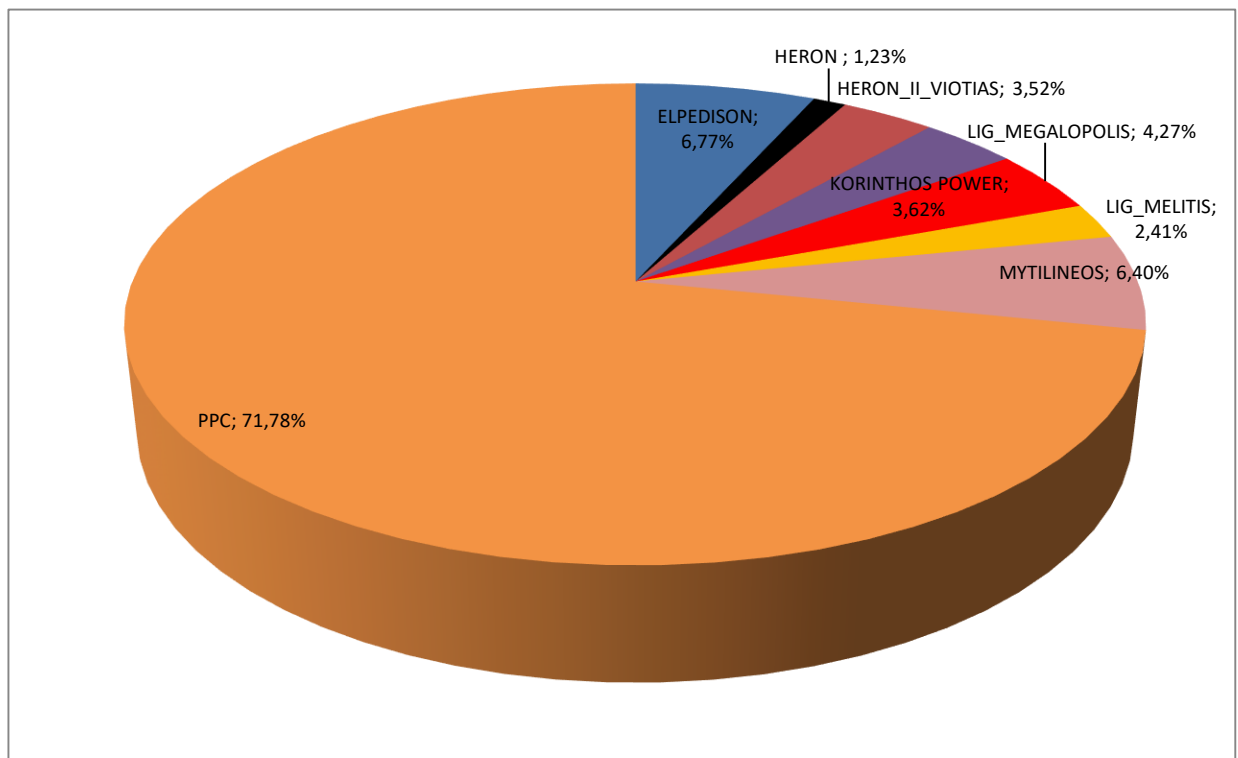


Figure 2: Percentage (%) of Total Installed Capacity per Producer (RES excluded)

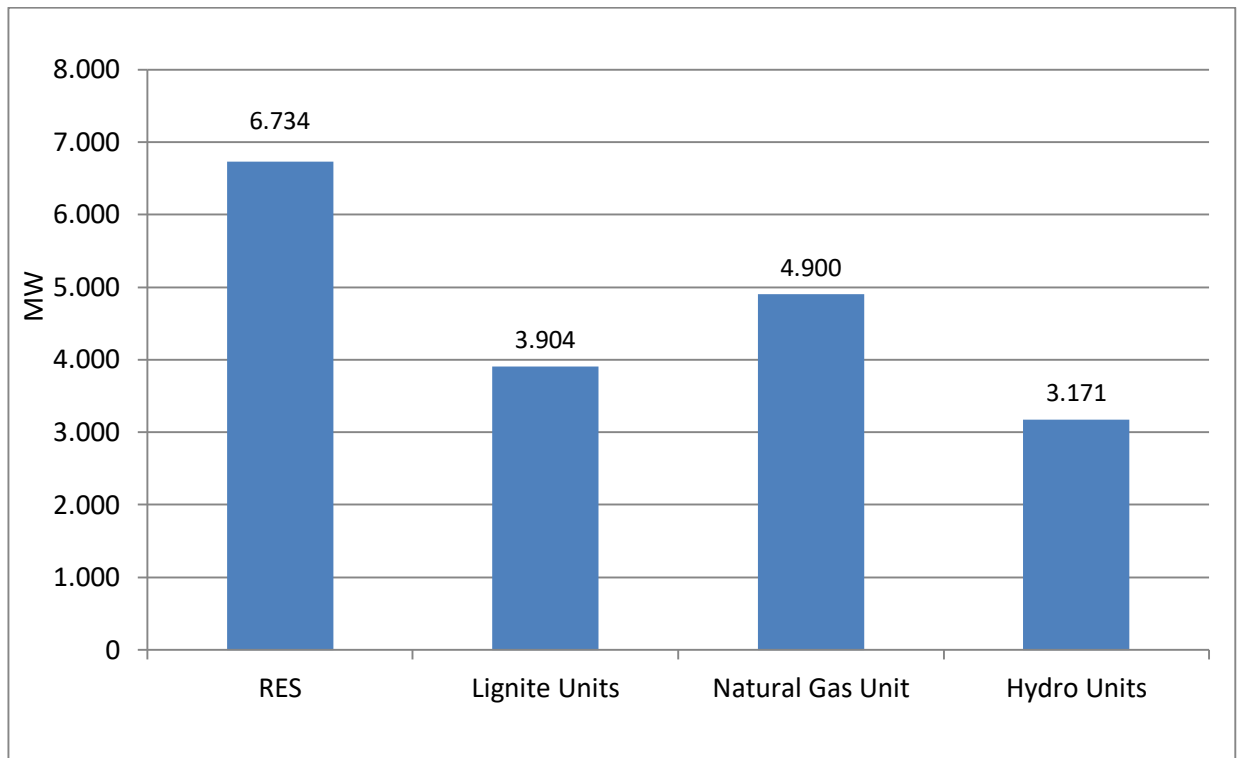


Figure 3: Total Installed Capacity of Units per Fuel type in the Interconnected System

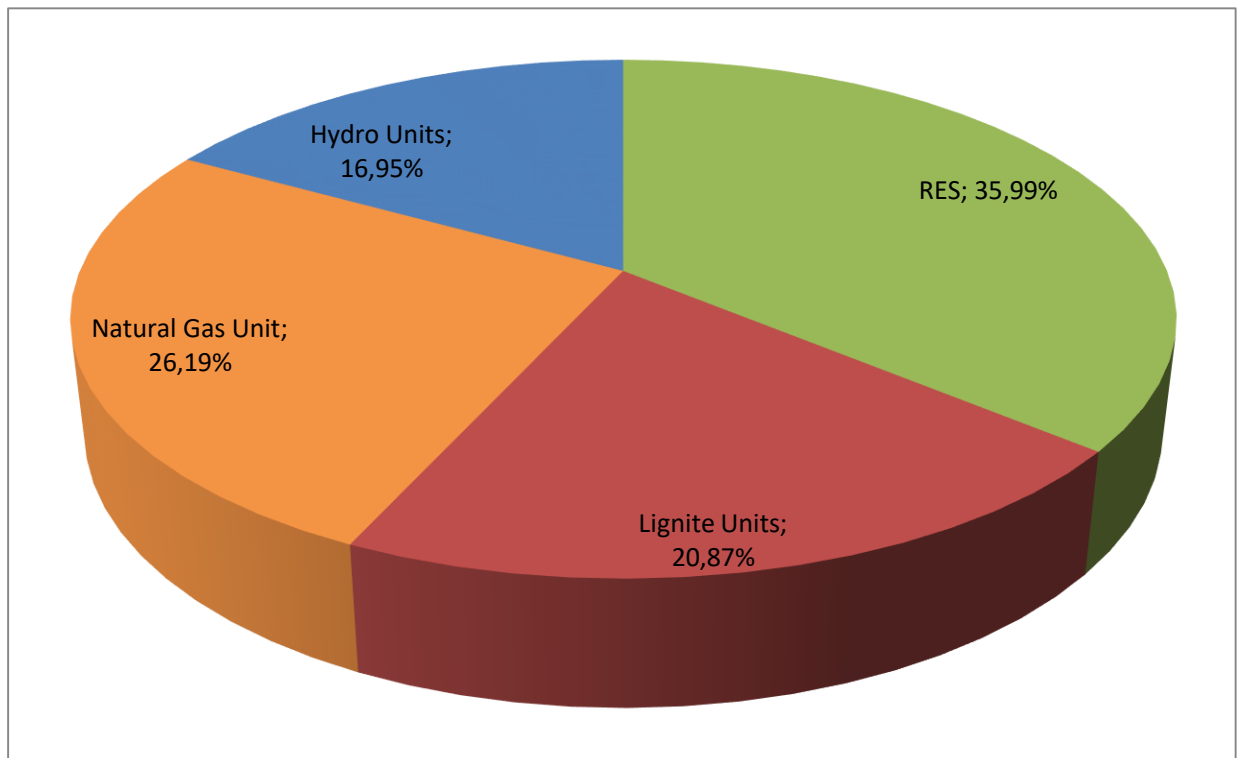


Figure 4: Percentage (%) of total Installed Capacity per Fuel type in the Interconnected System

2. System Marginal Price (SMP) and Reserves Prices

	SMP (€/MWh)	Date	Hour
Minimum	0,000	01/05/2020	15
		01/05/2020	16
		01/05/2020	17
		01/05/2020	18
		24/05/2020	16
Maximum	79,058	15/05/2020	22
Average	34,271		

Table 1: SMP data

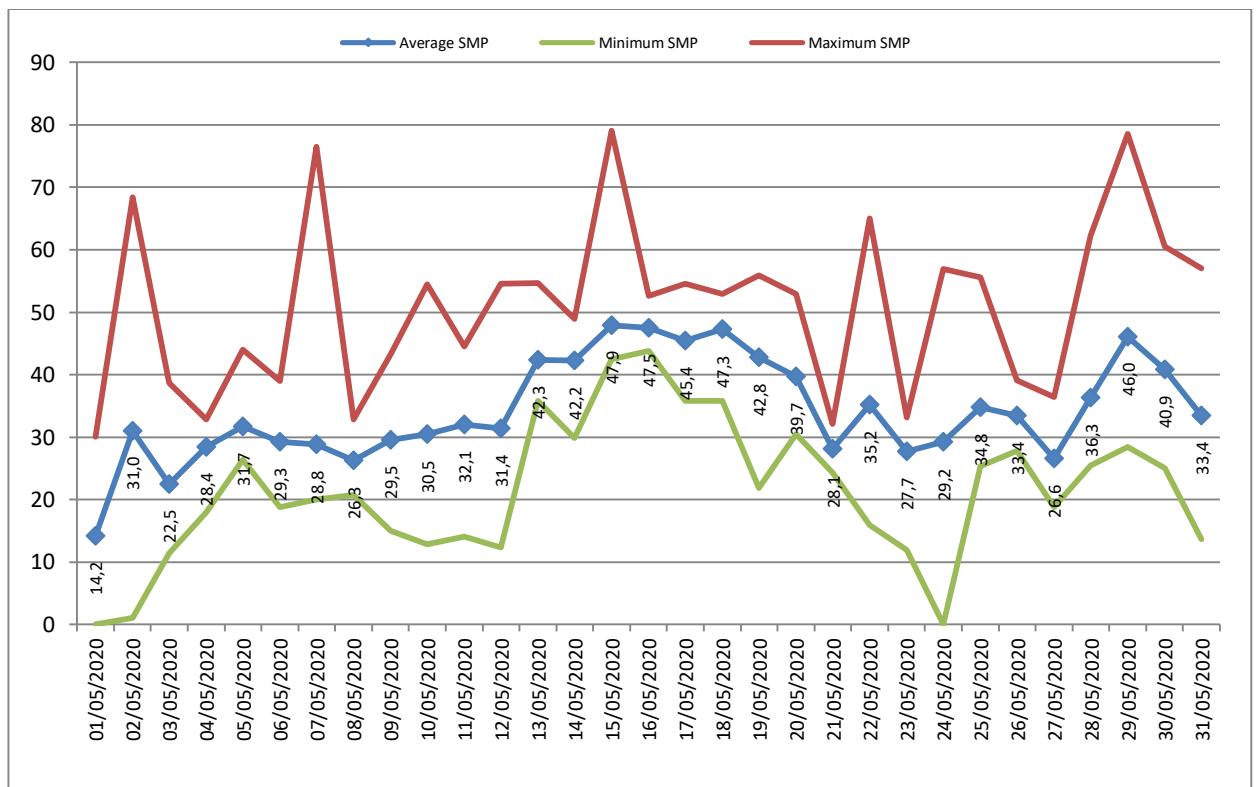


Figure 5: Average, Minimum and Maximum Daily SMP (€/MWh)

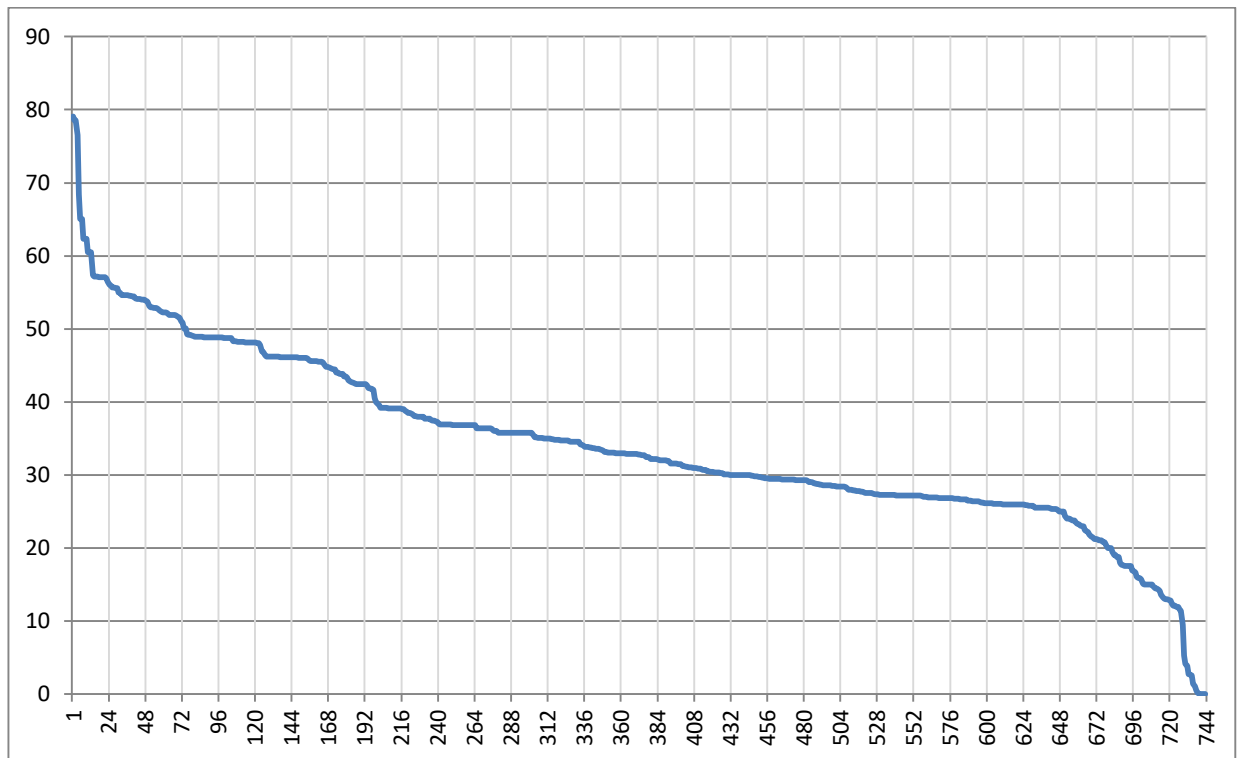


Figure 5a: SMP duration curve (€/MWh)

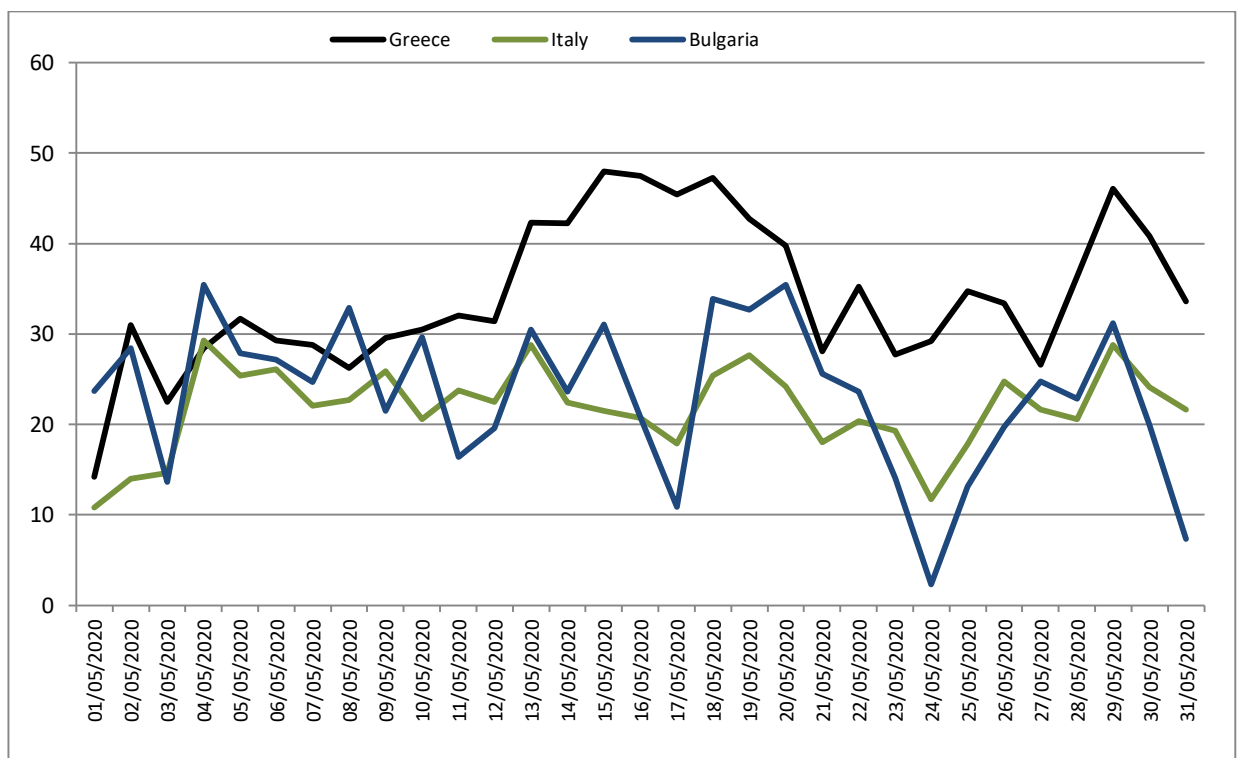


Figure 5b: Daily average marginal energy prices (€/MWh) of Greece, Italy, Bulgaria

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

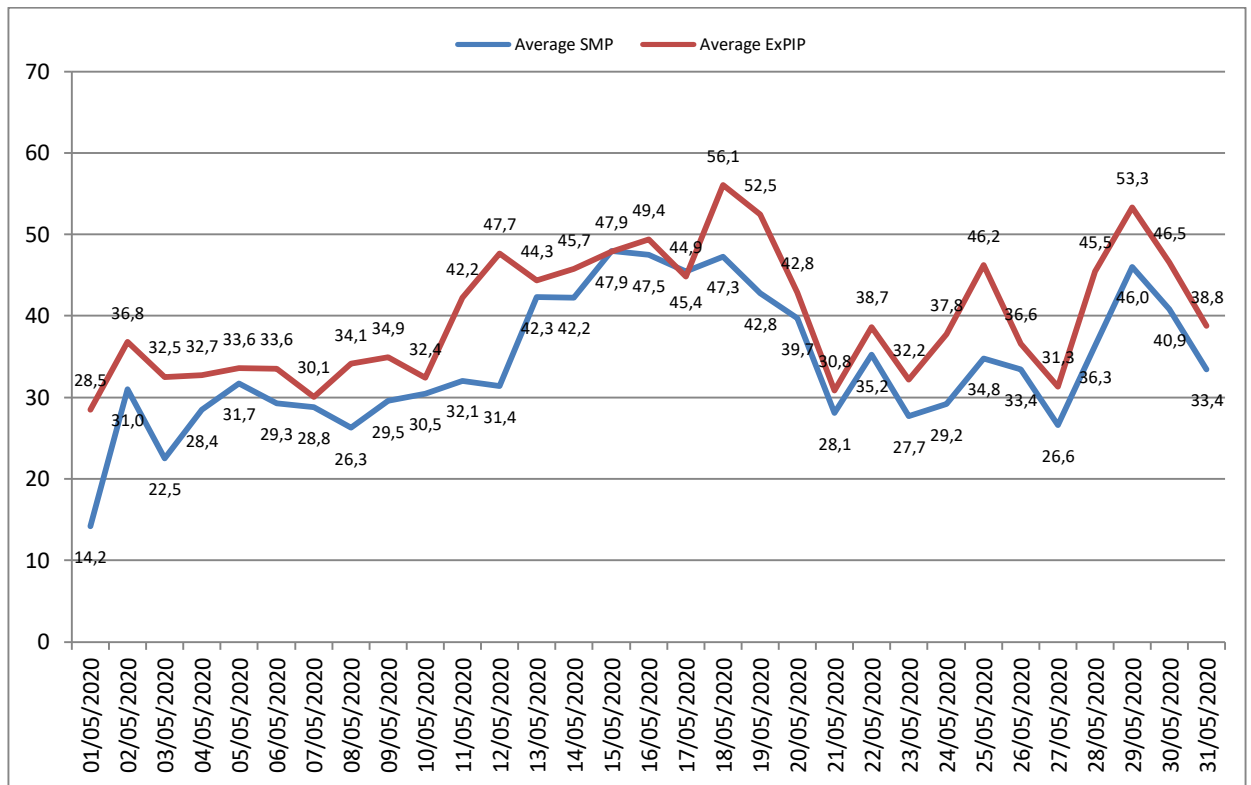


Figure 6: Average Daily SMP and ExPIP

Source: HENEX, ADMIE

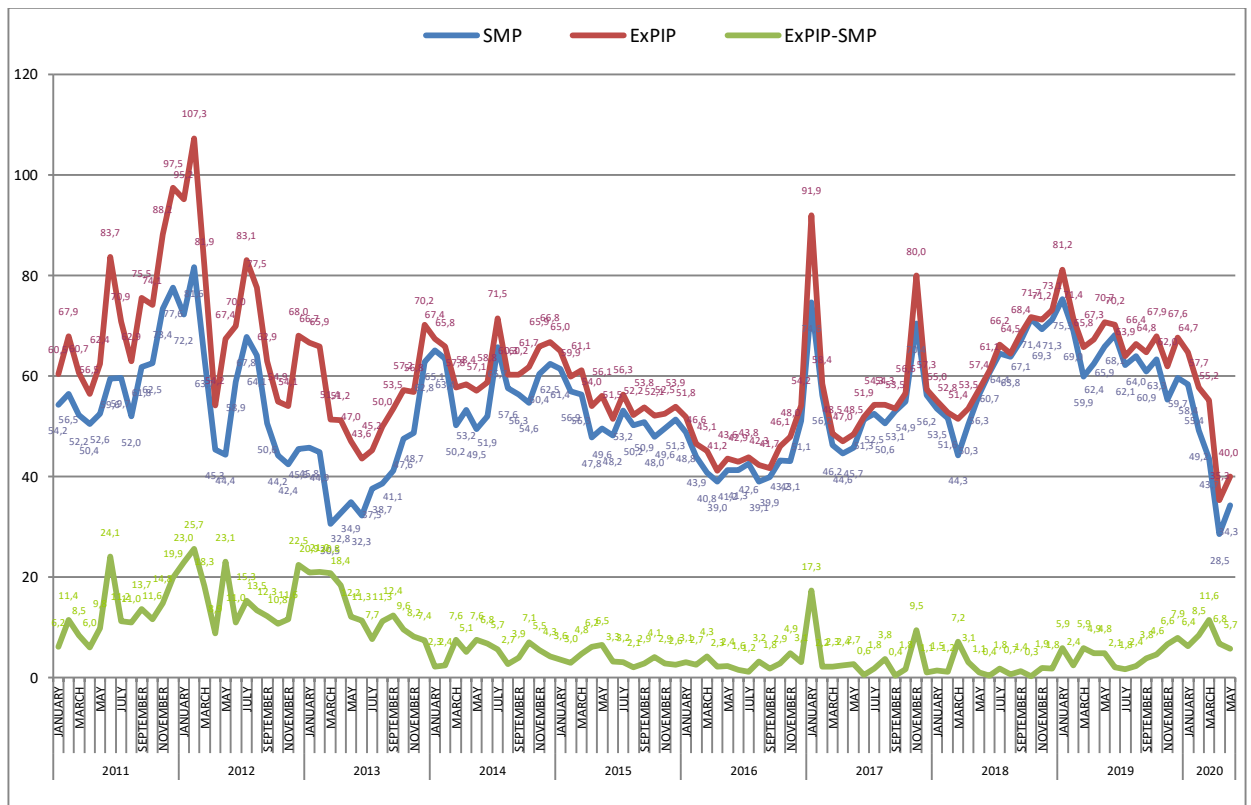


Figure 7: Evolution of average monthly SMP, ExPIP and their difference

Source: HENEX, ADMIE

		Average Monthly SMP		Average Monthly ExPIP		Difference SMP-ExPIP
		€/MWh	% deviation*	€/MWh	% deviation*	€/MWh
2019	January	75,28	40,73	81,21	47,68	5,93
	February	69,01	33,67	71,44	35,26	2,43
	March	59,87	35,19	65,79	27,89	5,93
	April	62,40	23,93	67,29	25,85	4,89
	May	65,91	17,03	70,75	23,31	4,84
	June	68,14	12,27	70,21	14,96	2,07
	July	62,14	-3,53	63,90	-3,47	1,76
	August	64,02	0,30	66,42	2,95	2,40
	September	60,91	-9,17	64,75	-5,38	3,84
	October	63,32	-11,31	67,90	-5,36	4,57
	November	55,35	-20,13	61,96	-13,00	6,61
	December	59,68	-16,24	67,62	-7,46	7,94
2020	January	58,38	-22,45	64,73	-20,29	6,35
	February	49,23	-28,66	57,74	-19,18	8,51
	March	43,65	-27,09	55,21	-16,08	11,56
	April	28,51	-54,31	35,33	-47,49	6,82
	May	34,27	-48,00	40,01	-43,45	5,74
	June					
	July					
	August					
	September					
	October					
	November					
	December					

Source: HENEX, ADMIE

Table 2: Evolution of average monthly SMP, ExPIP and their difference, as well as the % deviation of average monthly SMP & ExPIP in relation to the same month of the previous year

*The calculation of SMP & ExPIP commenced in the Fifth Reference Day on 30/09/2010

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

Reserve	Minimum Price (€/MW)	Maximum Price (€/MW)	Date of Maximum Price	Average Price (€/MW)
Primary	0,001	50,000	02/05/2020 12/05/2020	0,338
Secondary Up	0,001	17,000	07/05/2020 13/05/2020 18/05/2020	0,370
Secondary Down	0,001	6,123	18/05/2020	0,249

Table 2a: Average, Minimum and Maximum Monthly Reserves Prices

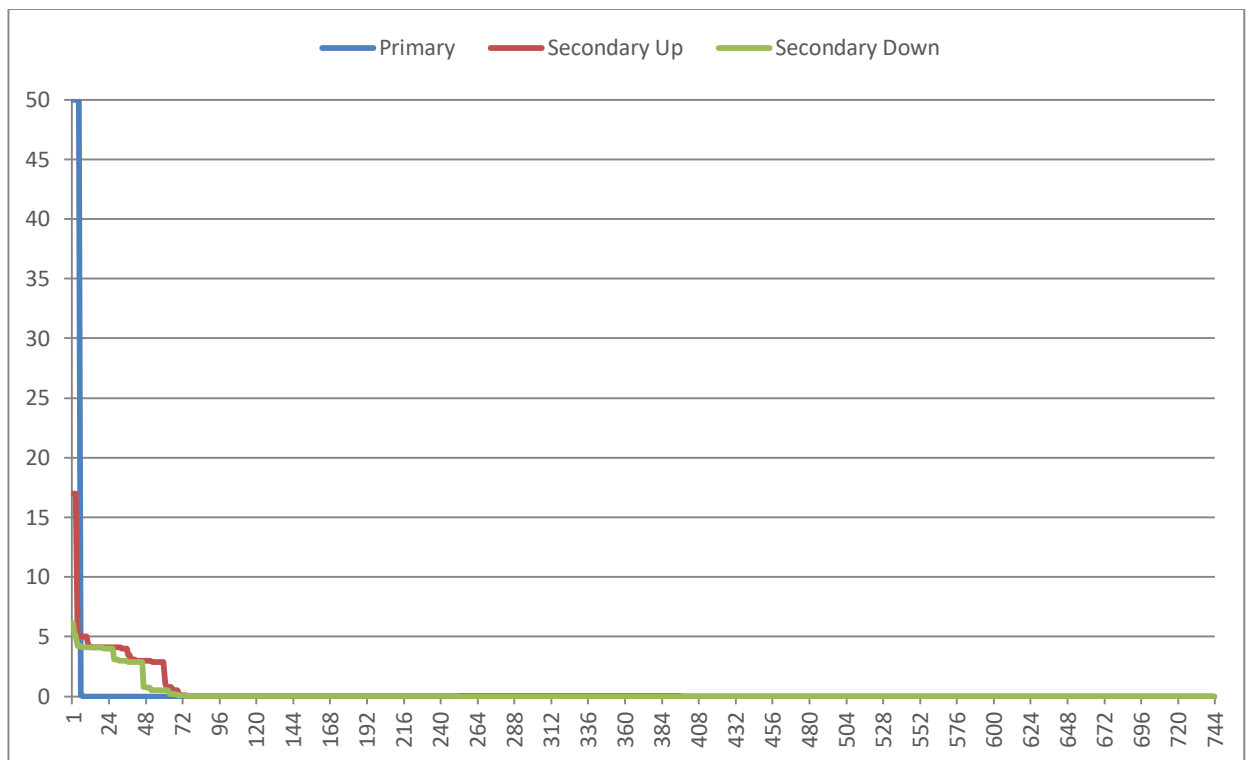


Figure 7a: Duration Curve of Primary, Secondary Up and Secondary Down Reserve Prices (€/MW)

	Lignite	Natural Gas	Hydro	Imports	Exports
Hours/Month	15	491	9	166	63

Table 3: Number of hours for each type of fuel, imports and exports that have defined the SMP

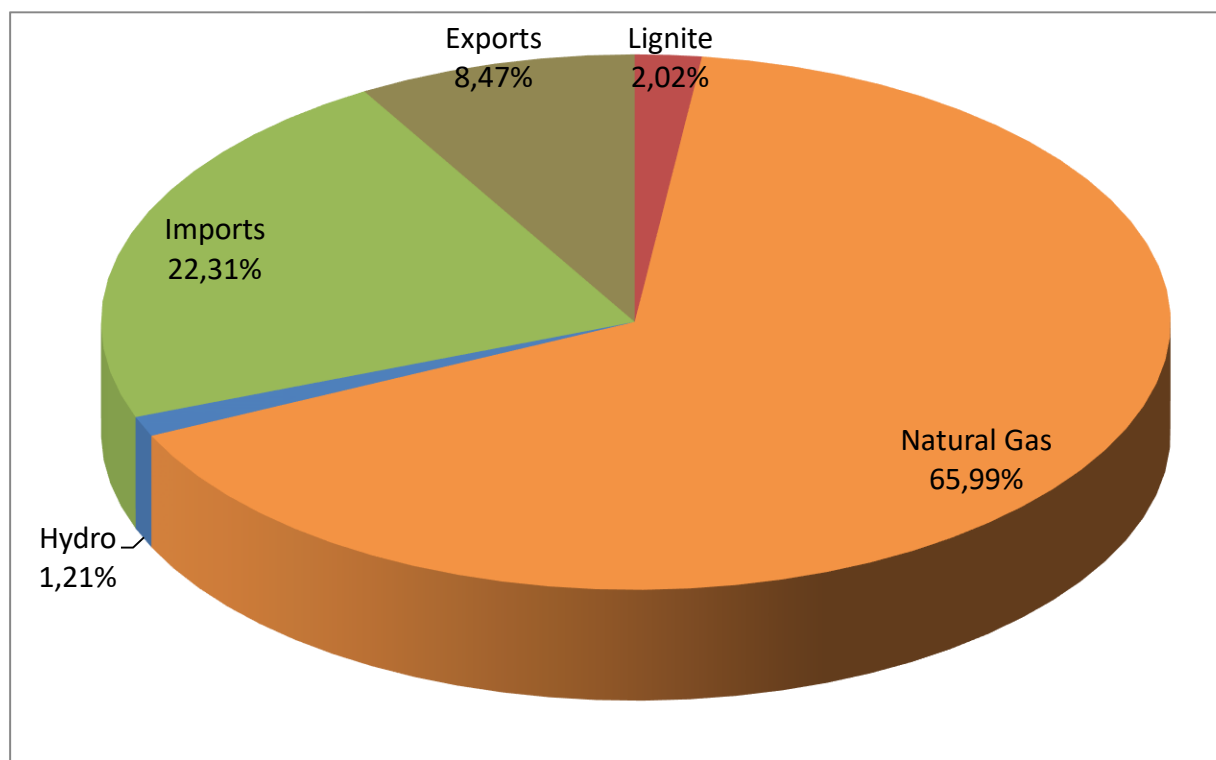


Figure 8: Percentage (%) of total hours per fuel type/imports/exports that have defined the SMP

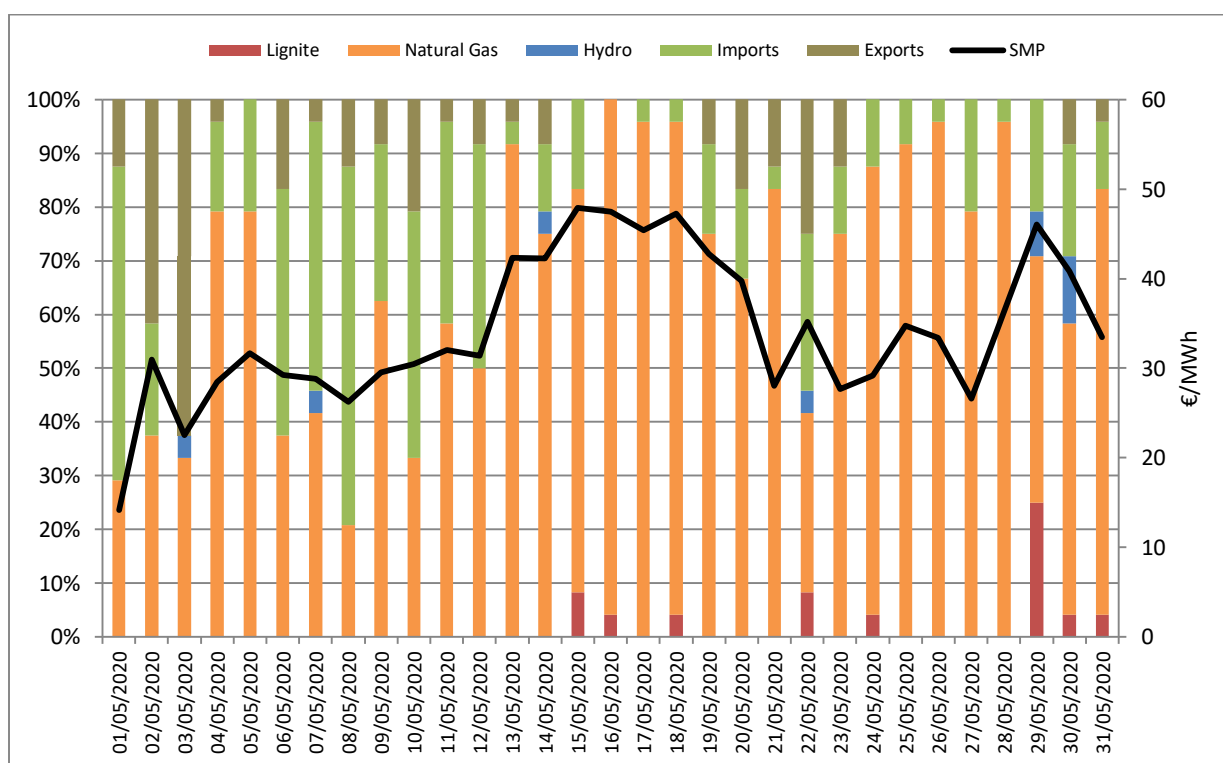


Figure 9: Daily percentage (%) distribution of fuel type/import/export that have defined SMP

3. DAS Energy Balance

	May 2020	% deviation (from 05/2019)	January - May 2020	% deviation (from 01-05/2019)
PRODUCTION AND IMPORTS - EXPORTS BALANCE (MWh)				
TOTAL PRODUCTION & IMPORTS - EXPORTS BALANCE	3.396.478	-9,26	19.396.362	-7,06
NET PRODUCTION ANALYSIS				
LIGNITE	92.506	-87,22	2.278.241	-54,08
OIL	0	0,00	264	0,00
NATURAL GAS	1.338.495	28,88	6.636.365	-1,63
HYDRO	211.161	7,92	717.083	-24,20
RES	1.029.657	29,69	5.388.301	26,06
TOTAL NET PRODUCTION	2.671.819	-2,91	15.020.253	-11,27
IMPORTS				
ALBANIA	132.987		668.513	
BULGARIA	67.428		1.296.389	
ITALY	340.889		1.567.886	
F.Y.R.O.M.	221.522		1.053.178	
TURKEY	41.523		216.677	
EXPORTS	79.690	-62,15	426.534	-75,61
ALBANIA	6.844		42.771	
BULGARIA	20.475		81.172	
ITALY	6.021		102.351	
F.Y.R.O.M.	14.893		97.958	
TURKEY	31.457		102.283	
IMPORTS - EXPORTS BALANCE	724.660	-26,89	4.376.109	11,04
DEMAND (MWh)				
TOTAL DEMAND	3.396.478	-9,26	19.396.362	-7,06
NET DEMAND	3.394.129	-9,17	19.333.232	-7,23
PUMPING	2.349	-63,33	63.130	117,20
TOTAL DEMAND ANALYSIS				
LOW VOLTAGE CUSTOMERS	2.027.763	-12,77	12.252.992	-9,33
MEDIUM VOLTAGE CUSTOMERS	699.121	-22,43	4.211.172	-12,38
HIGH VOLTAGE CUSTOMERS	667.245	30,62	2.869.068	13,86
SYSTEM PEAK POWER (MW)				
MAXIMUM HOURLY SYSTEM POWER	6.442	0,61	8.553	-5,80
Date	15/05/2020		07/01/2020	
Hour of maximum	14:00		20:00	

The DAS Energy Balance refers to the Market Point, where the solution of DAS also refers to, in which system losses have already been allocated. According to Chapter 10 of the Power Exchange Code for Electricity, to each Generation Unit Metering point and to each Interconnection Metering point for Import, as well as to each Meter point of the Distribution Network, losses factors are applied, in order to allocate both injected and absorbed power to the Market Points.

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

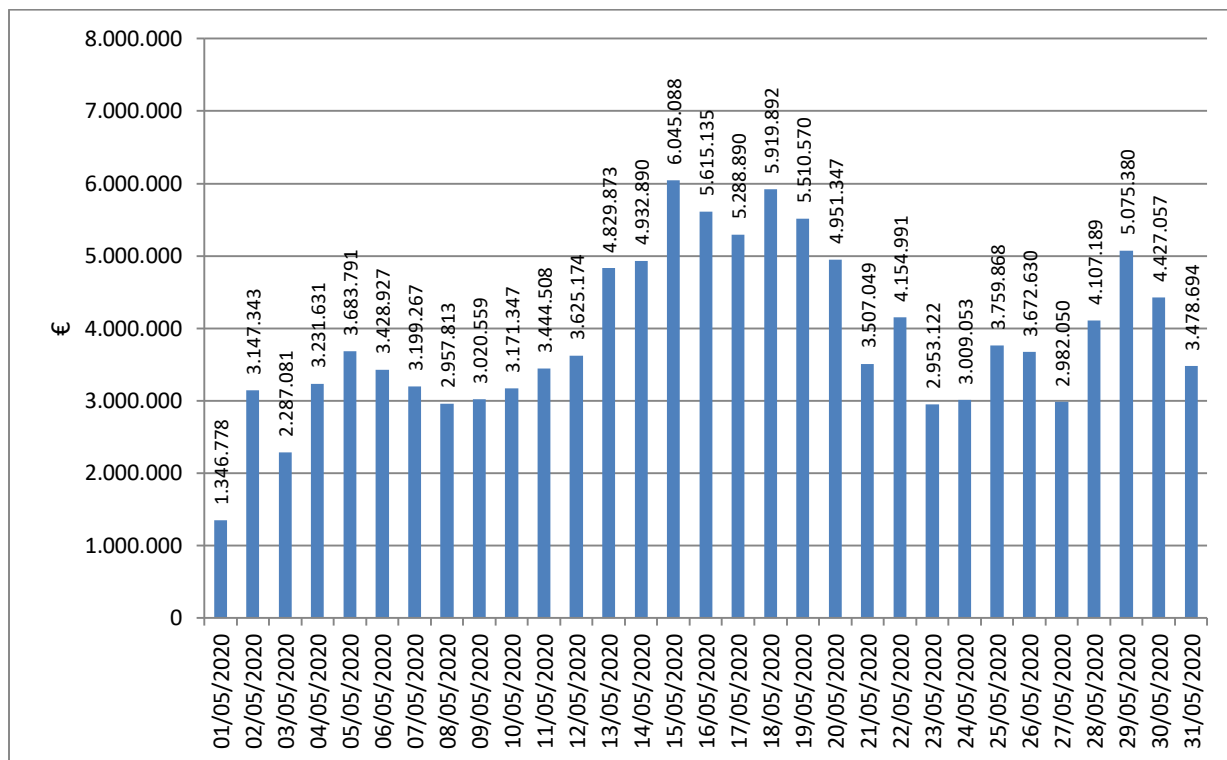


Figure 10: Daily value of DAS

The total value of DAS for May 2020 reached 120,8 M€.

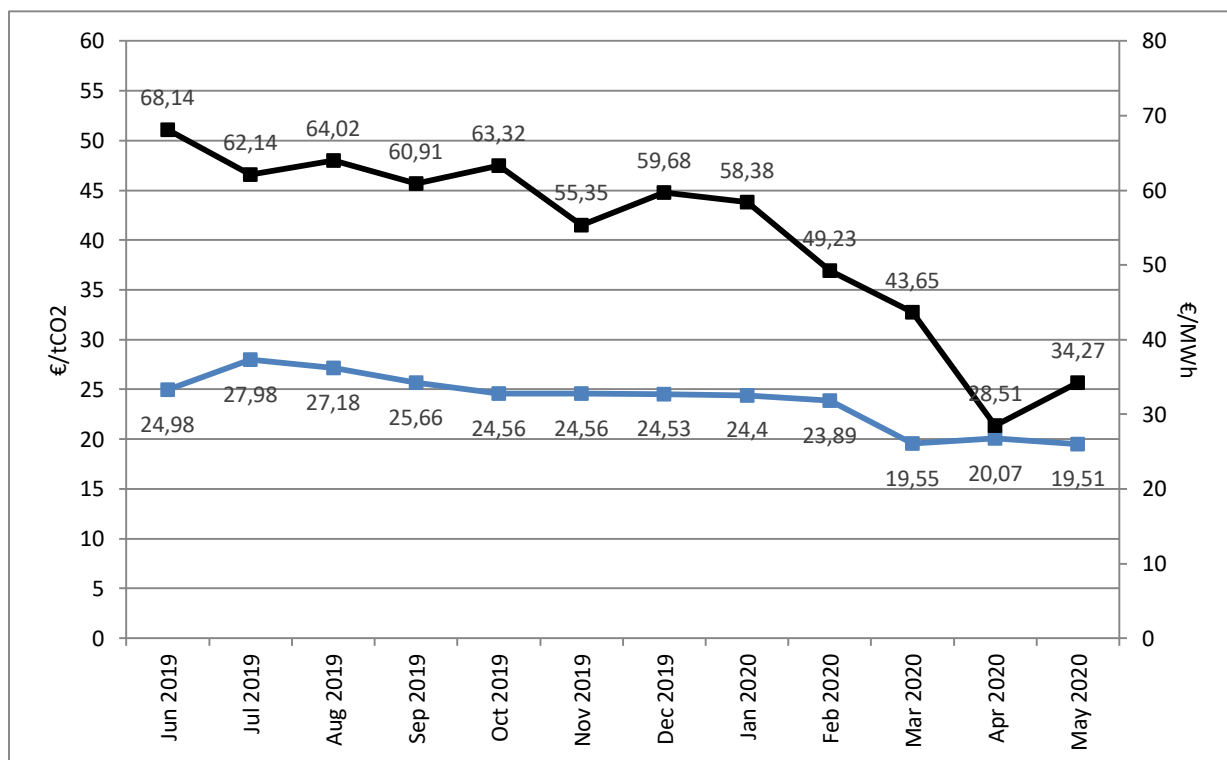


Figure 11: Weighted Average Monthly Prices of CO2 emissions rights (auction T3PA) and SMP (right axis)

Source: DAPEEP

4. Domestic Power Generation

4.1 Production and Credit per fuel type

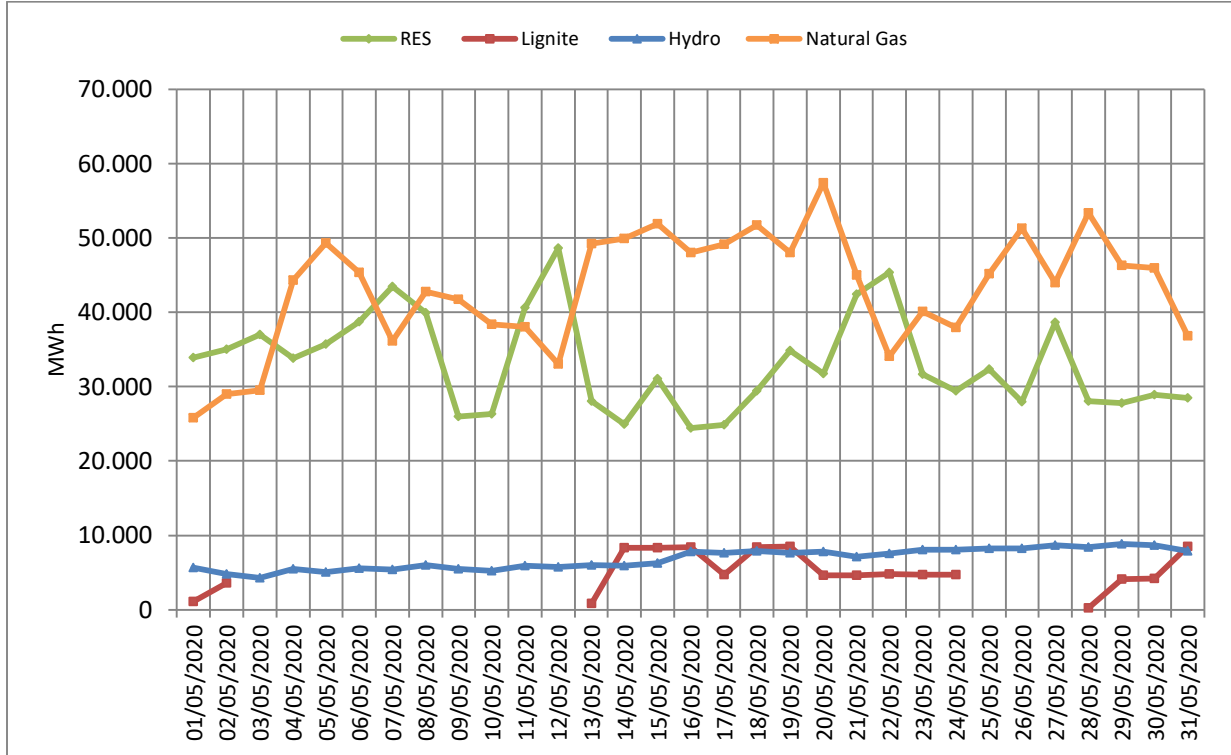


Figure 12: Daily production per fuel type

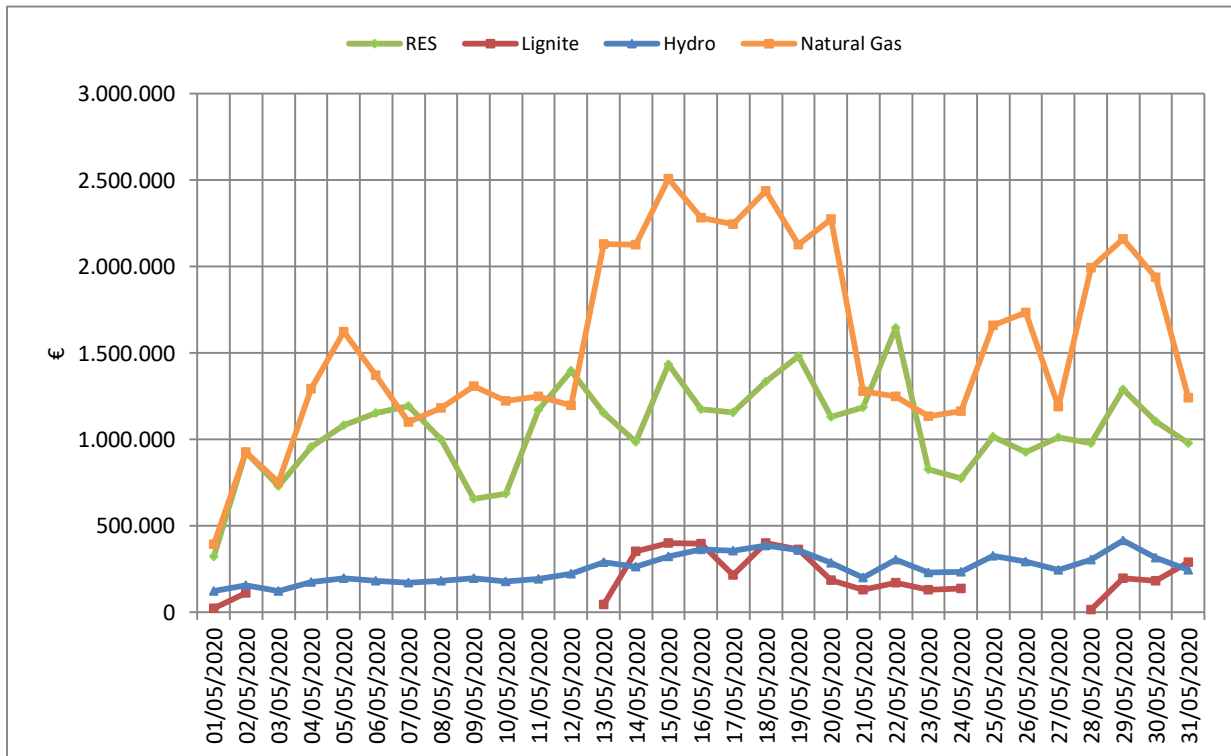


Figure 13: Daily production credit per fuel type

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

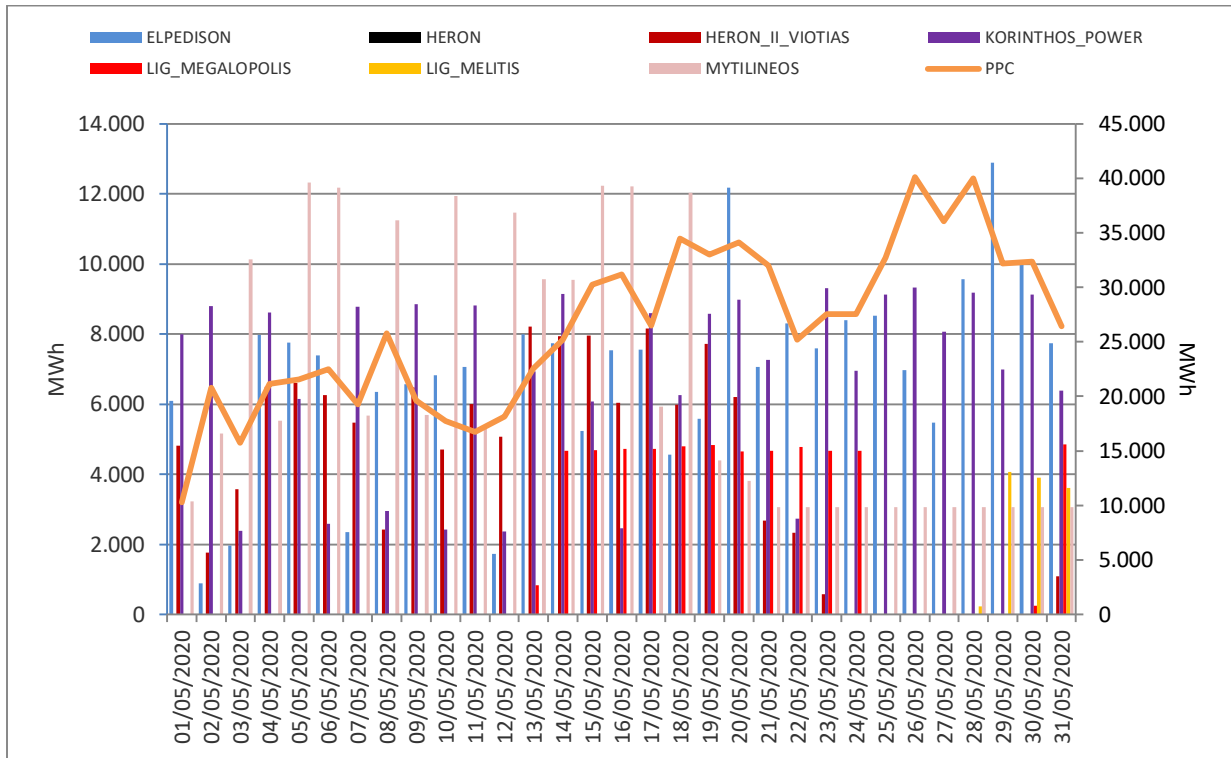


Figure 14: Daily production per Participant excluded RES (the right axis represents the production of PPC)

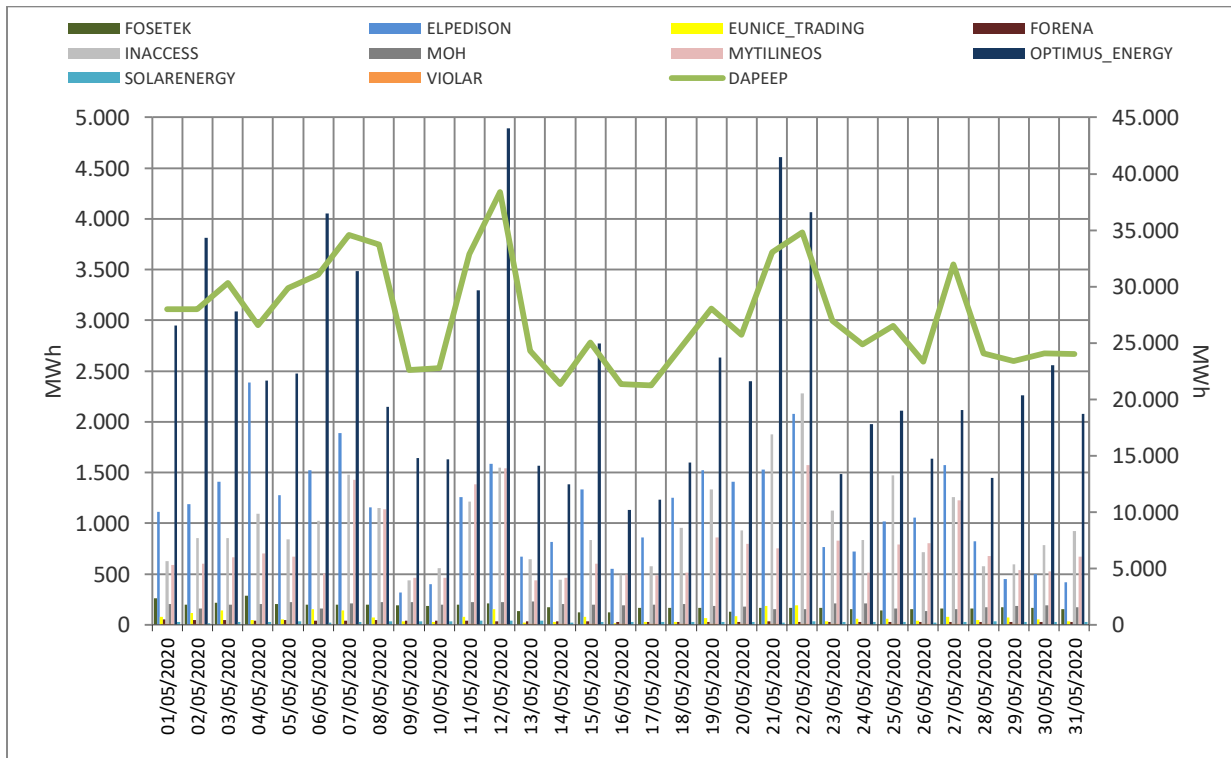


Figure 14a: Daily production per RES Participant (the right axis represents the production of DAPEEP excluded FOSETEK Production)

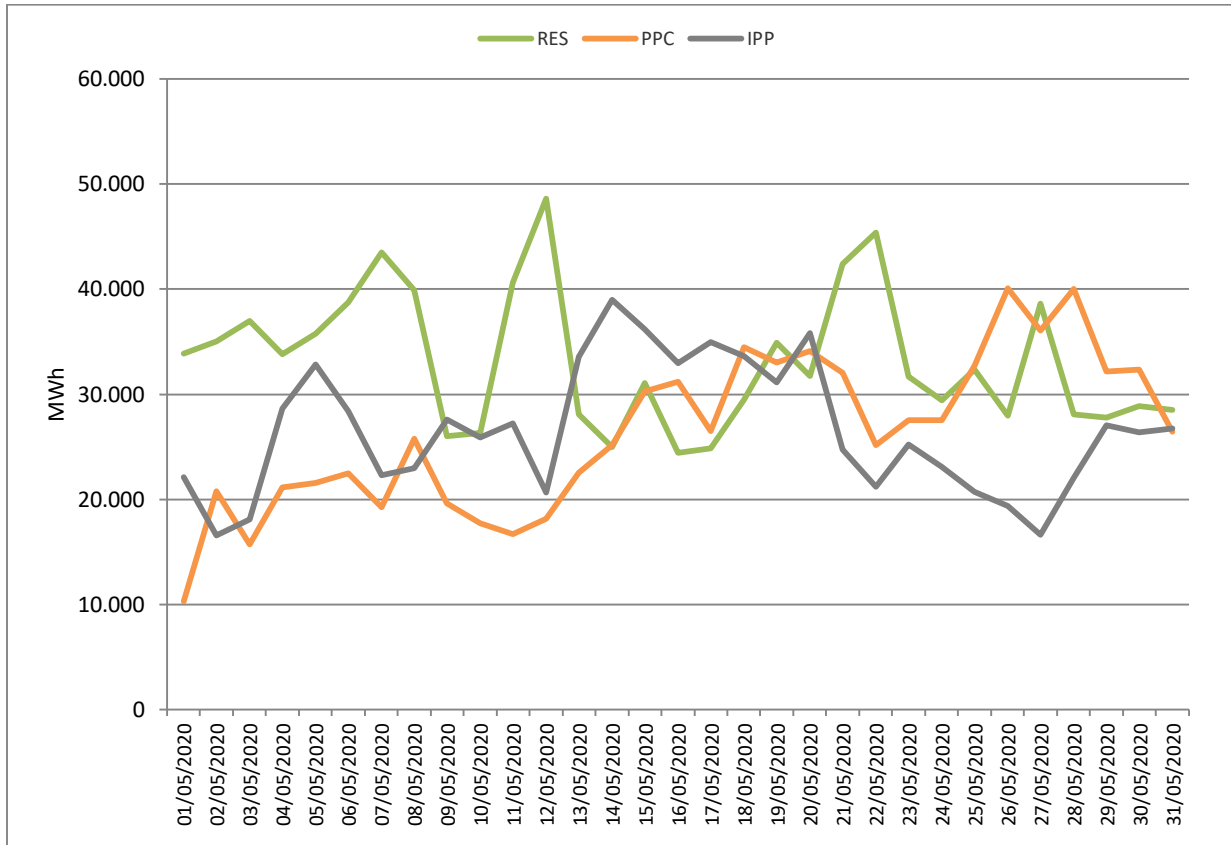


Figure14b: Daily production for PPC, RES and Independent Power Producers

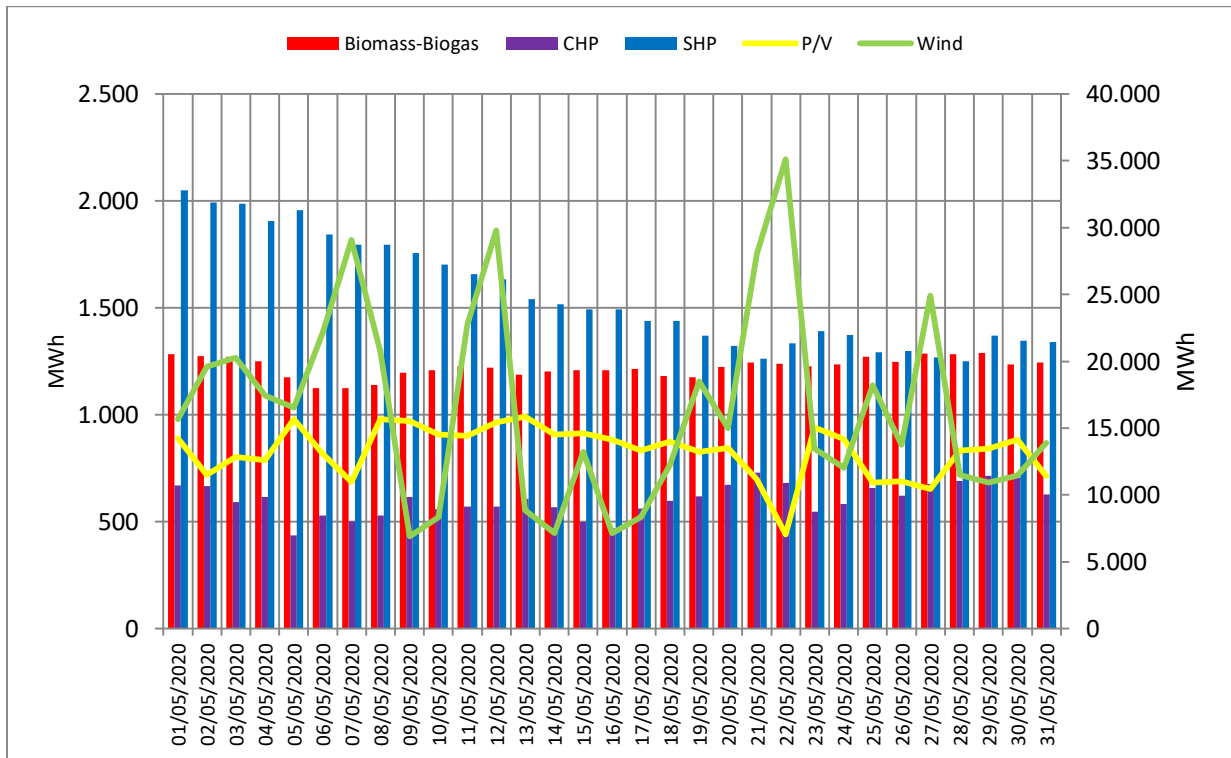


Figure14c: Daily RES production per Technology (the right axis represents Wind and P/V generation)

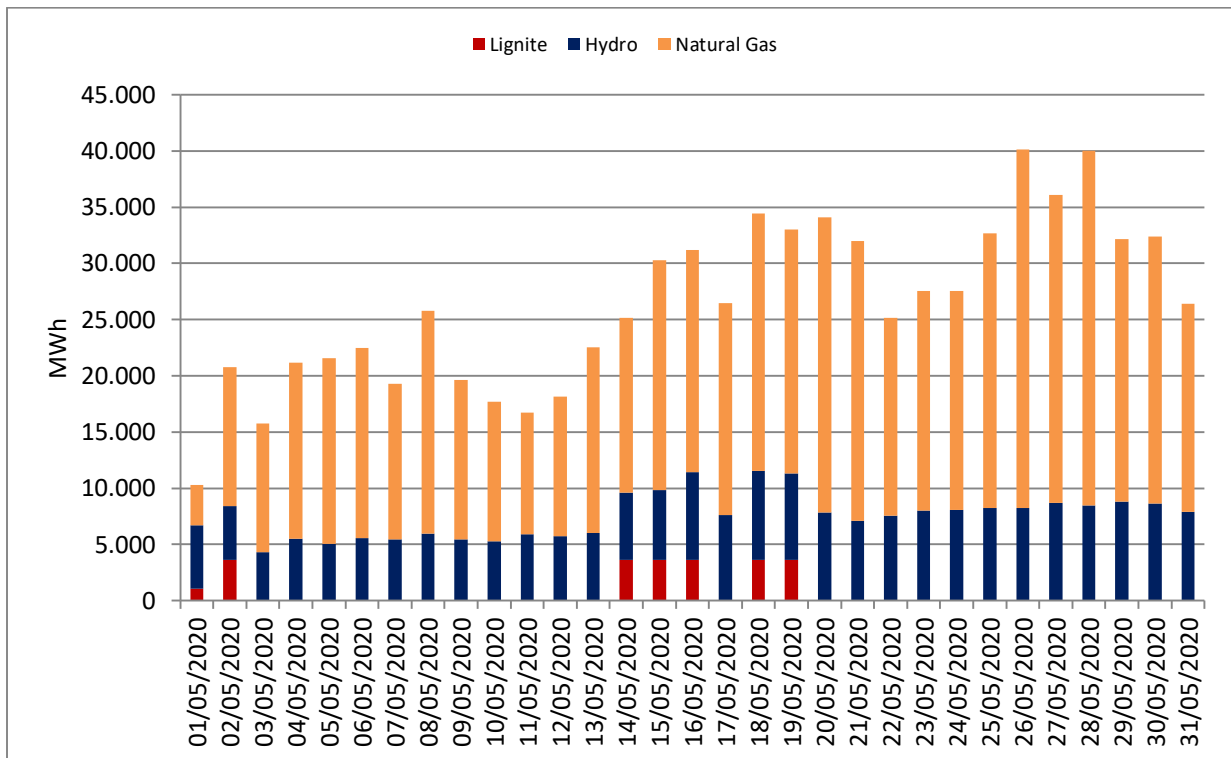


Figure 15: Daily production of PPC units per fuel type

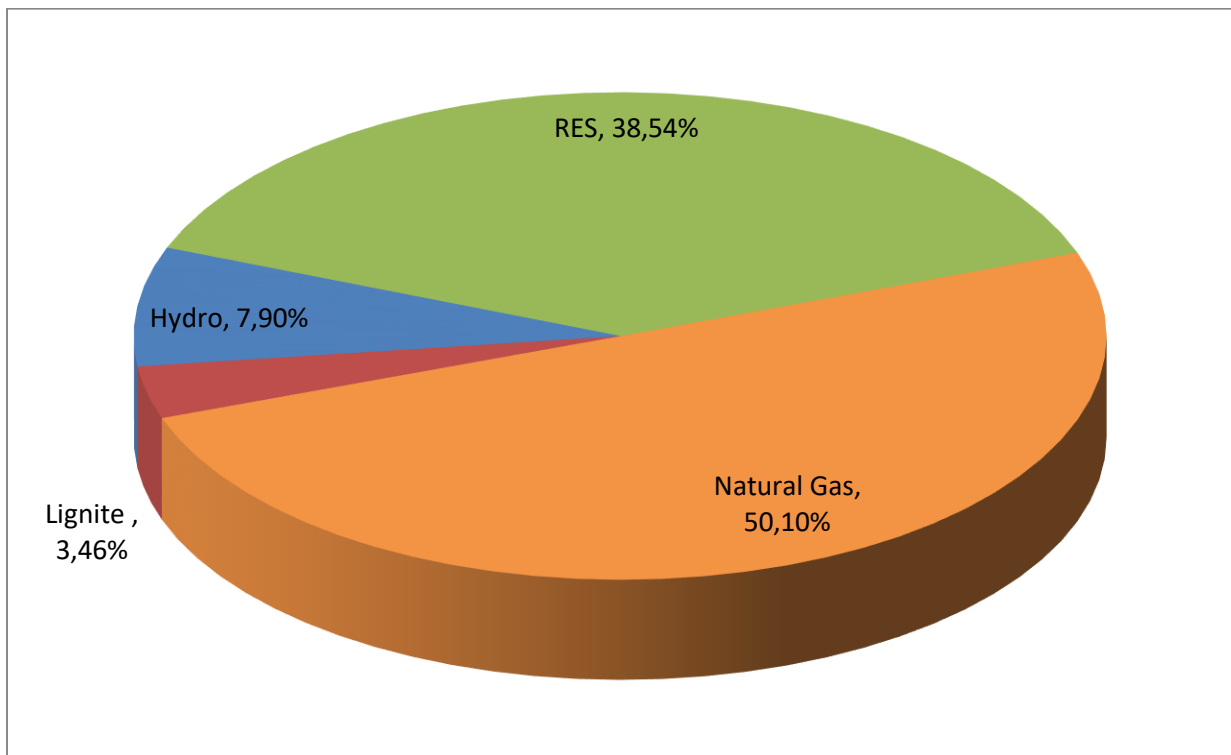


Figure 16: Percentage (%) of total Monthly Production per fuel type

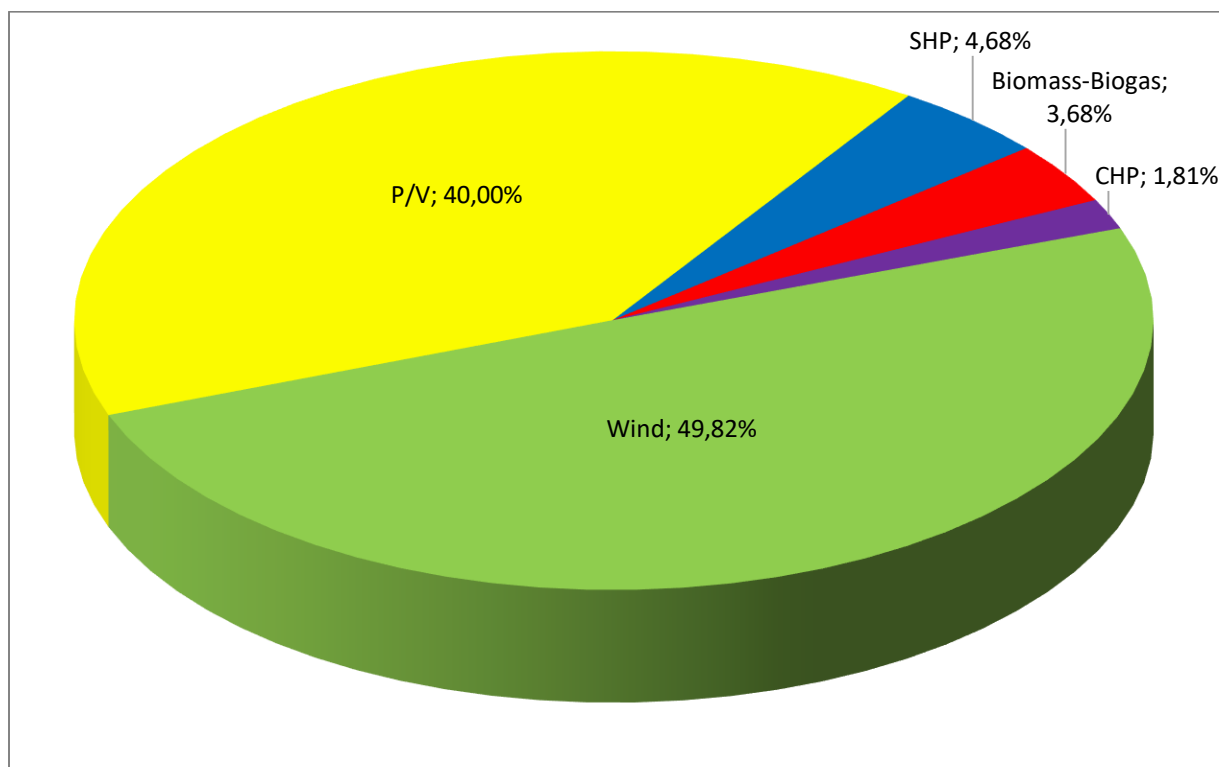


Figure 16a: Percentage (%) of total Monthly RES Production per Technology

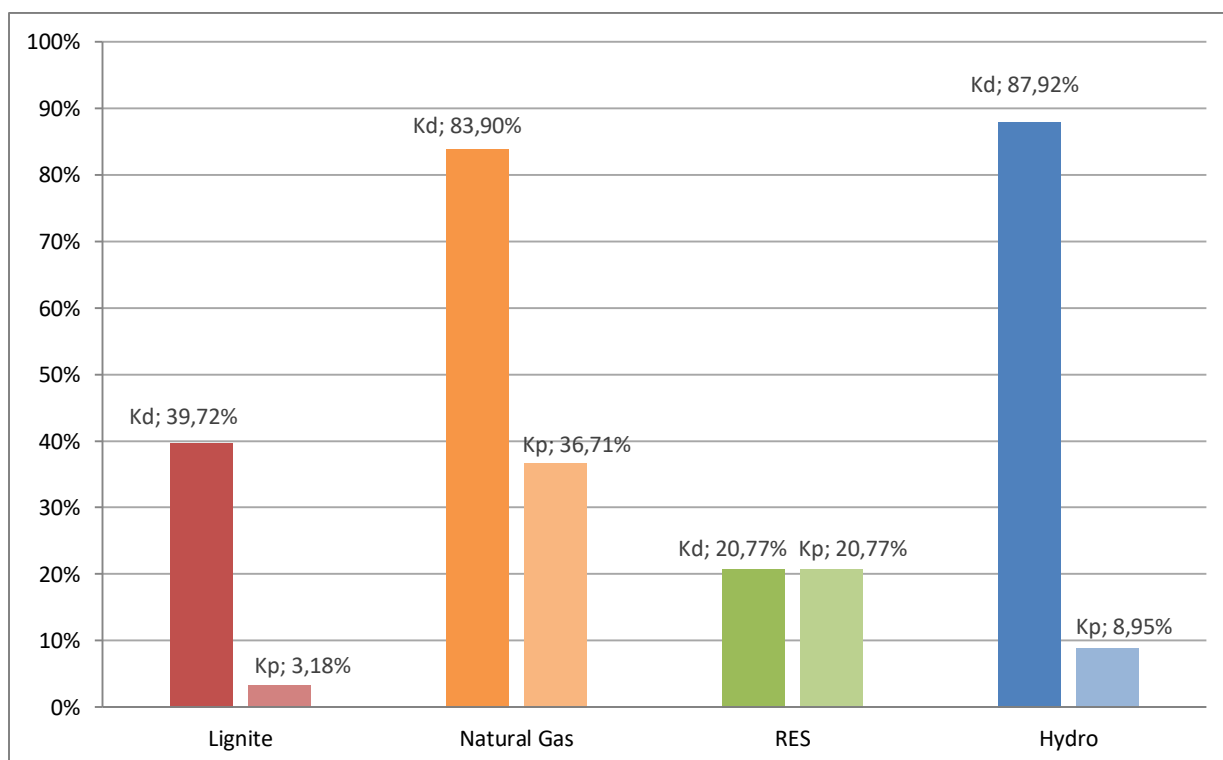


Figure 16b: Availability factor (Kd)* and production factor (Kp)** per fuel type at monthly level

* Availability factor (Kd) per fuel type is defined as the ratio of the energy that could have been produced by the available capacity of all units per fuel type for a period of time to the energy that would have been produced by the same units and same period of time at full capacity.

** Production factor (Kp) per fuel type is defined as the ratio of the energy produced by all units per fuel type during a given period of time to the energy that would have been produced by the same units and same period of time at full capacity.

4.2 Production and Credits per Participant

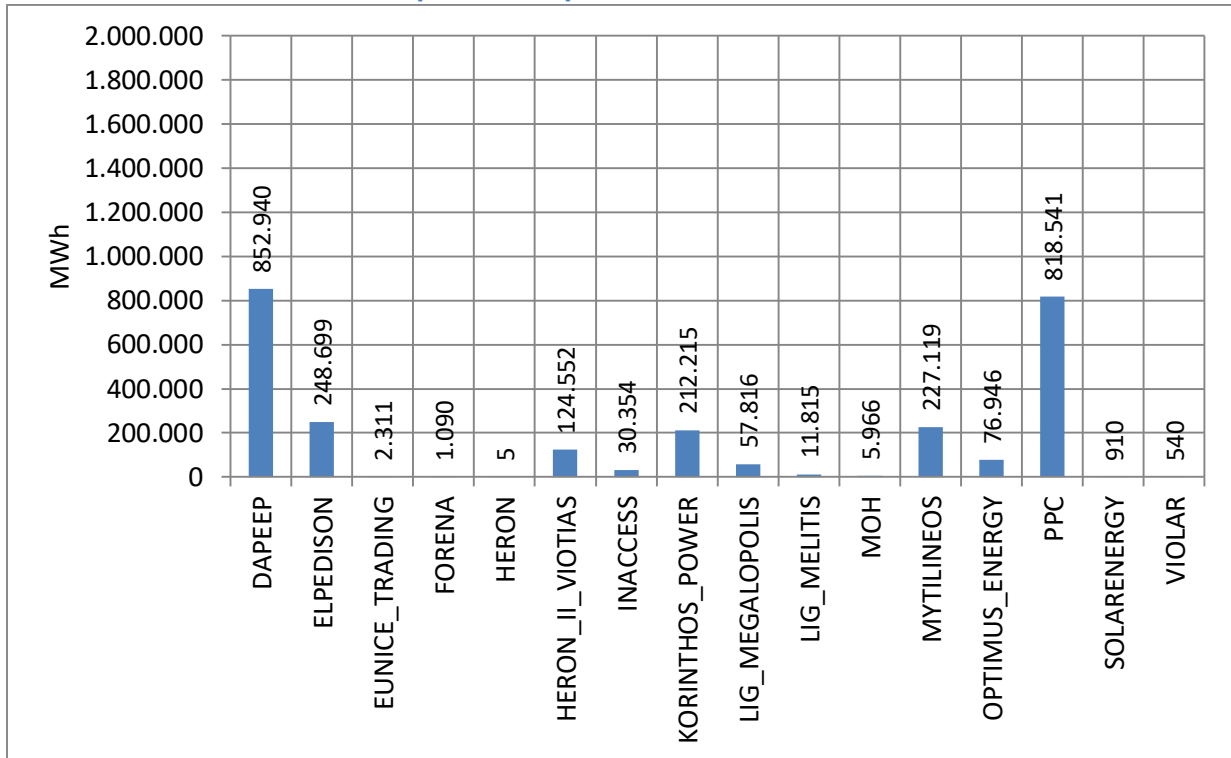


Figure 17: Monthly Production per Participant

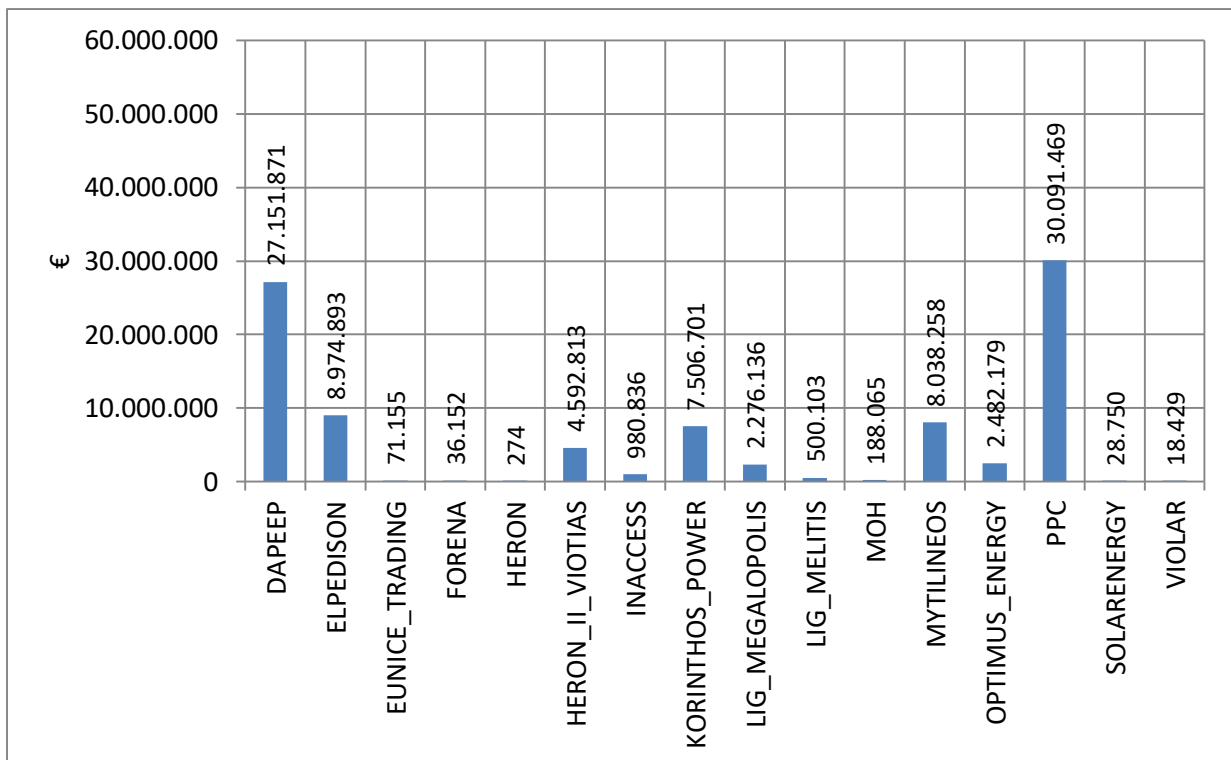


Figure 18: Monthly Production Credits per Participant

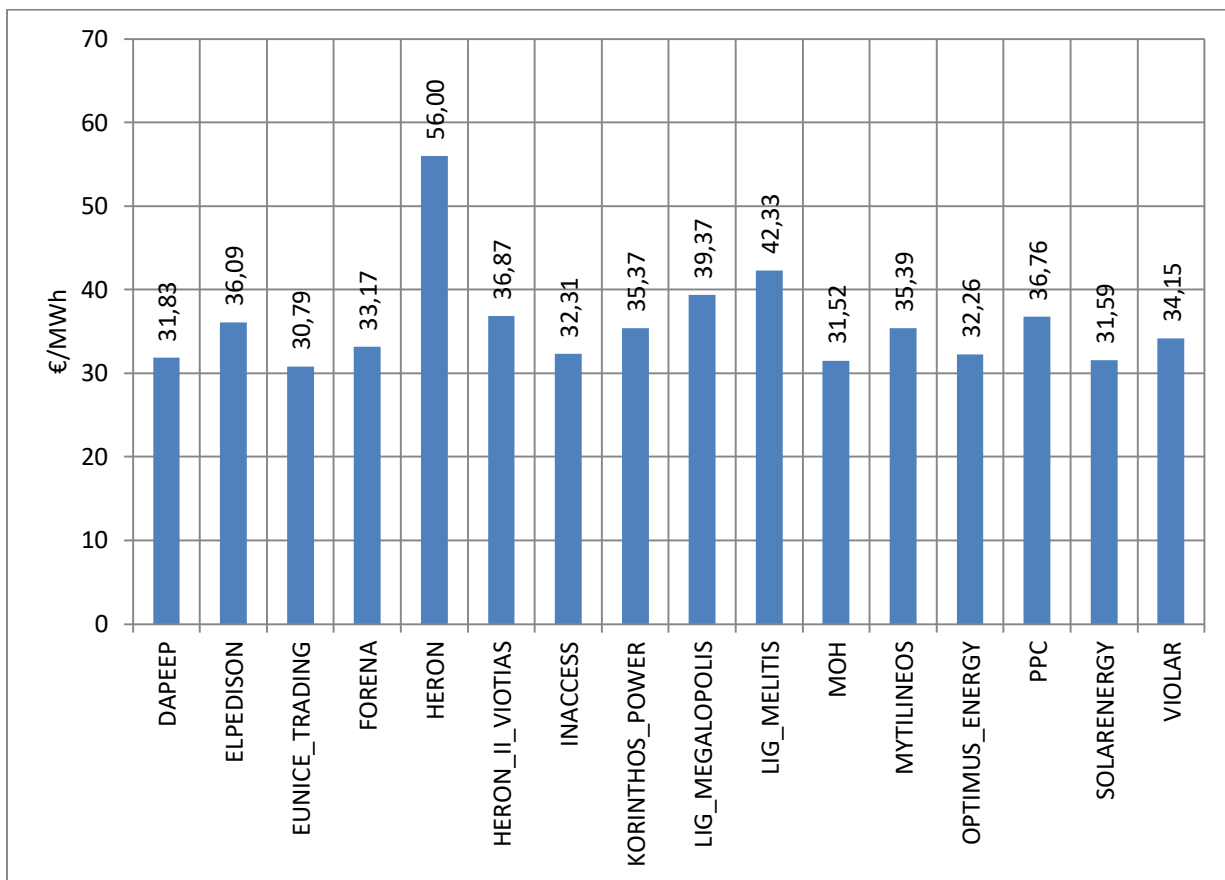


Figure 19: Monthly Credits / Monthly Production in €/MWh per Participant

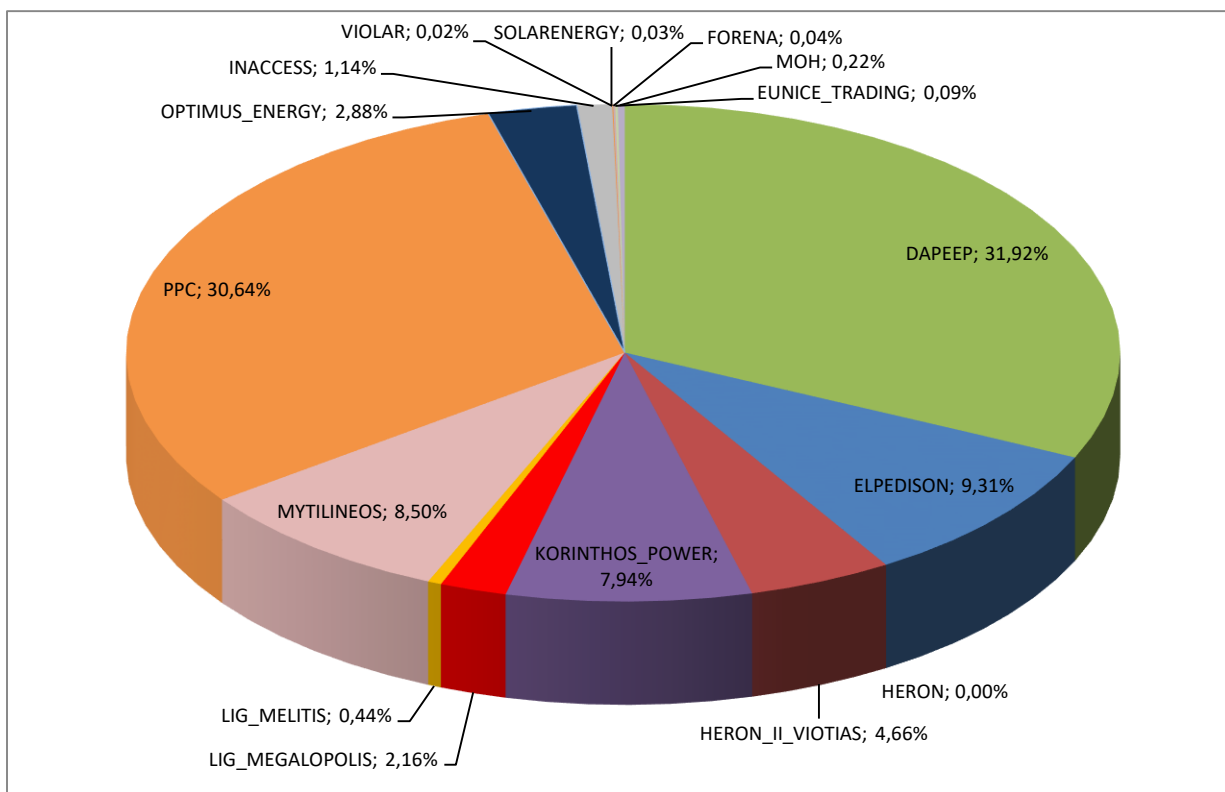


Figure 20: Percentage (%) of Total Monthly Production per Participant

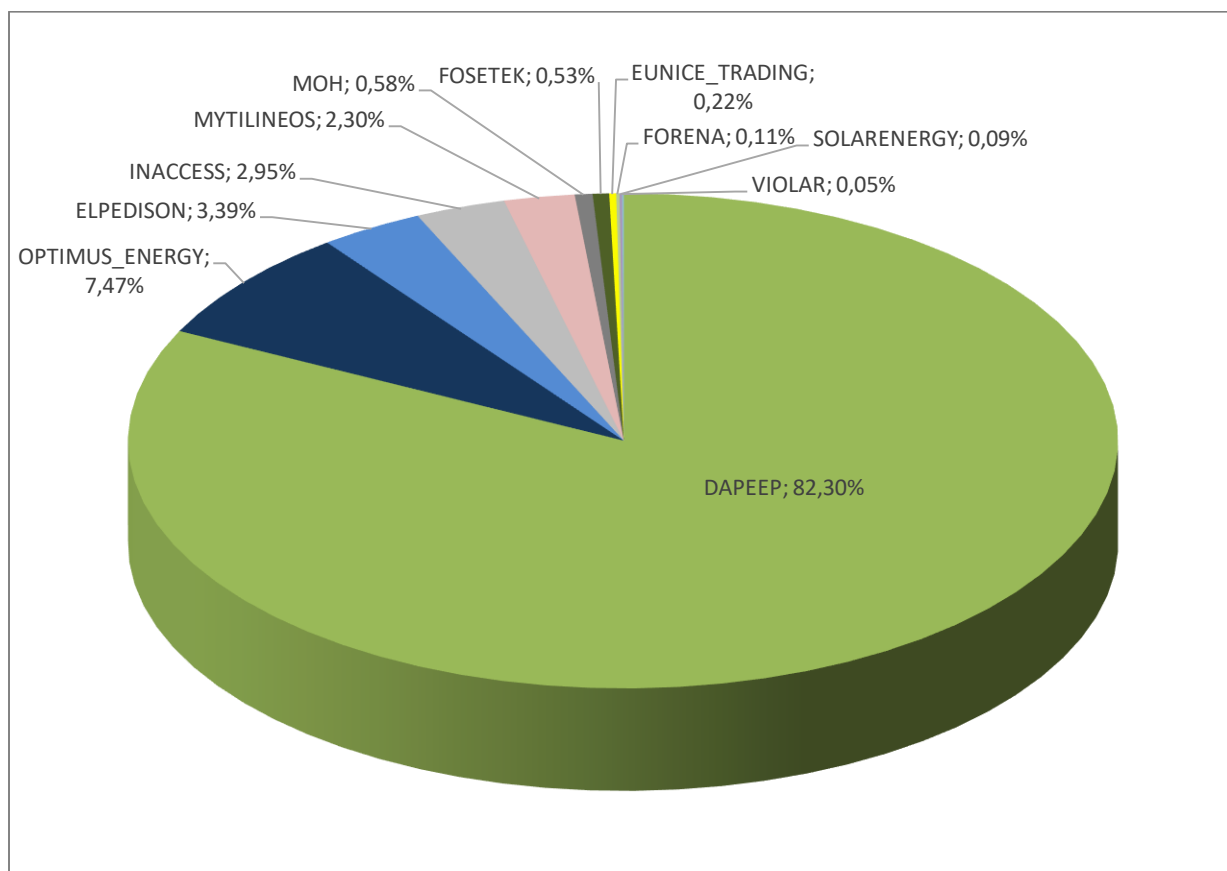


Figure 20a: Percentage (%) of Total Monthly RES Production per Participant

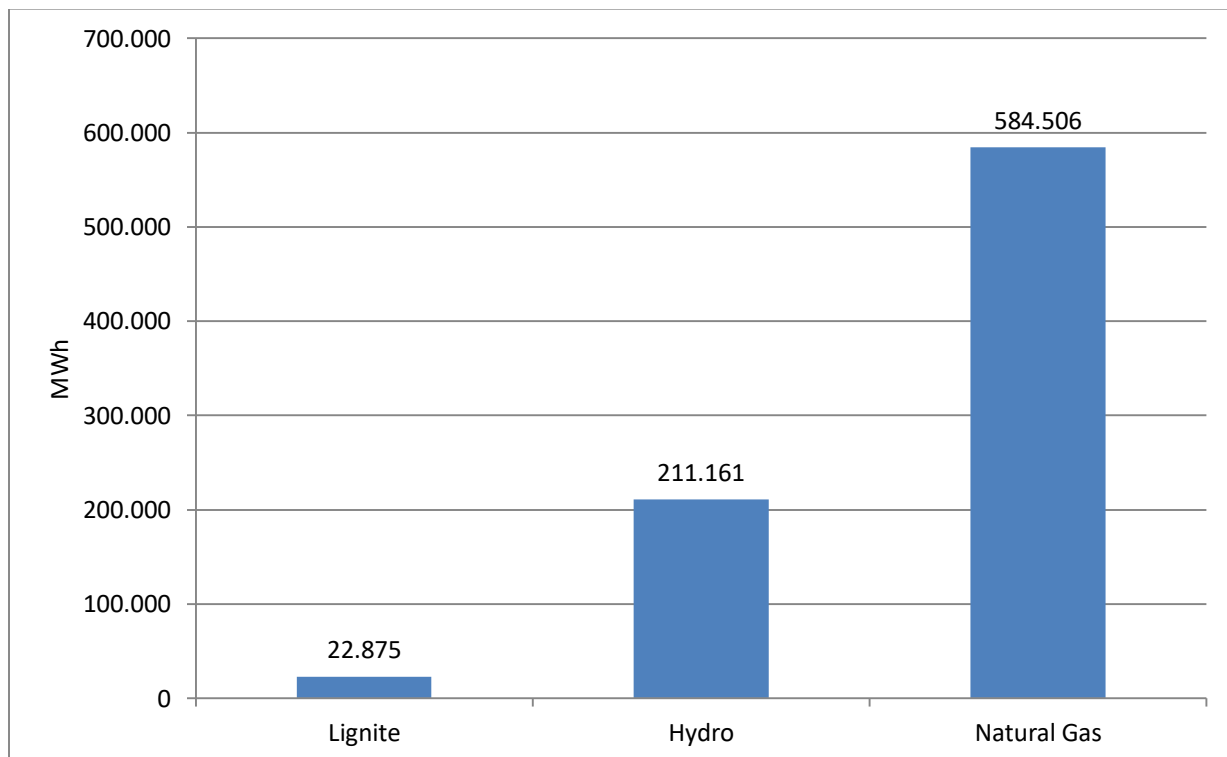


Figure 21: Monthly Production of PPC per fuel type

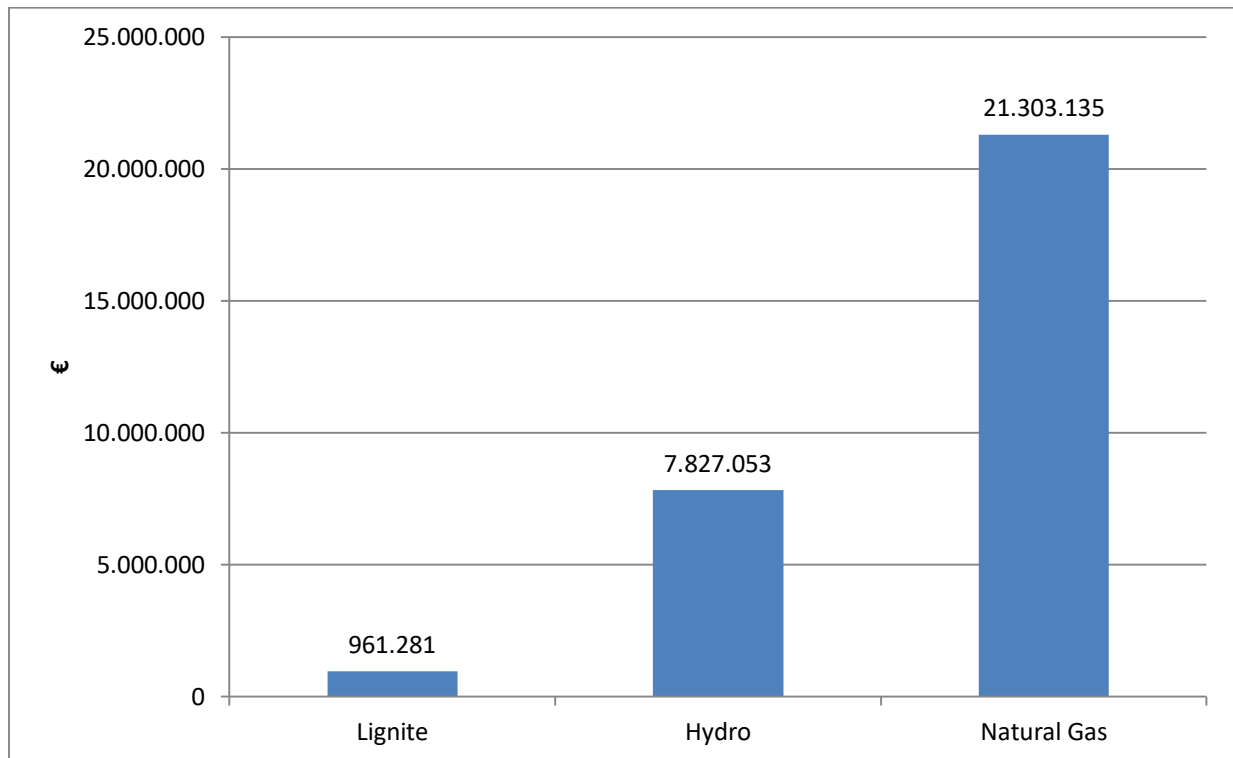


Figure 22: Monthly Credits of PPC per fuel type

4.3 Production per Participant, fuel type and operation status

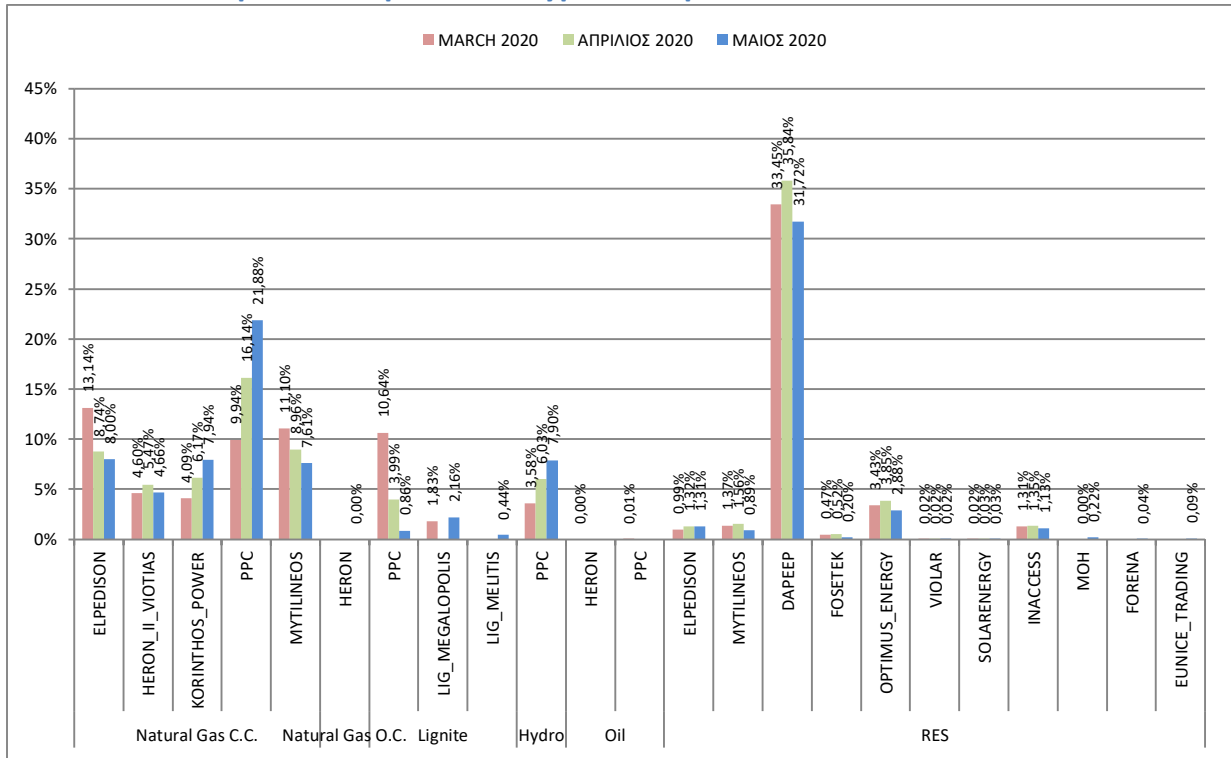


Figure 23: Percentage (%) of total Monthly Production per Participant and fuel type, in comparison to the previous months. DAEPP percentage as FOSETEK is shown separately.

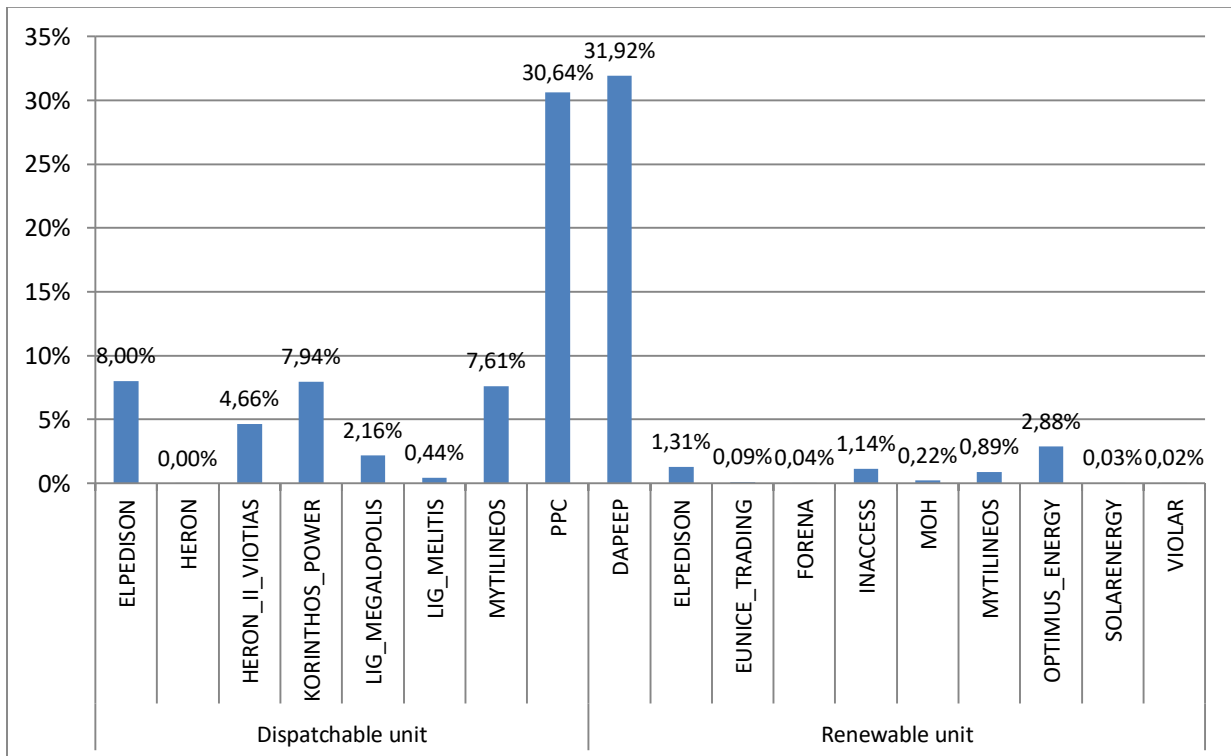


Figure 24: Percentage (%) of Total Production per Participant and operation status (testing operation, dispatchable unit, RES)

4.4 Production and Credits per Unit

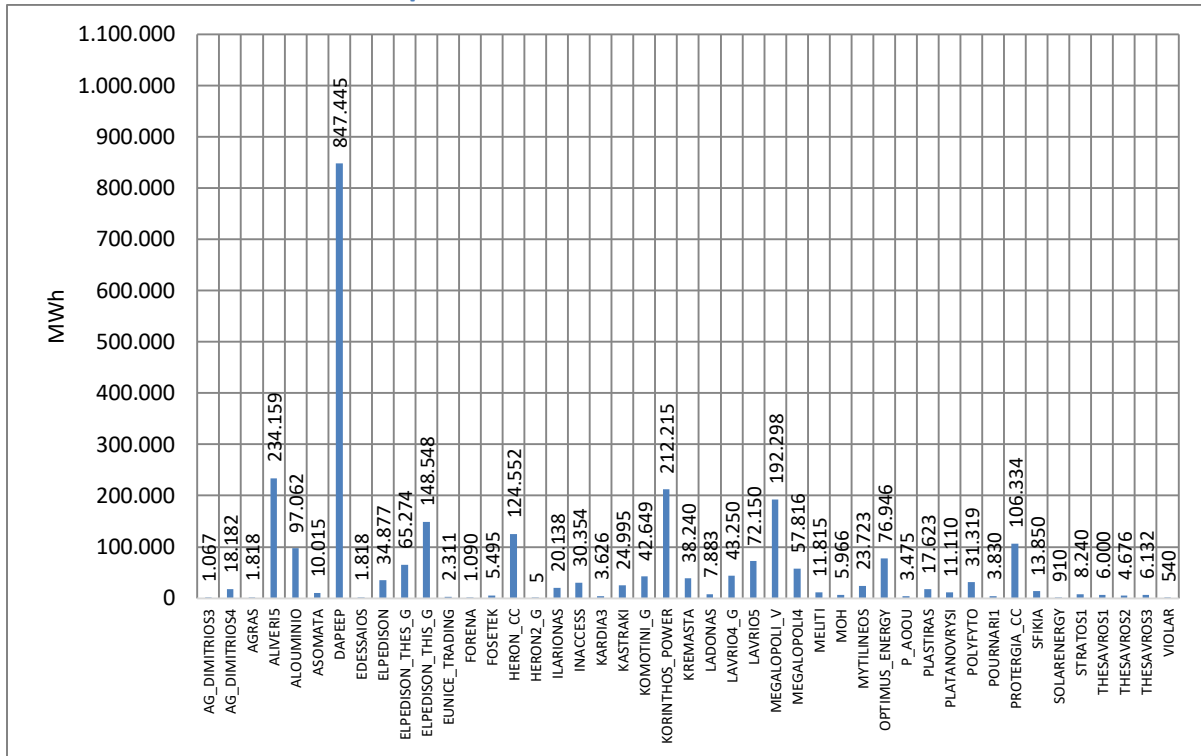


Figure 25: Monthly Energy per Unit

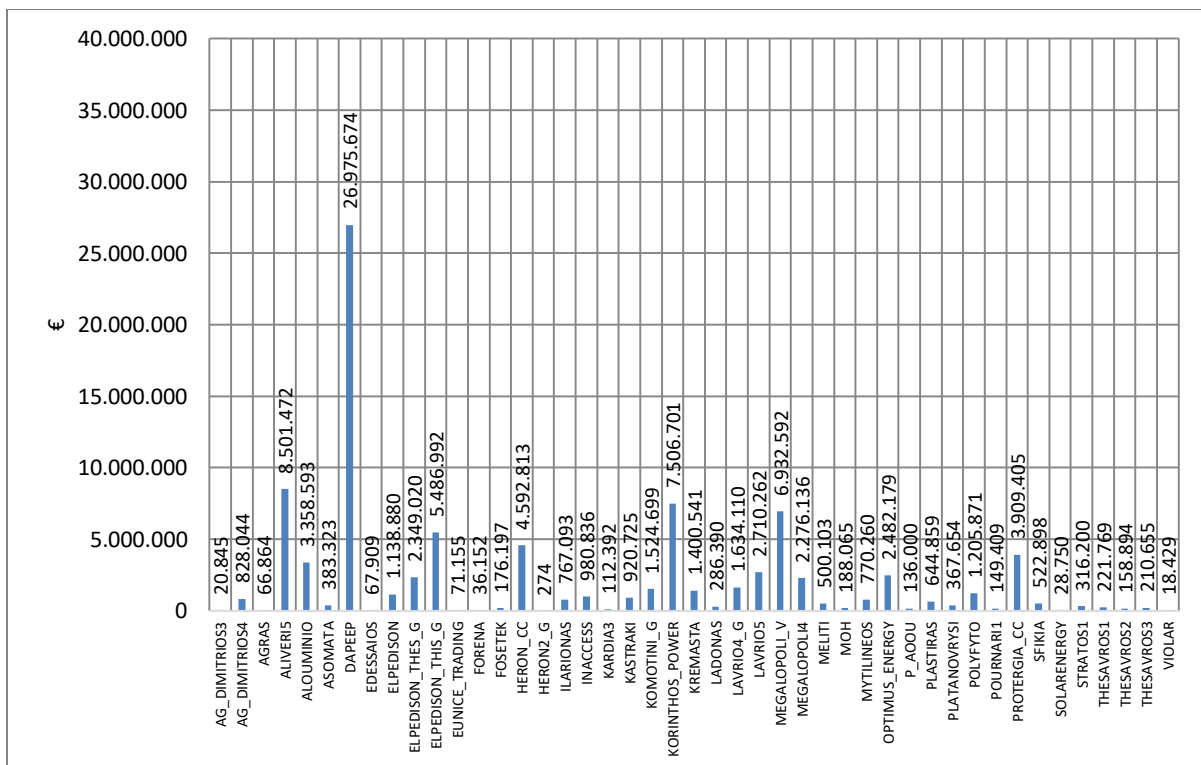


Figure 26: Monthly Credits per Unit and RES Aggregators

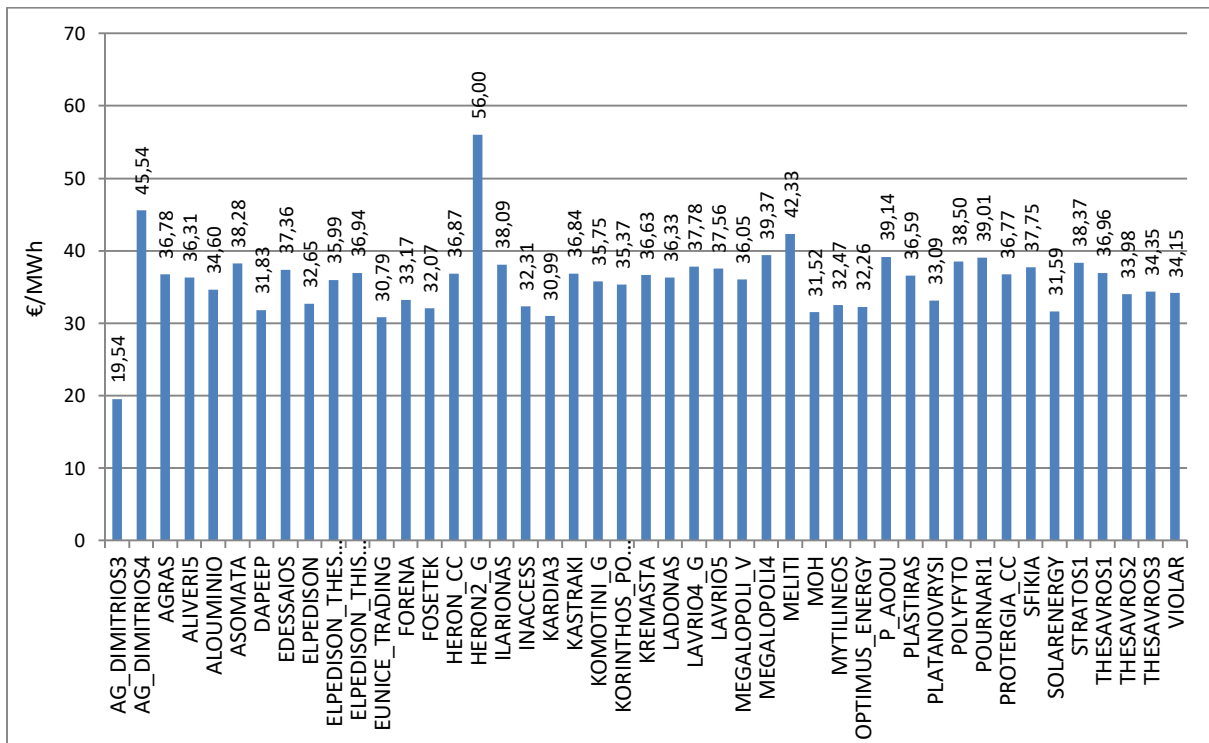


Figure 27: Monthly Credits/Monthly Production in €/MWh per Unit and RES Aggregators

5. Supply of Electricity

5.1 Load Declarations and Debits

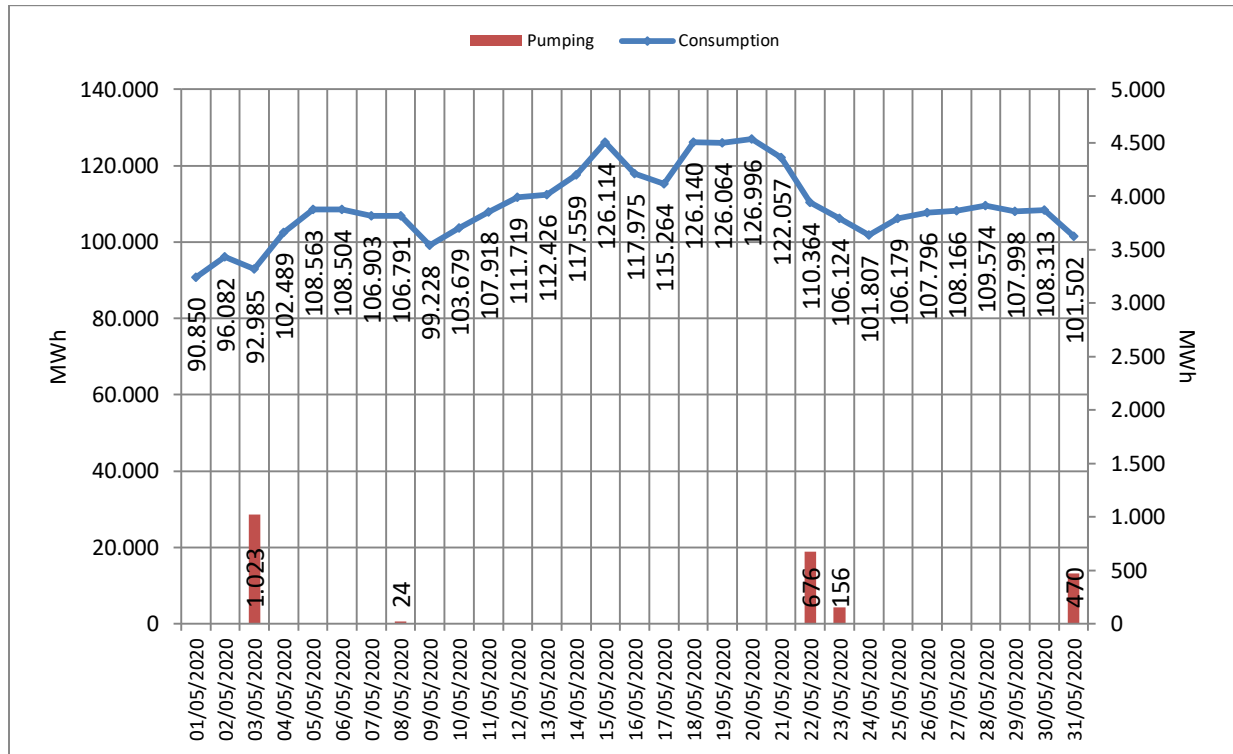


Figure 28: Daily Load Declarations and Pumping (MWh) (right axis represents pumping operation)

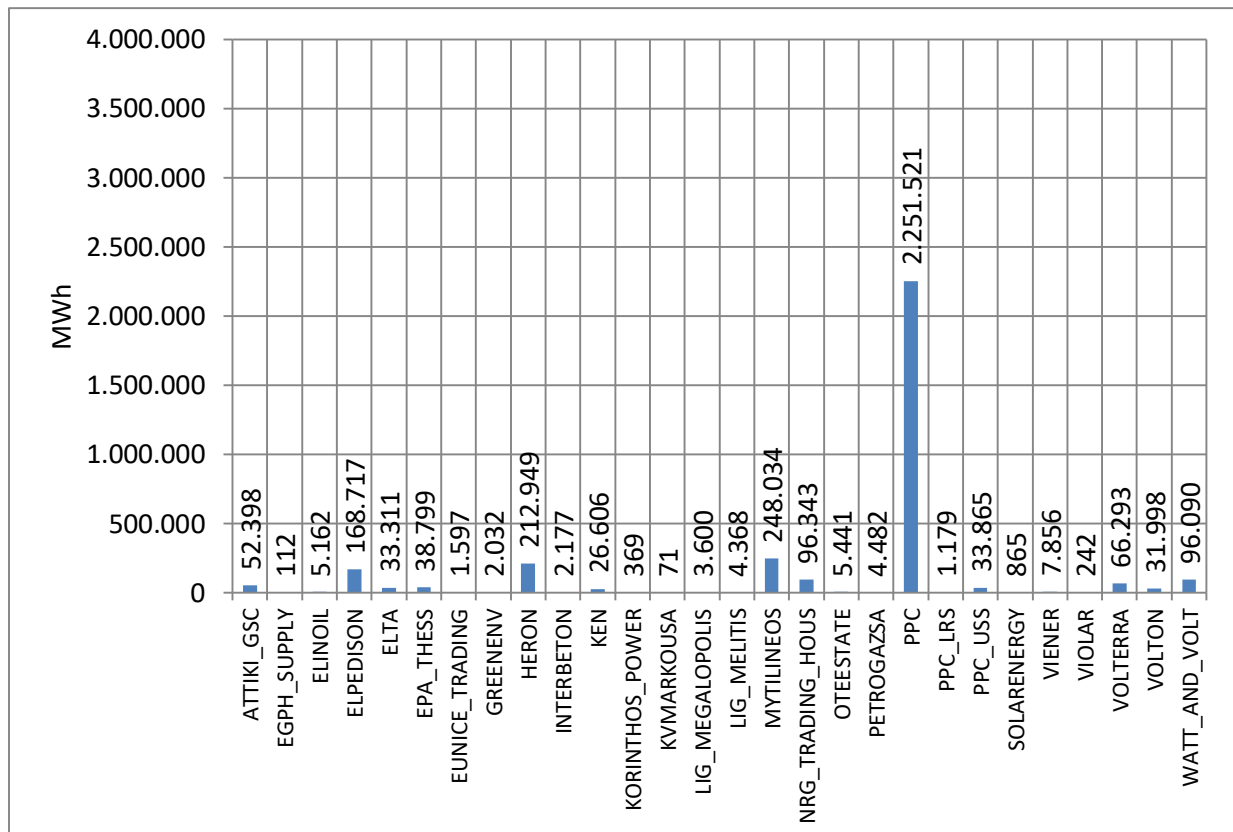


Figure 29: Monthly Supply per Participant

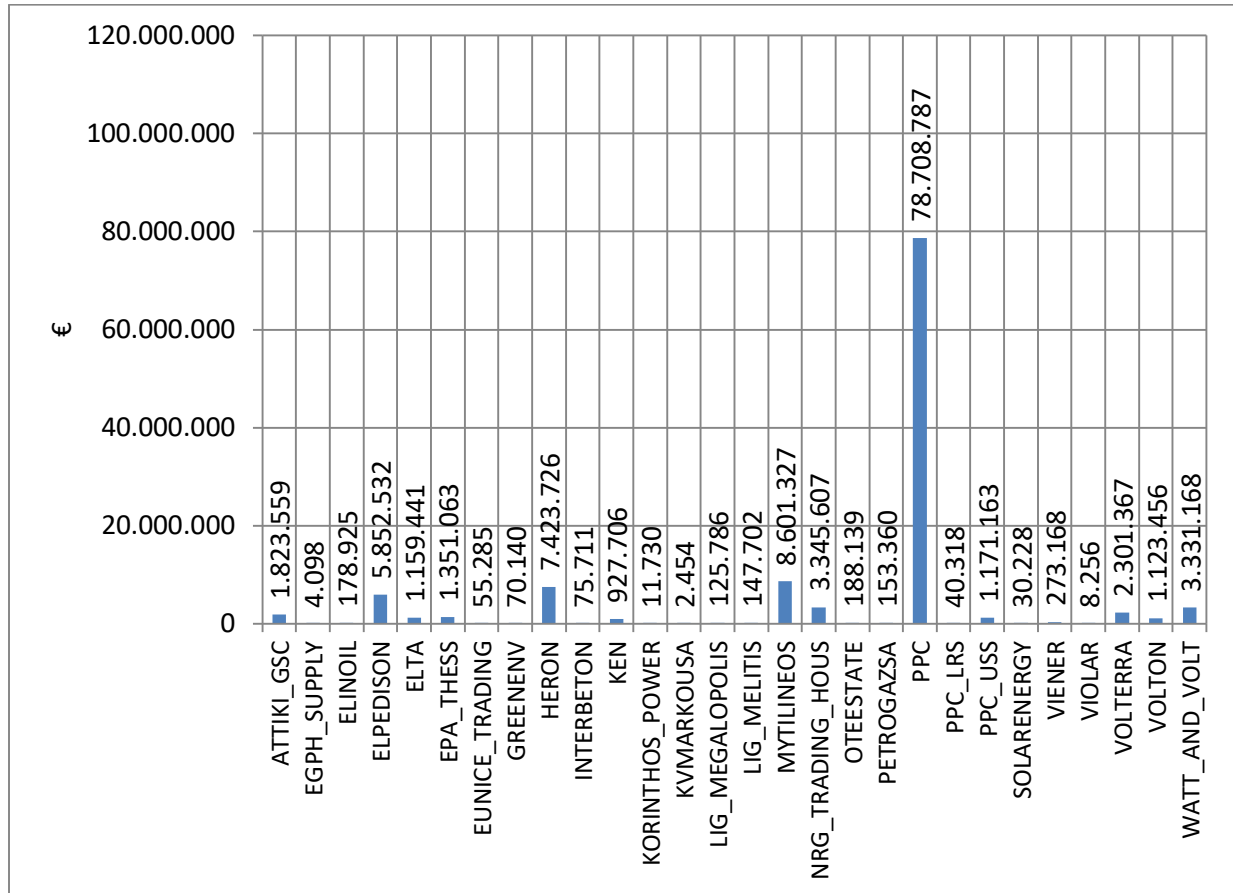


Figure 30: Monthly Supply Debits per Participant

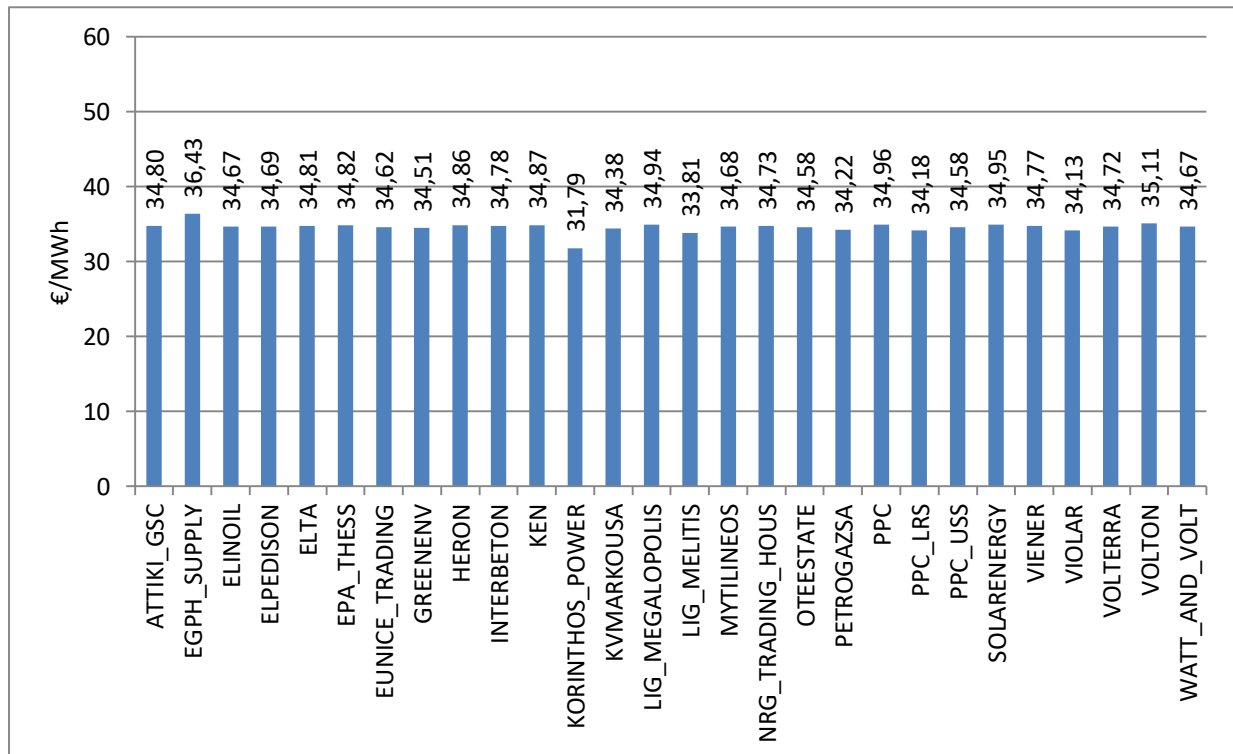


Figure 31: Monthly Debits / Monthly Supply in €/MWh per Participant

5.2 Analysis on Supply per Participant, Load Zone and Voltage Level

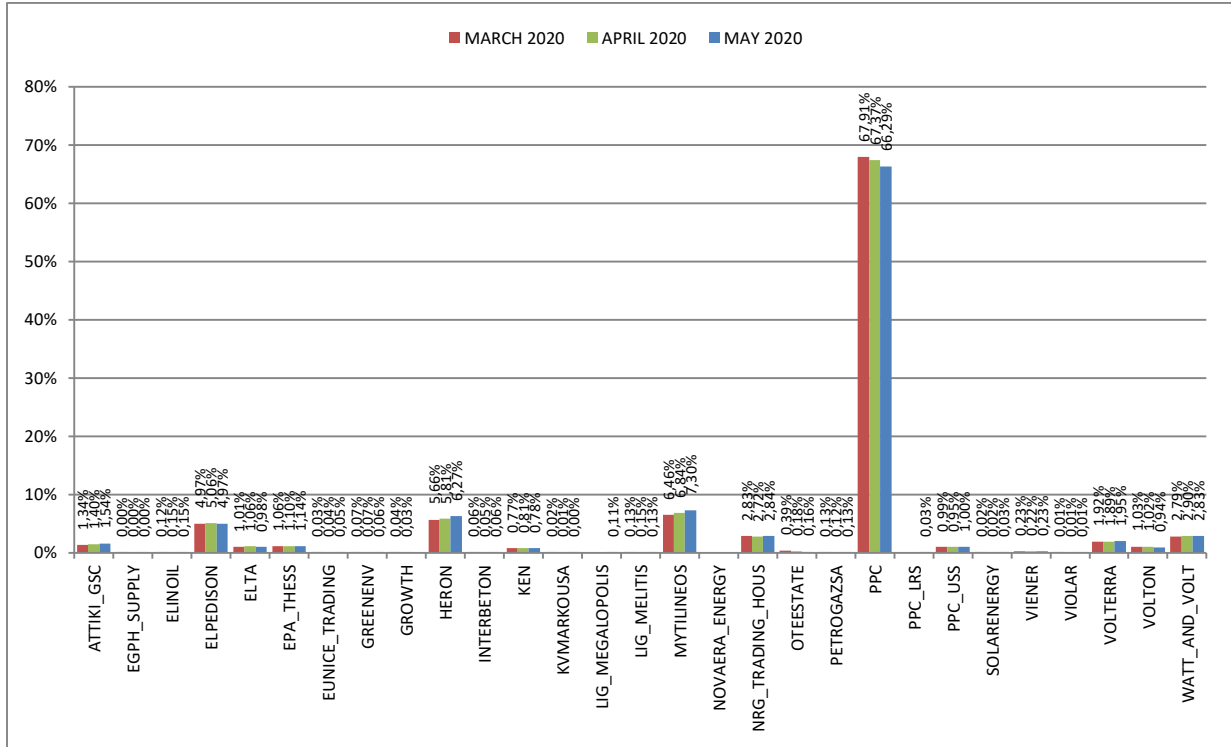


Figure 32: Percentage (%) of Total Monthly Supply per Participant in comparison with the two last months

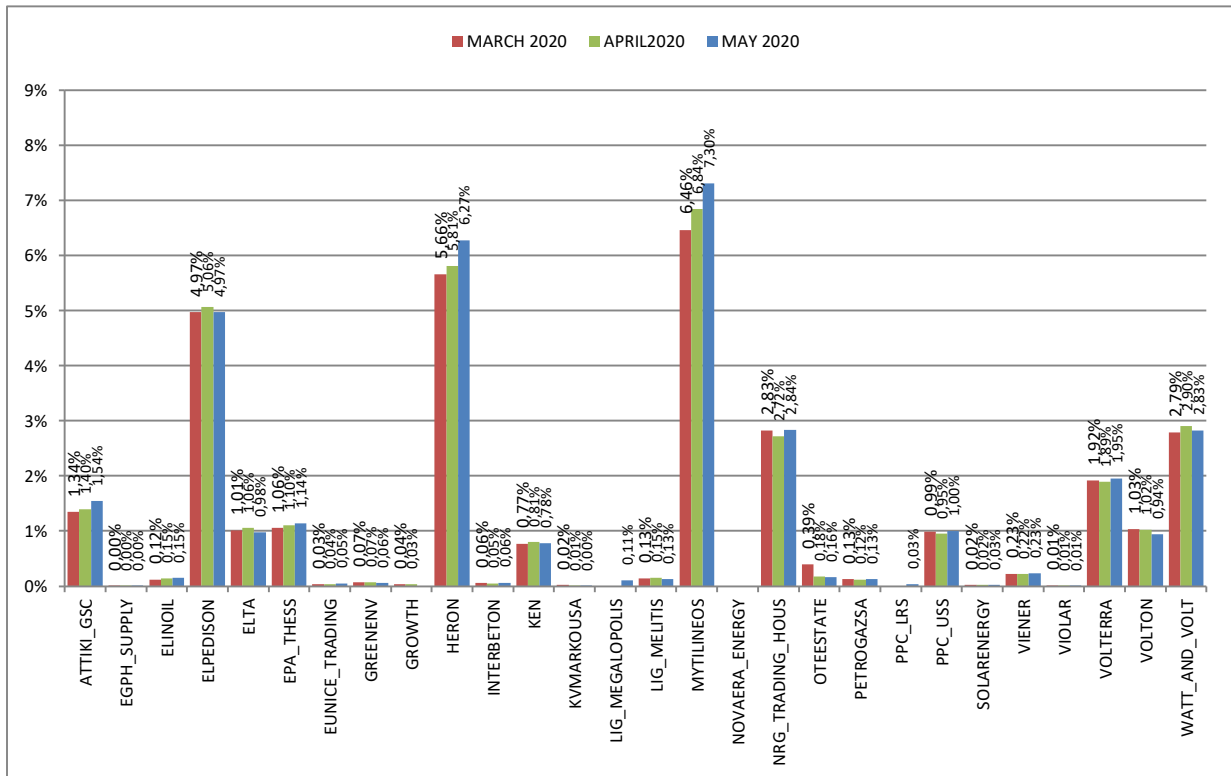


Figure 32a: Percentage (%) of Total Monthly Supply per Participant (without PPC) in comparison with the two last months.

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

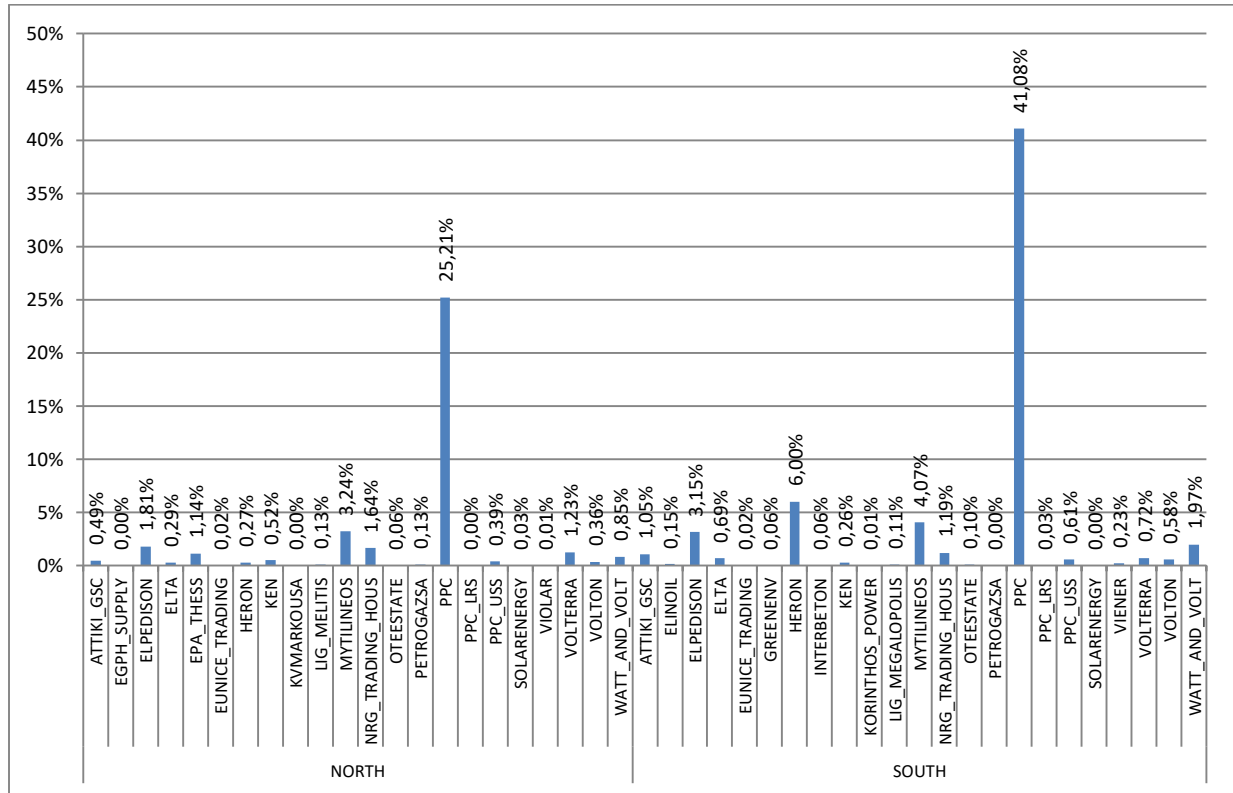


Figure 33: Percentage (%) of Total Monthly Supply per Participant and Zone

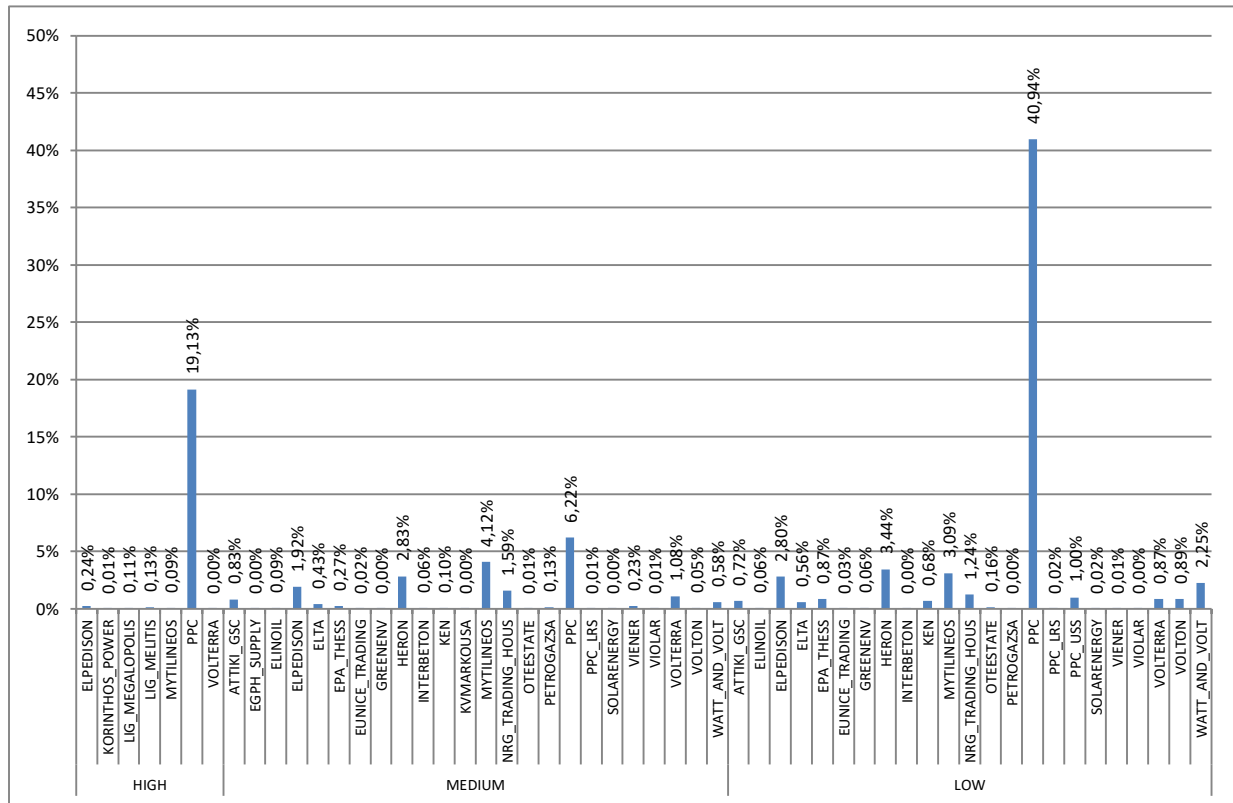


Figure 34: Percentage (%) of Total Monthly Supply per Participant and Voltage Level

6. Electricity Trading

6.1 Imports

	Total	Albania	Bulgaria	Italy	F.Y.R.O.M.	Turkey
Daily Average Imports	25,947	12,090	2,175	10,996	7,146	1,339
Total Monthly Imports	804,349	132,987	67,428	340,889	221,522	41,523

Table 4: Daily Average and Total Monthly Imports per Interconnection (MWh)

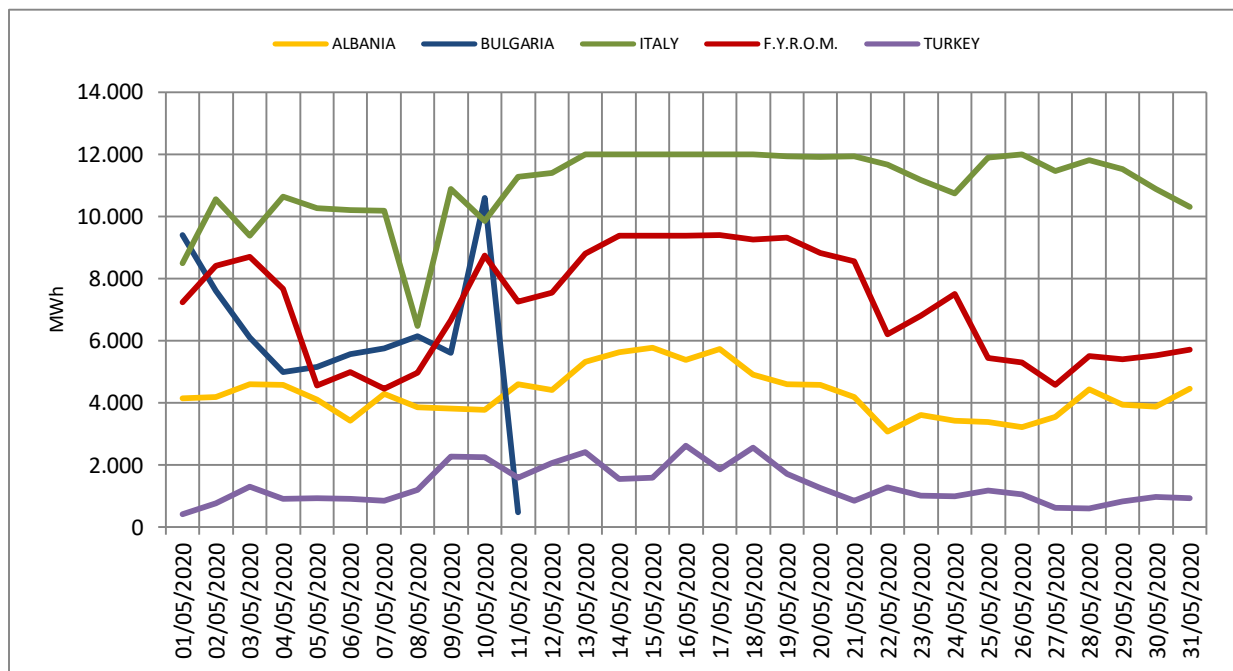


Figure 35: Daily Imports per Interconnection

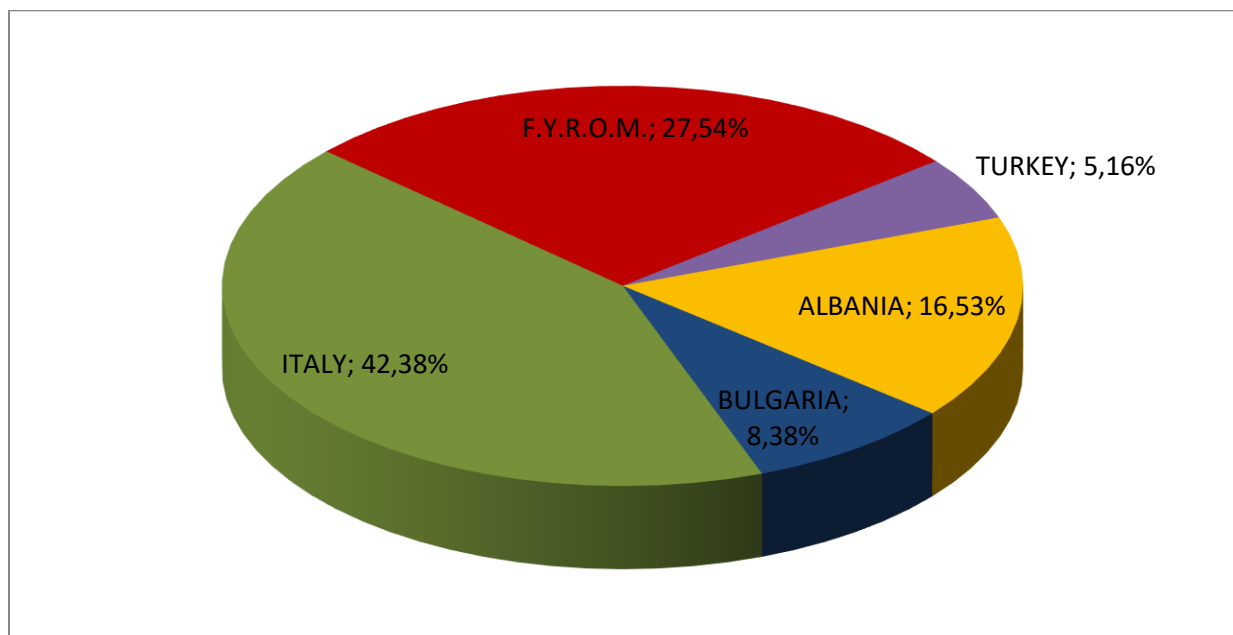


Figure 36: Percentage (%) of Monthly Imports per Interconnection

6.2 Exports

	Total	Albania	Bulgaria	Italy	F.Y.R.O.M.	Turkey
Daily Average Exports	2,846	684	1,138	241	532	1,015
Total Monthly Exports	79,690	6,844	20,475	6,021	14,893	31,457

Table 5: Daily Average and Total Monthly Exports per Interconnection (MWh)

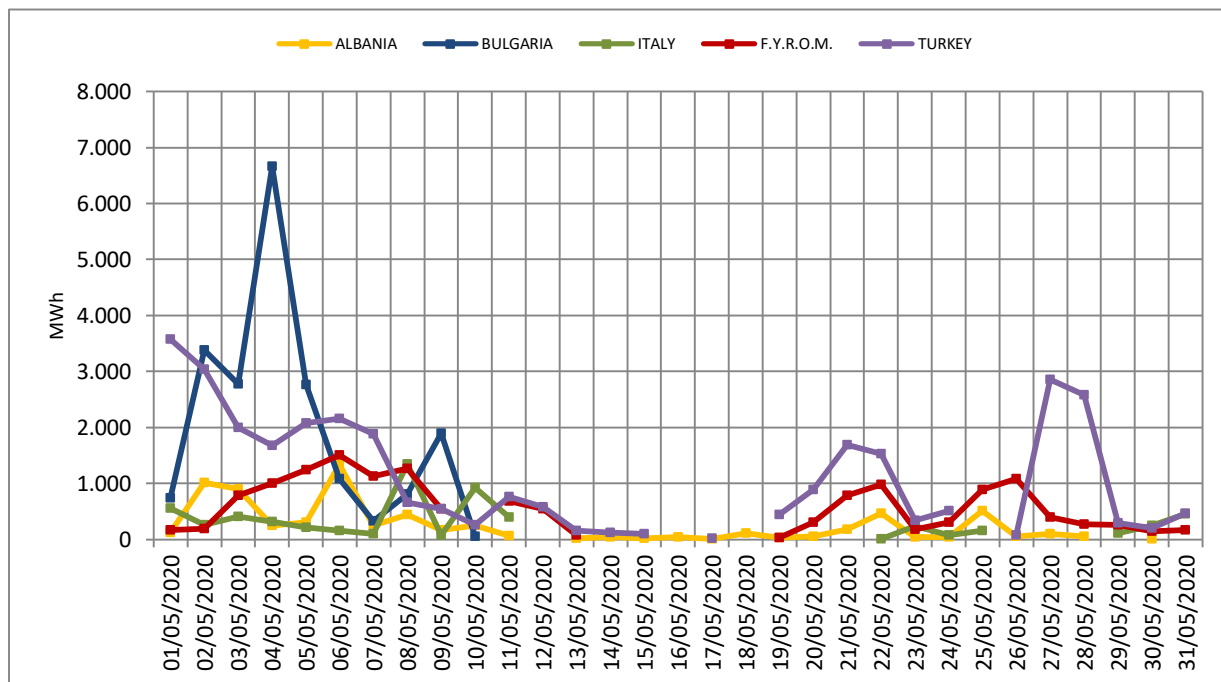


Figure 37: Daily Exports per Interconnection (MWh)

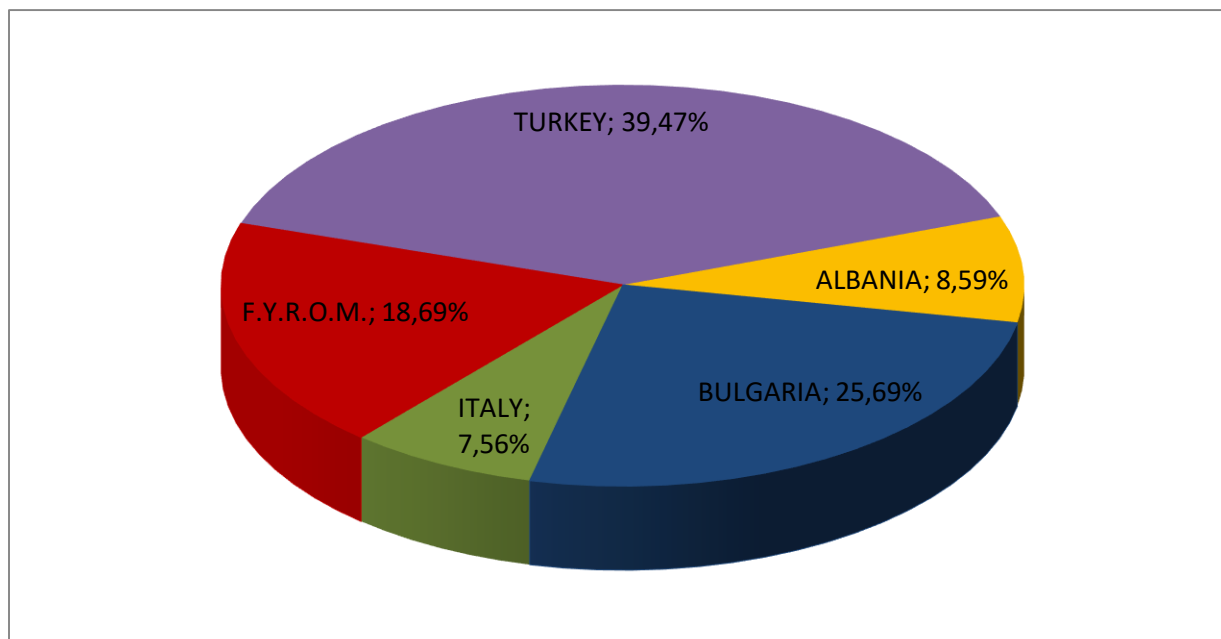


Figure 38: Percentage (%) of Monthly Electricity Exports per Interconnection

6.3 Electricity Transit

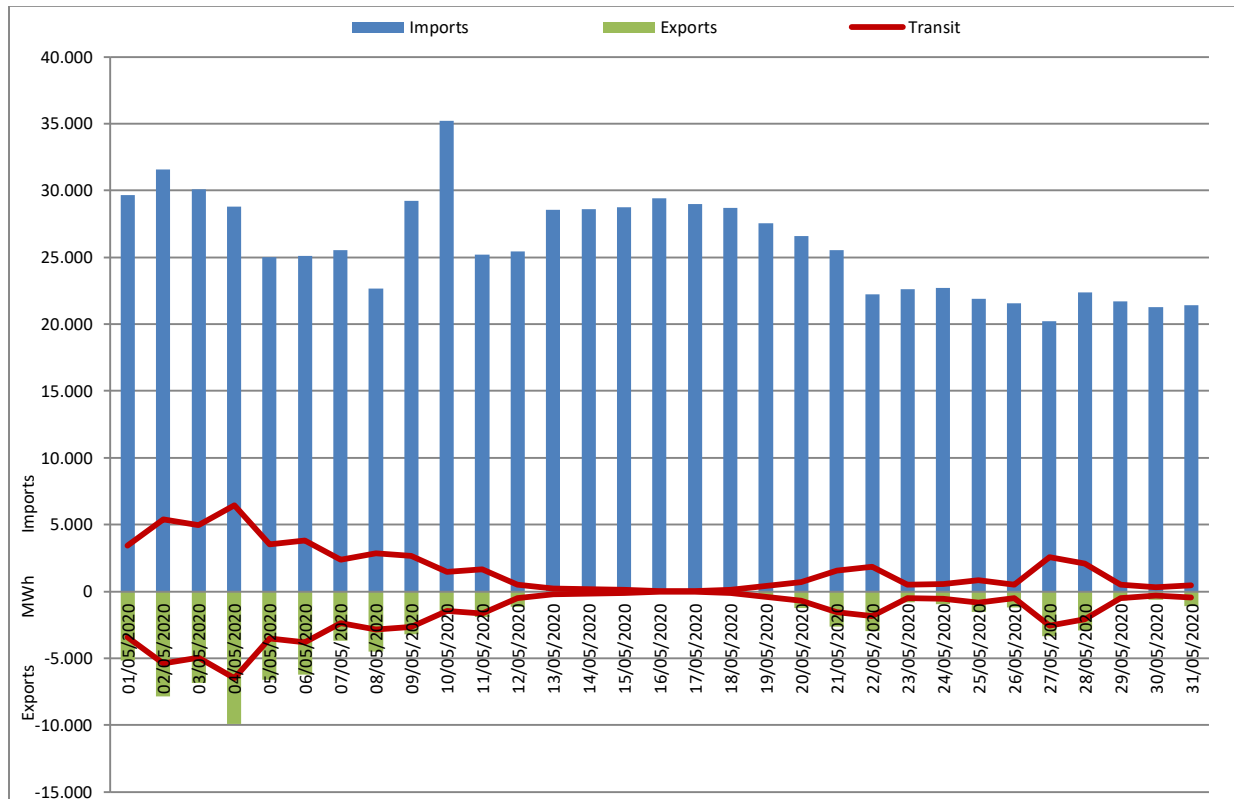


Figure 39: Daily Transit*

* Energy Transit shall mean the concurrent, namely during the same Dispatch Period, Import and Export of energy by the same participant, regardless of the capacity in which such Participant carries out such concurrent Import and Export. The energy quantity transited by a Participant during a Dispatch Period shall be calculated as the minimum between the absolute value of all Imports and the absolute value of all Exports performed by such Participant in the same Dispatch Period.

Source: Power Exchange Code for Electricity, Article 81

6.4 Net Position of Interconnections Balance

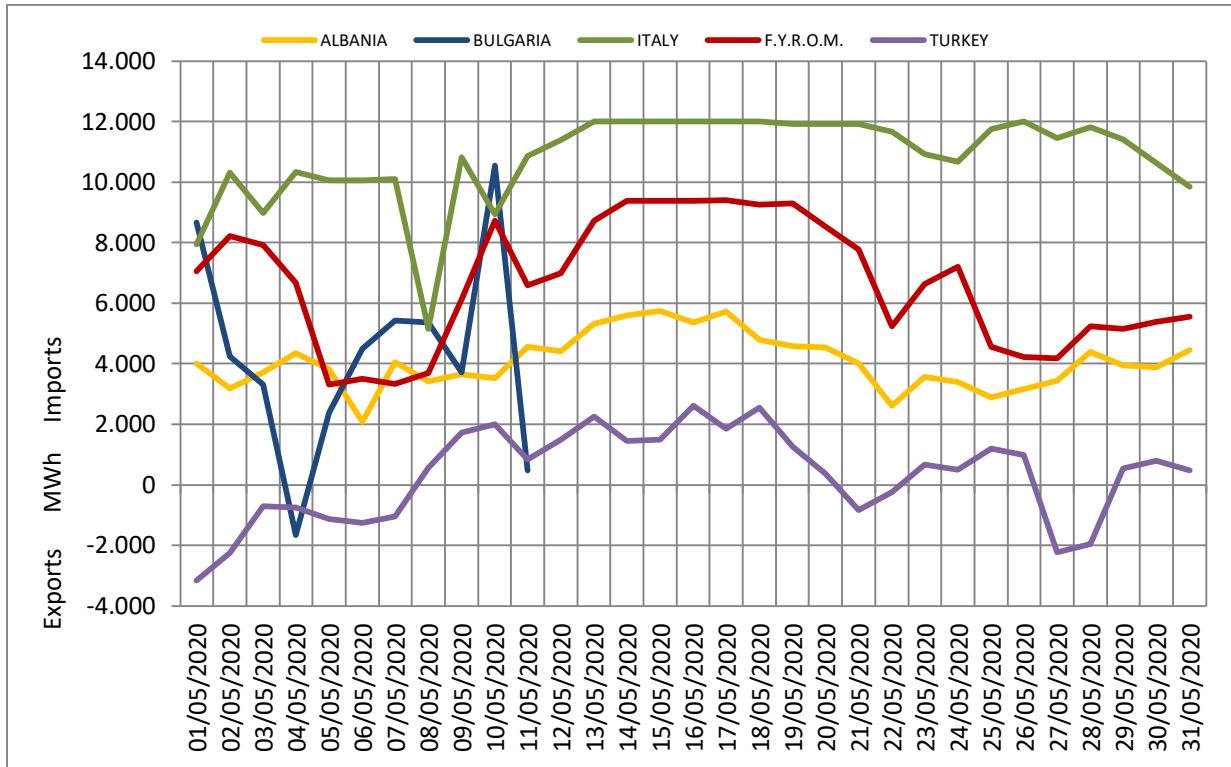


Figure 40: Daily Net Position of Interconnections (Imports-Exports), (positive values: more Imports, negative values: more Exports)

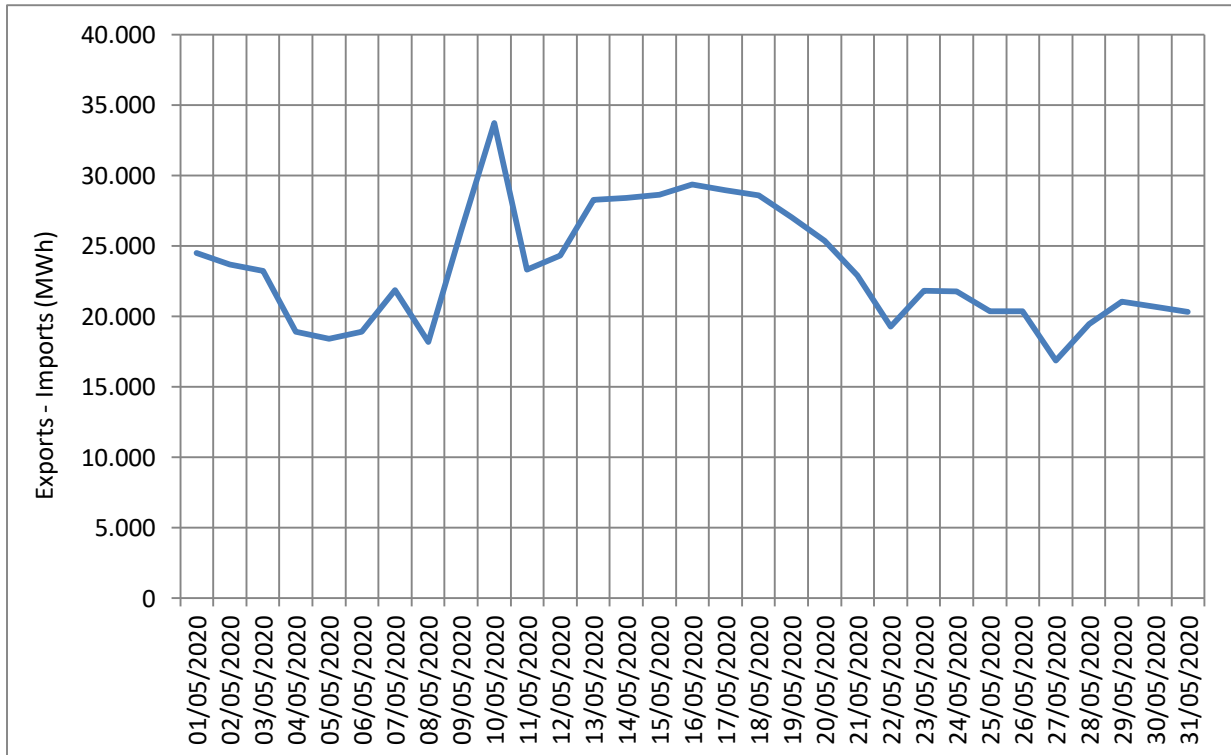


Figure 41: Daily Net Position of all Interconnections (Imports - Exports)

6.5 Analysis on Trading per Participant and Interconnection

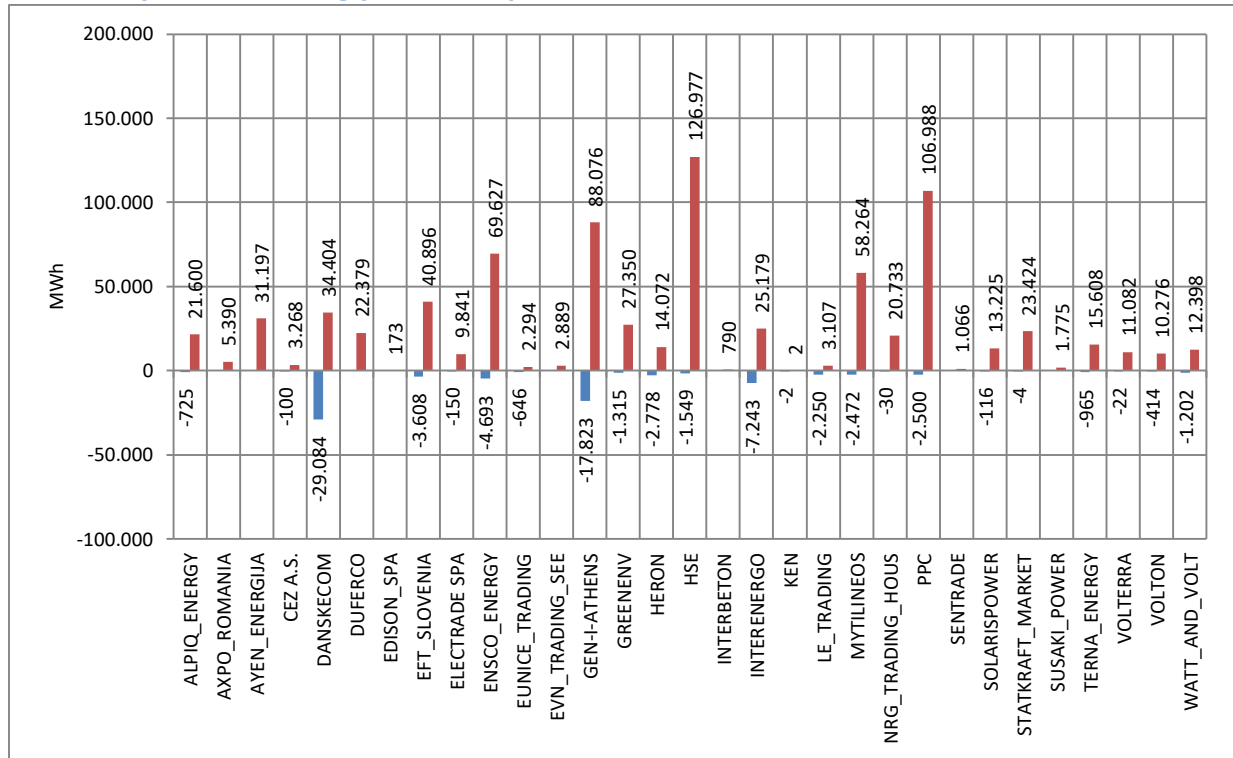


Figure 42: Monthly Trading per Participant and activity (positive values: Imports, negative values: Exports)

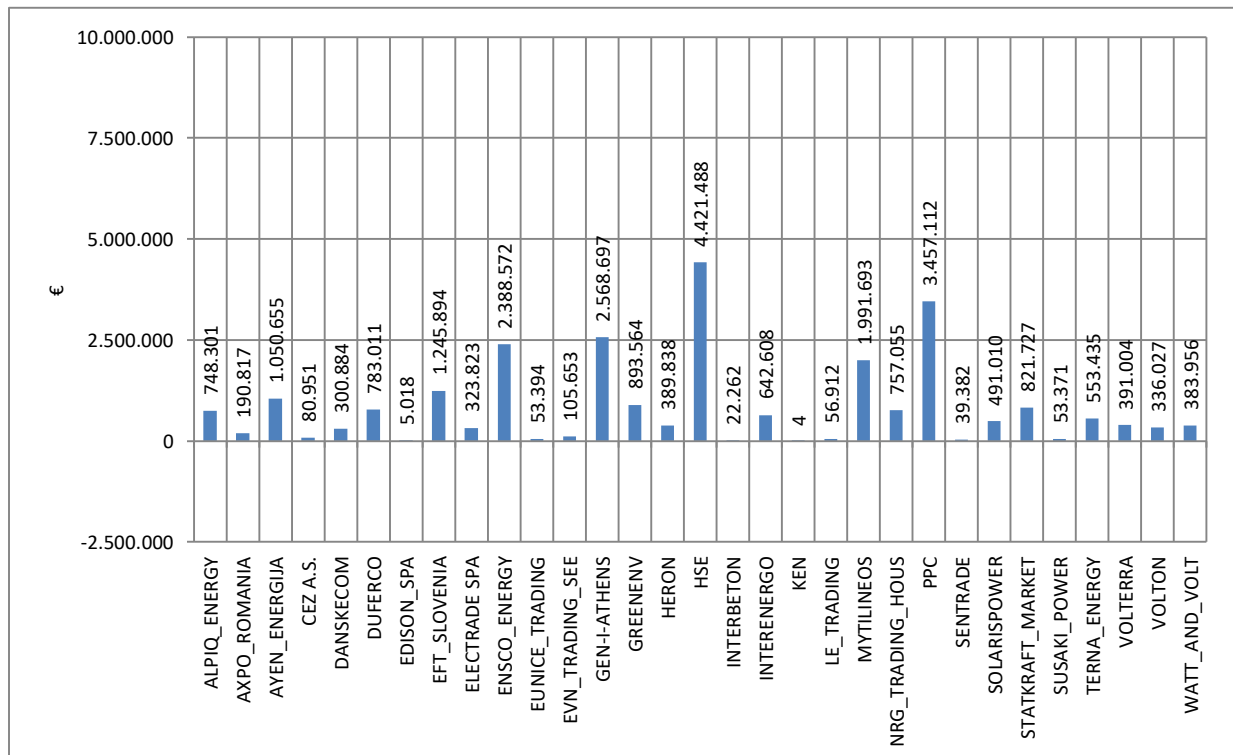


Figure 43: Trading Credits/Debits per Participant (positive values: Credits, negative values: Debits)

6.6 Wrong Direction Energy Flows

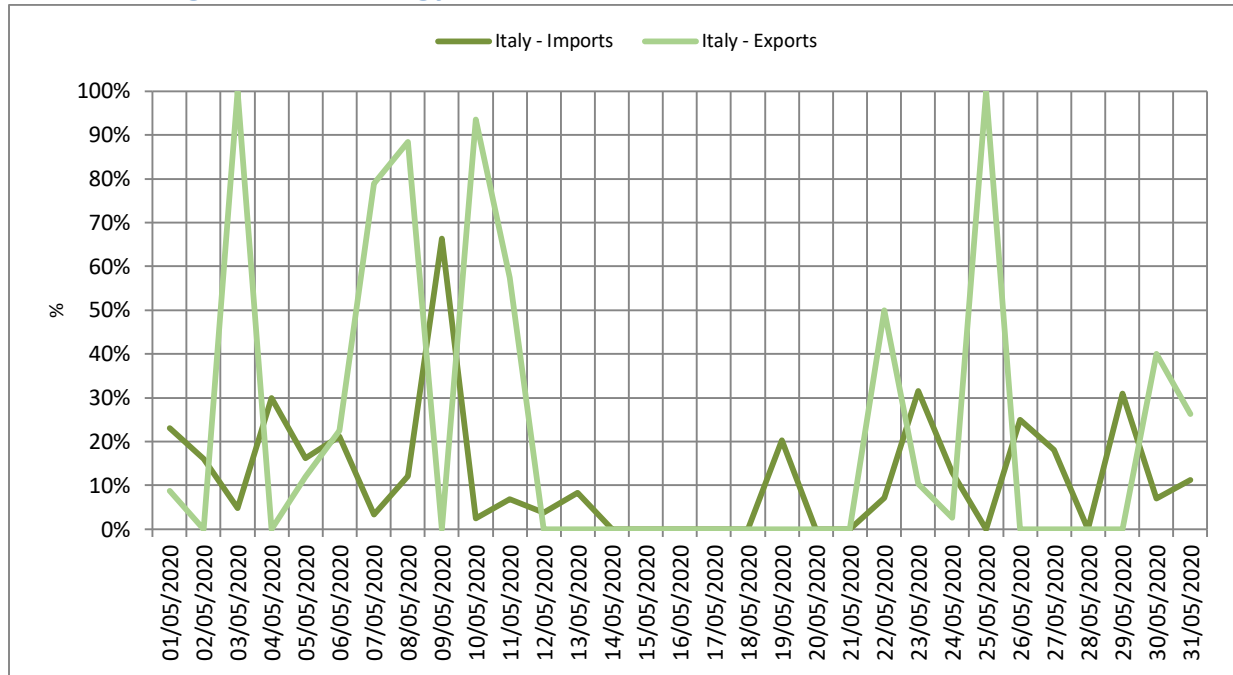


Figure 44: Daily percentage (%) of indicative wrong direction energy flows* as part of the realized imports/exports for the interconnection of Greece-Italy, which would not get implemented under market coupling

*As indicative wrong energy flow is defined the energy flow from a bidding zone with higher price to a bidding zone with lower price. The above values of energy trading are calculated based on the Short-Term Capacity Rights.

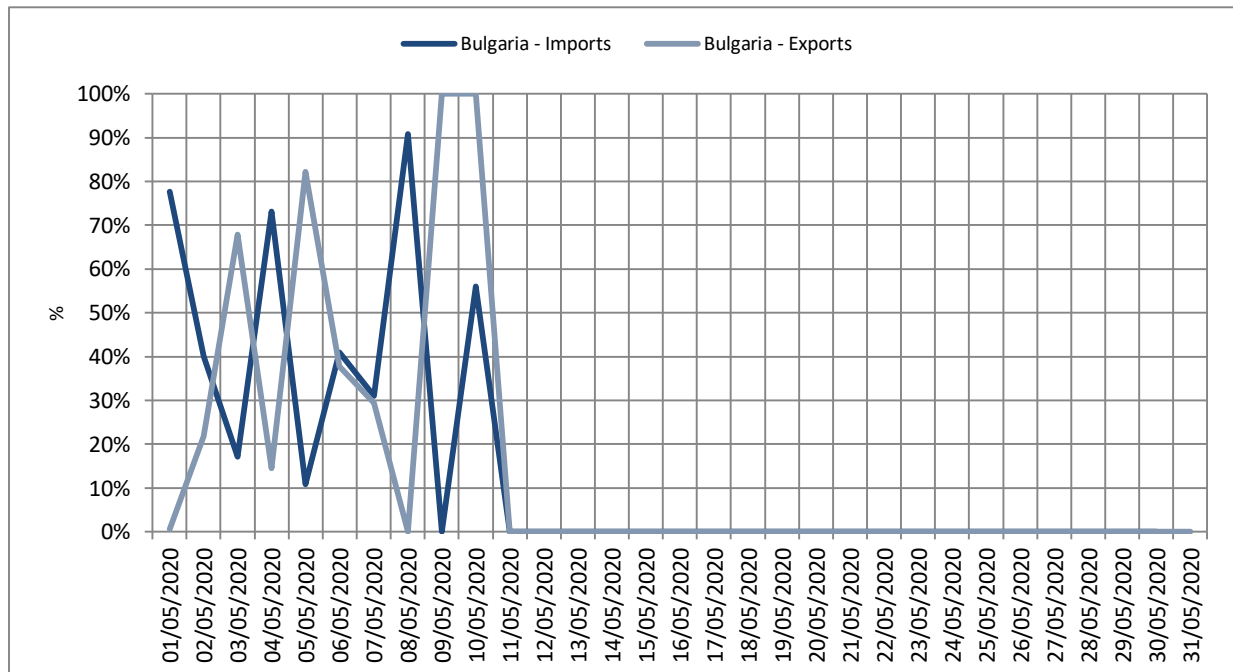


Figure 45: Daily percentage (%) of indicative wrong direction energy flows* as part of the realized imports/exports for the interconnection of Greece-Bulgaria, which would not get implemented under market coupling

MONTHLY DAS TRADING SYSTEM REPORT MAY 2020

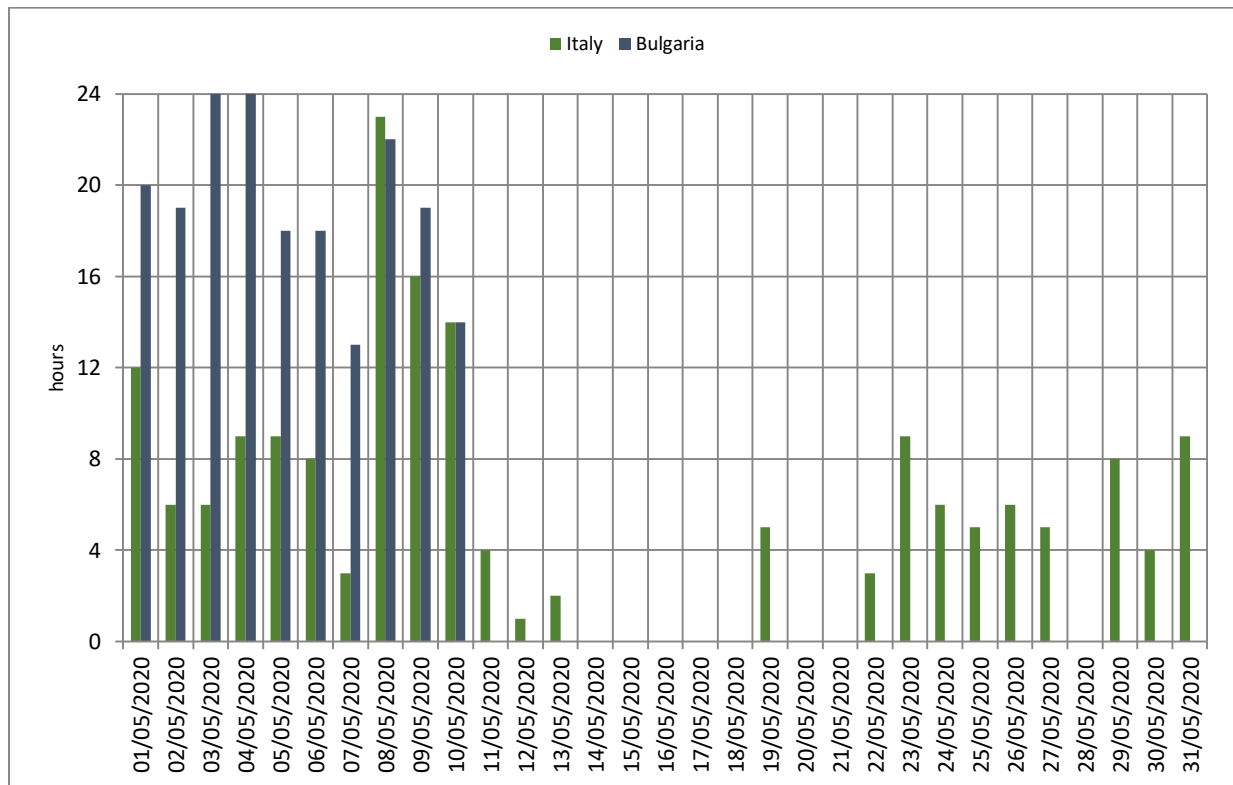


Figure 46: Hours per day with wrong direction energy flows