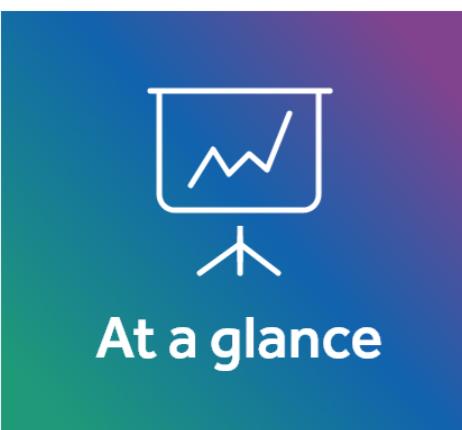


# MONTHLY ENERGY BULLETIN

July

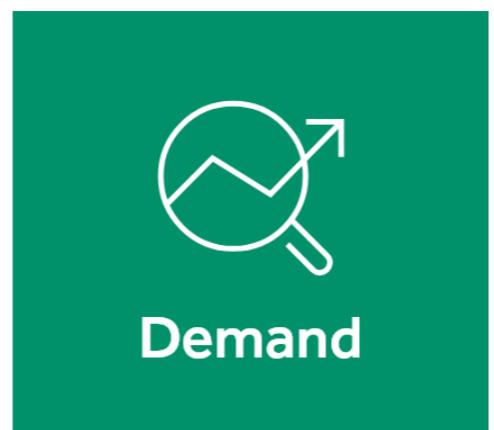
2023 - 2nd Edition



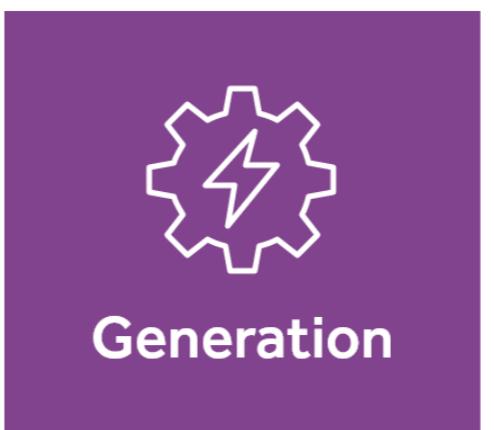
At a glance



Energy Balance



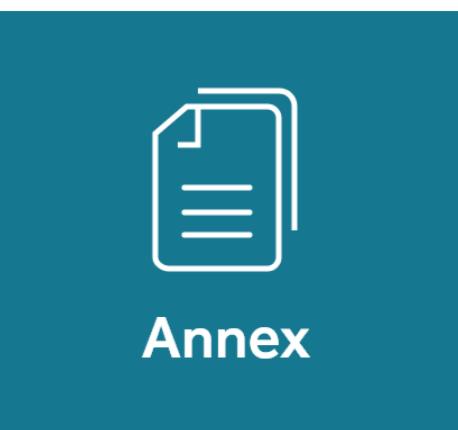
Demand



Generation



Interconnections



Annex

01

02

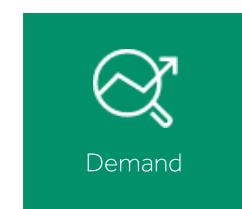
03

11

19

21

## The Month at a glance

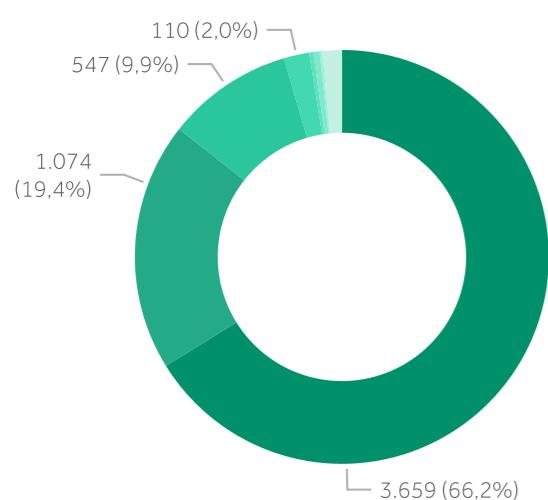


Total Demand  
**5.530 GWh**

↑ 10,17%

Variation in comparison  
to the same month of  
the previous year

### Estimation of total demand (GWh)



- SYSTEM TO NETWORK BOUNDARY SUBSTATIONS
- DEMAND SUPPLIED BY GENERATION UNITS ON THE NETWORK
- HIGH VOLTAGE CONSUMERS
- SYSTEM LOSSES<sup>1</sup>
- MINES
- SELF-PRODUCTION
- PUMPING
- CRETE INTERCONNECTION

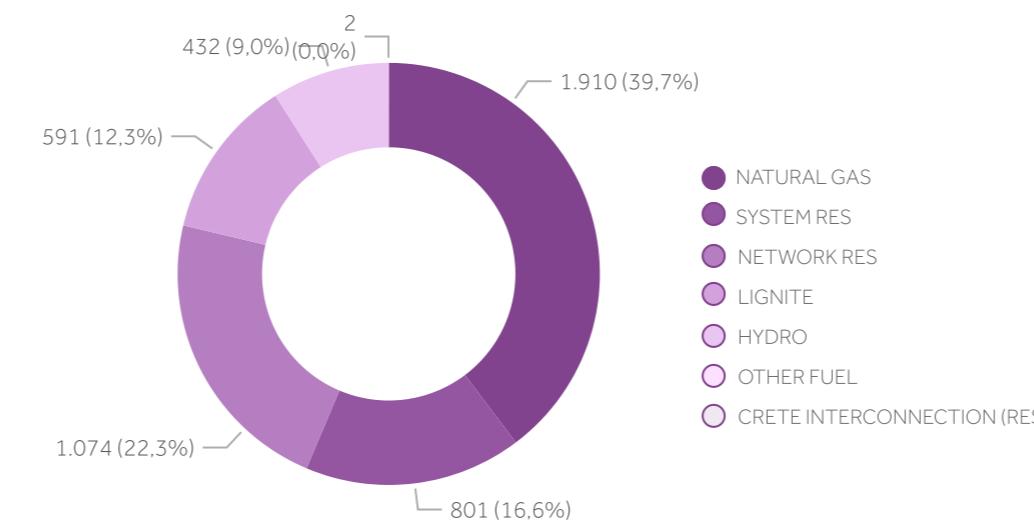


Total Generation  
**4.810 GWh**

↓ 13,01%

Variation in comparison  
to the same month of  
the previous year

### Estimation of total generation (GWh)



### Maximum total demand

↑  26/07/2023  15:00  
**10.385 MW**

### Minimum total demand

↓  02/07/2023  7:00  
**4.352 MW**



Interconnection Balance  
**720 GWh**

↑ 1.230 GWh

Variation in comparison  
to the same month of  
the previous year

### Imports

 **879 GWh**

↑ 165,45%



### Exports

 **160 GWh**

↓ 81,03%



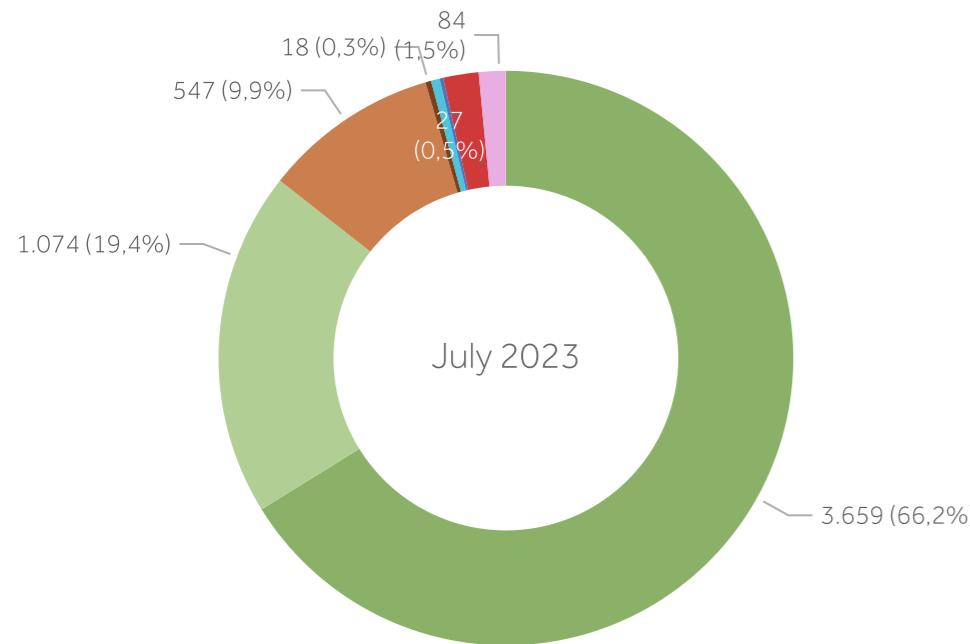
<sup>1</sup> The percentage which refers to losses in this graph is not associated to the Percentage of System Losses presented in page 5 of the present Bulletin.

# Energy Balance in the Interconnected System and Network

Ιανουάριος 2023

Ιούλιος 2023

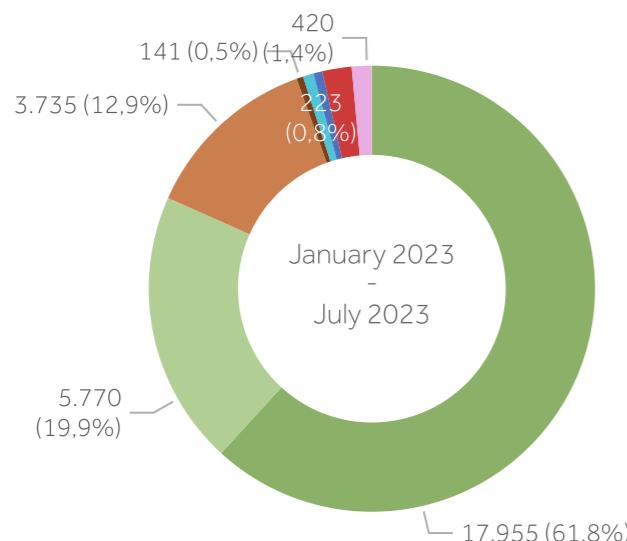
## ESTIMATION OF TOTAL DEMAND<sup>1</sup> & INTERCONNECTION BALANCE<sup>3</sup>



Energy Balance  
July 2023

**5.530** GWh

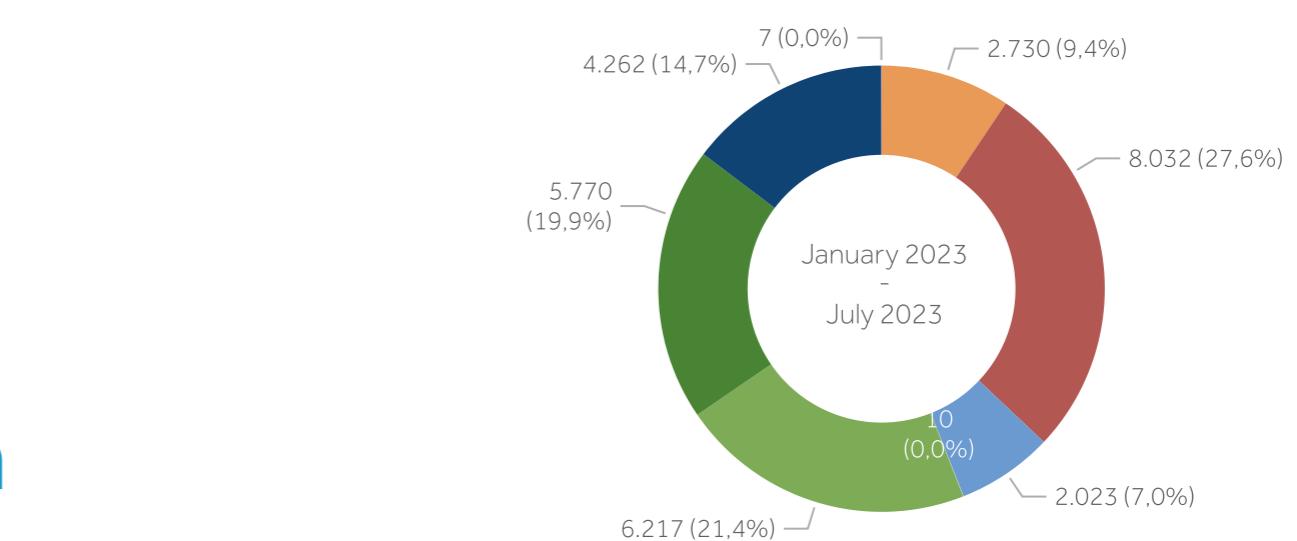
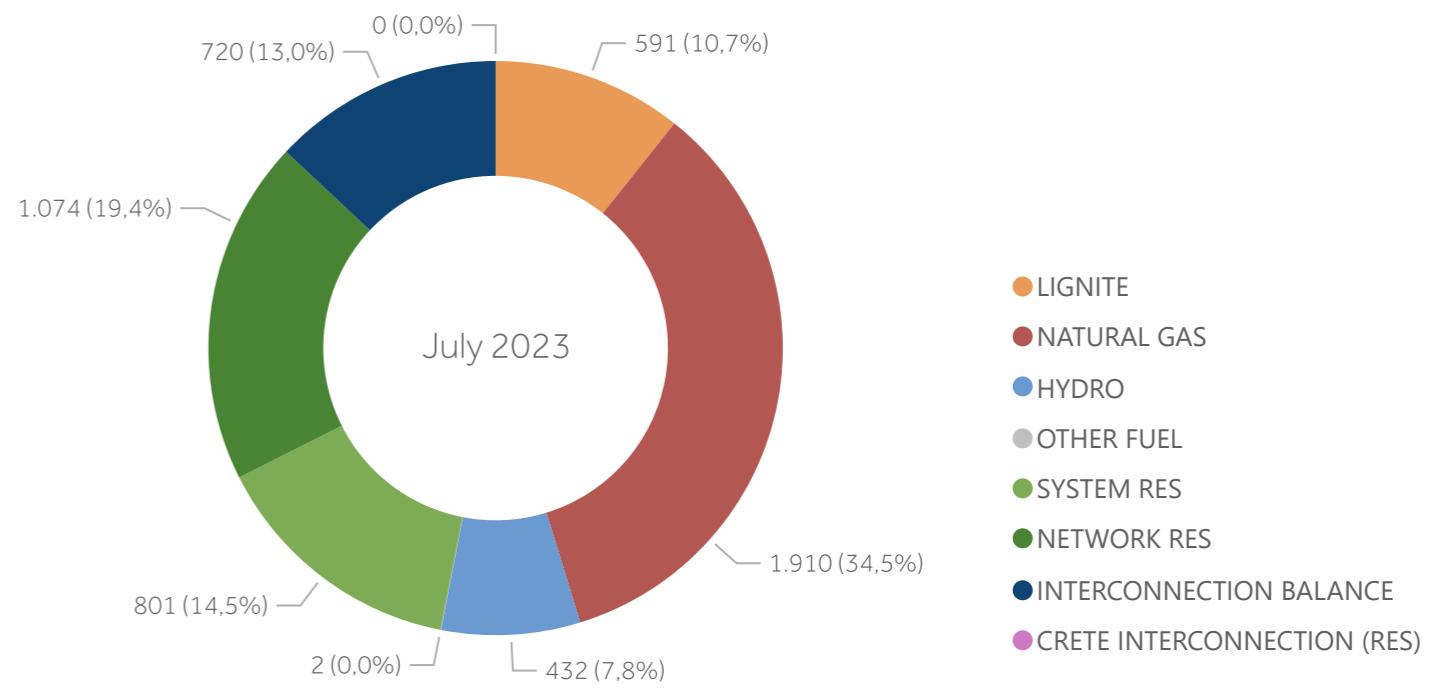
- SYSTEM TO NETWORK BOUNDARY SUBSTATIONS
- NETWORK DEMAND
- HIGH VOLTAGE CONSUMERS
- MINES
- SELF-PRODUCTION
- PUMPING
- SYSTEM LOSSES<sup>4</sup>
- INTERCONNECTION BALANCE
- CRETE INTERCONNECTION



Energy Balance  
January 2023 - July 2023

**29.050** GWh

## ESTIMATION OF TOTAL GENERATION<sup>2</sup> & INTERCONNECTION BALANCE<sup>3</sup>



### Notes

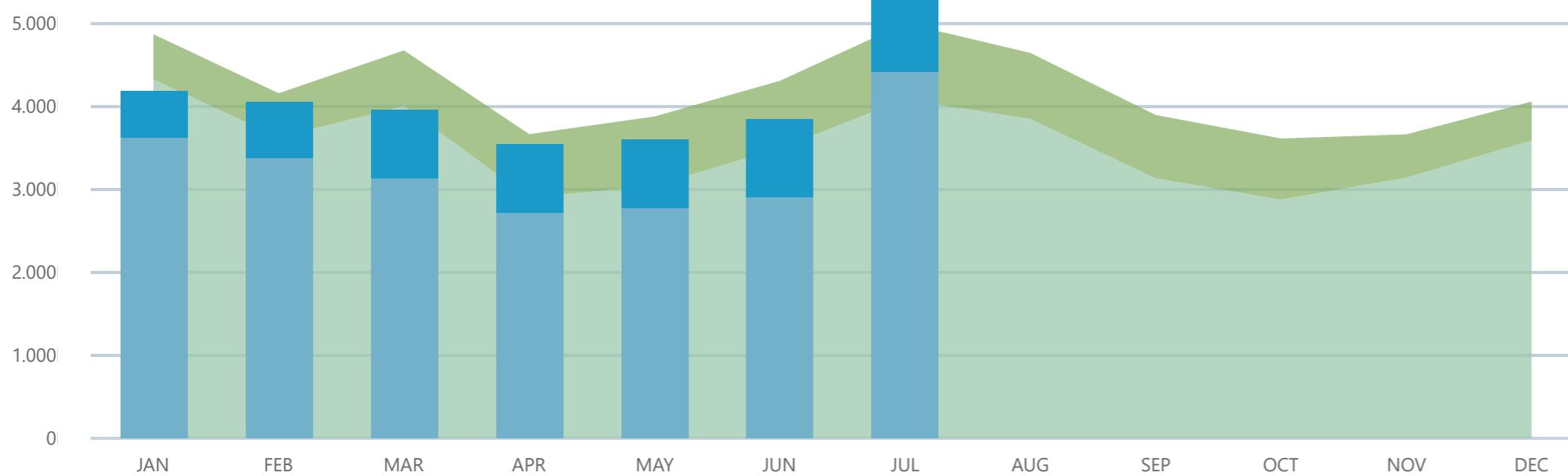
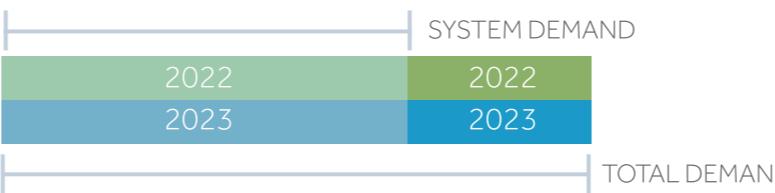
- 1 The demand of non-interconnected islands is not included.
- 2 Network generation results from validated meter data for the Medium Voltage and from validated meter data and estimations for the Low Voltage.
- 3 The surplus in the interconnection balance is displayed in the estimation of demand, whereas a deficit in the estimation of generation.
- 4 The percentage which refers to losses in this graph is not associated to the Percentage of System Losses presented in page 5 of the present Bulletin.

## Total Demand & System Demand

### ESTIMATION OF TOTAL DEMAND & SYSTEM DEMAND (GWh)



Annex 1.1

Total Demand <sup>2</sup>

**5.519** GWh

↑ 10,24%

Variation in comparison to the same month of the previous year

System Demand <sup>1</sup>

**4.445** GWh

↑ 8,70%

Variation in comparison to the same month of the previous year

### VARIATION OF TOTAL DEMAND (GWh)

July

2022

- July

2023



### Notes

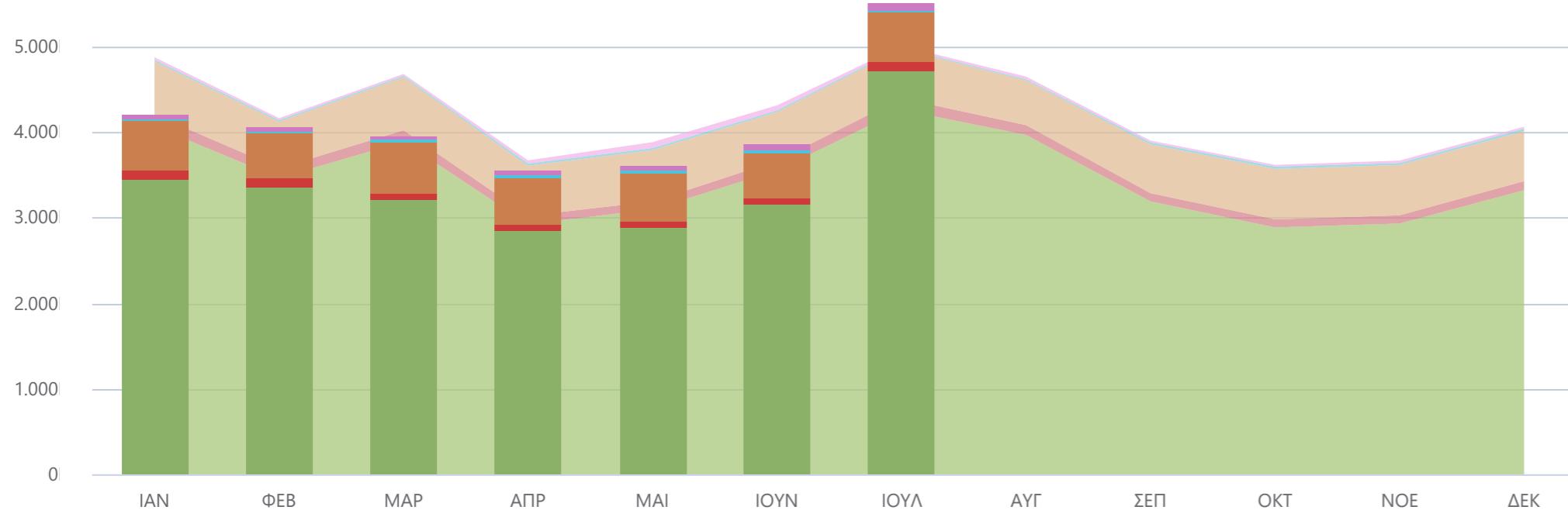
1 System Demand is defined as the generation produced by production units (conventional and RES) connected to the System, that is required to cover the System Load (excluding pumping). Demand supplied by units injecting into the Network is not included. More specifically, the estimation of System Demand includes the demand of High Voltage consumers, mines, the self-production, the demand in System-Network boundary substations, the System losses and the flow to Crete interconnection.

2 Total Demand is defined as the generation on the mainland and the interconnected islands required to supply the Load (excluding pumping). More specifically, the estimation of Total Demand includes the estimation of System Demand and the estimation of demand covered by production units connected to the Network. Network generation results from certified measurements for the Medium Voltage and measurements and estimations for the Low Voltage.

# Demand per Consumption Category

## EVOLUTION OF DEMAND (GWh) Annex 1.1

per consumption category



### SELF-PRODUCTION

2022 2023

### HIGH VOLTAGE CONSUMERS / MINES

2022 2023

### SYSTEM LOSSES

2022 2023

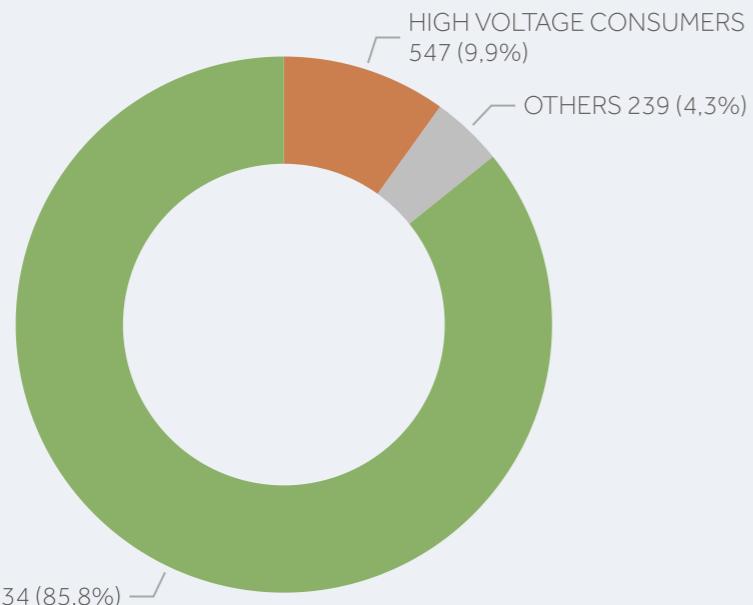
### NETWORK

2022 2023

### CRETE INTERCONNECTION

2022 2023

## ESTIMATION OF DEMAND PER CONSUMPTION CATEGORY (GWh) July 2023



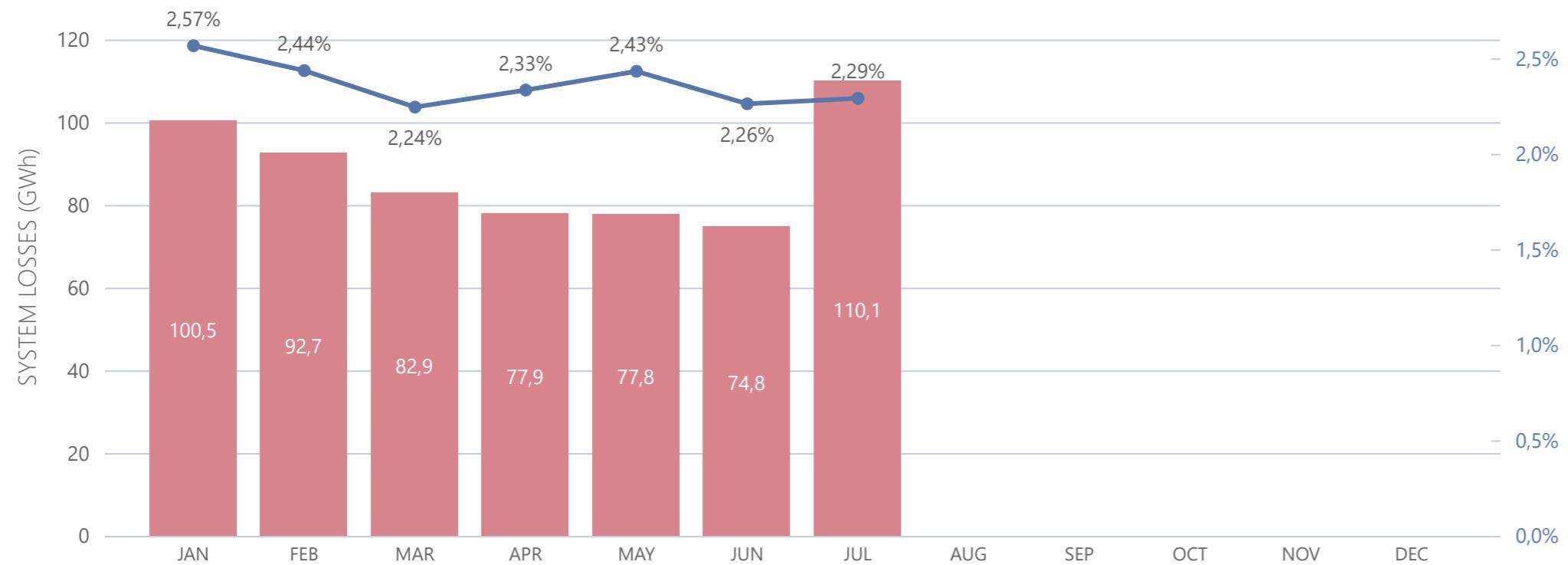
### Notes

- 1 Network Demand includes the estimation of demand in the System-Network boundary substations and the estimation of demand supplied by production units in the Network. Network generation results from certified measurements for the Medium Voltage and measurements and estimations for the Low Voltage.
- 2 Demand does not include pumping.
- 3 The percentage which refers to losses in this graph is not associated to the Percentage of System Losses presented in page 5 of the present Bulletin.

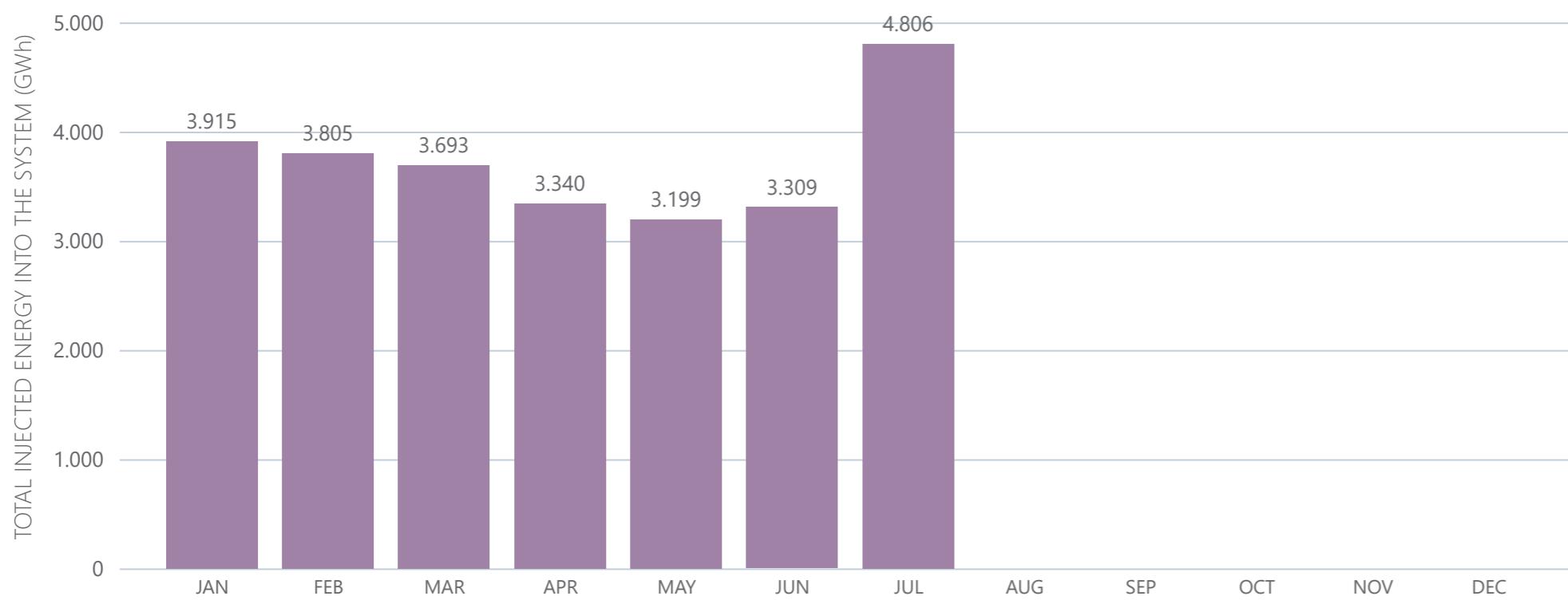
## Analysis of System Losses

### EVOLUTION OF SYSTEM LOSSES (GWh) and PERCENTAGE OF SYSTEM LOSSES (%)

in relation to the Total Injected Energy into the System (%)



### EVOLUTION OF TOTAL INJECTED ENERGY INTO THE SYSTEM (GWh)



### PERCENTAGE OF SYSTEM LOSSES (%)

July 2023

**2,29%**

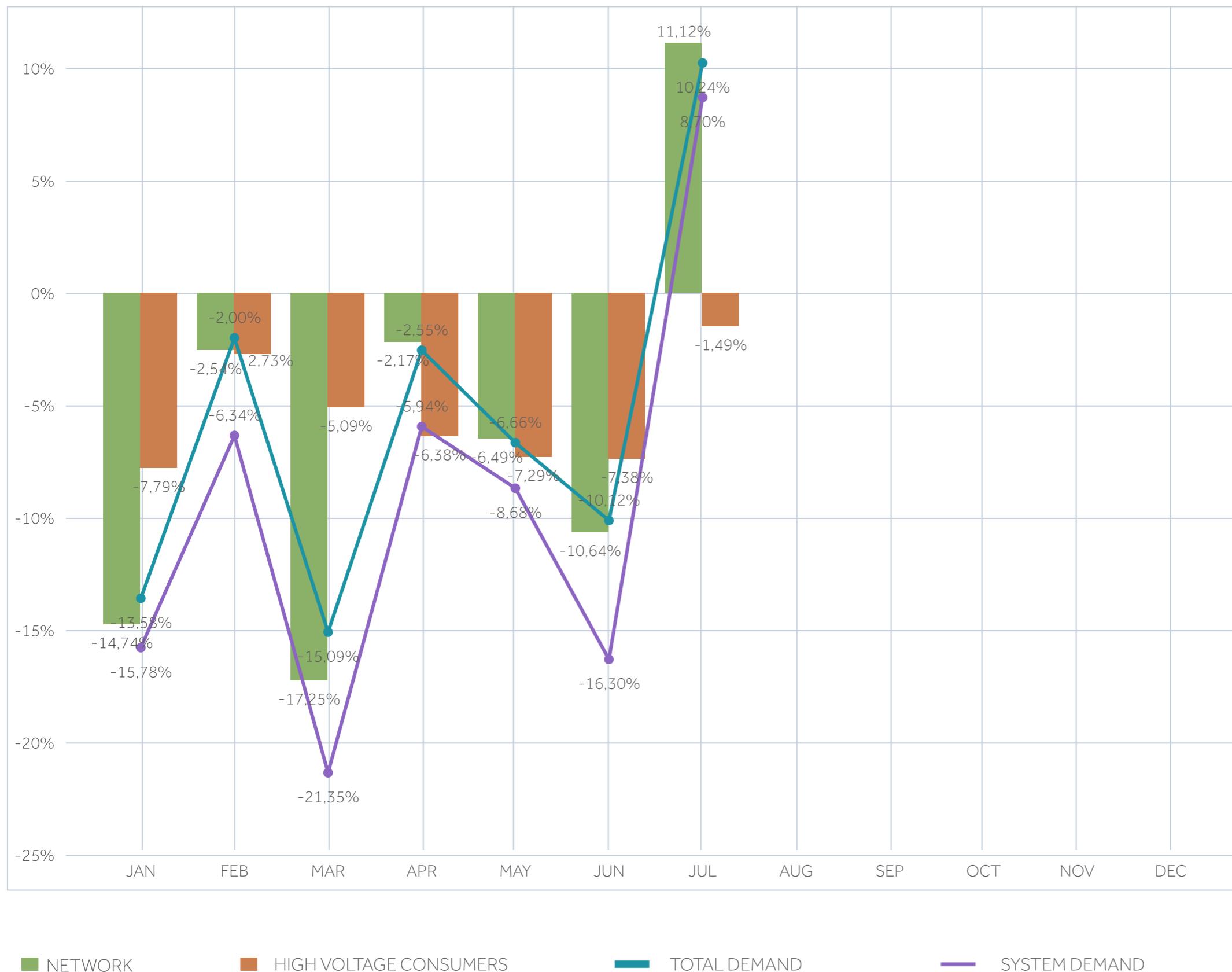
in relation to the  
Total Injected Energy  
into the System

#### Notes

- 1 The Percentage of System Losses is calculated as the quotient of System Losses to the Total Injected Energy into the System.
- 2 The Total Injected Energy into the System includes the energy generated by conventional and RES units connected to the System, the injections from the interconnections into the System and the energy injected into the System from the System to Network boundary substations.

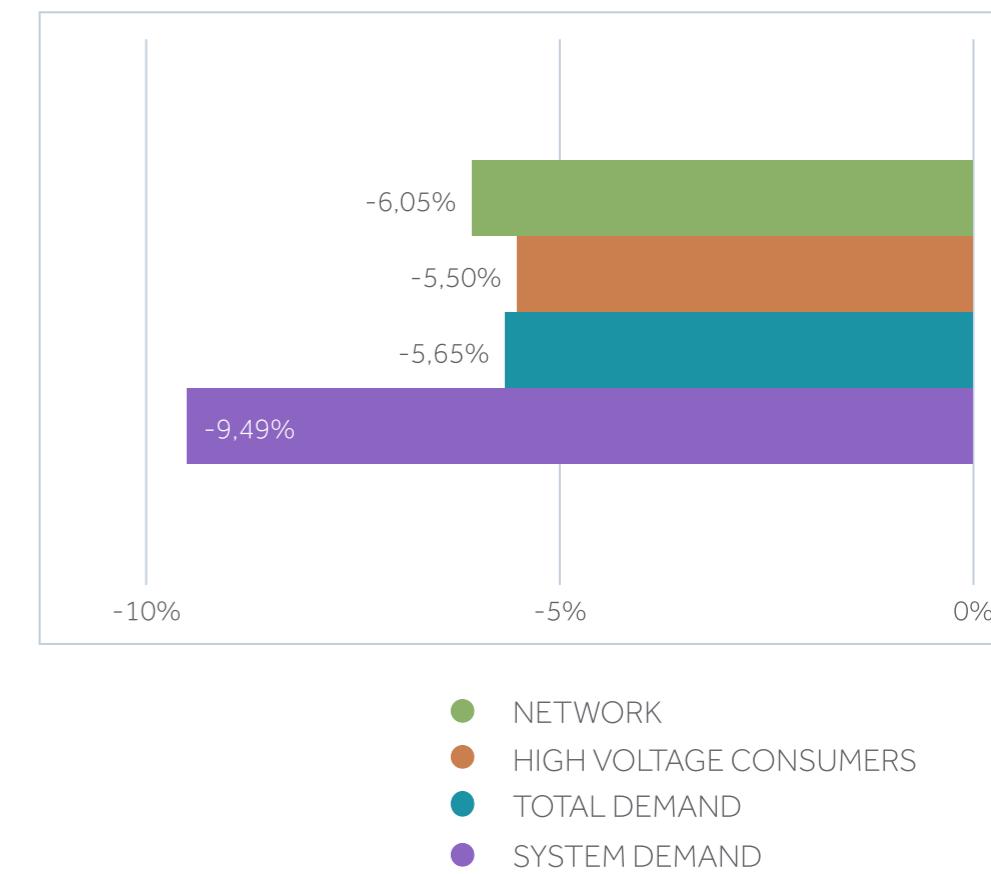
# Evolution of Demand in comparison to the previous year

## EVOLUTION OF DEMAND in comparison to the same month of the previous year



## EVOLUTION OF DEMAND

current year in comparison to the same period of the previous year



### Notes

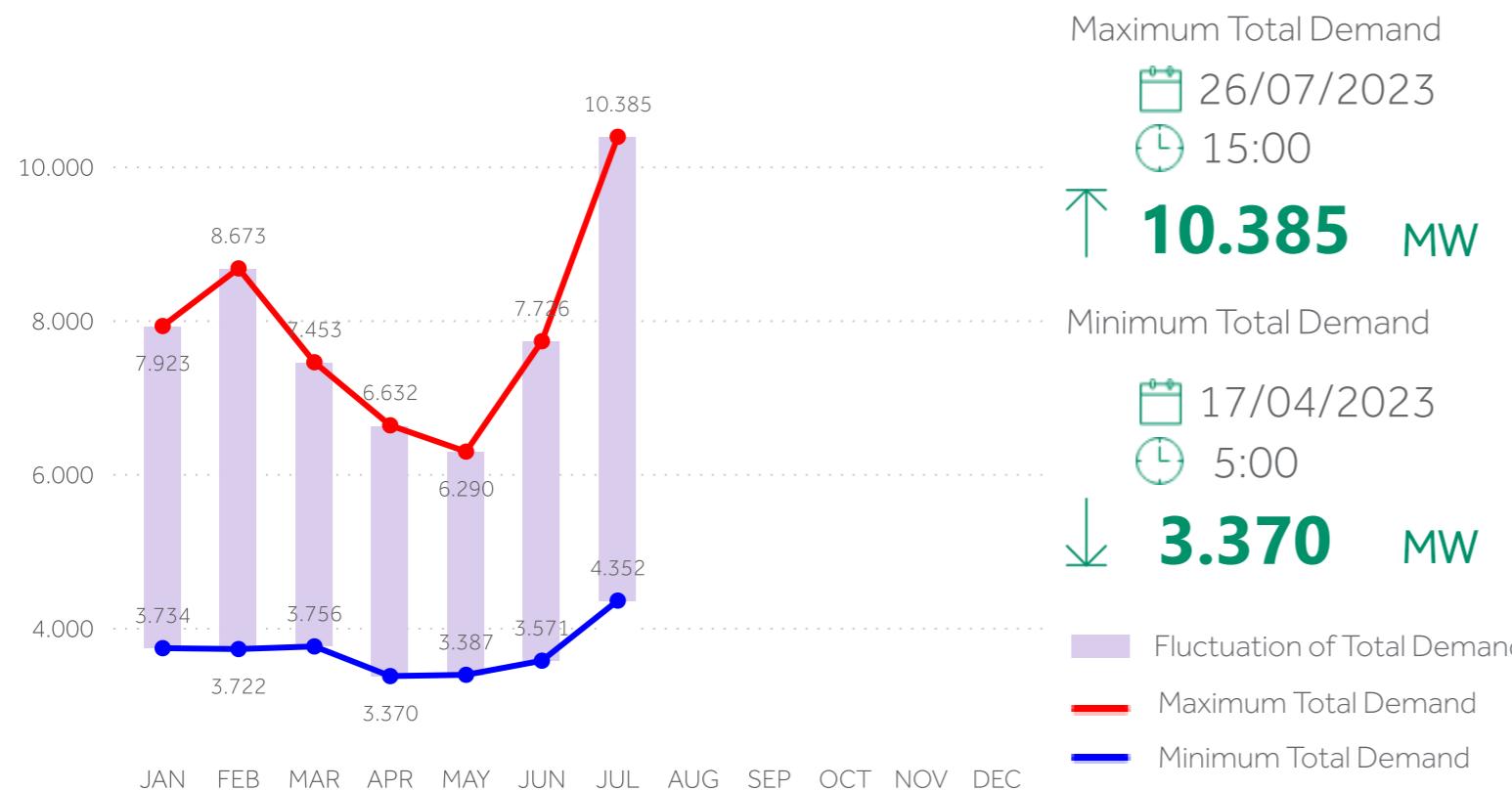
- 1 Network Demand includes the estimation of demand in the System-Network boundary substations and the estimation of demand supplied by production units in the Network. Network generation results from certified measurements for the Medium Voltage and measurements and estimations for the Low Voltage.

- 2 Demand does not include pumping.

## MAXIMUM & MINIMUM HOURLY TOTAL DEMAND (MW)

current year

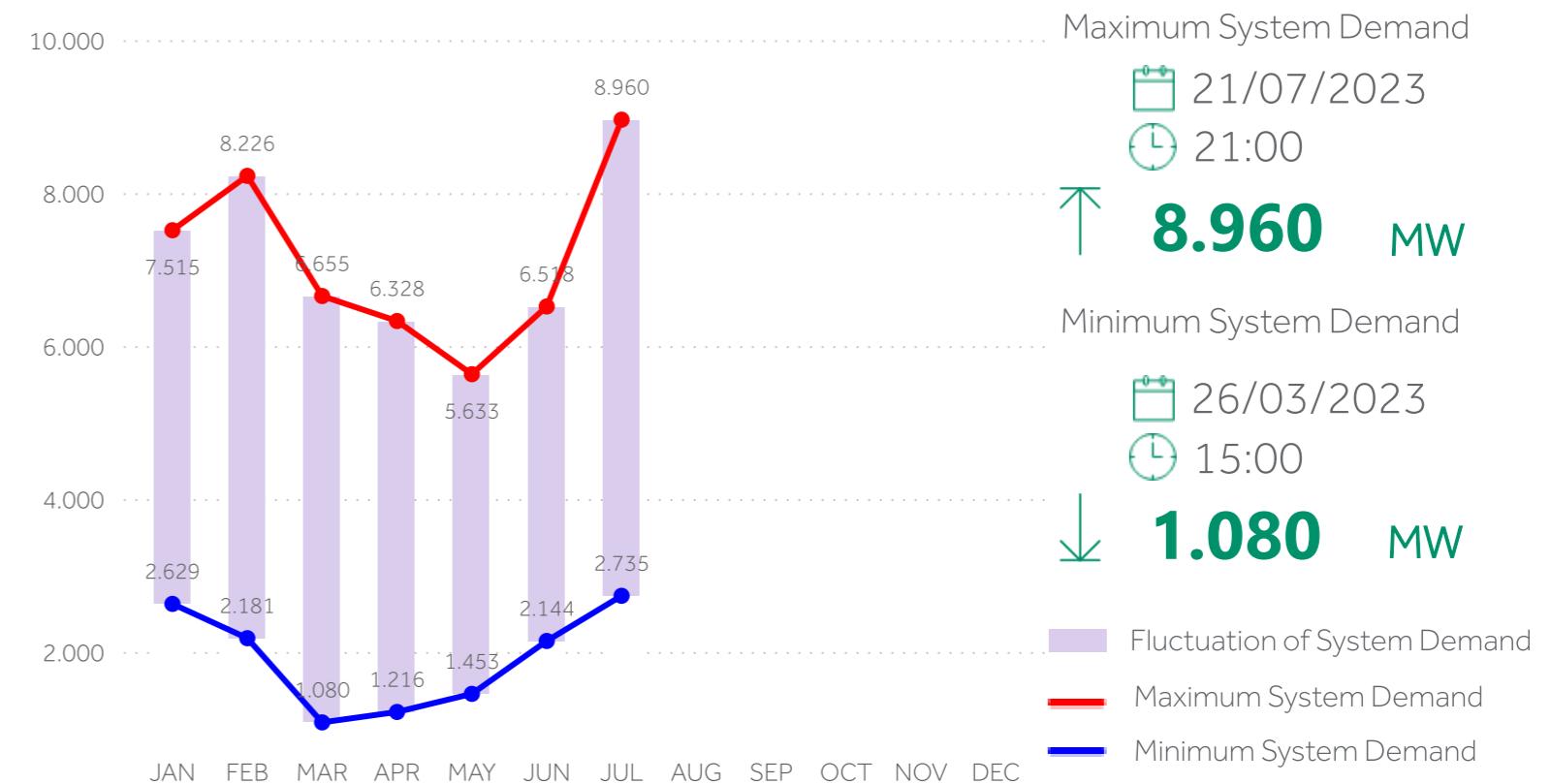
Annex 1.2



## MAXIMUM & MINIMUM HOURLY SYSTEM DEMAND (MW)

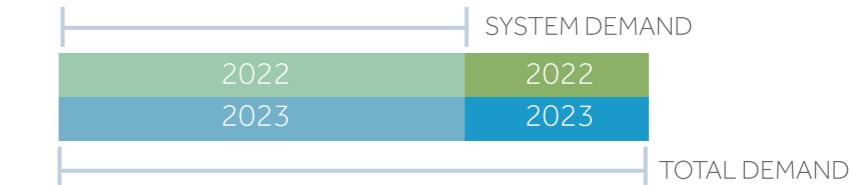
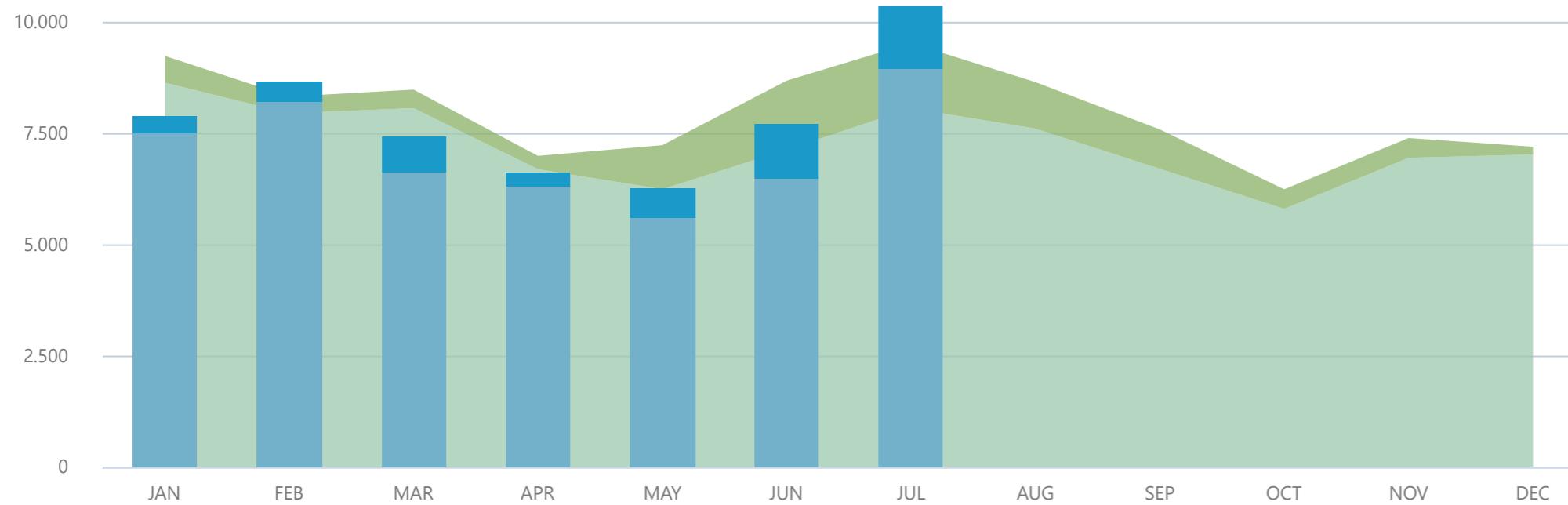
current year

Annex 1.3



## MAXIMUM HOURLY TOTAL DEMAND & SYSTEM DEMAND (MW)

Annex 1.2 - 1.3



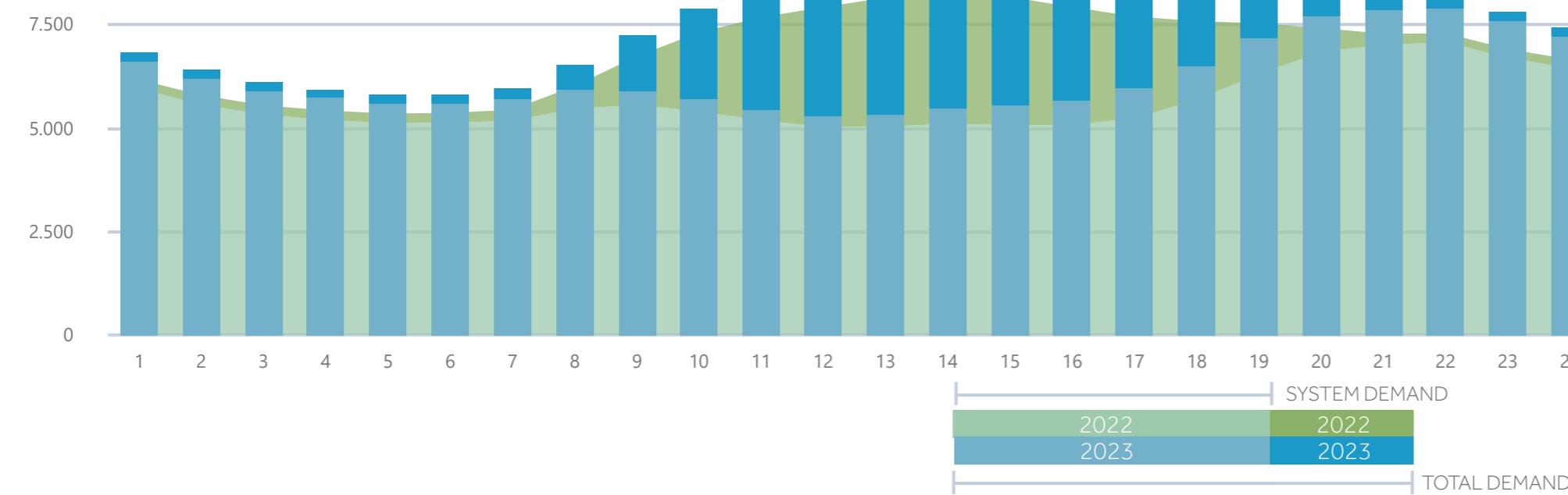
### Notes

- In maximum & minimum demand analysis, Total Demand and System Demand include pumping.
- Analysis is based on hourly data.

## AVERAGE HOURLY TOTAL DEMAND &amp; SYSTEM DEMAND (MW)

During working days of month July current &amp; previous year

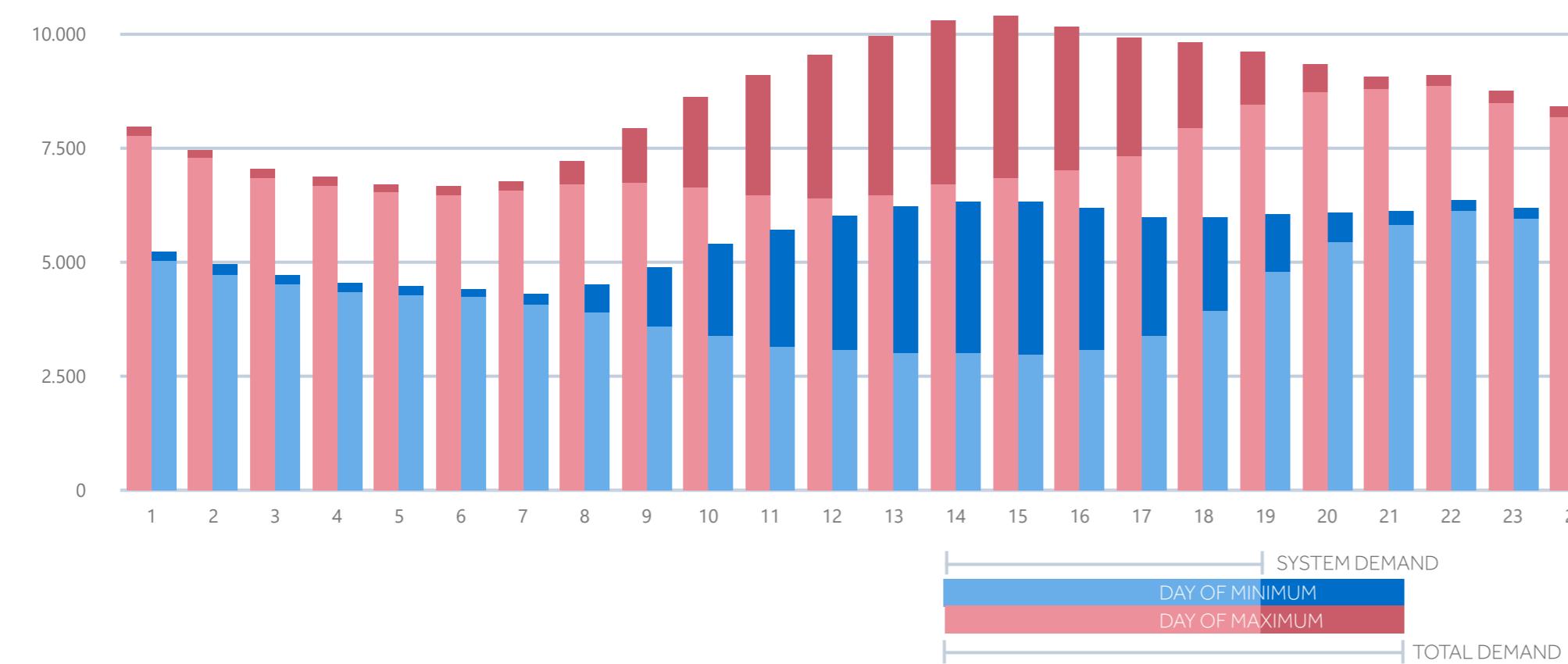
Annex 1.4



## HOURLY TOTAL DEMAND &amp; SYSTEM DEMAND (MW)

During the day of maximum and minimum of month July 2023

Annex 1.5



## MAXIMUM TOTAL DEMAND

26/07/2023

15:00

**10.385 MW**

## MINIMUM TOTAL DEMAND

02/07/2023

7:00

**4.352 MW**

## MAXIMUM SYSTEM DEMAND

21/07/2023

21:00

**8.960 MW**

## MINIMUM SYSTEM DEMAND

09/07/2023

15:00

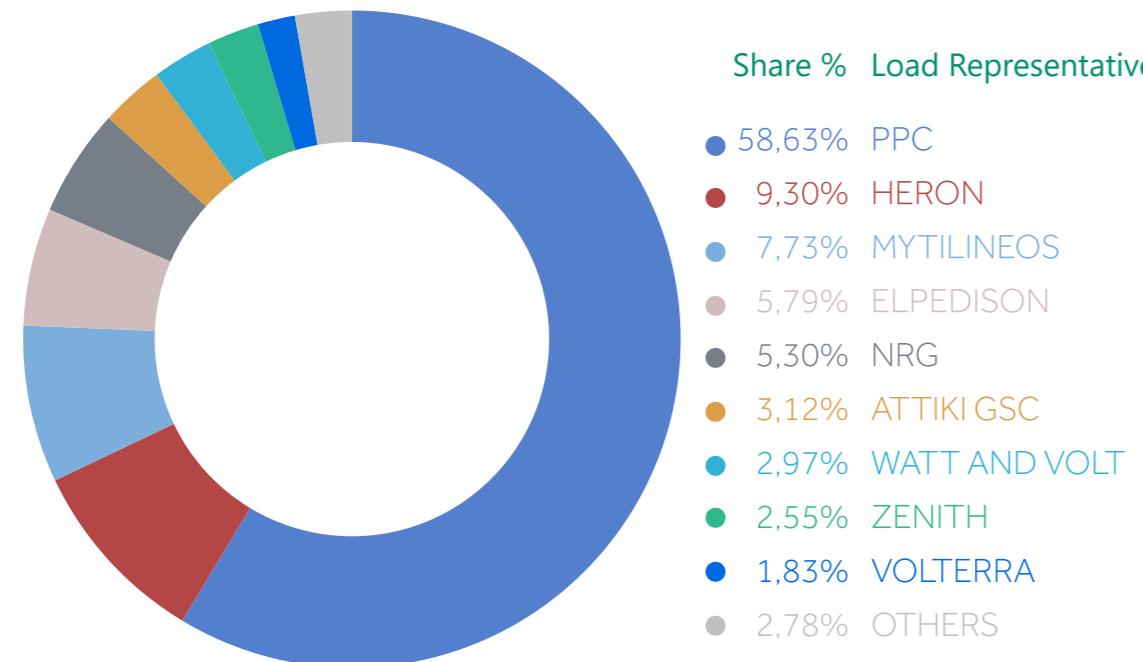
**2.735 MW**

## Notes

- For each hour, the demand is calculated as the average of the demand of the relevant hour for each working day or the month.
- Total Demand and System Demand include pumping.

## Market Share of Load Representatives - Demand per voltage level

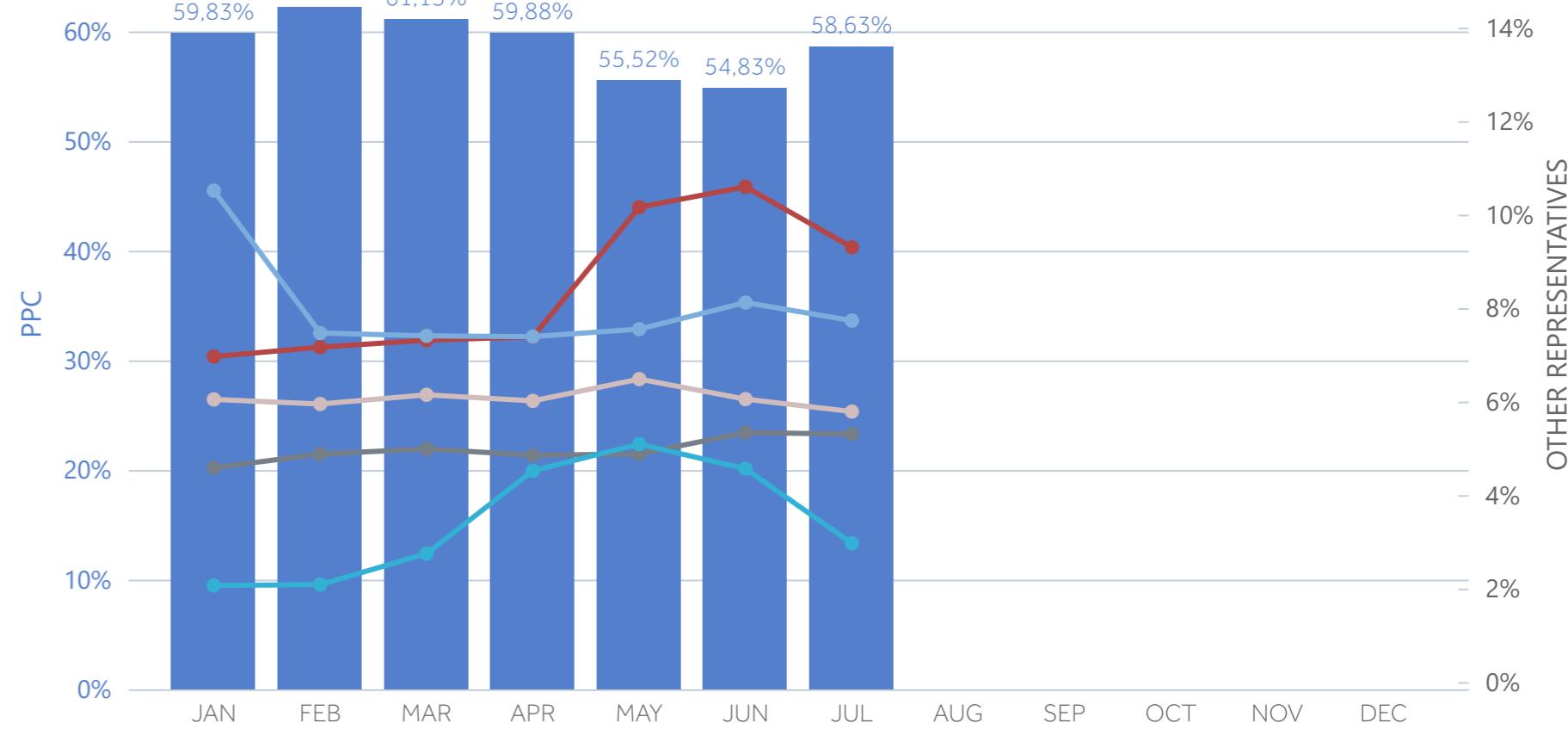
MARKET SHARE OF LOAD REPRESENTATIVES (%) 



Annex 1.7

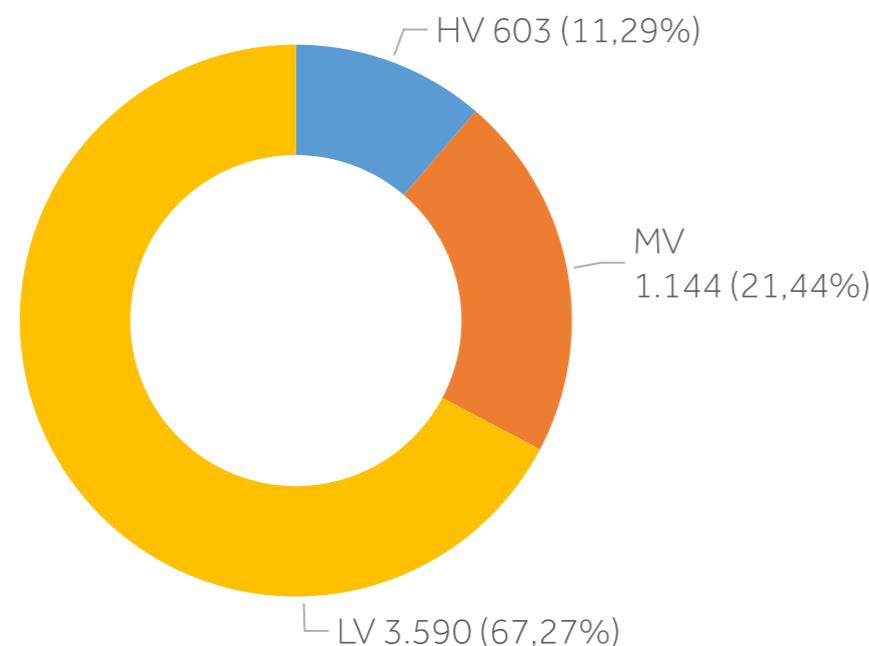
EVOLUTION OF MARKET SHARE OF LOAD REPRESENTATIVES (%) 

(6 load representatives with higher market shares during the current year)



Annex 1.6

DEMAND PER VOLTAGE LEVEL (GWh/%)

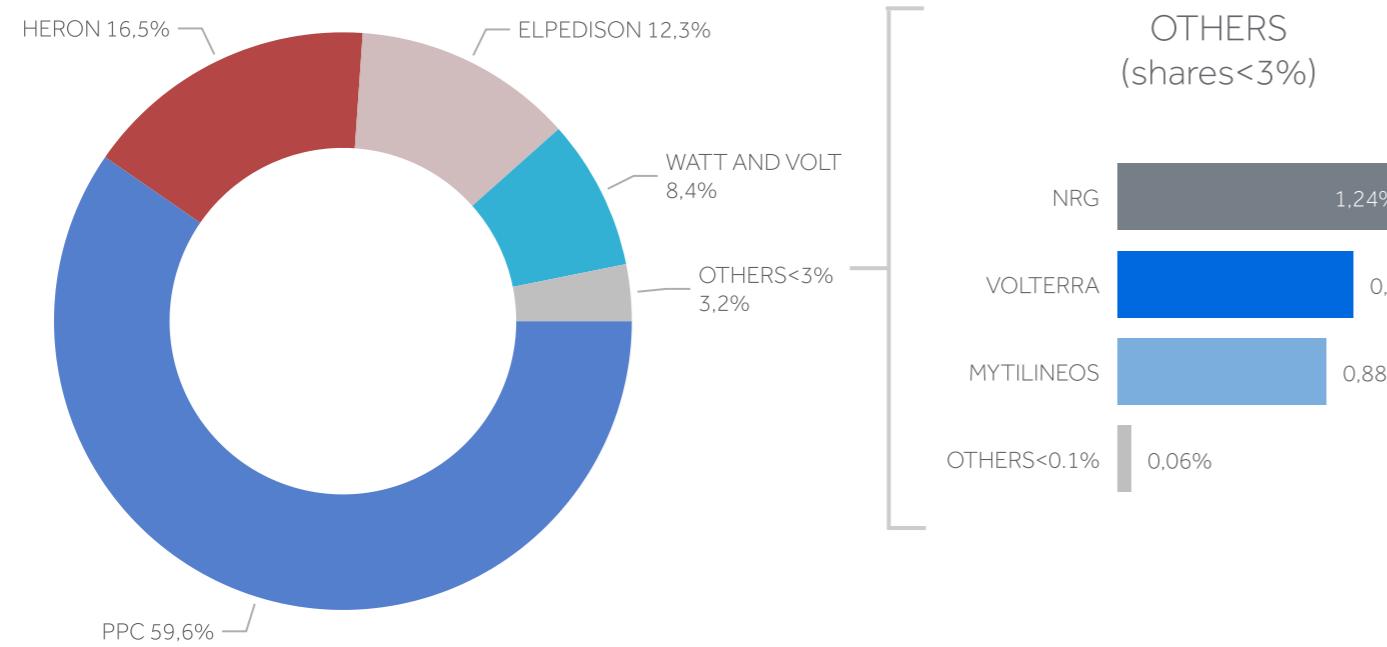


### Notes

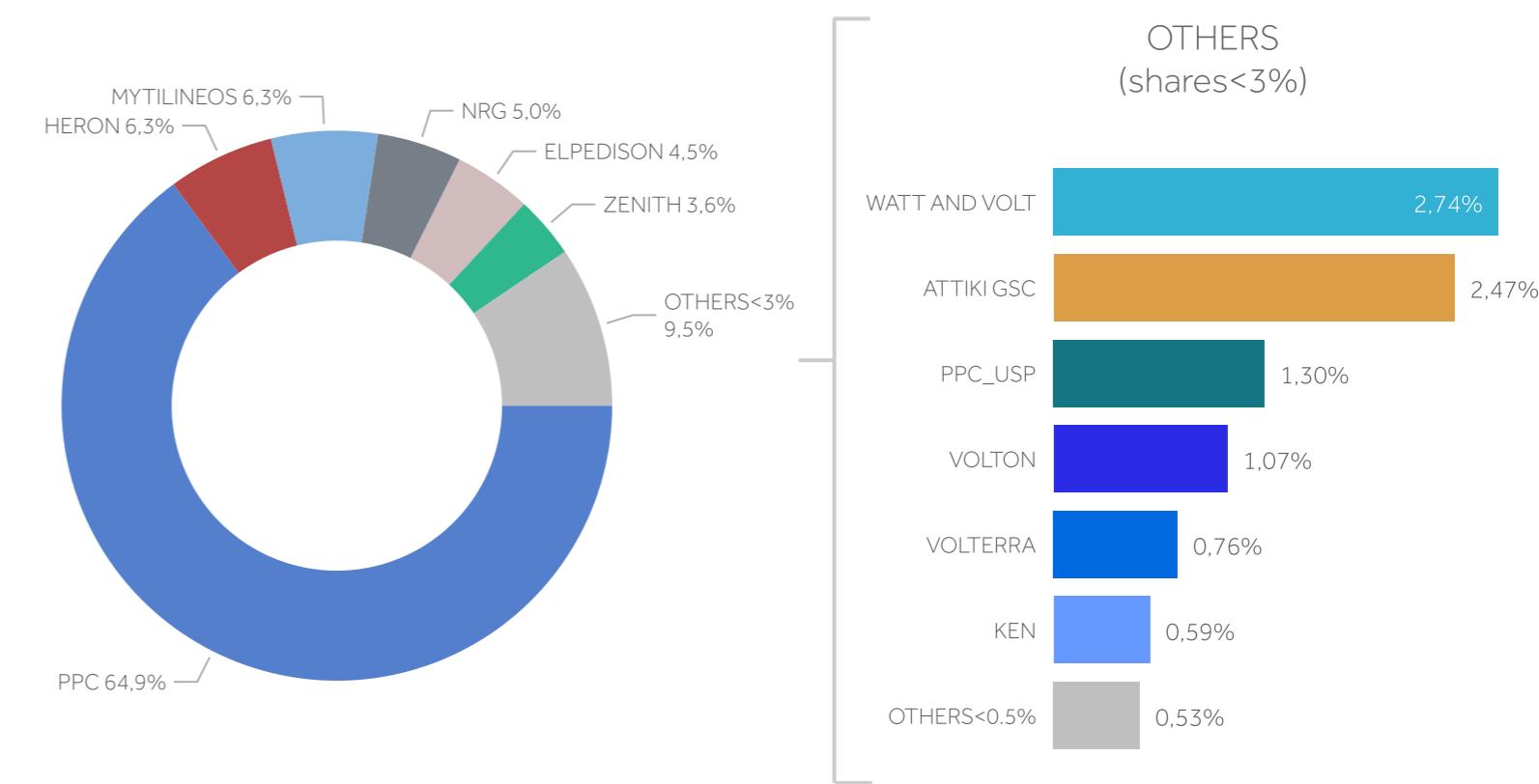
- Data used for the calculation of the shares of the representatives include:
  - Self-supplied consumers and producers representing the auxiliary loads of their production units.
  - Consumption of Low Voltage consumers is based on a preliminary estimation of the Network Operator.
- Values in GWh are referenced to the System-Network boundaries.
- The utilisation of the interconnection of Crete to the HETS is not included.

## Market Share of Load Representatives per voltage level

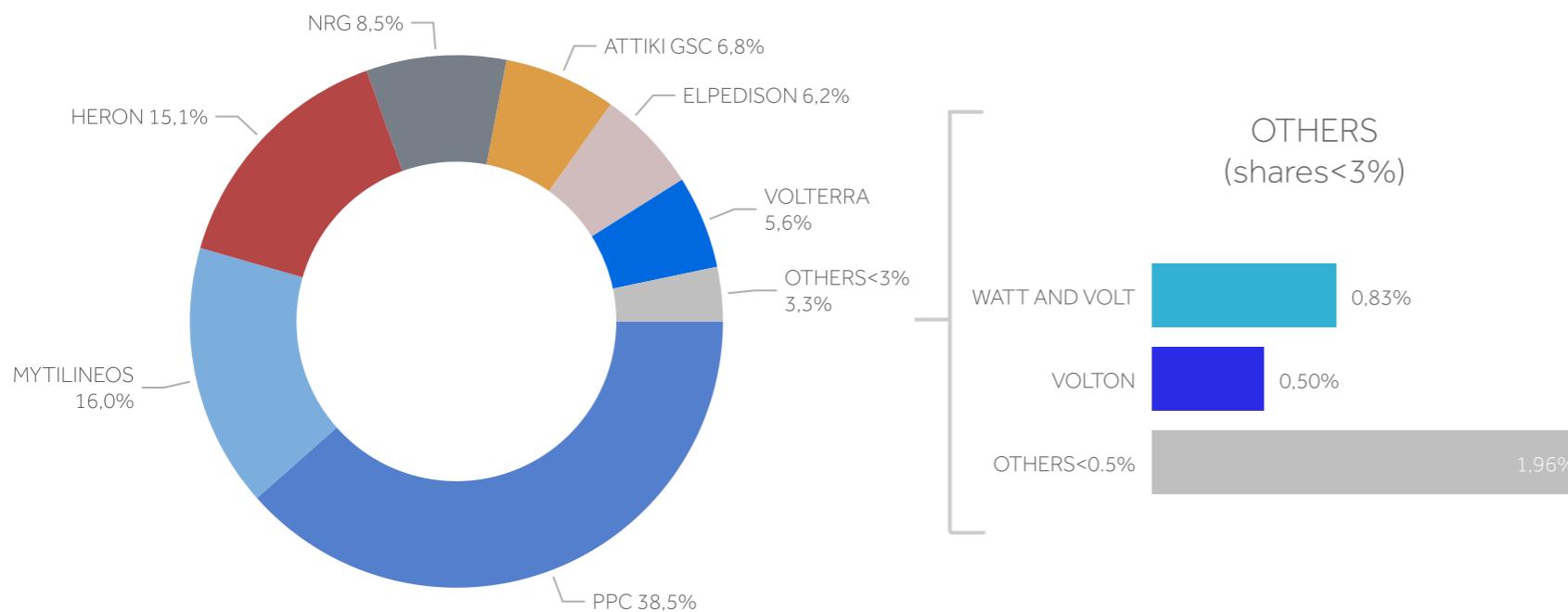
MARKET SHARE OF LOAD REPRESENTATIVES IN HV (%) Annex 1.7



MARKET SHARE OF LOAD REPRESENTATIVES IN LV (%) Annex 1.7



MARKET SHARE OF LOAD REPRESENTATIVES IN MV (%) Annex 1.7



### Notes

- Data used for the calculation of the shares of the representatives include:
  - Self-supplied consumers and producers representing the auxiliary loads of their production units.
  - Consumption of Low Voltage consumers is based on a preliminary estimation of the Network Operator.
- Values in GWh are referenced to the System-Network boundaries.
- The utilisation of the interconnection of Crete to the HETS is not included.

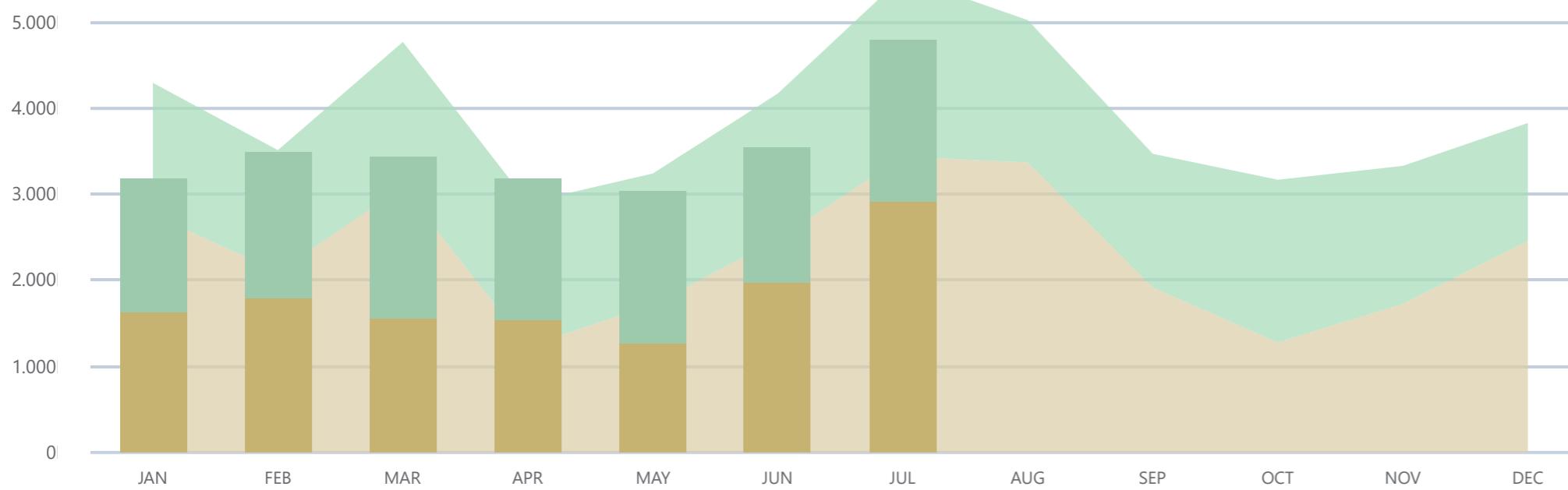
# Analysis of Net Generation

## ESTIMATION OF NET GENERATION (GWh)

Annex 2.1

2022 CONVENTIONAL  
2023 GENERATION

2022 RES  
2023 GENERATION



## Total Net Generation

**4.810** GWh

↓ 13,01%

Variation in comparison to the same month of the previous year



Thermal Generation



Hydro Generation

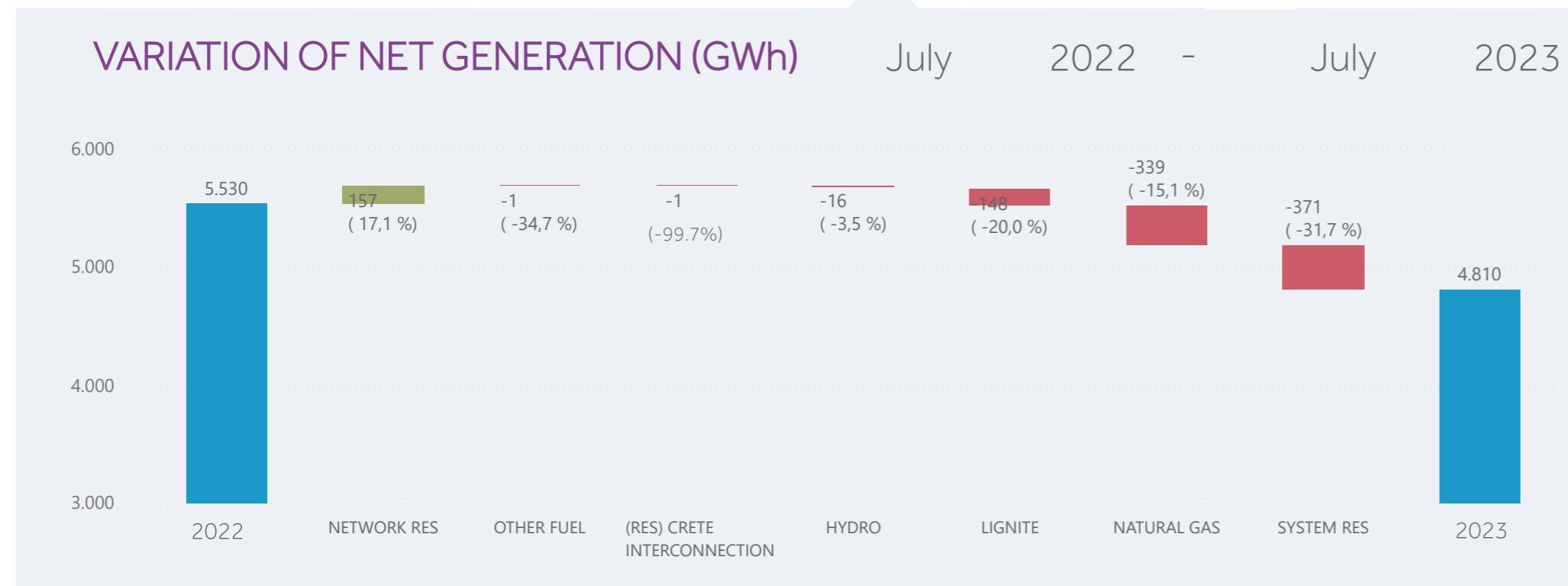


RES Generation

52,04%

8,98%

38,98%



### Notes

Analysis of generation refers to the net generation.

Total Generation includes the generation of conventional production units and RES units and refers to the injection point in the System.

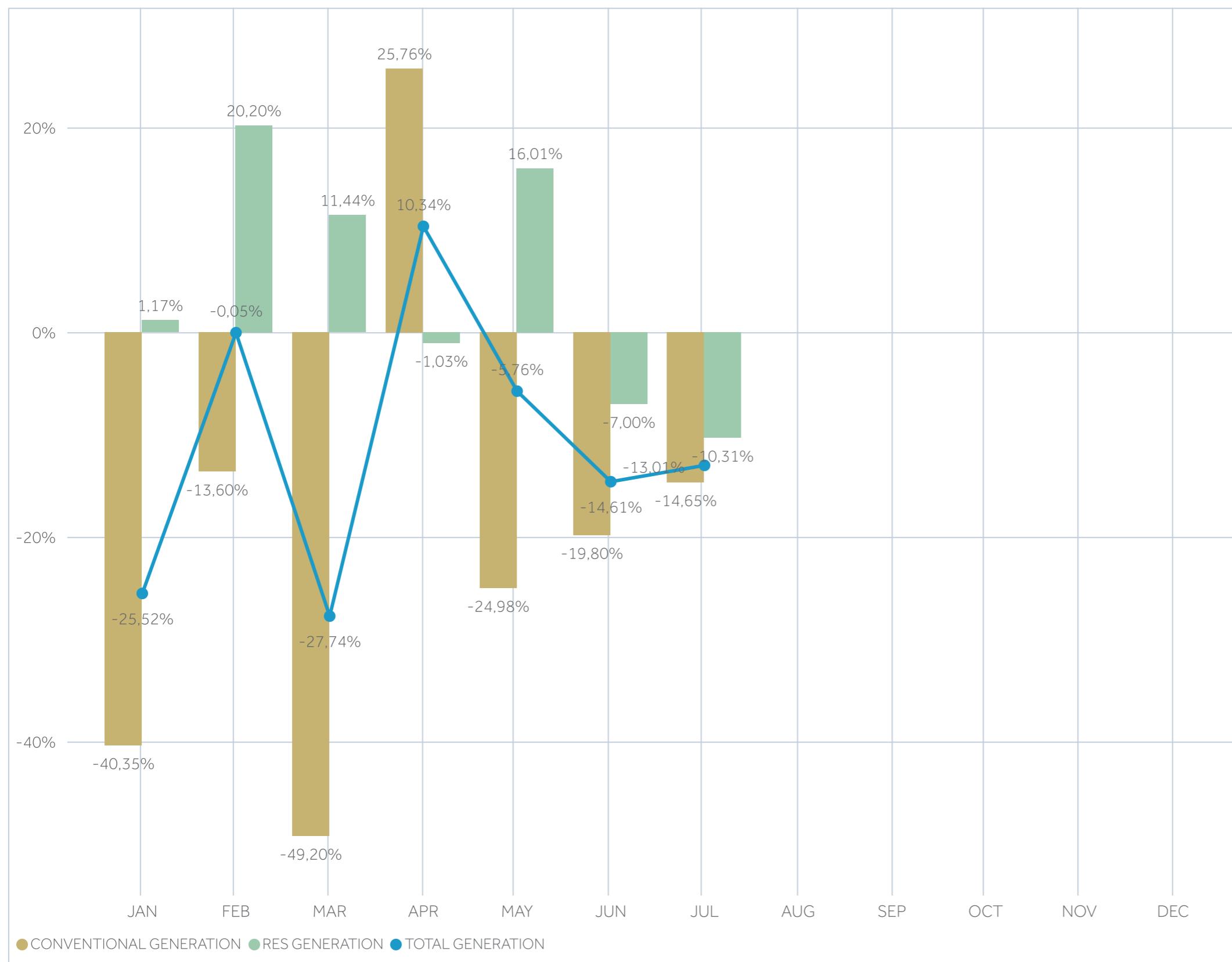
Conventional Generation includes the generation of large scale hydro units, as well as the generation of dispatchable co-generation units that has not been characterised as high efficiency Co-Generation.

RES Generation includes

- generation in the point of injection to the System from RES generation connected directly to System substations (System RES)
- generation from dispatchable co-generation units that has been characterised as high efficiency Co-Generation (System RES)
- estimation of generation in the Distribution Network (Network RES), which results from certified measurements for the Medium Voltage and measurements and estimations for the Low Voltage.

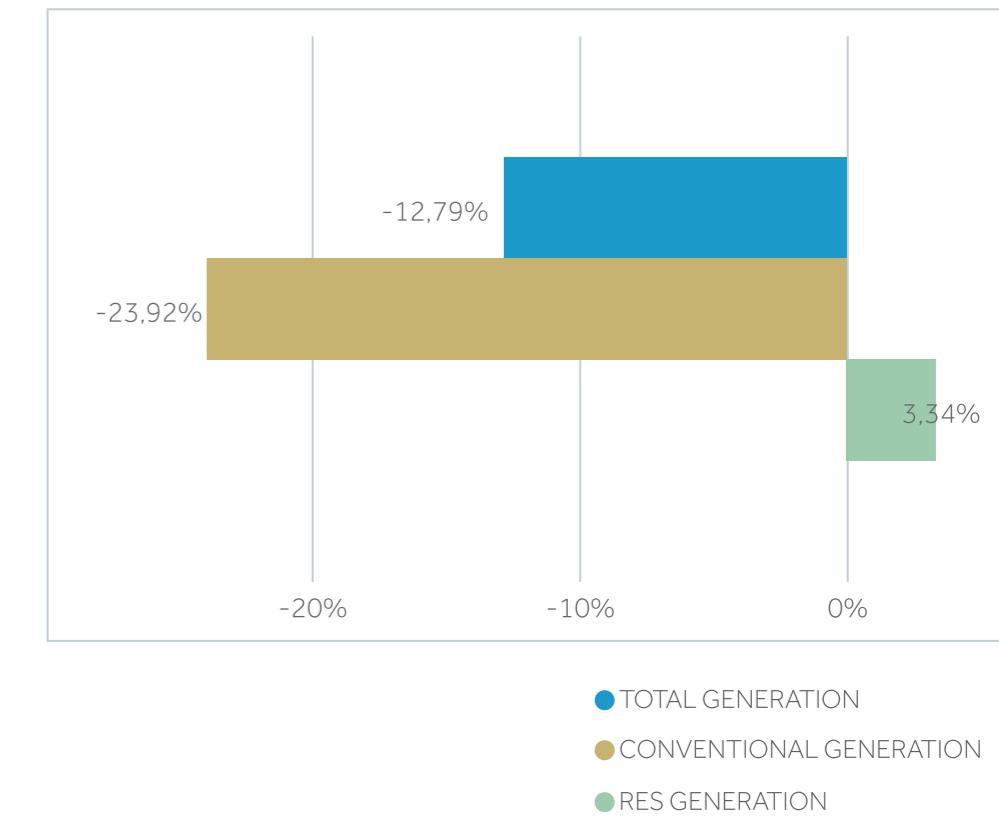
## Variation of Generation in comparison to the previous year

### VARIATION OF GENERATION in comparison to the same month of the previous year



### VARIATION OF GENERATION

of current year in comparison to the same period of the previous year



### Notes

Variation of generation refers to the net generation.

Total Generation includes the generation of conventional production units and RES units and refers to the injection point in the System.

Conventional Generation includes the generation of large scale hydro units, as well as the generation of dispatchable co-generation units that has not been characterised as high efficiency Co-Generation.

RES Generation includes

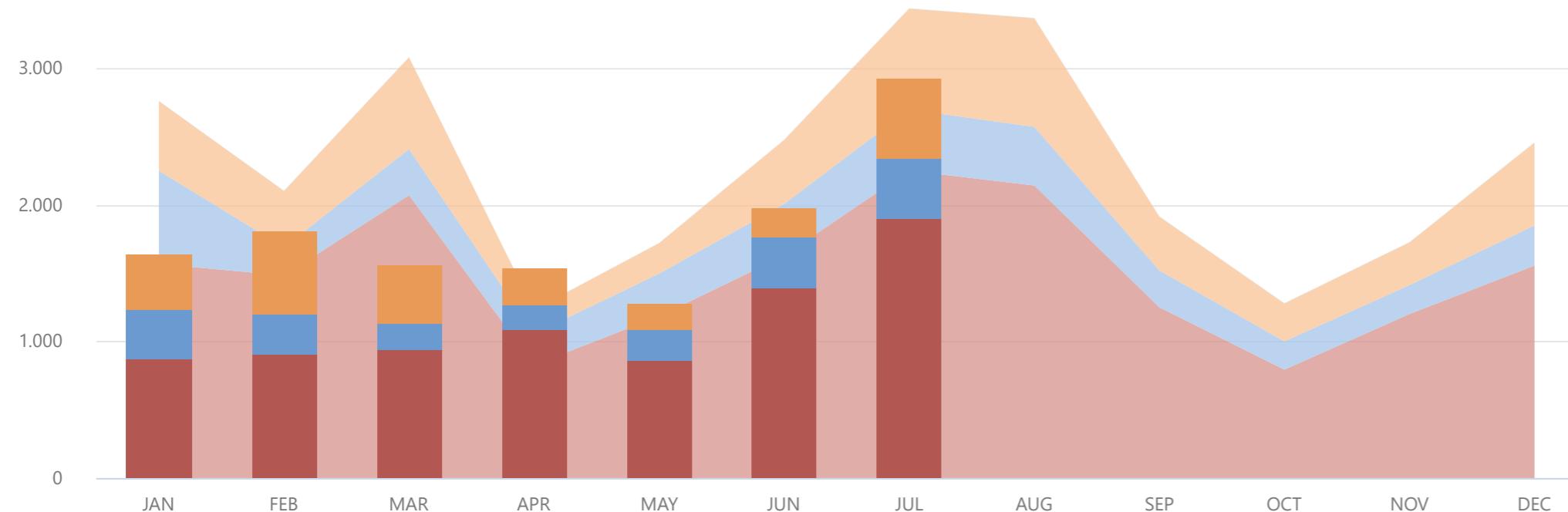
- generation in the point of injection to the System from RES generation connected directly to System substations (System RES)
- generation from dispatchable co-generation units that has been characterised as high efficiency Co-Generation (System RES)
- estimation of generation in the Distribution Network (Network RES), which results from certified measurements for the Medium Voltage and measurements and estimations for the Low Voltage.

## Conventional Generation Mix

### EVOLUTION OF CONVENTIONAL GENERATION MIX (GWh)



Annex 2.2



#### OTHER FUEL

2022 2023

#### LIGNITE

2022 2023

#### HYDRO

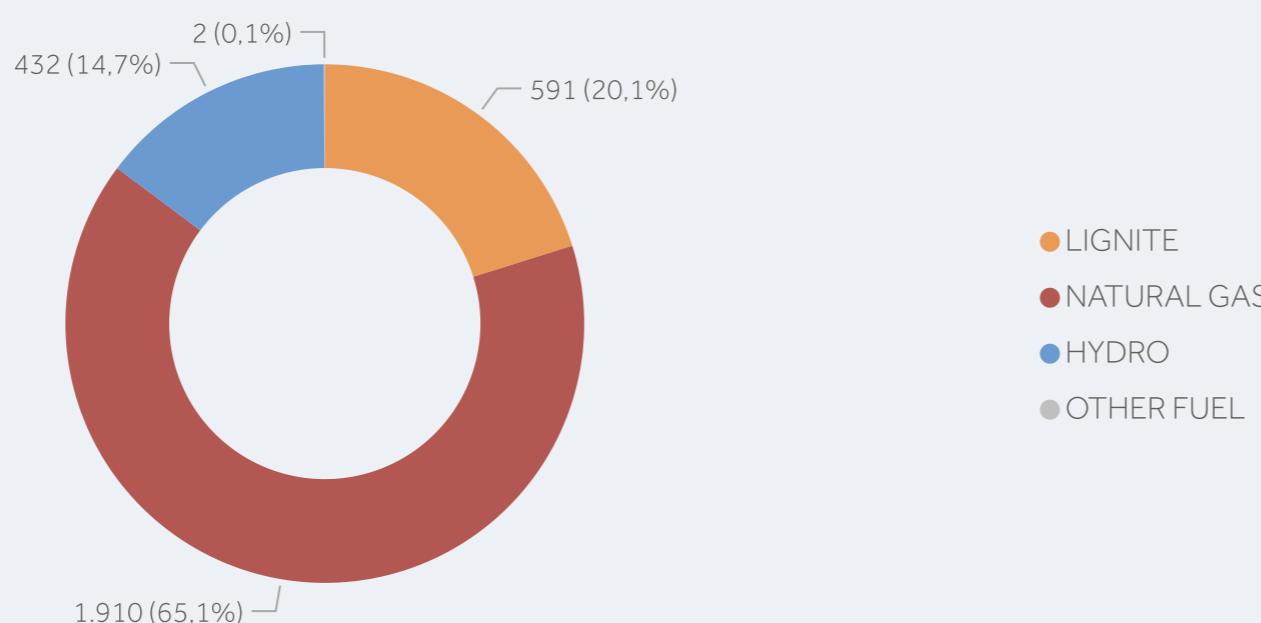
2022 2023

#### NATURAL GAS

2022 2023

### CONVENTIONAL GENERATION MIX PER FUEL CATEGORY (GWh)

July 2023



#### Notes

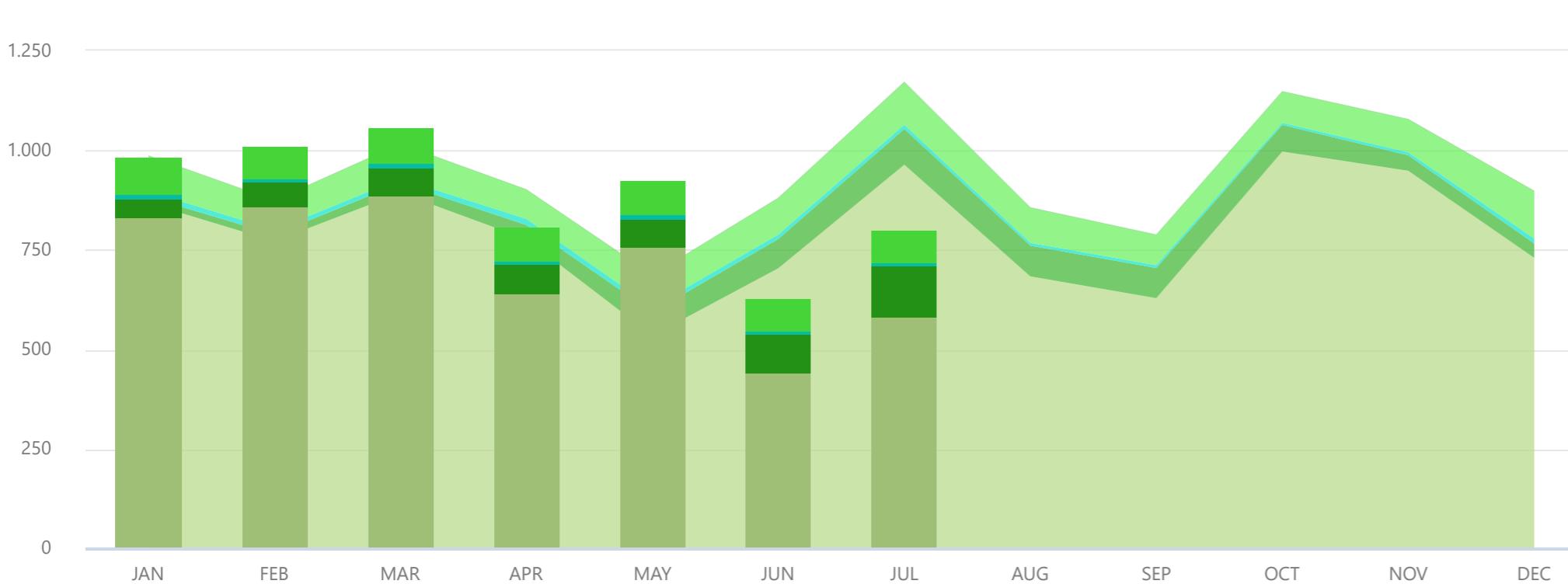
- Generation refers to the injection point in the System.
- Conventional Generation includes the generation of large scale hydro units, as well as the generation of dispatchable co-generation units that has not been characterised as high efficiency Co-Generation.

# System RES Generation Mix

## EVOLUTION OF SYSTEM RES GENERATION MIX (GWh)

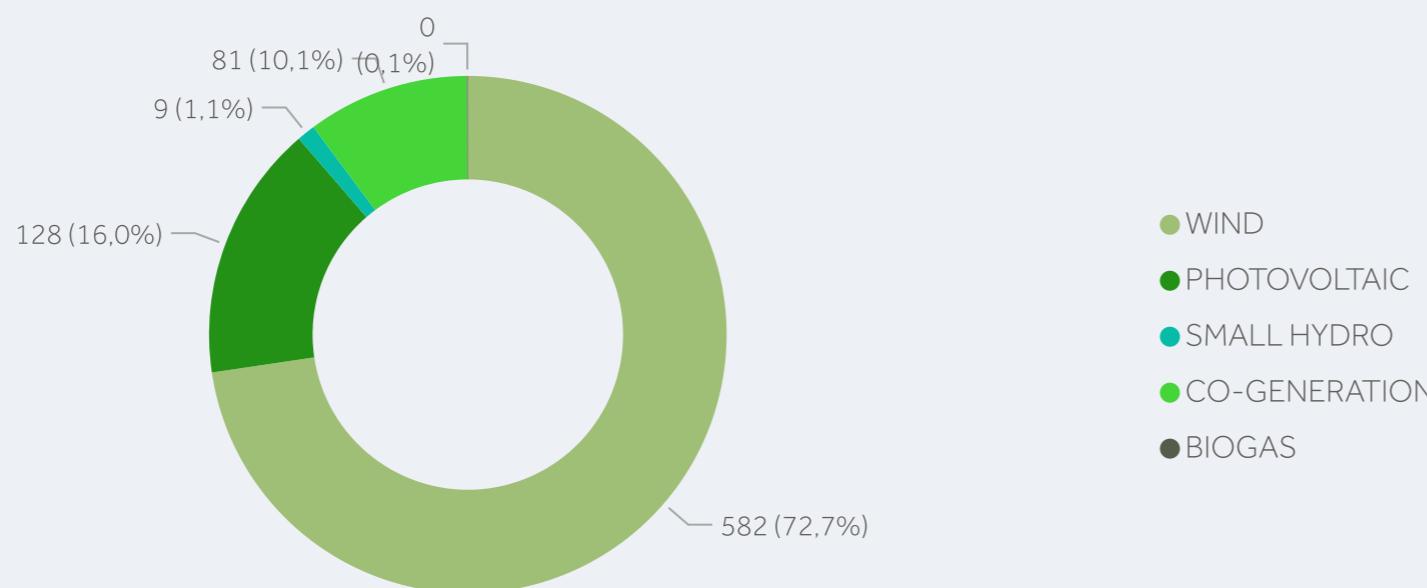


Annex 2.3



## SYSTEM RES GENERATION MIX PER RES TECHNOLOGY (GWh)

July 2023



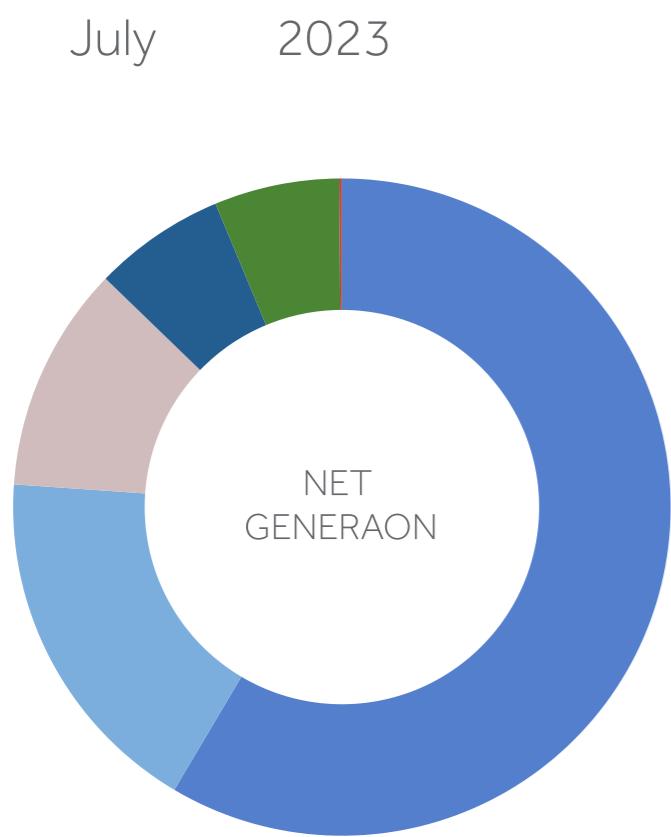
### Notes

RES Generation includes:

- generation in the point of injection to the System from RES generation connected directly to System substations (System RES)
- generation from dispatchable co-generation units that has been characterised as high efficiency Co-Generation (System RES)

## Conventional Generation per Producer

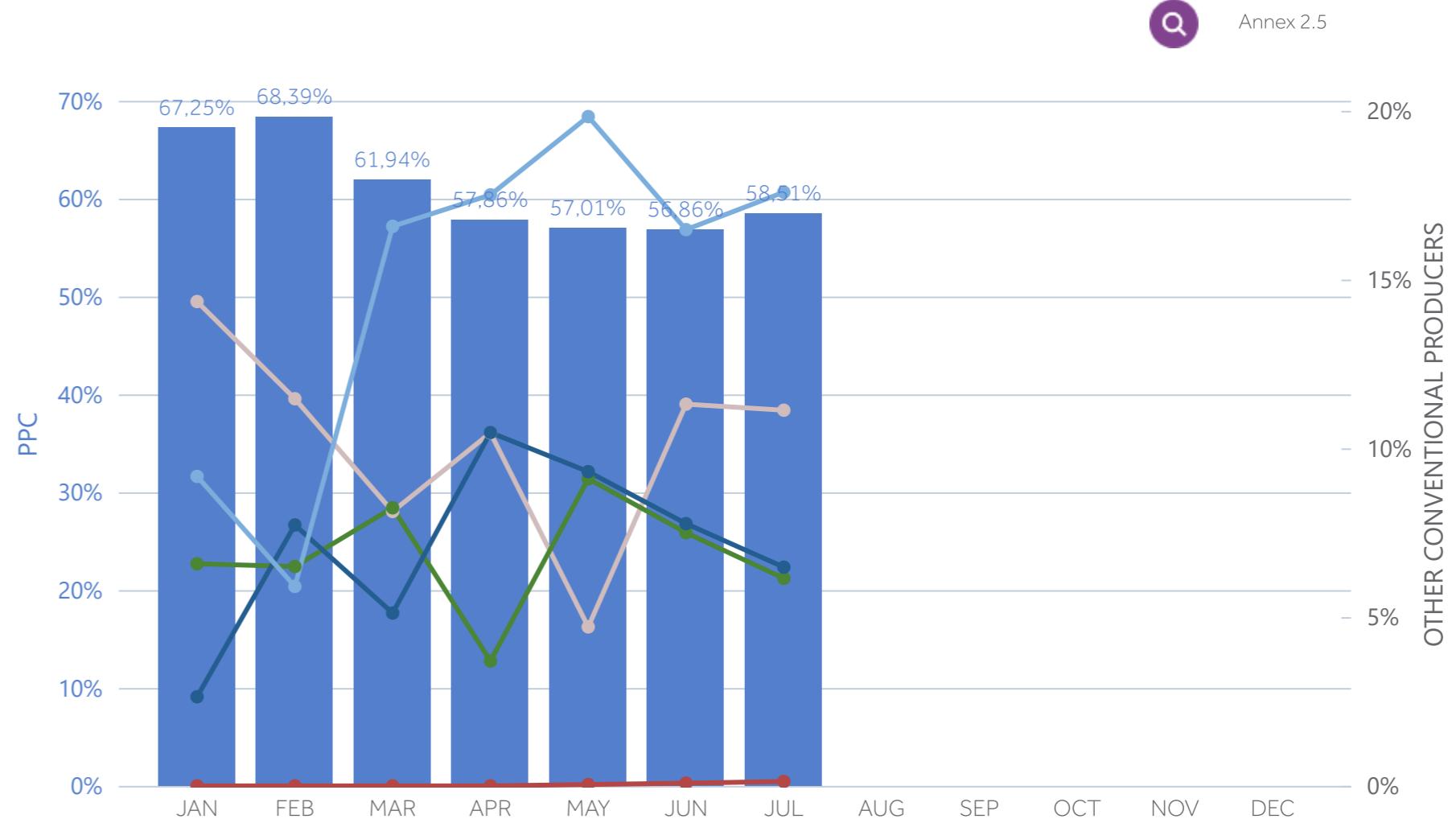
NET GENERATION (GWh) - NET CAPACITY (MW)



 Annex 2.4

GWh	%	PRODUCER
1.754,88	58,51%	PPC
527,63	17,59%	MYTILINEOS
333,85	11,13%	ELPEDISON
194,49	6,48%	KORINTHOS POWER
184,47	6,15%	HERON 2 VIOTIAS
3,94	0,13%	HERON

PERCENTAGE OF NET CONVENTIONAL GENERATION IN THE SYSTEM (%)



 Annex 2.5

NET  
CAPACITY

MW	%	PRODUCER
8.670,00	71,74%	PPC
1.572,70	13,01%	MYTILINEOS
828,00	6,85%	ELPEDISON
433,70	3,59%	HERON 2 VIOTIAS
433,46	3,59%	KORINTHOS POWER
147,76	1,22%	HERON

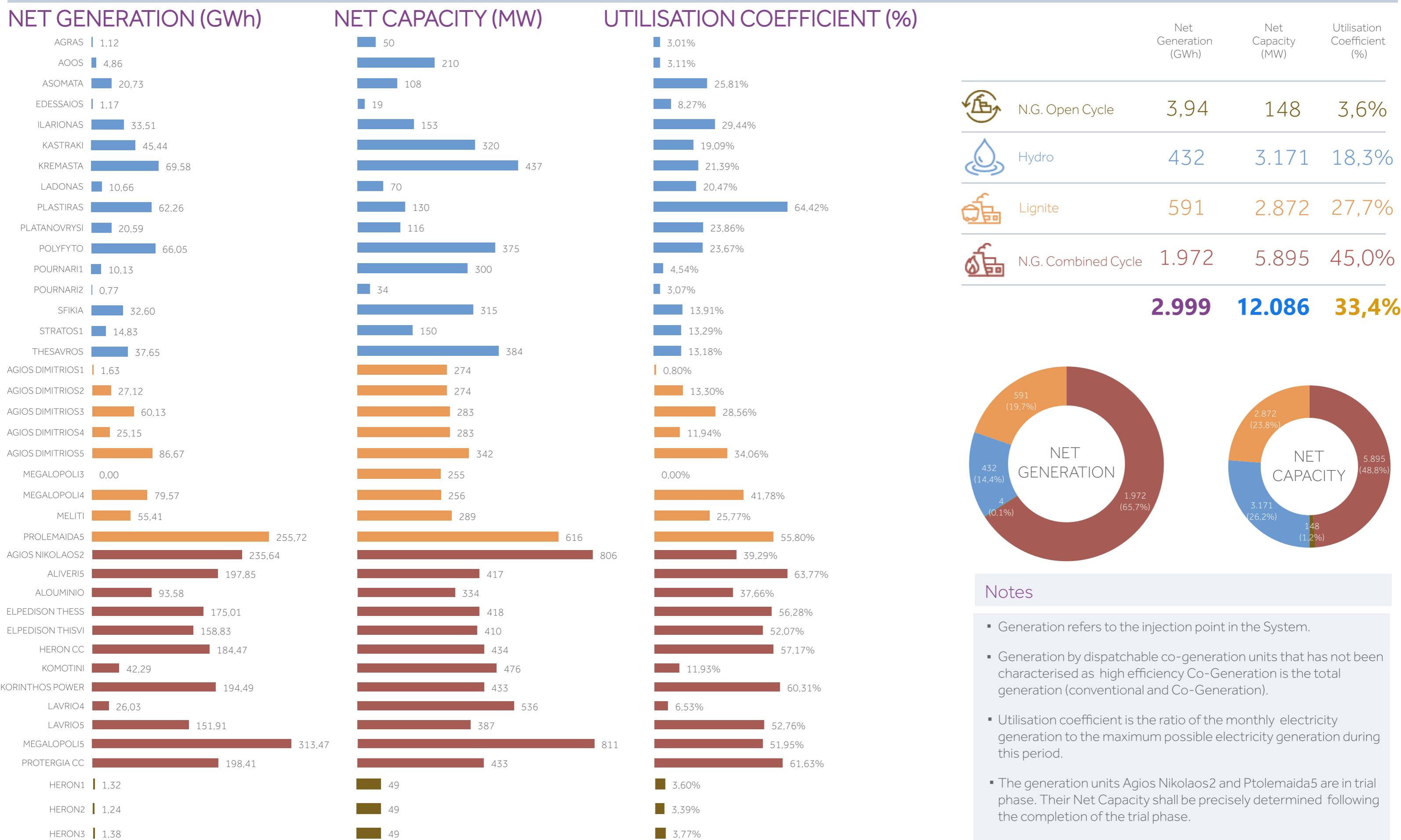
### Notes

- Generation refers to the injection point in the System.
- Conventional Generation includes the generation of large scale hydro units, as well as the generation of dispatchable co-generation units that has not been characterised as high efficiency Co-Generation.

# Net Generation - Net Capacity by Dispatchable Generation Units in the System



Annex 2.6



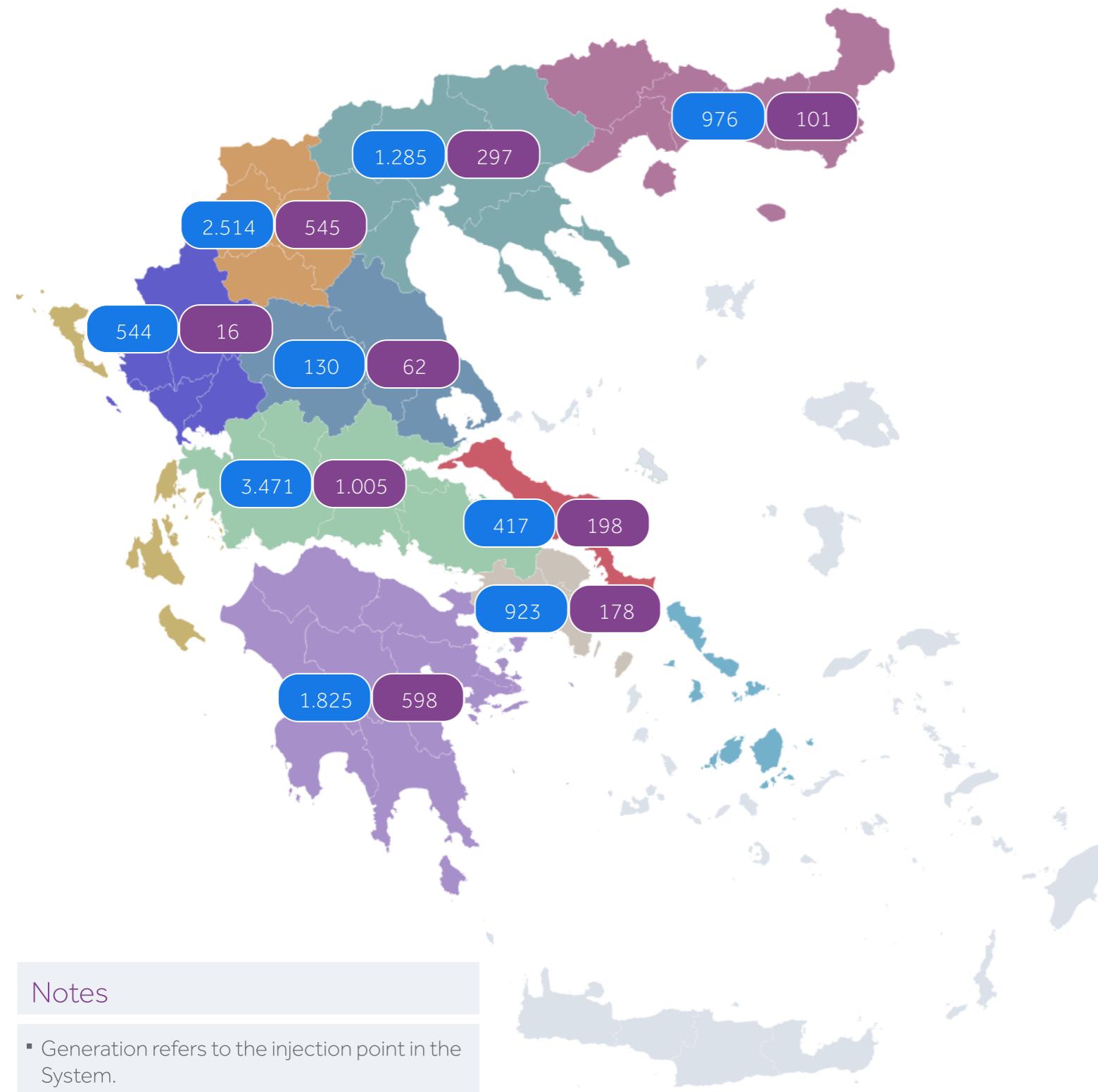
# Geographical Distribution of Conventional Generation



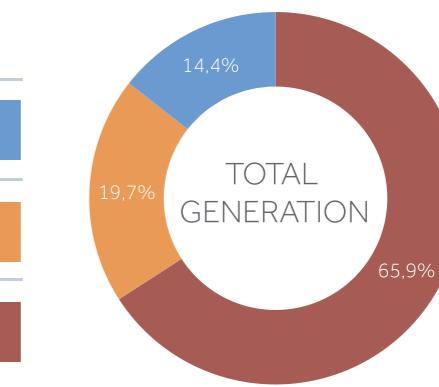
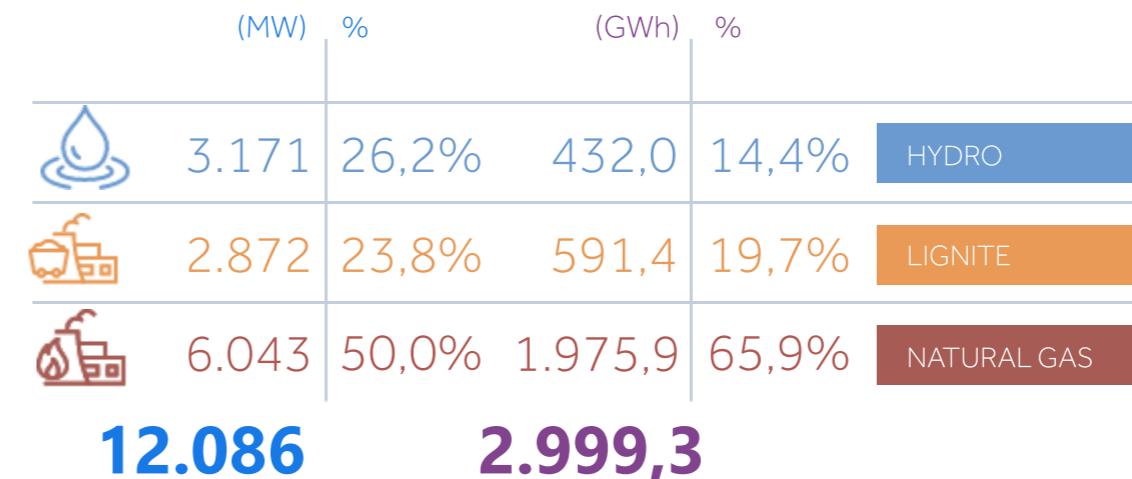
Annex 2.7

## GEOGRAPHICAL DISTRIBUTION OF CONVENTIONAL GENERATION

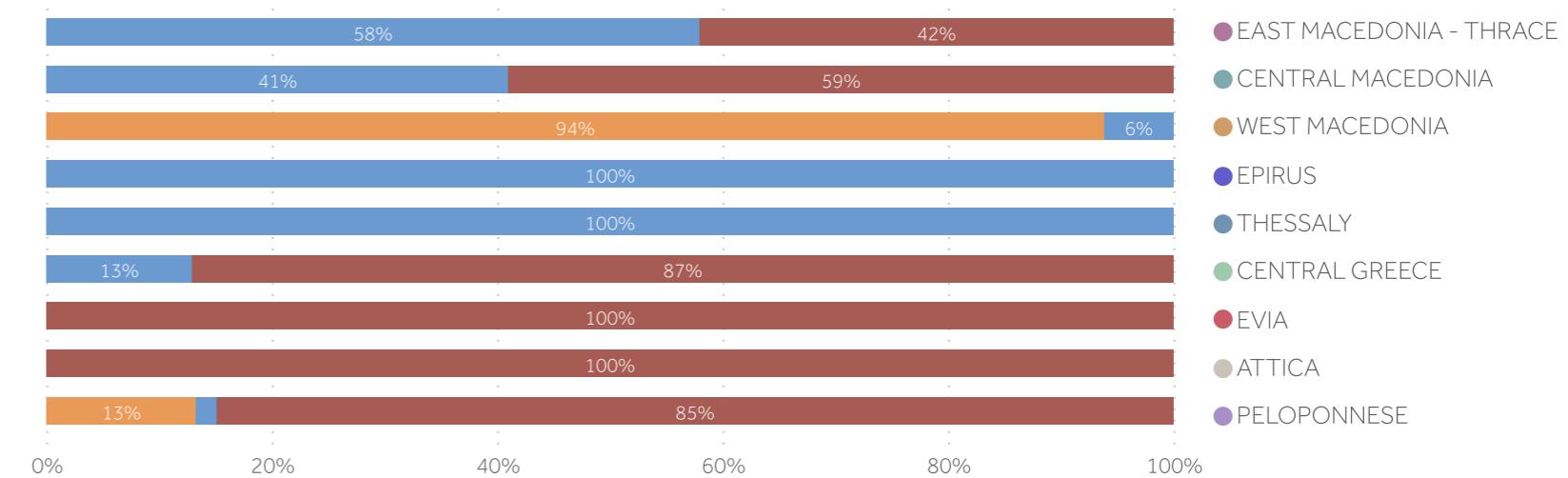
NET CAPACITY (MW) | NET GENERATION (GWh)



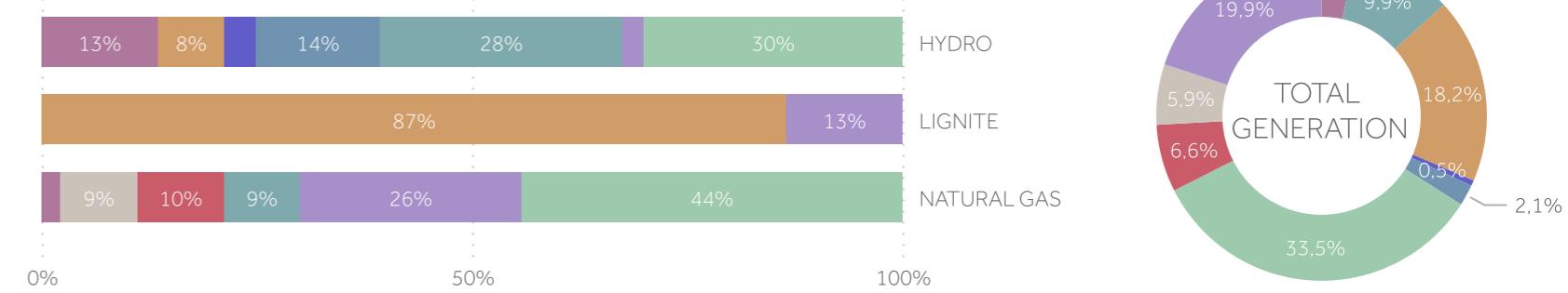
## ENERGY MIX OF CONVENTIONAL GENERATION



per geographical area (%)



## GEOGRAPHICAL DISTRIBUTION OF CONVENTIONAL GENERATION per fuel category (%)



### Notes

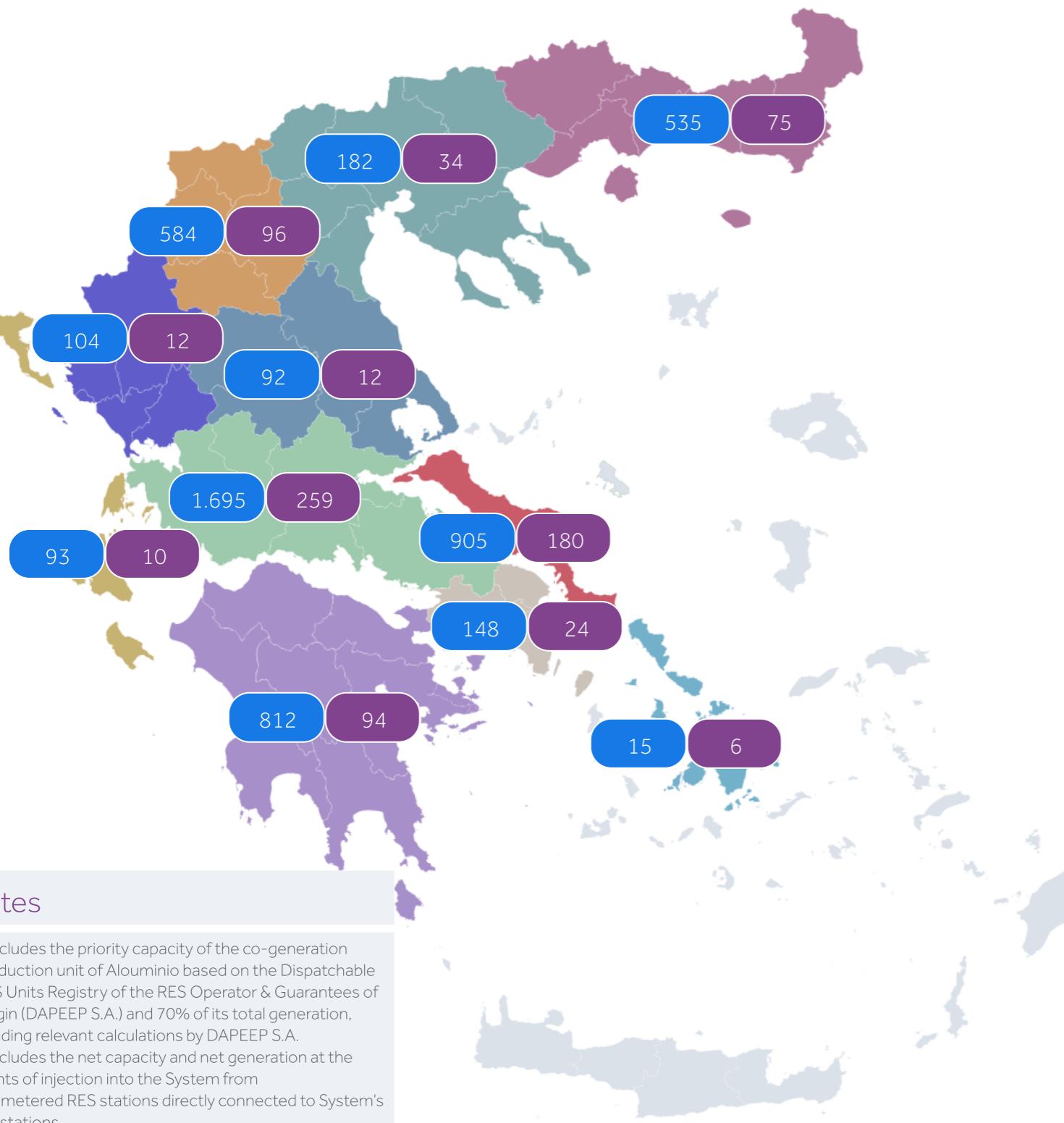
- Generation refers to the injection point in the System.
- Generation by dispatchable co-generation units that has not been characterised as high efficiency Co-Generation is the total generation (conventional and Co-Generation).

# Geographical Distribution of System RES Generation

 Annex 2.8

## GEOGRAPHICAL DISTRIBUTION OF SYSTEM RES GENERATION

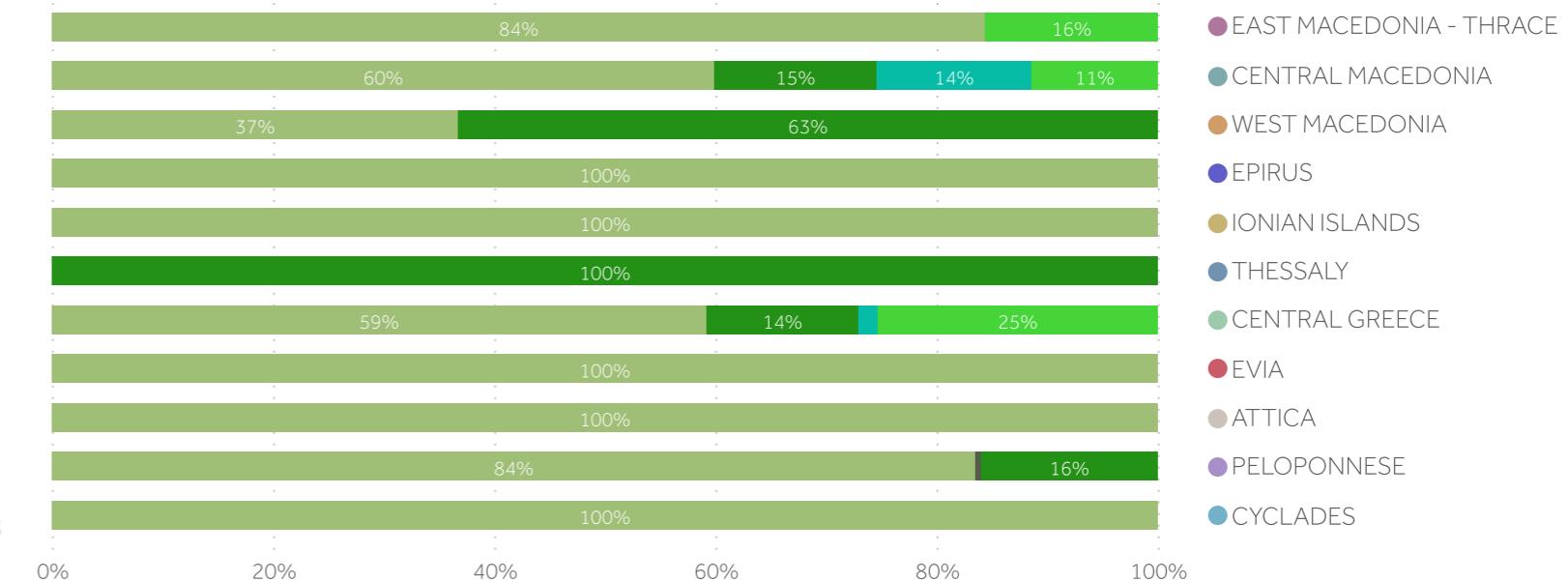
NET CAPACITY (MW) | NET GENERATION (GWh)



## ENERGY MIX OF SYSTEM RES GENERATION

	(MW)	%	(GWh)	%	
	4.302	83,3%	581,8	72,7%	WIND
	657	12,7%	128,3	16,0%	PHOTOVOLTAIC
	40	0,8%	9,2	1,1%	SMALL HYDRO
	167	3,2%	81,0	10,1%	CO-GENERATION
	2	0,0%	0,5	0,1%	BIOGAS
<b>5.167</b>		<b>800,8</b>			

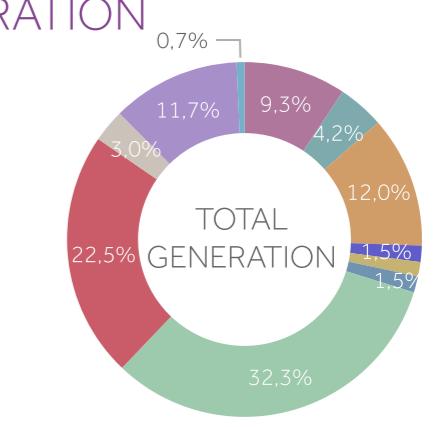
per geographical area (%)



## GEOGRAPHICAL DISTRIBUTION OF SYSTEM RES GENERATION

per RES technology (%)

11%	6%	31%	9%	13%	26%	WIND
47%	9%	12%	28%	0%	0%	PHOTOVOLTAIC
52%	48%	0%	0%	0%	0%	SMALL HYDRO
14%	5%	81%	0%	0%	0%	CO-GENERATION
100%	0%	0%	0%	0%	0%	BIOGAS



## Energy on Interconnections

### COMMERCIAL PROGRAMS<sup>1</sup> (GWh)

Variation in comparison to the same month of the previous year

Total

Imports

**1.079** GWh

Exports

**322** GWh

Balance

**757** GWh

↑ 188,78%

↓ 63,36%

↑ 1.263 GWh

### PHYSICAL ENERGY FLOWS<sup>2</sup> (GWh)

Variation in comparison to the same month of the previous year

Total

Imports

**879** GWh

Exports

**160** GWh

Balance

**720** GWh

↑ 165,45%

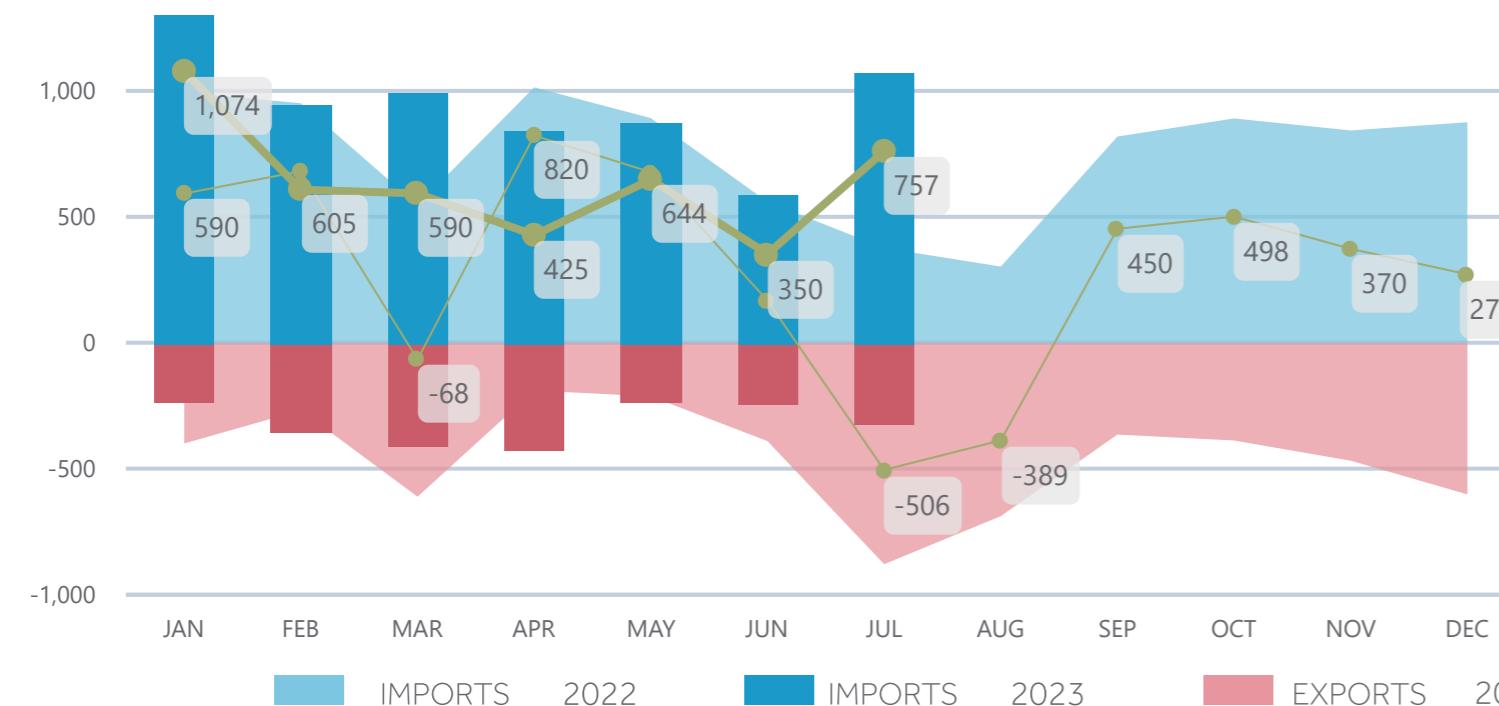
↓ 81,03%

↑ 1.230 GWh

### EVOLUTION OF COMMERCIAL PROGRAMS (GWh)



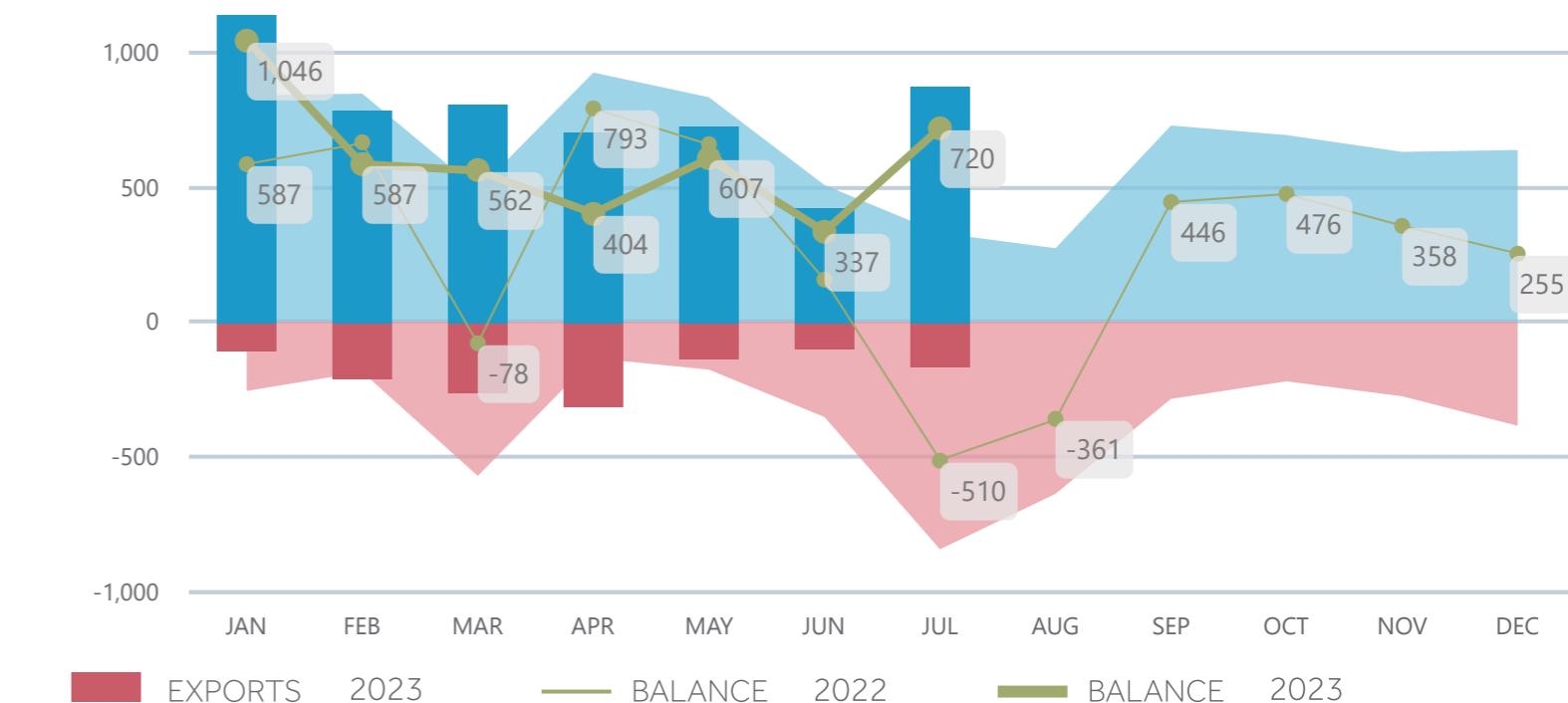
Annex 3.1



### EVOLUTION OF PHYSICAL ENERGY FLOWS (GWh)



Annex 3.2



#### Notes

1 Balance of commercial programs in the interconnections is calculated as the difference "Commercial Program Imports" - "Commercial Program Exports" for all the interconnections.

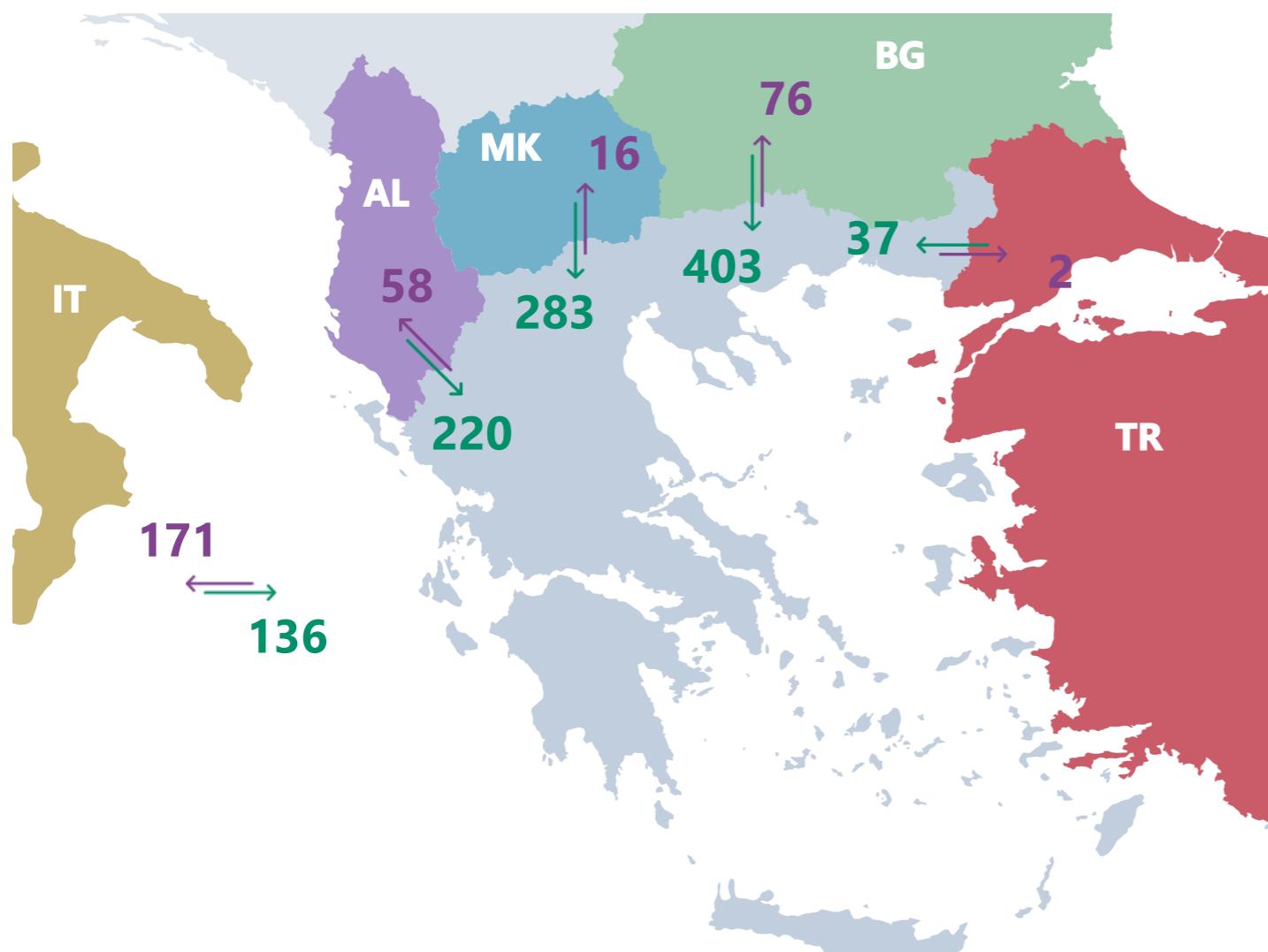
2 Balance of physical energy flows on the interconnections is calculated as the difference "Physical Flow Imports" - "Physical Flow Exports" for all the interconnections.

## Commercial Programs per Interconnection

### Interconnection Balance

**757** GWh **1.263** GWh

Variation in comparison to  
the same month of the  
previous year

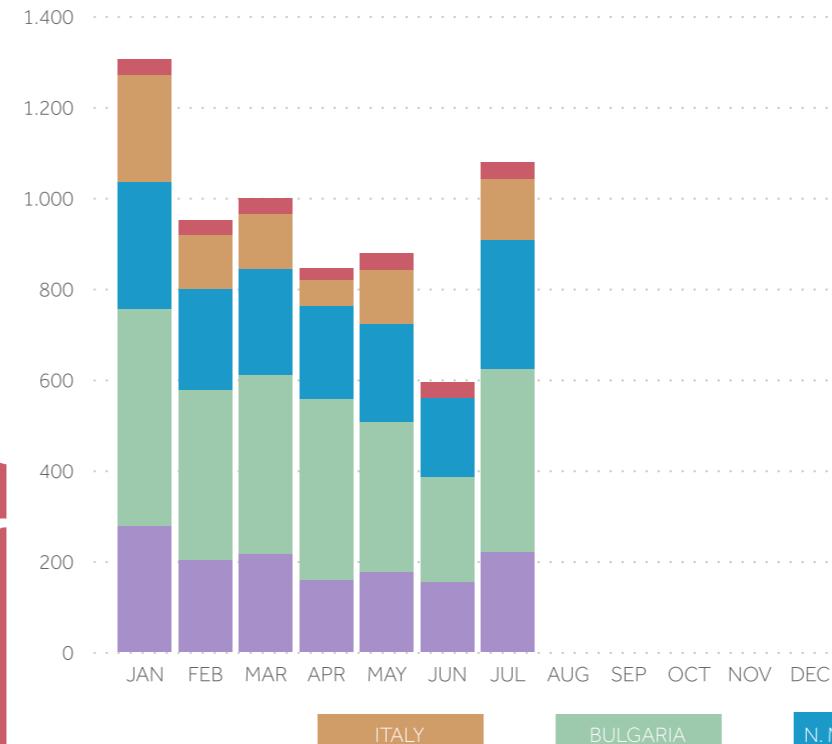


### COMMERCIAL PROGRAMS PER INTERCONNECTION

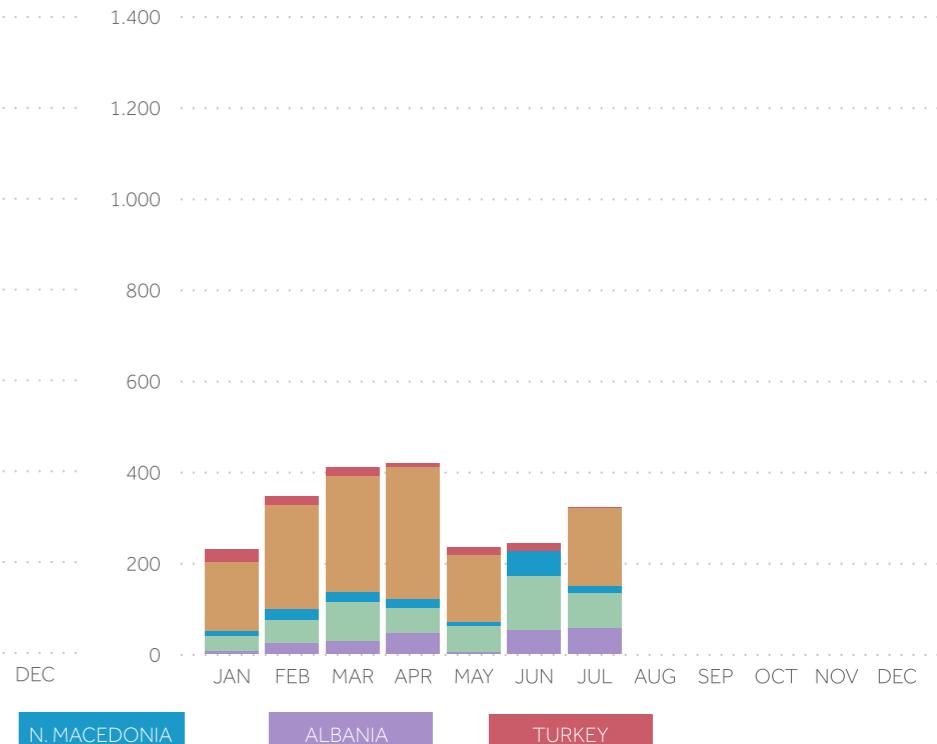


Annex 3.3-3.4

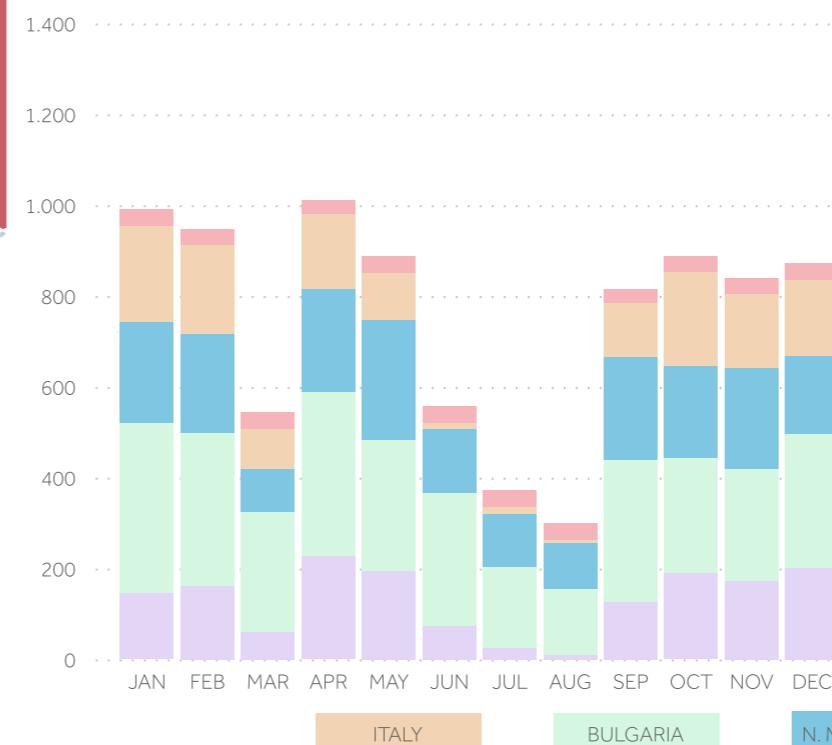
#### IMPORTS 2023



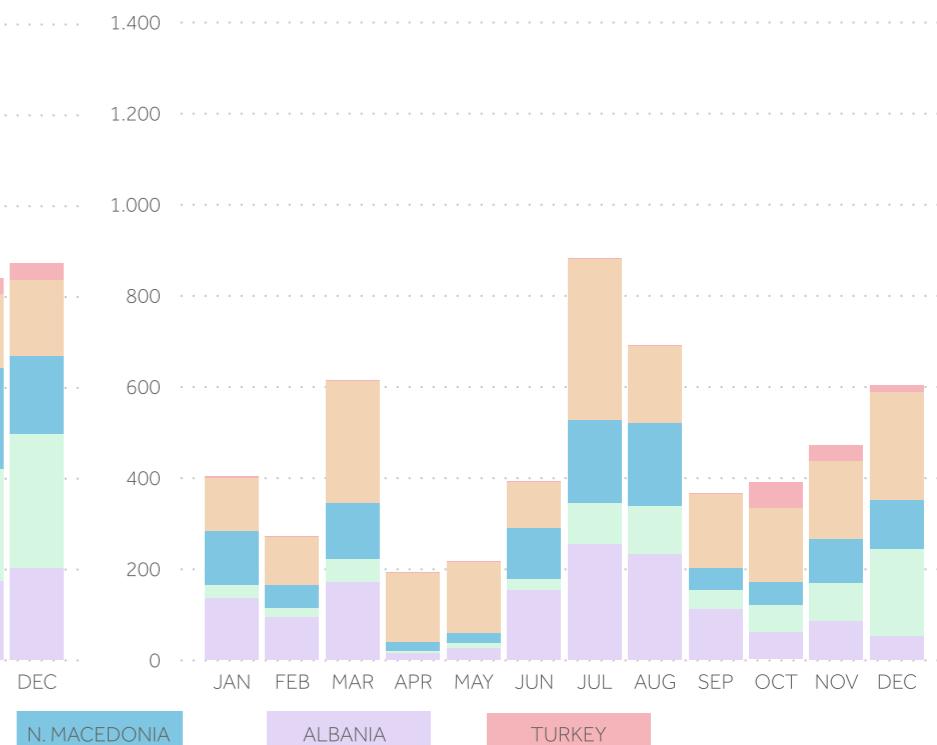
#### EXPORTS 2023



#### IMPORTS 2022



#### EXPORTS 2022



## 1.1 Ζήτηση ανά Κατηγορία Πελατών (GWh)

**2022**

MONTH	SYSTEM TO NETWORK BOUNDARY SUBSTATIONS	DEMAND SUPPLIED BY GENERATION UNITS ON THE NETWORK	HIGH VOLTAGE CONSUMERS	MINES	SELF-PRODUCTION	PUMPING	SYSTEM LOSSES	CRETE INTERCONNECTION	TOTAL DEMAND	SYSTEM DEMAND
JAN	3.522,91	544,04	597,00	26,37	17,83	6,70	135,59	30,71	4.881,14	4.337,10
FEB	2.931,62	532,60	520,61	23,27	18,56	13,97	113,46	22,43	4.176,51	3.643,91
MAR	3.217,66	670,52	593,67	27,03	16,13	12,17	132,69	21,88	4.691,75	4.021,23
APR	2.157,97	766,85	560,25	23,92	26,07	28,79	97,46	36,49	3.697,80	2.930,94
MAY	2.264,01	831,88	577,75	23,28	23,58	18,46	93,17	68,73	3.900,86	3.068,98
JUN	2.739,92	812,17	548,12	21,37	19,85	16,53	112,67	58,24	4.328,86	3.516,70
JUL	3.342,34	917,51	554,78	22,30	14,25	13,21	135,30	19,79	5.019,48	4.101,98
AUG	3.169,61	796,82	500,40	21,99	13,51	12,80	114,56	31,57	4.661,26	3.864,43
SEP	2.425,32	764,06	551,63	19,33	23,19	15,88	95,75	20,70	3.915,86	3.151,80
OCT	2.149,02	736,29	569,86	19,79	28,09	27,25	94,58	19,19	3.644,06	2.907,78
NOV	2.409,72	521,60	568,99	19,34	23,40	20,63	95,85	28,18	3.687,70	3.166,10
DEC	2.852,15	468,44	563,12	22,51	27,54	20,22	105,85	22,82	4.082,64	3.614,20
	<b>33.182,23</b>	<b>8.362,77</b>	<b>6.706,18</b>	<b>270,50</b>	<b>251,99</b>	<b>206,59</b>	<b>1.326,92</b>	<b>380,73</b>	<b>50.687,92</b>	<b>42.325,15</b>

**2023**

MONTH	SYSTEM TO NETWORK BOUNDARY SUBSTATIONS	DEMAND SUPPLIED BY GENERATION UNITS ON THE NETWORK	HIGH VOLTAGE CONSUMERS	MINES	SELF-PRODUCTION	PUMPING	SYSTEM LOSSES	CRETE INTERCONNECTION	TOTAL DEMAND	SYSTEM DEMAND
ΙΑΝ	2.902,05	565,23	550,50	24,29	27,31	32,02	100,46	42,47	4.244,32	3.679,09
ΦΕΒ	2.696,45	679,62	506,42	22,26	28,08	18,03	92,67	53,96	4.097,50	3.417,88
ΜΑΡ	2.397,34	820,25	563,47	21,76	36,47	35,45	82,89	51,36	4.008,98	3.188,73
ΑΠΡ	2.015,27	845,94	524,52	20,05	35,11	33,45	77,94	56,79	3.609,07	2.763,13
ΜΑΙ	2.056,85	838,21	535,61	19,05	34,00	37,71	77,79	62,33	3.661,52	2.823,32
ΙΟΥΝ	2.227,82	946,20	507,69	15,49	34,72	22,53	74,84	69,04	3.898,33	2.952,13
ΙΟΥΛ	3.659,37	1.074,21	546,54	17,81	27,11	11,23	110,06	83,65	5.529,96	4.455,75
ΑΥΓ										
ΣΕΠ										
ΟΚΤ										
ΝΟΕ										
ΔΕΚ										
	<b>17.955,14</b>	<b>5.769,65</b>	<b>3.734,74</b>	<b>140,70</b>	<b>222,80</b>	<b>190,42</b>	<b>616,64</b>	<b>419,59</b>	<b>29.049,68</b>	<b>23.280,03</b>



At a glance



Energy Balance



Demand



Generation



Interconnections



Annex

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MONTHLY ENERGY BULLETIN |

July 2023

| 2nd VERSION

## 1.2 Maximum and Minimum Hourly Total Demand (MW)

**2022**

MONTH	MAXIMUM TOTAL DEMAND	MAXIMUM TOTAL DEMAND DATE	MAXIMUM TOTAL DEMAND TIME	MINIMUM TOTAL DEMAND	MINIMUM TOTAL DEMAND DATE	MINIMUM TOTAL DEMAND TIME
JAN	9.223	24/01/2022	12:00	4.057	02/01/2022	5:00
FEB	8.311	03/02/2022	20:00	4.212	21/02/2022	5:00
MAR	8.467	10/03/2022	14:00	4.173	28/03/2022	5:00
APR	6.980	18/04/2022	21:00	3.295	25/04/2022	5:00
MAY	7.220	27/05/2022	13:00	3.626	02/05/2022	7:00
JUN	8.668	23/06/2022	14:00	3.988	12/06/2022	7:00
JUL	9.512	28/07/2022	14:00	4.324	11/07/2022	5:00
AUG	8.635	01/08/2022	14:00	4.168	15/08/2022	7:00
SEP	7.574	01/09/2022	14:00	3.741	26/09/2022	4:00
OCT	6.230	01/10/2022	14:00	3.532	31/10/2022	4:00
NOV	7.382	30/11/2022	13:00	3.555	07/11/2022	3:00
DEC	7.186	22/12/2022	20:00	3.754	26/12/2022	6:00

**2023**

MONTH	MAXIMUM TOTAL DEMAND	MAXIMUM TOTAL DEMAND DATE	MAXIMUM TOTAL DEMAND TIME	MINIMUM TOTAL DEMAND	MINIMUM TOTAL DEMAND DATE	MINIMUM TOTAL DEMAND TIME
JAN	7.923	31/01/2023	20:00	3.734	01/01/2023	6:00
FEB	8.673	07/02/2023	13:00	3.722	28/02/2023	5:00
MAR	7.453	17/03/2023	14:00	3.756	27/03/2023	5:00
APR	6.632	06/04/2023	21:00	3.370	17/04/2023	5:00
MAY	6.290	26/05/2023	13:00	3.387	08/05/2023	4:00
JUN	7.726	28/06/2023	14:00	3.571	05/06/2023	4:00
JUL	10.385	26/07/2023	15:00	4.352	02/07/2023	7:00
AUG						
SEP						
OCT						
NOV						
DEC						

## 1.3 Maximum and Minimum Hourly System Demand (MW)

**2022**

MONTH	MAXIMUM SYSTEM DEMAND	MAXIMUM SYSTEM DEMAND DATE	MAXIMUM SYSTEM DEMAND TIME	MINIMUM SYSTEM DEMAND	MINIMUM SYSTEM DEMAND DATE	MINIMUM SYSTEM DEMAND TIME
JAN	8.622	27/01/2022	20:00	2.786	02/01/2022	13:00
FEB	7.937	03/02/2022	20:00	3.221	19/02/2022	13:00
MAR	8.052	10/03/2022	20:00	2.351	25/03/2022	12:00
APR	6.680	18/04/2022	21:00	1.016	24/04/2022	15:00
MAY	6.231	31/05/2022	22:00	2.412	20/05/2022	15:00
JUN	7.119	30/06/2022	22:00	2.813	19/06/2022	16:00
JUL	8.048	27/07/2022	22:00	2.877	10/07/2022	11:00
AUG	7.592	01/08/2022	22:00	2.226	15/08/2022	15:00
SEP	6.690	01/09/2022	21:00	1.982	25/09/2022	15:00
OCT	5.792	25/10/2022	20:00	1.846	30/10/2022	12:00
NOV	6.937	29/11/2022	20:00	2.662	01/11/2022	12:00
DEC	7.012	22/12/2022	20:00	2.240	25/12/2022	15:00

**2023**

MONTH	MAXIMUM SYSTEM DEMAND	MAXIMUM SYSTEM DEMAND DATE	MAXIMUM SYSTEM DEMAND TIME	MINIMUM SYSTEM DEMAND	MINIMUM SYSTEM DEMAND DATE	MINIMUM SYSTEM DEMAND TIME
JAN	7.515	31/01/2023	20:00	2.629	01/01/2023	15:00
FEB	8.226	09/02/2023	20:00	2.181	27/02/2023	15:00
MAR	6.655	17/03/2023	20:00	1.080	26/03/2023	15:00
APR	6.328	06/04/2023	21:00	1.216	15/04/2023	14:00
MAY	5.633	02/05/2023	21:00	1.453	07/05/2023	16:00
JUN	6.518	28/06/2023	22:00	2.144	05/06/2023	15:00
JUL	8.960	21/07/2023	21:00	2.735	09/07/2023	15:00
AUG						
SEP						
OCT						
NOV						
DEC						



At a glance



Energy Balance



Demand



Generation



Interconnections



Annex

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MONTHLY ENERGY BULLETIN |

July 2023

| 2nd VERSION

## 1.4 Average Hourly Total Demand and System Demand (MW) Working Days of Month

**2022**

TIME	SYSTEM DEMAND	TOTAL DEMAND
1	5.960	6.183
2	5.585	5.810
3	5.334	5.560
4	5.211	5.438
5	5.131	5.362
6	5.142	5.377
7	5.187	5.457
8	5.479	6.028
9	5.568	6.750
10	5.418	7.325
11	5.194	7.690
12	5.041	7.942
13	5.044	8.166
14	5.120	8.298
15	5.080	8.183
16	5.087	7.942
17	5.250	7.710
18	5.695	7.602
19	6.320	7.546
20	6.856	7.436
21	7.027	7.293
22	7.090	7.305
23	6.712	6.926
24	6.457	6.670

**2023**

TIME	SYSTEM DEMAND	TOTAL DEMAND
1	6.660	6.877
2	6.248	6.463
3	5.950	6.167
4	5.764	5.983
5	5.638	5.858
6	5.647	5.870
7	5.730	5.994
8	5.964	6.566
9	5.929	7.277
10	5.736	7.937
11	5.484	8.393
12	5.323	8.733
13	5.359	9.039
14	5.525	9.284
15	5.599	9.254
16	5.697	9.055
17	5.991	8.855
18	6.530	8.714
19	7.221	8.598
20	7.753	8.400
21	7.908	8.191
22	7.946	8.166
23	7.635	7.849
24	7.261	7.470

## 1.5 Hourly Total Demand and System Demand (MW) Date of Monthly Maximum and Minimum

Date of Maximum 26/07/2023

TIME	SYSTEM DEMAND	TOTAL DEMAND
1	7.810	7.994
2	7.310	7.503
3	6.874	7.068
4	6.710	6.901
5	6.554	6.750
6	6.513	6.704
7	6.587	6.804
8	6.727	7.262
9	6.774	7.973
10	6.688	8.668
11	6.499	9.144
12	6.424	9.582
13	6.501	9.981
14	6.739	10.343
15	6.887	10.385
16	7.038	10.205
17	7.366	9.966
18	7.959	9.840
19	8.492	9.652
20	8.748	9.363
21	8.817	9.107
22	8.883	9.121
23	8.532	8.776
24	8.204	8.462

Date of Minimum 02/07/2023

TIME	SYSTEM DEMAND	TOTAL DEMAND
1	5.058	5.282
2	4.766	4.983
3	4.545	4.754
4	4.384	4.590
5	4.304	4.504
6	4.262	4.456
7	4.092	4.352
8	3.942	4.567
9	3.636	4.918
10	3.436	5.433
11	3.184	5.752
12	3.100	6.050
13	3.033	6.253
14	3.039	6.378
15	3.019	6.352
16	3.127	6.222
17	3.418	6.036
18	3.967	6.011
19	4.812	6.104
20	5.490	6.139
21	5.854	6.155
22	6.155	6.383
23	5.997	6.222
24	5.712	5.938



At a glance



Energy Balance



Demand



Generation



Interconnections



Annex

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MONTHLY ENERGY BULLETIN |

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## 1.6 Analysis of Load Representatives' Supply (GWh)

LOAD REPRESENTATIVE	2023-01	2023-02	2023-03	2023-04	2023-05	2023-06	2023-07	TOTAL
PPC	2.453,9	2.457,2	2.368,5	2.080,3	1.955,0	2.058,6	3.128,8	<b>16.502,4</b>
HERON	285,6	283,1	283,4	256,6	357,8	397,8	496,4	<b>2.360,8</b>
MYTILINEOS	431,2	295,1	287,0	256,8	265,9	304,9	412,7	<b>2.253,5</b>
ELPEDISON	248,0	235,0	238,1	209,0	228,2	227,3	308,8	<b>1.694,5</b>
NRG	188,1	192,7	193,3	168,6	171,8	200,4	283,1	<b>1.398,0</b>
WATT AND VOLT	84,7	82,4	106,4	157,1	179,3	171,3	158,4	<b>939,6</b>
ATTIKI GSC	110,1	113,2	115,4	103,0	106,6	120,0	166,4	<b>834,7</b>
ZENITH	89,0	87,2	81,6	72,5	81,0	86,4	135,8	<b>633,5</b>
VOLTERRA	74,6	74,6	80,5	70,0	74,6	83,1	97,9	<b>555,3</b>
PPC_USP	38,1	37,9	34,2	29,1	33,8	31,3	46,6	<b>251,0</b>
VOLTON	40,1	37,9	33,8	27,9	29,1	30,4	44,1	<b>243,4</b>
KEN	21,2	20,2	17,5	14,4	12,6	16,5	23,3	<b>125,7</b>
ELINOIL	6,8	6,3	6,5	5,4	5,5	5,7	7,3	<b>43,5</b>
EUNICE TRAD	5,2	5,2	5,5	5,2	4,8	5,8	7,4	<b>39,0</b>
VIENER	6,5	6,0	7,1	5,7	2,3	2,5	3,1	<b>33,1</b>
ELTA	6,1	5,6	5,0	3,7	3,2	3,0	2,7	<b>29,4</b>
OTE	2,0	1,9	1,9	1,7	1,8	1,9	2,4	<b>13,6</b>
MYTILINEOS_USP	2,1	2,0	1,8	1,5	1,8	1,7	2,6	<b>13,5</b>
ELPEDISON_USP	1,9	1,9	1,7	1,5	1,7	1,6	2,4	<b>12,5</b>
HERON_USP	1,6	1,6	1,4	1,2	1,4	1,3	2,3	<b>10,9</b>
SOLAR ENERGY	1,1	1,1	1,2	1,2	0,9	1,3	1,9	<b>8,8</b>
NRG_USP	1,2	1,2	1,1	0,9	1,0	1,0	1,8	<b>8,1</b>
KOR_POWER	0,8	0,3	0,6	0,2	0,4	0,3	0,2	<b>2,8</b>
HERON2_V	0,6	0,4	0,5	0,3	0,4	0,4	0,2	<b>2,8</b>
MARKOU	0,6	0,5	0,7	0,2	0,5	0,1	0,1	<b>2,7</b>
VIOLAR	0,3	0,2	0,1	0,1	0,1	0,1	0,1	<b>1,0</b>
<b>TOTAL</b>	<b>4.101,4</b>	<b>3.950,9</b>	<b>3.874,7</b>	<b>3.474,3</b>	<b>3.521,4</b>	<b>3.754,5</b>	<b>5.336,9</b>	<b>28.014,1</b>



At a glance



Energy Balance



Demand



Generation



Interconnections



Annex

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MONTHLY ENERGY BULLETIN |

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## 1.7 Monthly Market Share of Load Representatives per voltage level (GWh/%)

LOAD REPRESENTATIVE	HV(GWh)	HV(%)	MV(GWh)	MV(%)	LV(GWh)	LV(%)	TOTAL(GWh)	TOTAL(%)
PPC	359,31	59,62%	440,08	38,46%	2.329,44	64,89%	3.128,83	58,63%
HERON	99,29	16,48%	172,54	15,08%	224,59	6,26%	496,43	9,30%
MYTILINEOS	5,28	0,88%	183,00	15,99%	224,45	6,25%	412,73	7,73%
ELPEDISON	74,25	12,32%	71,39	6,24%	163,21	4,55%	308,85	5,79%
NRG	7,50	1,24%	97,21	8,50%	178,41	4,97%	283,12	5,30%
ATTIKI GSC	0,00	0,00%	77,85	6,80%	88,56	2,47%	166,41	3,12%
WATT AND VOLT	50,74	8,42%	9,45	0,83%	98,25	2,74%	158,44	2,97%
ZENITH	0,00	0,00%	5,41	0,47%	130,42	3,63%	135,83	2,55%
VOLTERRA	5,96	0,99%	64,53	5,64%	27,38	0,76%	97,87	1,83%
PPC_USP	0,00	0,00%	0,00	0,00%	46,56	1,30%	46,56	0,87%
VOLTON	0,00	0,00%	5,75	0,50%	38,35	1,07%	44,11	0,83%
KEN	0,00	0,00%	2,03	0,18%	21,31	0,59%	23,34	0,44%
EUNICE TRAD	0,01	0,00%	4,18	0,37%	3,17	0,09%	7,36	0,14%
ELINOIL	0,00	0,00%	3,94	0,34%	3,34	0,09%	7,28	0,14%
VIENER	0,00	0,00%	3,10	0,27%	0,00	0,00%	3,10	0,06%
ELTA	0,00	0,00%	1,49	0,13%	1,25	0,03%	2,74	0,05%
MYTILINEOS_USP	0,00	0,00%	0,00	0,00%	2,60	0,07%	2,60	0,05%
OTE	0,00	0,00%	1,14	0,10%	1,30	0,04%	2,45	0,05%
ELPEDISON_USP	0,00	0,00%	0,00	0,00%	2,37	0,07%	2,37	0,04%
HERON_USP	0,00	0,00%	0,00	0,00%	2,34	0,07%	2,34	0,04%
SOLAR ENERGY	0,00	0,00%	1,03	0,09%	0,85	0,02%	1,89	0,04%
NRG_USP	0,00	0,00%	0,00	0,00%	1,78	0,05%	1,78	0,03%
HERON2_V	0,18	0,03%	0,00	0,00%	0,00	0,00%	0,18	0,00%
KOR_POWER	0,16	0,03%	0,00	0,00%	0,00	0,00%	0,16	0,00%
MARKOU	0,00	0,00%	0,09	0,01%	0,00	0,00%	0,09	0,00%
VIOLAR	0,00	0,00%	0,07	0,01%	0,01	0,00%	0,08	0,00%
<b>TOTAL</b>	<b>602,68</b>	<b>100,00%</b>	<b>1.144,28</b>	<b>100,00%</b>	<b>3.589,93</b>	<b>100,00%</b>	<b>5.336,89</b>	<b>100,00%</b>



At a glance



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## 2.1 Evolution of Energy Mix (GWh)

**2022**

MONTH	LIGNITE	NATURAL GAS	HYDRO	OTHER FUEL	SYSTEM RES	NETWORK RES	CRETE INTERCONNECTION (RES)	CONVENTIONAL GENERATION	SYSTEM GENERATION	TOTAL GENERATION
JAN	509,089	1.566,934	682,671	2,202	986,986	544,040	2,327	2.760,896	3.750,209	4.294,249
FEB	412,584	1.483,143	205,772	2,031	874,822	532,601	1,467	2.103,530	2.979,819	3.512,420
MAR	671,611	2.070,201	337,682	2,034	1.016,516	670,517	1,302	3.081,528	4.099,346	4.769,863
APR	176,127	827,202	228,322	1,916	902,052	766,852	2,020	1.233,567	2.137,639	2.904,491
MAY	222,826	1.184,083	312,270	2,209	687,767	831,875	0,382	1.721,388	2.409,537	3.241,412
JUN	468,099	1.627,528	379,159	2,338	880,934	812,167	0,428	2.477,124	3.358,486	4.170,653
JUL	739,377	2.249,903	447,562	2,396	1.171,811	917,507	1,108	3.439,238	4.612,157	5.529,664
AUG	794,904	2.141,674	429,492	2,452	856,810	796,824	0,315	3.368,522	4.225,647	5.022,471
SEP	394,231	1.249,569	269,580	2,357	788,578	764,063	1,324	1.915,737	2.705,639	3.469,702
OCT	277,407	793,115	207,132	2,491	1.148,214	736,286	3,813	1.280,145	2.432,172	3.168,458
NOV	312,781	1.200,292	211,790	2,155	1.078,388	521,601	2,650	1.727,018	2.808,056	3.329,657
DEC	606,588	1.554,965	293,816	2,287	898,398	468,437	2,756	2.457,656	3.358,810	3.827,247
	<b>5.585,624</b>	<b>17.948,609</b>	<b>4.005,248</b>	<b>26,868</b>	<b>11.291,276</b>	<b>8.362,770</b>	<b>19,892</b>	<b>27.566,349</b>	<b>38.877,517</b>	<b>47.240,287</b>

**2023**

MONTH	LIGNITE	NATURAL GAS	HYDRO	OTHER FUEL	SYSTEM RES	NERWORK RES	CRETE INTERCONNECTION (RES)	CONVENTIONAL GENERATION	SYSTEM GENERATION	TOTAL GENERATION
JAN	405,532	885,725	353,362	2,251	984,504	565,229	1,565	1.646,870	2.632,939	3.198,168
FEB	611,167	917,775	286,531	1,893	1.012,430	679,618	1,404	1.817,366	2.831,200	3.510,818
MAR	428,766	949,211	187,044	0,300	1.058,859	820,246	2,430	1.565,321	2.626,610	3.446,856
APR	275,156	1.099,621	175,728	0,777	806,813	845,941	0,915	1.551,282	2.359,010	3.204,951
MAY	199,692	873,382	216,867	1,421	924,831	838,206	0,334	1.291,362	2.216,527	3.054,733
JUN	218,540	1.395,369	371,042	1,604	628,615	946,202	0,104	1.986,555	2.615,274	3.561,476
JUL	591,388	1.910,425	431,952	1,564	800,795	1.074,208	0,003	2.935,329	3.736,127	4.810,335
AUG										
SEP										
OCT										
NOV										
DEC										
	<b>2.730,241</b>	<b>8.031,508</b>	<b>2.022,526</b>	<b>9,810</b>	<b>6.216,847</b>	<b>5.769,650</b>	<b>6,755</b>	<b>12.794,085</b>	<b>19.017,687</b>	<b>24.787,337</b>

## 2.2 Evolution of Conventional Generation Mix (GWh)

**2022**

MONTH	LIGNITE	NATURAL GAS	HYDRO	OTHER FUEL	TOTAL CONVENTIONAL GENERATION
JAN	509,09	1.566,93	682,67	2,20	2.760,90
FEB	412,58	1.483,14	205,77	2,03	2.103,53
MAR	671,61	2.070,20	337,68	2,03	3.081,53
APR	176,13	827,20	228,32	1,92	1.233,57
MAY	222,83	1.184,08	312,27	2,21	1.721,39
JUN	468,10	1.627,53	379,16	2,34	2.477,12
JUL	739,38	2.249,90	447,56	2,40	3.439,24
AUG	794,90	2.141,67	429,49	2,45	3.368,52
SEP	394,23	1.249,57	269,58	2,36	1.915,74
OCT	277,41	793,12	207,13	2,49	1.280,15
NOV	312,78	1.200,29	211,79	2,16	1.727,02
DEC	606,59	1.554,97	293,82	2,29	2.457,66
	<b>5.585,62</b>	<b>17.948,61</b>	<b>4.005,25</b>	<b>26,87</b>	<b>27.566,35</b>

**2023**

MONTH	LIGNITE	NATURAL GAS	HYDRO	OTHER FUEL	TOTAL CONVENTIONAL GENERATION
JAN	405,53	885,73	353,36	2,25	1.646,87
FEB	611,17	917,78	286,53	1,89	1.817,37
MAR	428,77	949,21	187,04	0,30	1.565,32
APR	275,16	1.099,62	175,73	0,78	1.551,28
MAY	199,69	873,38	216,87	1,42	1.291,36
JUN	218,54	1.395,37	371,04	1,60	1.986,56
JUL	591,39	1.910,43	431,95	1,56	2.935,33
AUG					
SEP					
OCT					
NOV					
DEC					
	<b>2.730,24</b>	<b>8.031,51</b>	<b>2.022,53</b>	<b>9,81</b>	<b>12.794,09</b>

## 2.3 Evolution of System RES Generation Mix (GWh)

**2022**

MONTH	WIND	PHOTOVOLTAIC	SMALL HYDRO	CO-GENERATION	BIOGAS	TOTAL SYSTEM RES GENERATION
JAN	867,62	15,38	13,96	90,02	0,00	986,99
FEB	772,18	16,53	11,67	74,45	0,00	874,82
MAR	893,40	24,16	11,12	87,84	0,00	1.016,52
APR	777,32	35,39	15,22	74,12	0,00	902,05
MAY	535,53	58,51	12,14	81,59	0,00	687,77
JUN	704,37	73,22	11,17	92,18	0,00	880,93
JUL	964,10	89,47	10,55	107,69	0,00	1.171,81
AUG	683,92	77,03	7,11	88,76	0,00	856,81
SEP	629,26	75,68	6,92	76,71	0,00	788,58
OCT	997,11	66,55	5,30	79,25	0,00	1.148,21
NOV	948,86	38,73	7,47	83,32	0,00	1.078,39
DEC	730,42	35,81	12,59	119,58	0,00	898,40
	<b>9.504,09</b>	<b>606,45</b>	<b>125,22</b>	<b>1.055,52</b>	<b>0,00</b>	<b>11.291,28</b>

**2023**

MONTH	WIND	PHOTOVOLTAIC	SMALL HYDRO	CO-GENERATION	BIOGAS	TOTAL SYSTEM RES GENERATION
JAN	831,74	46,08	12,31	94,37	0,00	984,50
FEB	860,06	61,06	8,37	82,94	0,00	1.012,43
MAR	887,65	70,80	11,76	88,64	0,00	1.058,86
APR	639,87	73,36	11,13	82,46	0,00	806,81
MAY	758,79	69,92	11,51	84,61	0,00	924,83
JUN	442,59	95,69	10,44	79,88	0,01	628,61
JUL	581,85	128,27	9,21	81,01	0,46	800,79
AUG						
SEP						
OCT						
NOV						
DEC						
	<b>5.002,56</b>	<b>545,17</b>	<b>74,73</b>	<b>593,91</b>	<b>0,47</b>	<b>6.216,85</b>



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## 2.4 Analysis of Conventional Generation per Producer (GWh/%)

PRODUCER	NET GENERATION (GWh)	NET GENERATION (%)	NET CAPACITY (MW)	NET CAPACITY (%)
PPC	1.754,88	58,51%	8.670,00	71,74%
MYTILINEOS	527,63	17,59%	1.572,70	13,01%
ELPEDISON	333,85	11,13%	828,00	6,85%
KORINTHOS POWER	194,49	6,48%	433,46	3,59%
HERON 2 VIOTIAS	184,47	6,15%	433,70	3,59%
HERON	3,94	0,13%	147,76	1,22%
<b>TOTAL</b>	<b>2.999,27</b>	<b>100,00%</b>	<b>12.085,62</b>	<b>100,00%</b>

## 2.5 Evolution of Conventional Generation per Producer (GWh)

PRODUCER	2023-01	2023-02	2023-03	2023-04	2023-05	2023-06	2023-07	TOTAL
PPC	1.154,8	1.285,0	1.012,2	934,7	774,3	1.165,3	1.754,9	<b>8.081,2</b>
MYTILINEOS	157,5	111,1	271,0	282,8	269,3	337,7	527,6	<b>1.957,1</b>
ELPEDISON	246,5	215,5	132,8	169,0	64,0	231,7	333,9	<b>1.393,4</b>
KORINTHOS POWER	45,4	145,2	83,6	169,2	126,4	159,2	194,5	<b>923,5</b>
HERON 2 VIOTIAS	113,0	122,1	134,7	59,8	123,6	153,7	184,5	<b>891,4</b>
HERON	0,0	0,0	0,0	0,0	0,5	1,6	3,9	<b>6,1</b>
<b>TOTAL</b>	<b>1.717,1</b>	<b>1.878,9</b>	<b>1.634,3</b>	<b>1.615,4</b>	<b>1.358,3</b>	<b>2.049,3</b>	<b>2.999,3</b>	<b>13.252,6</b>

## 2.6 Net Generation - Net Capacity of Conventional Production Units in the System

PRODUCTION UNIT	PRODUCER	FUEL/TECHNOLOGY	NET CAPACITY (MW)	NET GENERATION (GWh)	UTILISATION COEFFICIENT (%)
AGIOS DIMITRIOS1	PPC	LIGNITE	274,00	1,63	0,80%
AGIOS DIMITRIOS2	PPC	LIGNITE	274,00	27,12	13,30%
AGIOS DIMITRIOS3	PPC	LIGNITE	283,00	60,13	28,56%
AGIOS DIMITRIOS4	PPC	LIGNITE	283,00	25,15	11,94%
AGIOS DIMITRIOS5	PPC	LIGNITE	342,00	86,67	34,06%
MEGALOPOLI3	PPC	LIGNITE	255,00	0,00	0,00%
MEGALOPOLI4	PPC	LIGNITE	256,00	79,57	41,78%
MELITI	PPC	LIGNITE	289,00	55,41	25,77%
PROLEMAIDA5	PPC	LIGNITE	616,00	255,72	55,80%
AGRAS	PPC	HYDRO	50,00	1,12	3,01%
AOOS	PPC	HYDRO	210,00	4,86	3,11%
ASOMATA	PPC	HYDRO	108,00	20,73	25,81%
EDESSAIOS	PPC	HYDRO	19,00	1,17	8,27%
ILARIONAS	PPC	HYDRO	153,00	33,51	29,44%
KASTRAKI	PPC	HYDRO	320,00	45,44	19,09%
KREMASTA	PPC	HYDRO	437,20	69,58	21,39%
LADONAS	PPC	HYDRO	70,00	10,66	20,47%
PLASTIRAS	PPC	HYDRO	129,90	62,26	64,42%
PLATANOVRYSI	PPC	HYDRO	116,00	20,59	23,86%
POLYFYTO	PPC	HYDRO	375,00	66,05	23,67%
POURNARI1	PPC	HYDRO	300,00	10,13	4,54%
POURNARI2	PPC	HYDRO	33,60	0,77	3,07%
SFIKIA	PPC	HYDRO	315,00	32,60	13,91%
STRATOS1	PPC	HYDRO	150,00	14,83	13,29%
THESAVROS	PPC	HYDRO	384,00	37,65	13,18%
AGIOS NIKOLAOS2	MYTILINEOS	NATURAL GAS	806,00	235,64	39,29%
ALIVERI5	PPC	NATURAL GAS	417,00	197,85	63,77%
ALOUMINIO	MYTILINEOS	NATURAL GAS	334,00	93,58	37,66%
ELPEDISON THESS	ELPEDISON	NATURAL GAS	418,00	175,01	56,28%
ELPEDISON THISVI	ELPEDISON	NATURAL GAS	410,00	158,83	52,07%
HERON CC	HERON 2 VIOTIAS	NATURAL GAS	433,70	184,47	57,17%
KOMOTINI	PPC	NATURAL GAS	476,30	42,29	11,93%
KORINTHOS POWER	KORINTHOS POWER	NATURAL GAS	433,46	194,49	60,31%
LAVRIO4	PPC	NATURAL GAS	536,00	26,03	6,53%
LAVRIO5	PPC	NATURAL GAS	387,00	151,91	52,76%
MEGALOPOLIS	PPC	NATURAL GAS	811,00	313,47	51,95%
PROTERGIA CC	MYTILINEOS	NATURAL GAS	432,70	198,41	61,63%
HERON1	HERON	NATURAL GAS	49,25	1,32	3,60%
HERON2	HERON	NATURAL GAS	49,25	1,24	3,39%
HERON3	HERON	NATURAL GAS	49,25	1,38	3,77%
<b>TOTAL</b>			<b>12.085,62</b>	<b>2.999,27</b>	<b>33,36%</b>

### Notes

- Generation refers to the injection point in the System.
- Generation by dispatchable co-generation units that has not been characterised as high efficiency Co-Generation is the total generation (conventional and Co-Generation).
- Utilisation coefficient is the ratio of the monthly electricity generation to the maximum possible electricity generation during this period.
- The generation units Agios Nikolaos2 and Ptolemaida5 are in trial phase. Their Net Capacity shall be precisely determined following the completion of the trial phase.

## 2.7 Geographical Distribution of Conventional Generation<sup>1</sup>

FUEL AREA	HYDRO		LIGNITE		NATURAL GAS		TOTAL	
	NET GENERATION (GWh)	NET CAPACITY (MW)	NET GENERATION (GWh)	NET CAPACITY (MW)	NET GENERATION (GWh)	NET CAPACITY (MW)	NET GENERATION (GWh)	NET CAPACITY (MW)
ATTICA					177,94	923	<b>177,94</b>	<b>923</b>
CENTRAL GREECE	129,85	907			874,88	2.564	<b>1.004,73</b>	<b>3.471</b>
CENTRAL MACEDONIA	121,67	867			175,01	418	<b>296,68</b>	<b>1.285</b>
EAST MACEDONIA - THRACE	58,24	500			42,29	476	<b>100,53</b>	<b>976</b>
EPIRUS	15,77	544					<b>15,77</b>	<b>544</b>
EVIA					197,85	417	<b>197,85</b>	<b>417</b>
PELOPONNESE	10,66	70	79,57	511	507,96	1.244	<b>598,19</b>	<b>1.825</b>
THESSALY	62,26	130					<b>62,26</b>	<b>130</b>
WEST MACEDONIA	33,51	153	511,82	2.361			<b>545,32</b>	<b>2.514</b>
<b>TOTAL</b>	<b>431,95</b>	<b>3.171</b>	<b>591,39</b>	<b>2.872</b>	<b>1.975,93</b>	<b>6.043</b>	<b>2.999,27</b>	<b>12.086</b>

### Notes<sup>1</sup>

- Generation refers to the injection point in the System.
- Generation by dispatchable co-generation units that has not been characterised as high efficiency Co-Generation, is the total generation (conventional and Co-Generation).

### Notes<sup>2</sup>

- It includes the priority capacity of the co-generation production unit of Alouminio based on the Dispatchable RES Units Registry of the RES Operator & Guarantees of Origin (DAPEEP S.A.) and 70% of its total generation, pending relevant calculations by DAPEEP S.A.
- It includes the net capacity and net generation at the points of injection into the System from telemetered RES stations directly connected to System's substations.
- In the geographical distribution, net capacity and net generation are included in the area where the connection point of the RES station to the System is located.

## 2.8 Geographical Distribution of System RES Generation<sup>2</sup>

RES TECHNOLOGY AREA	BIOGAS		CO-GENERATION		PHOTOVOLTAIC		SMALL HYDRO		WIND		TOTAL	
	NET GENERATION (GWh)	NET CAPACITY (MW)										
ATTICA									24,01	148	<b>24,01</b>	<b>148</b>
CENTRAL GREECE			65,50	133	35,65	175	4,46	23	153,01	1.365	<b>258,63</b>	<b>1.695</b>
CENTRAL MACEDONIA			3,86	16	4,96	29	4,75	11	20,27	127	<b>33,84</b>	<b>182</b>
CYCLADES									5,79	15	<b>5,79</b>	<b>15</b>
EAST MACEDONIA - THRACE			11,65	18					63,07	518	<b>74,72</b>	<b>535</b>
EPIRUS									11,92	104	<b>11,92</b>	<b>104</b>
EVIA									179,85	905	<b>179,85</b>	<b>905</b>
IONIAN ISLANDS									10,44	93	<b>10,44</b>	<b>93</b>
PELOPONNESE	0,46	2			14,99	105			78,22	705	<b>93,67</b>	<b>812</b>
THESSALY					11,90	58	0,00	6	0,00	28	<b>11,90</b>	<b>92</b>
WEST MACEDONIA					60,76	290			35,26	294	<b>96,02</b>	<b>584</b>
<b>TOTAL</b>	<b>0,46</b>	<b>2</b>	<b>81,01</b>	<b>167</b>	<b>128,27</b>	<b>657</b>	<b>9,21</b>	<b>40</b>	<b>581,85</b>	<b>4.302</b>	<b>800,79</b>	<b>5.167</b>

### 3.1 Evolution of Commercial Programs (GWh)

**2022**

MONTH	EXPORTS (GWh)	IMPORTS (GWh)	BALANCE (GWh)
JAN	400,744	990,513	589,769
FEB	269,469	947,492	678,023
MAR	612,120	543,888	-68,232
APR	190,996	1,010,597	819,601
MAY	214,245	888,629	674,384
JUN	391,646	556,808	165,162
JUL	879,519	373,762	-505,757
AUG	688,884	300,186	-388,698
SEP	365,574	815,584	450,010
OCT	389,184	887,420	498,236
NOV	469,318	839,716	370,398
DEC	602,715	872,335	269,620
<b>TOTAL</b>	<b>5,474,414</b>	<b>9,026,930</b>	<b>3,552,516</b>

**2023**

MONTH	EXPORTS (GWh)	IMPORTS (GWh)	BALANCE (GWh)
JAN	230,049	1,303,819	1,073,770
FEB	346,672	951,589	604,917
MAR	409,196	999,391	590,195
APR	418,808	844,025	425,217
MAY	233,613	878,051	644,438
JUN	242,456	592,855	350,399
JUL	322,277	1,079,365	757,088
AUG			
SEP			
OCT			
NOV			
DEC			
<b>TOTAL</b>	<b>2,203,071</b>	<b>6,649,095</b>	<b>4,446,024</b>

### 3.2 Evolution of Physical Energy Flows (GWh)

**2022**

MONTH	EXPORTS (GWh)	IMPORTS (GWh)	BALANCE (GWh)
JAN	254,203	841,095	586,892
FEB	183,817	847,909	664,091
MAR	569,589	491,477	-78,112
APR	132,667	925,971	793,304
MAY	175,224	834,672	659,447
JUN	350,938	509,147	158,209
JUL	841,402	331,219	-510,183
AUG	635,908	274,693	-361,214
SEP	283,579	729,737	446,158
OCT	218,593	694,197	475,604
NOV	273,883	631,922	358,038
DEC	383,564	638,953	255,389
<b>TOTAL</b>	<b>4,303,367</b>	<b>7,750,991</b>	<b>3,447,624</b>

**2023**

MONTH	EXPORTS (GWh)	IMPORTS (GWh)	BALANCE (GWh)
JAN	102,786	1,148,936	1,046,150
FEB	204,853	791,532	586,679
MAR	252,610	814,730	562,121
APR	308,404	712,524	404,120
MAY	129,275	736,065	606,791
JUN	95,328	432,184	336,856
JUL	159,606	879,234	719,628
AUG			
SEP			
OCT			
NOV			
DEC			
<b>TOTAL</b>	<b>1,252,861</b>	<b>5,515,205</b>	<b>4,262,345</b>



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### 3.3 Commercial Programs of Imports per Border (GWh)

2022	INTERCONNECTION	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
		ALBANIA	BULGARIA	ITALY	N. MACEDONIA	TURKEY								
	ALBANIA	147,490	163,144	60,643	228,934	194,236	74,000	26,647	10,632	126,065	191,501	171,810	201,407	<b>1.596,509</b>
	BULGARIA	374,953	337,030	264,373	360,108	290,351	293,137	177,270	144,613	313,673	252,121	248,524	295,017	<b>3.351,170</b>
	ITALY	210,696	197,158	86,204	163,501	102,648	12,128	16,427	4,579	119,173	205,583	163,425	167,558	<b>1.449,080</b>
	N. MACEDONIA	220,180	216,560	95,520	228,066	264,194	141,547	116,238	103,183	226,724	203,987	222,713	172,637	<b>2.211,549</b>
	TURKEY	37,194	33,600	37,148	29,988	37,200	35,996	37,180	37,179	29,949	34,228	33,244	35,716	<b>418,622</b>
	<b>TOTAL</b>	<b>990,513</b>	<b>947,492</b>	<b>543,888</b>	<b>1.010,597</b>	<b>888,629</b>	<b>556,808</b>	<b>373,762</b>	<b>300,186</b>	<b>815,584</b>	<b>887,420</b>	<b>839,716</b>	<b>872,335</b>	<b>9.026,930</b>
2023	INTERCONNECTION	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
	ALBANIA	279,078	201,953	216,750	158,053	177,270	152,932	220,234						<b>1.406,270</b>
	BULGARIA	476,171	375,795	394,528	399,410	330,649	233,343	402,994						<b>2.612,890</b>
	ITALY	234,331	120,734	119,691	57,754	120,441	0,000	136,174						<b>789,125</b>
	N. MACEDONIA	280,853	220,829	233,604	203,978	213,883	172,293	283,029						<b>1.608,469</b>
	TURKEY	33,386	32,278	34,818	24,830	35,808	34,287	36,934						<b>232,341</b>
	<b>TOTAL</b>	<b>1.303,819</b>	<b>951,589</b>	<b>999,391</b>	<b>844,025</b>	<b>878,051</b>	<b>592,855</b>	<b>1.079,365</b>						<b>6.649,095</b>

### 3.4 Commercial Programs of Exports per Border (GWh)

2022	INTERCONNECTION	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
		ALBANIA	BULGARIA	ITALY	N. MACEDONIA	TURKEY								
	ALBANIA	134,757	94,445	171,319	14,096	24,992	153,110	253,443	231,197	111,455	61,192	84,019	52,845	<b>1.386,870</b>
	BULGARIA	27,739	18,184	49,339	4,476	12,095	24,192	90,280	106,816	40,785	59,353	84,320	190,247	<b>707,826</b>
	ITALY	115,453	106,567	267,077	150,359	155,526	102,163	351,200	169,480	162,610	163,037	170,573	237,480	<b>2.151,525</b>
	N. MACEDONIA	120,530	50,250	123,900	20,503	21,604	110,797	183,747	181,076	49,499	50,207	96,127	107,391	<b>1.115,631</b>
	TURKEY	2,265	0,023	0,485	1,562	0,028	1,384	0,849	0,315	1,225	55,395	34,279	14,752	<b>112,562</b>
	<b>TOTAL</b>	<b>400,744</b>	<b>269,469</b>	<b>612,120</b>	<b>190,996</b>	<b>214,245</b>	<b>391,646</b>	<b>879,519</b>	<b>688,884</b>	<b>365,574</b>	<b>389,184</b>	<b>469,318</b>	<b>602,715</b>	<b>5.474,414</b>
2023	INTERCONNECTION	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
	ALBANIA	7,365	24,708	28,341	47,211	5,811	53,491	57,796						<b>224,723</b>
	BULGARIA	31,896	49,717	85,014	53,524	55,618	118,442	76,100						<b>470,311</b>
	ITALY	149,685	228,754	253,102	289,855	146,503	0,000	170,633						<b>1.238,532</b>
	N. MACEDONIA	12,855	25,776	23,835	20,826	8,332	52,974	16,053						<b>160,651</b>
	TURKEY	28,248	17,717	18,904	7,392	17,349	17,549	1,695						<b>108,854</b>
	<b>TOTAL</b>	<b>230,049</b>	<b>346,672</b>	<b>409,196</b>	<b>418,808</b>	<b>233,613</b>	<b>242,456</b>	<b>322,277</b>						<b>2.203,071</b>



At a glance



Energy Balance



Demand



Generation



Interconnections



Annex

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MONTHLY ENERGY BULLETIN |

July 2023

| 2nd VERSION

## Remarks

**1**

The data presented in this bulletin result from the corrective settlement carried out by IPTO in W+6 timing (where W is the reference week), which is based on certified measurements.

**2**

The generation of the co-generation production unit of Alouminio included in the present bulletin has been estimated as 70% of its total generation, pending relevant calculations by RES Operator & Guarantees of Origin (DAPEEP S.A.).

# 2nd Version

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