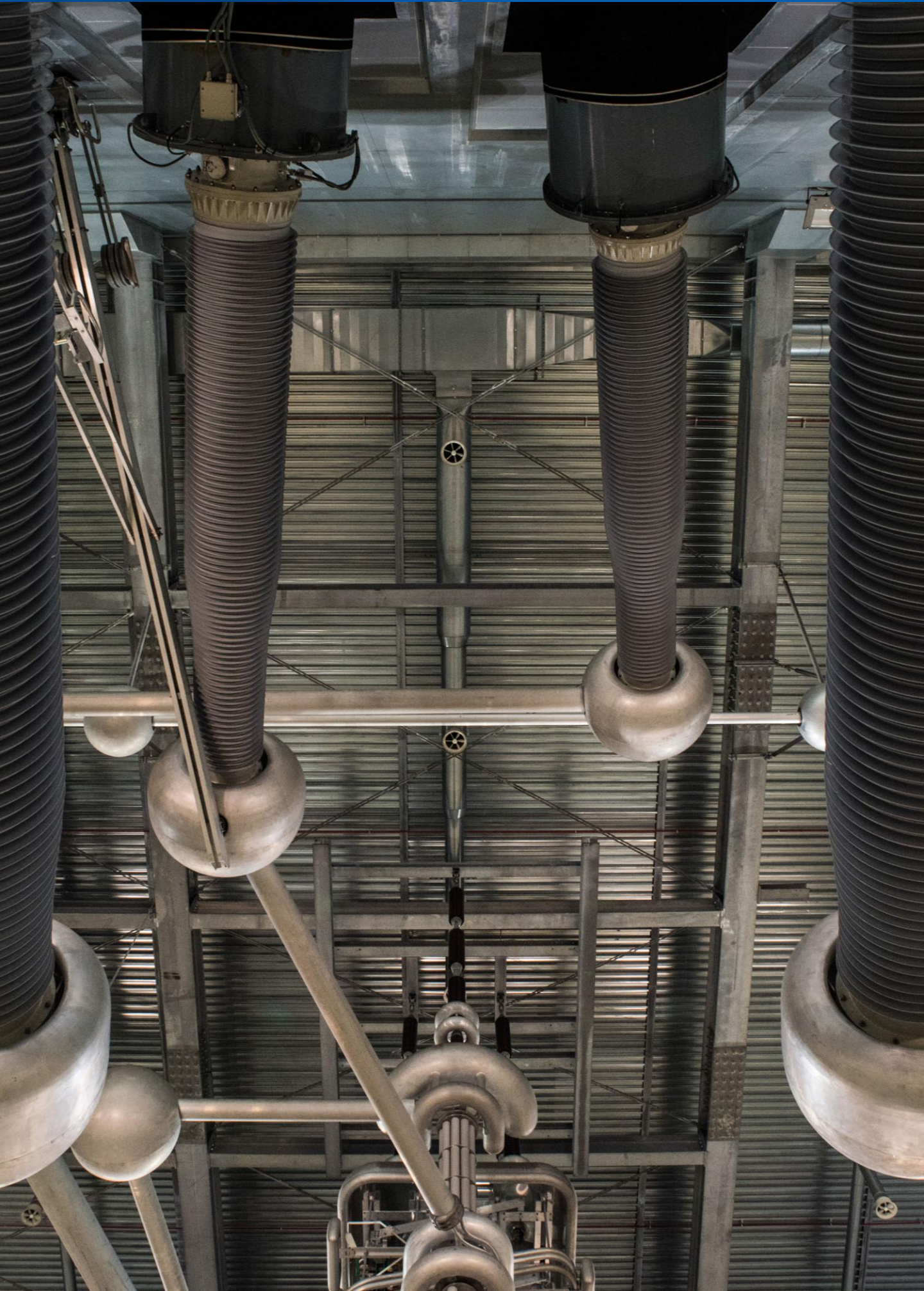


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In September, electricity demand was 26,174 GWh, a slight increase compared to the same month of the previous year (+0.5%) and down on September 2021 (-3.0%). There was also an increase in foreign exchange (+1.4%) compared to the same month in 2022. In 2023, electricity demand (232,456 GWh) increased compared to the same period in 2022 (-4.0%) and compared to the cumulative figure for 2021 (-2.9%).

The value of electricity demand was achieved with one less working day (21 vs 22), and with an average monthly temperature that was 1.2°C higher compared to September of last year. When adjusted for seasonal, temperature and calendar effects, the figure represents a +0.2% variation.

The annual trend for September 2023 (compared to September 2022) for the industrial electricity consumption index was negative (-0.9%) with adjusted and raw data.

In September 2023, 47.6% of the electricity demand was met via production from Non-Renewable Energy Sources, 38.4% via Renewable Energy Sources and the remainder via foreign exchange. In 2023, electricity demand was 232,456 GWh, 46.8% of which was met via production from Non-Renewable Energy Sources, 37.1% from Renewable Energy Sources and the remainder from the foreign balance. In September, production from Renewable Energy Sources increased compared to the same month the previous year (+25.7%). Specifically, there was an increase in renewable hydroelectric production (+74.7%) and photovoltaic production (+24.7%) and a decrease in wind production (-4.4%).

In 2023 the operating capacity of renewables increased by 3,911 MW. This value is 1,900 MW higher (+95%) compared to the same period of the previous year.

The September total for withdrawal programmes on the DAM was approximately €2.8 billion, up 6% compared to the previous month and down 73% compared to September 2022.

In September 2023, the spread between average bid-up and bid-down prices on the DSM was €93/MWh, down by 25% compared to the previous month and down by 67% compared to September 2022. Total volumes decreased compared to the previous month (-22%).

In September, the spread between bid-up and bid-down prices on the Balancing Market was €149/MWh, down 22% on August (€191/MWh) and September 2022 (€454/MWh; -67%). Total volumes were down compared to August (-27%).



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Monthly Summary and Short-Term Analysis

In September, electricity demand was 26,174 GWh, a slight increase compared to the same month of the previous year (+0.5%) and down on September 2021 (-3.0%). There was also an increase in foreign exchange (+1.4%) compared to the same month in 2022.

In 2023, electricity demand (232,456 GWh) increased compared to the same period in 2022 (-4.0%) and compared to the cumulative figure for 2021 (-2.9%).

Demand breakdown – coverage by sources

[GWh]	Sep 2023	Sep 2022	%23/22	Jan-Sep 23	Jan-Sep 22	%23/22
Renewable Hydro	3,610	2,067	74.7%	27,956	21,631	29.2%
Pumping Production ⁽²⁾	100	158	-36.7%	1,170	1,365	-14.3%
Thermal	13,859	15,859	-12.6%	121,827	145,382	-16.2%
<i>of which Biomass</i>	1,353	1,362	-0.7%	12,414	12,910	-3.8%
<i>of which Hard Coal</i>	914	1,861	-50.9%	10,650	15,174	-29.8%
Geothermal	445	440	1.1%	3,985	4,085	-2.4%
Wind	1,648	1,724	-4.4%	16,086	15,603	3.1%
Photovoltaic	2,995	2,402	24.7%	25,692	23,440	9.6%
Net Total Production	22,657	22,650	0.0%	196,716	211,506	-7.0%
Pumping	143	226	-36.7%	1,671	1,950	-14.3%
Net Total Production for Consumption	22,514	22,424	0.4%	195,045	209,556	-6.9%
<i>of which RES ⁽³⁾</i>	10,051	7,995	25.7%	86,133	77,669	10.9%
<i>of which not RES</i>	12,463	14,429	-13.6%	108,912	131,887	-17.4%
Import	3,908	3,897	0.3%	39,852	35,508	12.2%
Export	248	289	-14.2%	2,441	2,930	-16.7%
Net Foreign Exchange	3,660	3,608	1.4%	37,411	32,578	14.8%
Electricity demand⁽¹⁾	26,174	26,032	0.5%	232,456	242,134	-4.0%

In September 2023, a decrease in thermal production (-12.6%) and in wind production (-4.4%) was recorded, and there was an increase in photovoltaic production (+24.7%) and in renewable hydroelectric production (+74.7%), compared to the same month of the previous year. In 2023, there was a change in exports, which dropped (-16.7%) compared to 2022. The trend of total net production allocated for consumption in September was slightly upward (+0.4%) compared to the same period in 2022.

(1) Electricity Demand = Net Total Production for Consumption + Foreign Balance
 (2) Pumping production is calculated assuming theoretical efficiency during the pumping phase
 (3) RES Production = Renewable Hydro + Biomass + Geothermal + Wind + Photovoltaic -

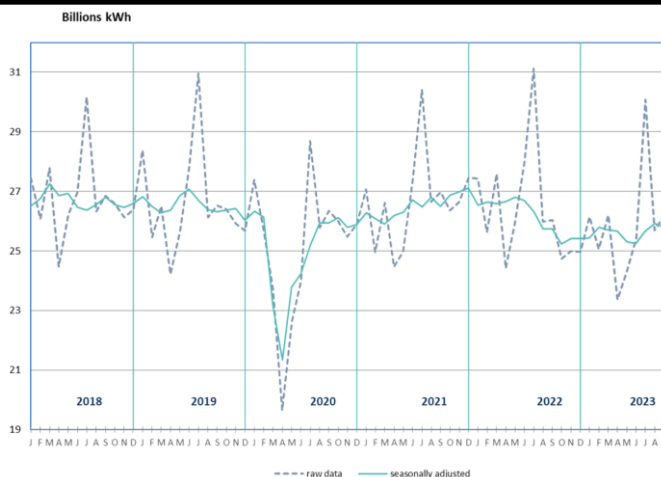
Source: Terna

The value of electricity demand was achieved with one less working day (21 vs 22), and with an average monthly temperature that was 1.2°C higher compared to September of last year. When adjusted for seasonal, temperature and calendar effects, the figure represents a +0.2% variation.

In the first nine months of the year, national demand decreased by 4.0% compared to the corresponding period in 2022 (-3.0% adjusted value).

The data for September 2023, adjusted for calendar and temperature effects, recorded a decrease in electricity demand compared to August 2023 (-0.5%).

Demand – seasonality adjusted



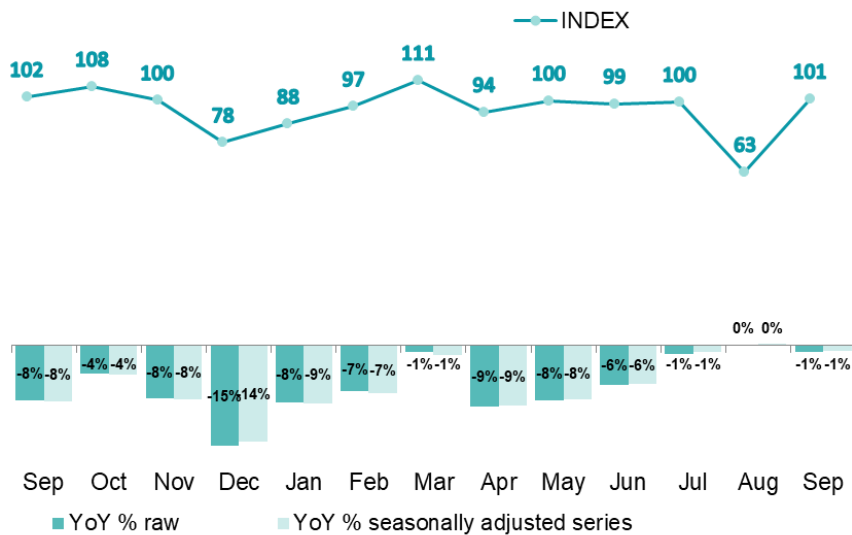
The value, adjusted for seasonal, calendar and temperature effects, shows negative cyclical change (-0.5%).

Source: Terna

IMCEI

The trend for September 2023 (compared to September 2022) was negative (-0.9%) based on raw data. Using data adjusted for calendar differences, there is no change. In the first nine months of 2023, industrial electricity consumption decreased by 4.8% compared to the same period in 2022.

IMCEI short-term analysis (2015 base = 100)

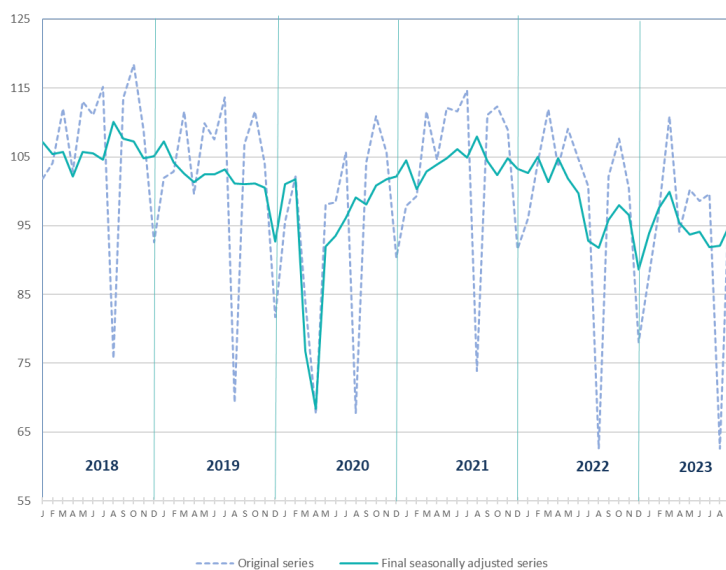


In September, the variation in the monthly index of Italian electricity consumption decreased compared to September 2022

Source: Terna

The September 2023 data, adjusted for seasonal, calendar and temperature effects, for the industrial electricity consumption index, increased (+3.2%) compared to August.

Monthly Industrial Electrical Consumption Index - IMCEI (2015 base = 100)



When adjusted for seasonal and calendar effects, the monthly figure for September 2023 increased compared to the previous month

Source: Terna

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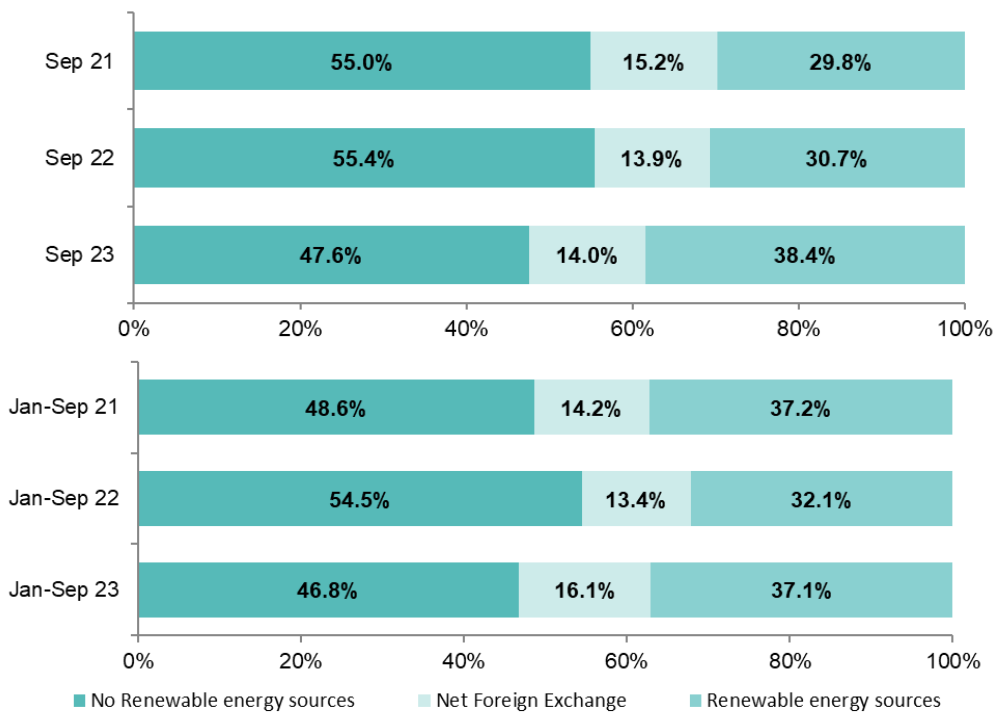


Energy Demand Mix

In September 2023, 47.6% of the electricity demand was met by production from Non-Renewable Energy Sources, 38.4% from Renewable Energy Sources and the remainder via foreign exchange.

In 2023, electricity demand was 232,456 GWh, 46.8% of which was met via production from Non-Renewable Energy Sources, 37.1% from Renewable Energy Sources and the remainder from the foreign balance.

Demand breakdown – coverage by sources

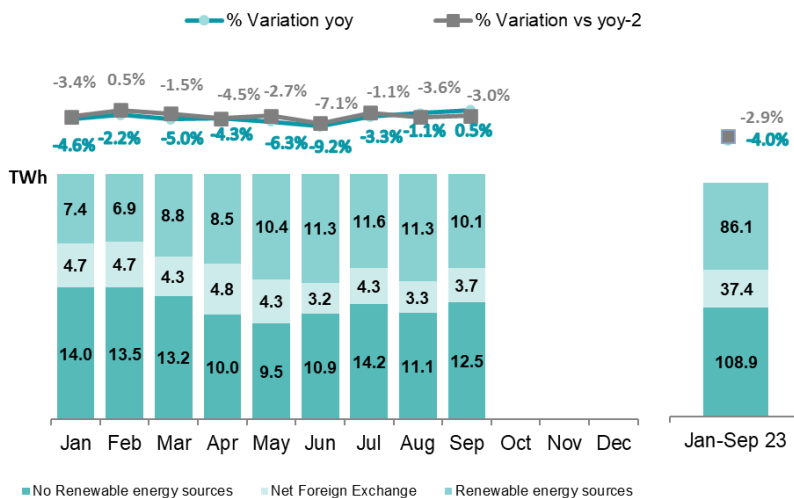


Coverage of demand from renewable sources grew from 30.7% in September 2022 to 38.4% in September 2023

In 2023 coverage of demand from non-renewables fell from 54.5% in 2022 to 46.8% in 2023

Source: Terna

2023 trend in demand breakdown and difference from 2022 and 2021



In 2023, electricity demand on the grid is lower than 2022 (-4.0%) and down compared to the cumulative figure for 2021 (-2.9%). In 2023, energy production from renewable sources totalled 86.1 TWh, an increase compared to 2022 (+10.9%)

Source: Terna

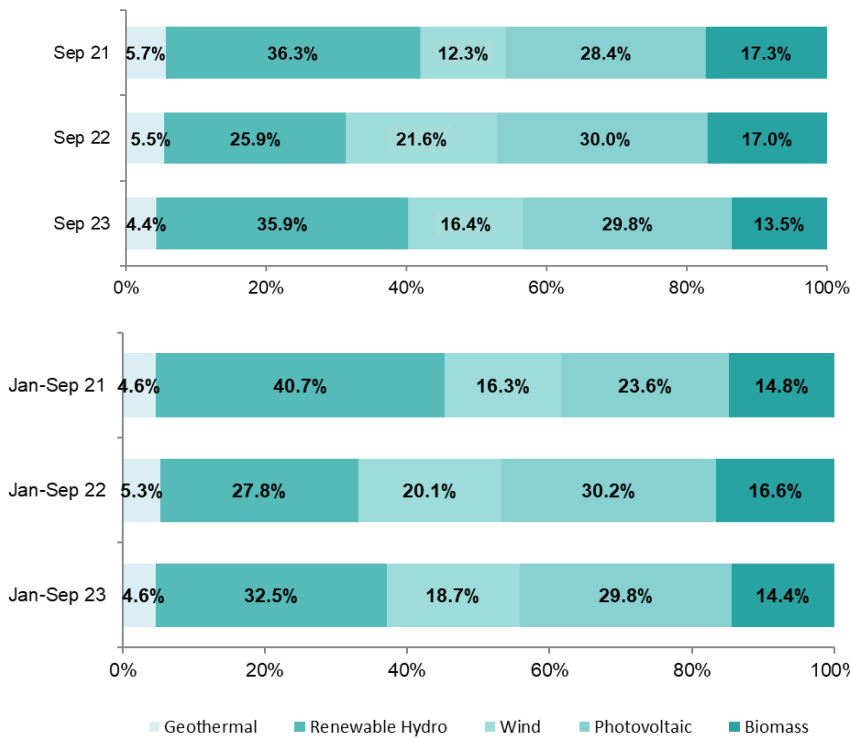
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Details of Renewable Energy Sources

In September, production from Renewable Energy Sources increased compared to the same month the previous year (+25.7%). Specifically, there was an increase in renewable hydroelectric production (+74.7%) and photovoltaic production (+24.7%) and a decrease in wind production (-4.4%).

RES Production - Breakdown

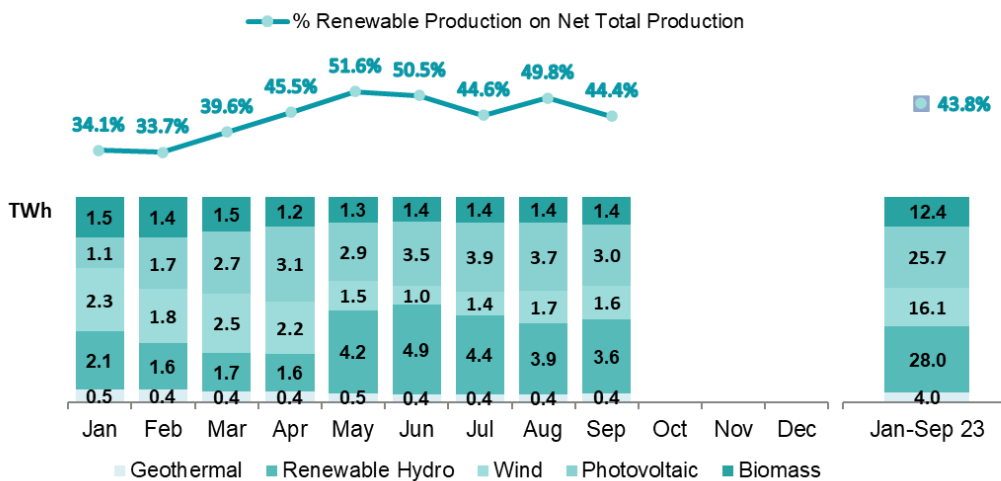


In September 2023, the greater contribution of renewable energy sources to the total is attributed to renewable hydroelectric production (35.9%) and photovoltaic production (29.8%)

In 2023 contribution from renewable hydroelectric production increased while the contribution from the other sources decreased overall compared to 2022

Source: Terna

2023 trend in net production from RES and difference from 2022



In September 2023, production from RES represented 44.4% of total net national production, an increase compared to the same month in 2022 (35.3%). In 2023, production from RES represented 43.8% of total net national production, an increase compared to the cumulative figure for 2022 (36.7%)

Source: Terna

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Historical Energy Balance Sheets

In 2023, total net production allocated for consumption (195,045 GWh) met 83.9% of national electricity demand (232,456 GWh).

2023 Historical Monthly Energy Balance Sheet

[GWh]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Renewable Hydro	2,081	1,581	1,658	1,581	4,190	4,902	4,445	3,908	3,610				27,956
Pumping Production ⁽²⁾	137	99	172	168	135	95	104	160	100				1,170
Thermal	15,569	14,866	14,712	11,307	10,915	12,330	15,667	12,602	13,859				121,827
of which Biomass	1,463	1,368	1,471	1,245	1,309	1,361	1,429	1,415	1,353				12,414
of which Hard Coal	2,295	1,868	1,881	202	561	1,226	1,041	662	914				10,650
Geothermal	458	414	442	442	462	436	447	439	445				3,985
Wind	2,277	1,802	2,547	2,165	1,515	1,036	1,354	1,742	1,648				16,086
Photovoltaic	1,095	1,734	2,665	3,105	2,929	3,537	3,886	3,746	2,995				25,692
Net Total Production	21,617	20,496	22,196	18,768	20,146	22,336	25,903	22,597	22,657				196,716
Pumping	195	142	246	240	193	136	148	228	143				1,671
Net Total Production for Consumption	21,422	20,354	21,950	18,528	19,953	22,200	25,755	22,369	22,514				195,045
of which RES ⁽³⁾	7,374	6,898	8,783	8,538	10,405	11,272	11,561	11,250	10,051				86,133
of which not RES	14,048	13,456	13,167	9,990	9,548	10,928	14,194	11,119	12,463				108,912
Import	5,080	4,944	4,445	5,005	4,616	3,546	4,651	3,657	3,908				39,852
Export	352	233	188	170	275	314	323	338	248				2,441
Net Foreign Exchange	4,728	4,711	4,257	4,835	4,341	3,232	4,328	3,319	3,660				37,411
Electricity demand ⁽¹⁾	26,150	25,065	26,207	23,363	24,294	25,432	30,083	25,688	26,174				232,456

In 2023, net total production was down (-7.0%) compared to the same period in 2022, and peak electricity demand was reached in July, with 30,083 GWh

Source: Terna

The developments in the monthly balance sheet for 2022 are provided below.

2022 Historical Monthly Energy Balance Sheet

[GWh]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Renewable Hydro	2,335	1,562	1,459	1,698	3,140	3,405	3,357	2,609	2,067	1,785	2,243	2,299	27,959
Pumping Production ⁽²⁾	117	165	181	176	146	102	165	156	158	148	139	122	1,773
Thermal	18,298	16,210	17,911	13,688	13,608	15,813	18,138	15,857	15,859	15,853	14,986	17,066	193,287
of which Biomass	1,537	1,435	1,548	1,395	1,404	1,361	1,429	1,440	1,362	1,401	1,397	1,412	17,120
of which Hard Coal	1,315	1,729	1,833	1,366	1,566	1,827	2,130	1,547	1,861	1,774	1,659	2,161	20,768
Geothermal	479	435	474	457	461	429	454	456	440	457	442	460	5,444
Wind	2,544	2,261	2,032	2,391	1,132	1,281	1,027	1,211	1,724	1,080	1,955	1,720	20,358
Photovoltaic	1,272	1,697	2,316	2,842	3,097	3,216	3,471	3,127	2,402	2,087	1,207	818	27,552
Net Total Production	25,045	22,330	24,373	21,252	21,584	24,245	26,611	23,416	22,650	21,410	20,972	22,485	276,373
Pumping	167	236	259	251	208	145	235	223	226	211	198	174	2,533
Net Total Production for Consumption	24,878	22,094	24,114	21,001	21,376	24,100	26,376	23,193	22,424	21,199	20,774	22,311	273,840
of which RES ⁽³⁾	8,167	7,390	7,829	8,783	9,234	9,692	9,737	8,843	7,995	6,810	7,244	6,709	98,433
of which not RES	16,711	14,704	16,285	12,218	12,142	14,409	16,639	14,350	14,429	14,389	13,530	15,602	175,407
Import	3,184	3,923	3,719	3,832	4,774	4,064	4,956	3,159	3,897	4,008	4,552	3,323	47,391
Export	643	392	239	412	214	159	211	371	289	474	339	661	4,404
Net Foreign Exchange	2,541	3,531	3,480	3,420	4,560	3,905	4,745	2,788	3,608	3,534	4,213	2,662	42,987
Electricity demand ⁽¹⁾	27,419	25,625	27,594	24,421	25,936	28,005	31,121	25,981	26,032	24,733	24,987	24,973	316,827

In 2022, the month with the highest demand for electricity was July, with 31,121 GWh

Source: Terna

- (1) Electricity Demand = Net Total Production for Consumption + Foreign Balance
- (2) Pumping production is calculated assuming theoretical efficiency during the pumping phase
- (3) RES Production = Renewable Hydro + Biomass + Geothermal + Wind + Photovoltaic

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Demand by Operational Area

In September 2023, demand increased in the Northern zone (TO-MI-VE), and in the Southern zone (NA) while it decreased in the Centre (RM-FI) and on the Islands (PA-CA) compared to the same period of the previous year.

Demand by Operational Area

[GWh]	Turin	Milan	Venice	Florence	Rome	Naples	Palermo	Cagliari
September 2023	2,489	5,608	4,039	4,022	3,678	3,927	1,691	720
September 2022	2,586	5,251	4,014	4,291	3,663	3,788	1,701	738
% September 23/22	-3.8%	6.8%	0.6%	-6.3%	0.4%	3.7%	-0.6%	-2.4%
Cumulated 2023	22,890	49,180	35,453	35,950	33,055	34,640	14,791	6,497
Cumulated 2022	24,037	51,099	37,180	38,370	34,441	35,539	14,558	6,910
% Cumulated 23/22	-4.8%	-3.8%	-4.6%	-6.3%	-4.0%	-2.5%	1.6%	-6.0%

In 2023, the Y-o-Y percentage change in demand was -4.3% in the North, -5.2% in the Centre, -2.5% in the South and -0.8% on the Islands

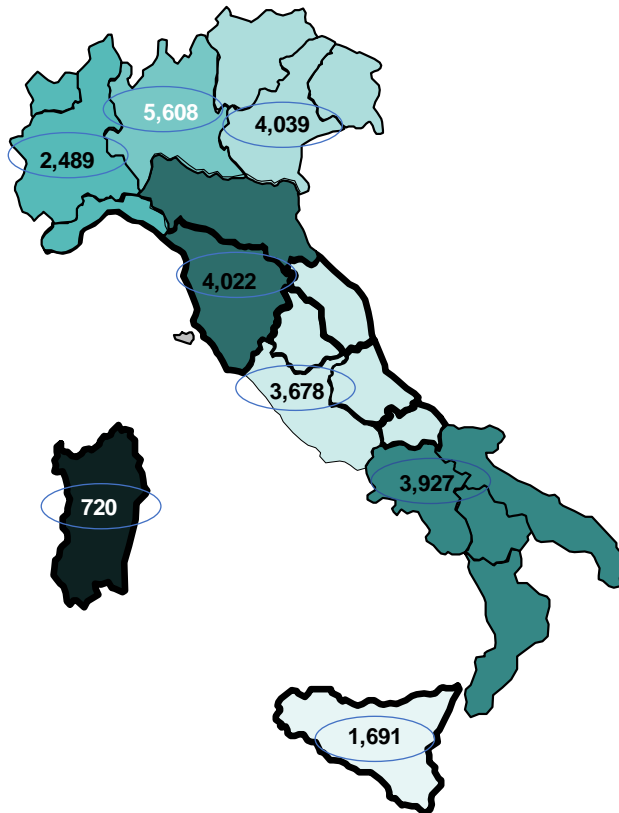
Source: Terna

Demand by Operational Area – Map Chart

[GWh]

The regions are combined in clusters on the basis of production and consumption:

- TURIN: Piedmont - Liguria - Valle d'Aosta
- MILAN: Lombardy (*)
- VENICE: Friuli Venezia Giulia - Greater Venice - Trentino Alto Adige
- FLORENCE: Emilia Romagna (*) - Tuscany
- ROME: Lazio - Umbria - Abruzzo - Molise - April
- NAPLES: Campania - Apulia - Basilicata - Calabria
- PALERMO: Sicily
- CAGLIARI: Sardinia



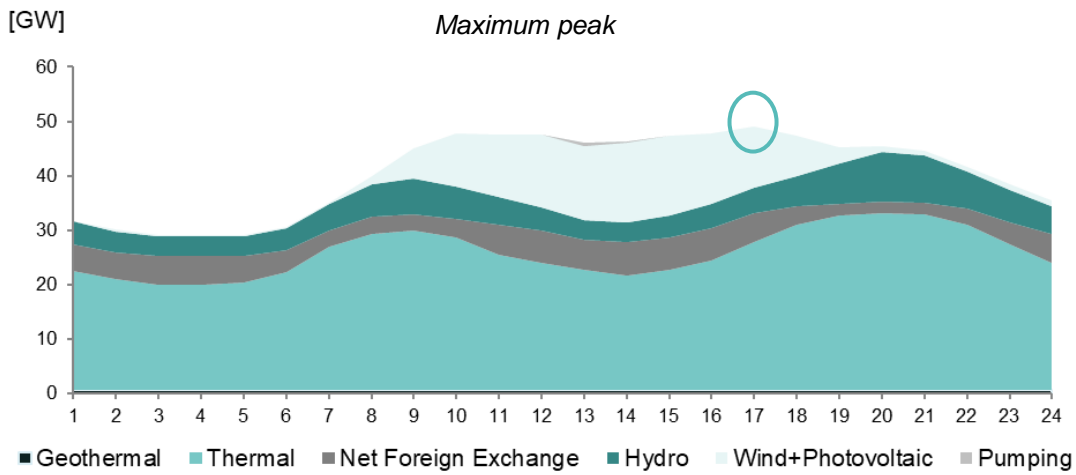
Source: Terna

(*) In these two regions, the geographical borders do not correspond to the electrical borders. Lombardy includes production plants that are part of the geographical administrative territory of Emilia Romagna.

Peak Demand

In September 2023, Peak Demand was recorded on **Tuesday 12 September between 16:00 and 17:00** and was 48,940 MW (+0.6% Y-o-Y). The hourly demand diagram of the peak day is presented below.

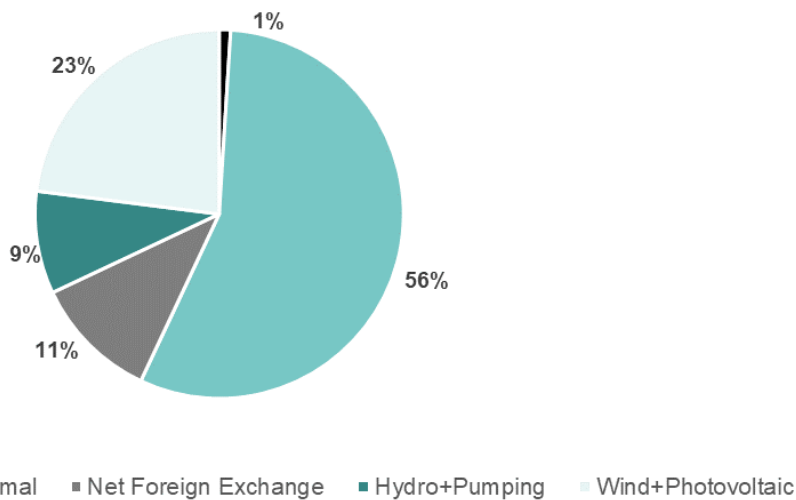
Peak Demand



At peak, the contribution from thermal production was 27,170 MW, down (-10.1%) compared to the contribution from thermal production at the September 2022 peak (30,231 MW)

Source: Terna

Coverage of demand - 12 September 2023 16:00-17:00



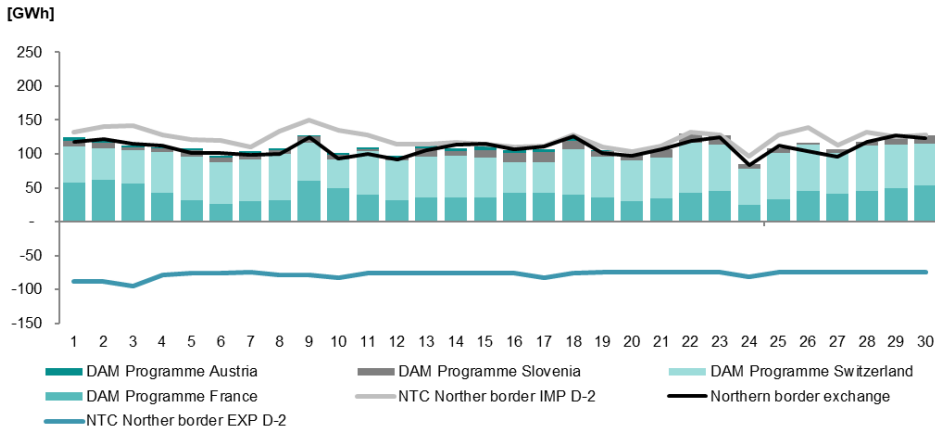
At its peak, production from wind and photovoltaic sources contributed to covering 23% of demand, with thermal production covering 56% and foreign balance covering 11%

Source: Terna

Net Foreign Exchange – September 2023

In September, there was good saturation of the planned figure for imported NTC compared to the exchange programmes on the Northern border.

Net Foreign Exchange on the Northern border



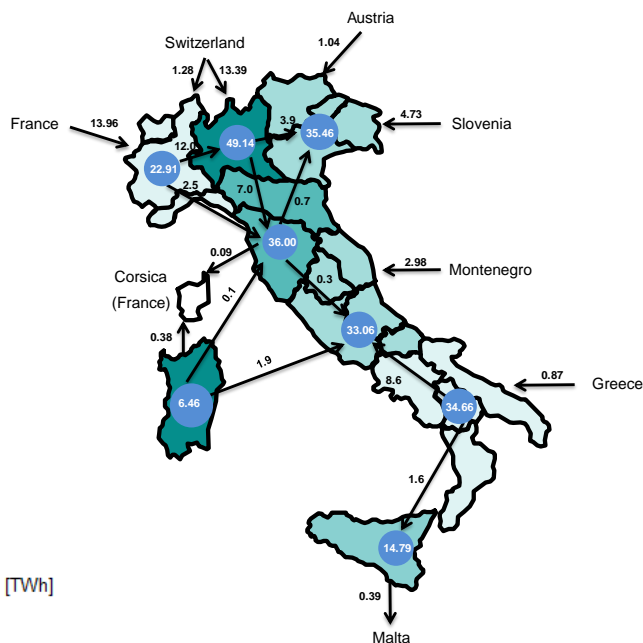
In September 2023 imports increased slightly Y-o-Y (+0.3%) amounting to 3,908 GWh and exports declined Y-o-Y (-14.2%) amounting to 248 GWh

Source: Terna

Balance of Physical Exchanges – Annual Cumulative Figure

The balance of physical electricity exchanges mainly shows the energy flows among the various areas identified in the Italian electricity system.

Balance of physical electricity exchanges: map



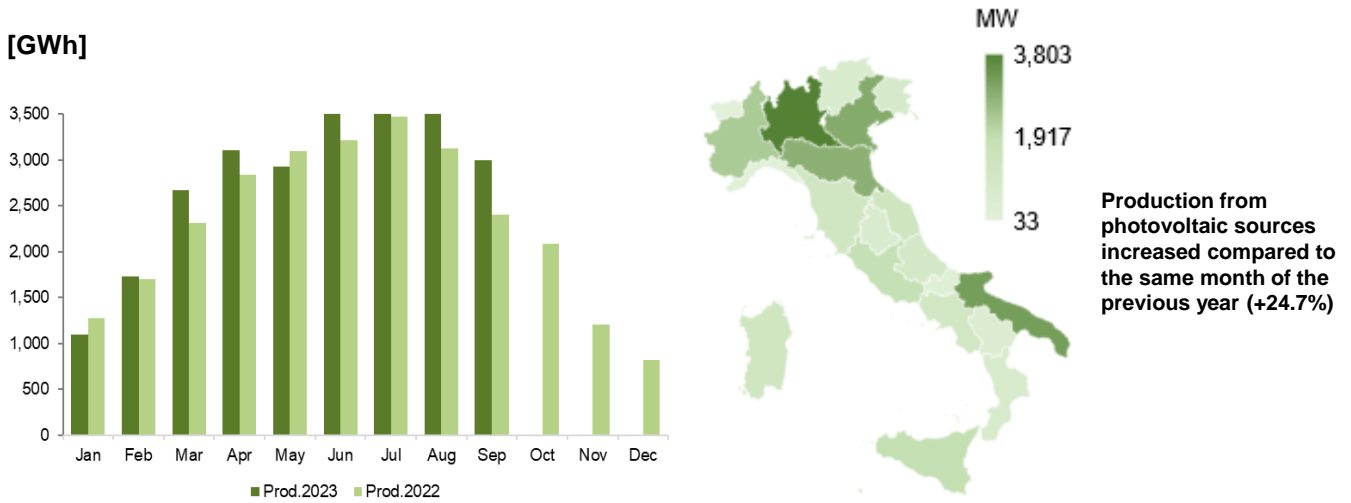
In 2023, a net exchange was recorded from the Northern zone to Emilia Romagna and Tuscany of 8.8 TWh. The mainland recorded a net exchange towards Sicily of 1.6 TWh.

Source: Terna

Production and Installed Capacity

Energy produced from photovoltaic sources in September 2023 reached 2,995 GWh, an increase compared to the same month of the previous year (+593 GWh).

Photovoltaic production (left) and distribution of operating capacity¹ (right)

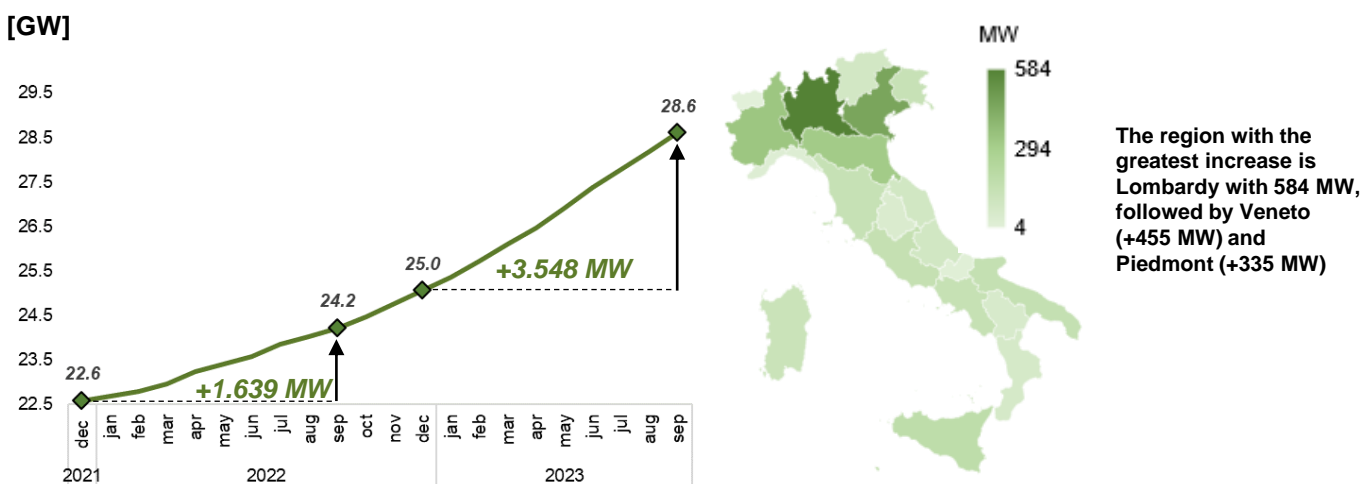


1. The operating capacity takes into account new activations, upgrades and decommissioning of plants

Source: Terna

In the first nine months of 2023, operating capacity increased by 3,548 MW. During the same period of 2022 the increase was 1,639 MW, recording an increase of 1,909 MW (+117%).

Cumulative operating capacity (left) and distribution of new activations 2023 (right)



Source: Terna

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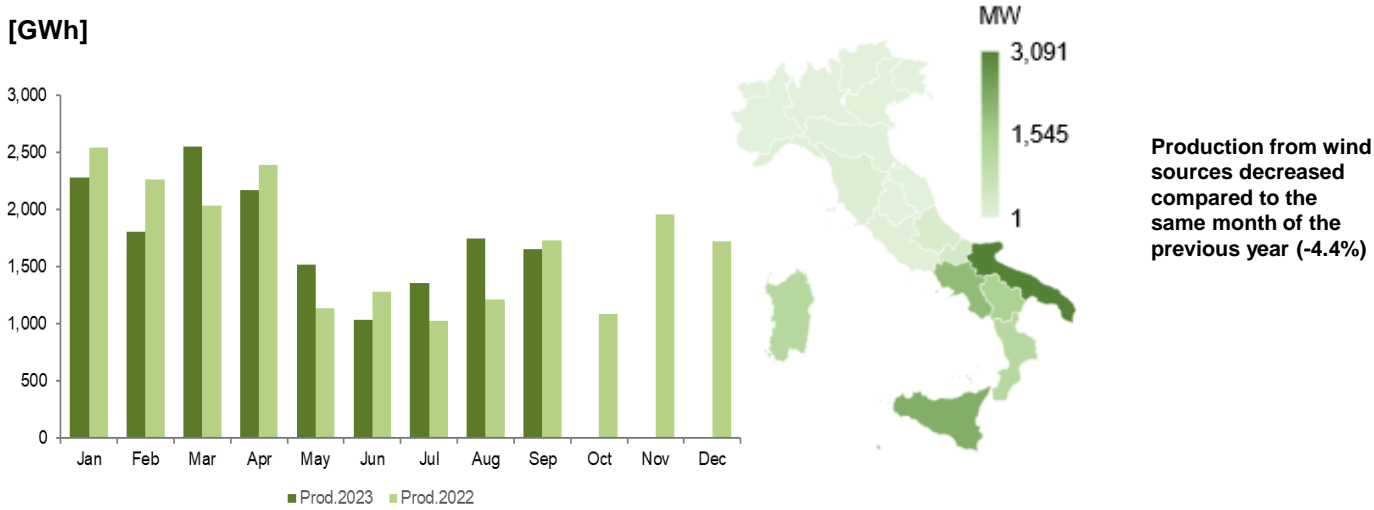
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Energy produced from wind production sources in September 2023 reached 1,648 GWh, down compared to the same month of the previous year (-76 GWh).

Wind production (left) and distribution of operating capacity¹ (right)



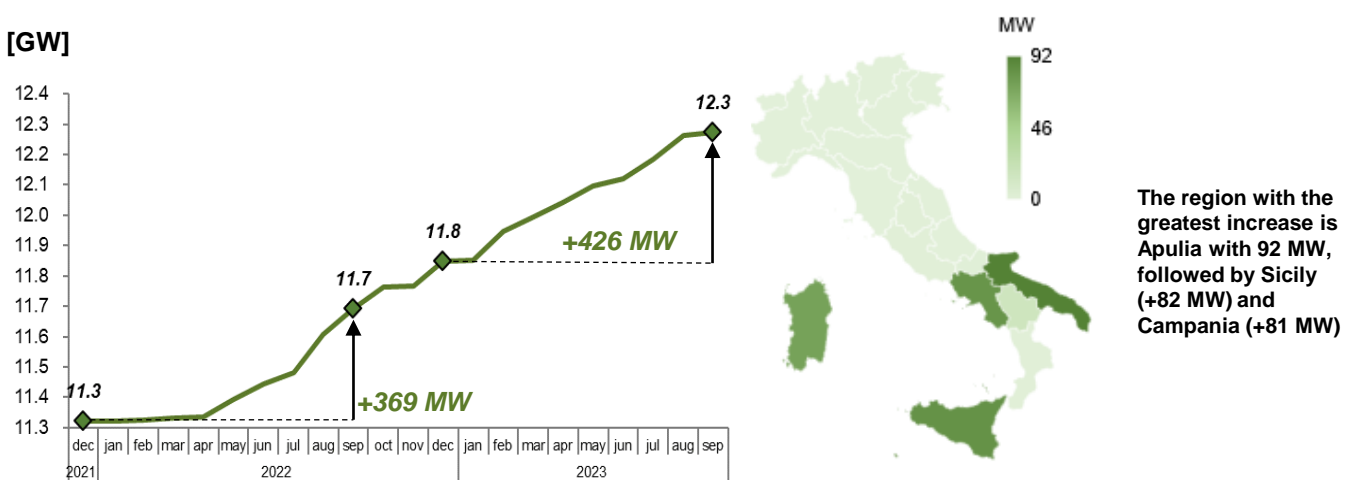
Production from wind sources decreased compared to the same month of the previous year (-4.4%)

1. The operating capacity takes into account new activations, upgrades and decommissioning of plants

Source: Terna

In the first nine months of 2023, operating capacity increased by 426 MW. During the same period of 2022 the increase was 369 MW, recording an increase of 57 MW (+15%).

Cumulative operating capacity (left) and distribution of new activations 2023 (right)



The region with the greatest increase is Apulia with 92 MW, followed by Sicily (+82 MW) and Campania (+81 MW)

Source: Terna

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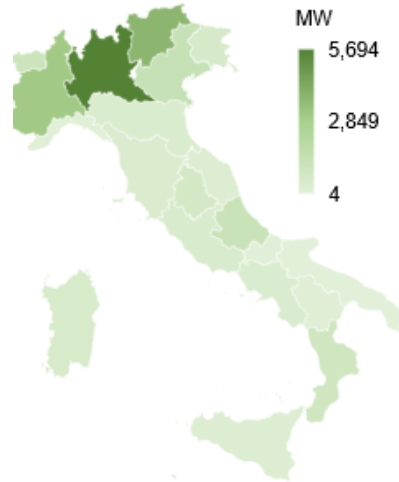
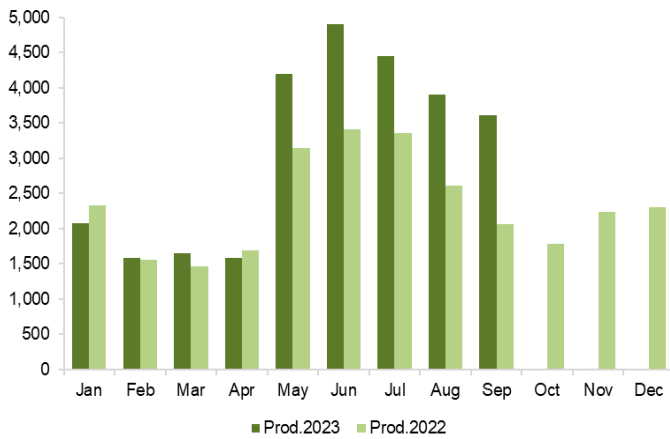
Electricity System



Energy produced from renewable hydroelectric production sources in September 2023 reached 3,610 GWh, an increase compared to the same month of the previous year (+1,543 GWh).

Renewable hydroelectric production (left) and distribution of operating capacity¹ (right)

[GWh]



Production from renewable hydroelectric production sources increased compared to the same month of the previous year (+74.7%)

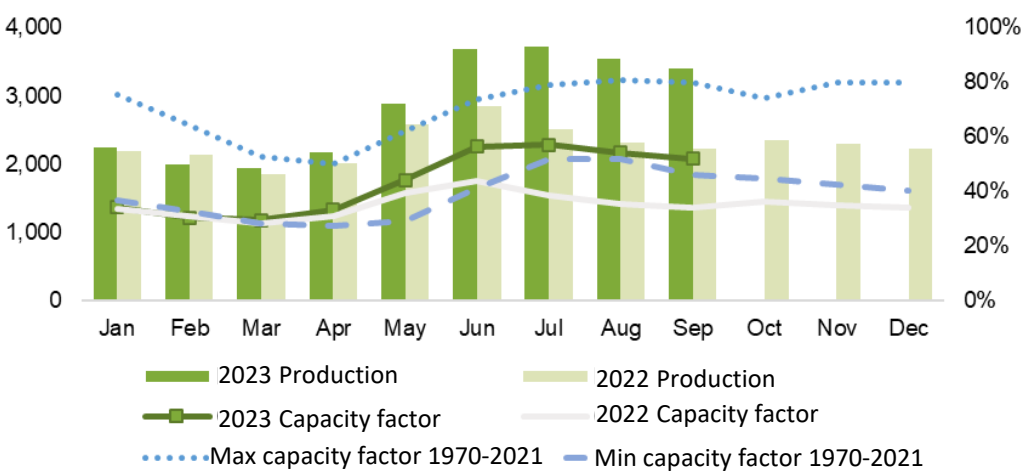
1. The operating capacity takes into account new activations, upgrades and decommissioning of plants.

Source: Terna

In September, hydroelectric producibility grew (+53.1%) compared to the same month of the previous year.

Hydroelectric Producibility and Reservoir Percentage

[GWh]



In September 2023, considering Italy as a whole, the ratio between the reservoir and the maximum reservoir capacity was 52.1%, up compared to the same month in 2022 (34.1%)

		Reservoir Capacity	NORTH	CENTRE SOUTH	ISLANDS	TOTAL
Sep	22	[GWh]	2,414	861	126	3,401
	23	% (capacity/max capacity)	55.8%	47.5%	33.1%	52.1%
	22	[GWh]	1,362	706	155	2,222
	23	% (capacity/max capacity)	31.5%	38.9%	40.6%	34.1%

Source: Terna

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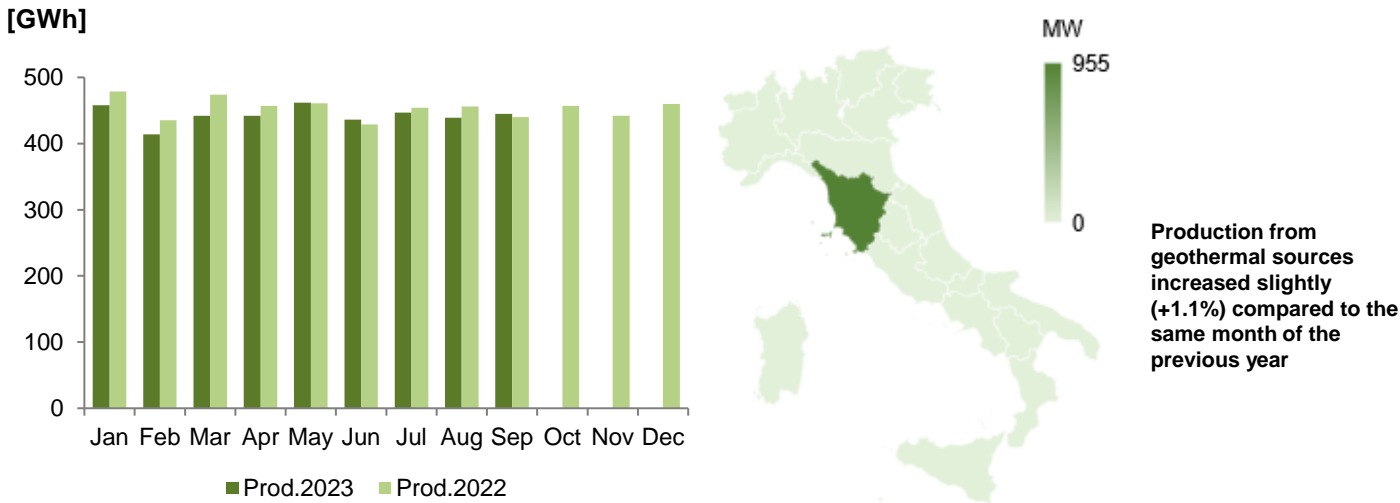
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Energy produced from geothermal production sources in September 2023 reached 445 GWh, a slight increase compared to the same month of the previous year (+5 GWh).

Geothermal production (left) and distribution of operating capacity¹ (right)

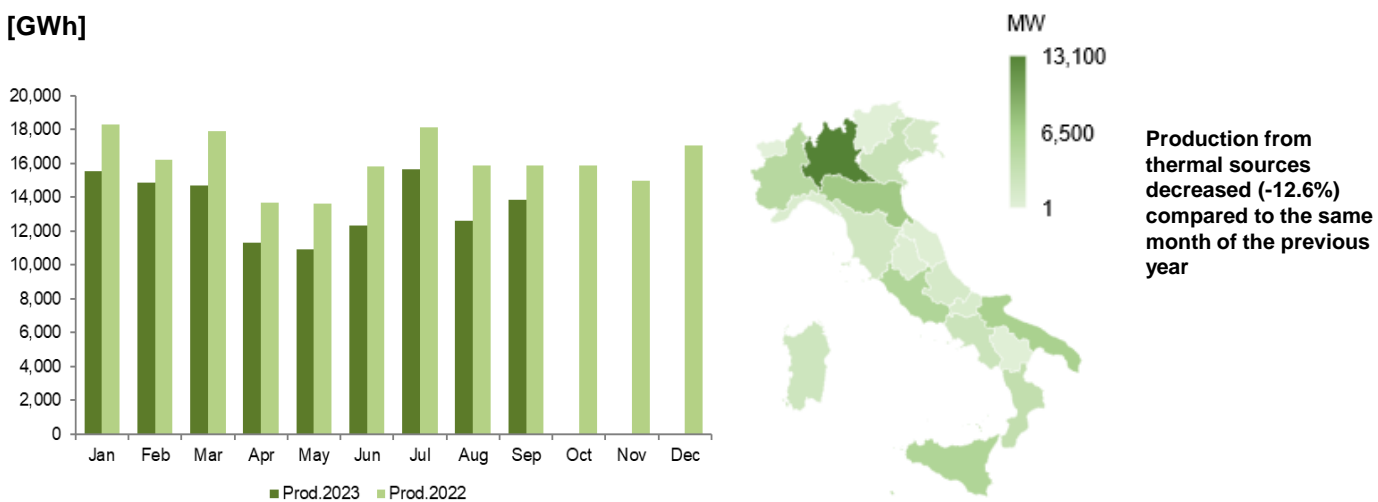


1. The operating capacity takes into account new activations, upgrades and decommissioning of plants

Source: Terna

Energy produced from thermal production sources in September 2023 reached 13,859 GWh, down compared to the same month of the previous year (-2,000 GWh).

Thermal production (left) and distribution of operating capacity¹ (right)



1. The operating capacity takes into account new activations, upgrades and decommissioning of plants

Source: Terna

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In 2023 the operating capacity of renewables increased by 3,911 MW. This value is 1,900 MW higher (+95%) compared to the same period of the previous year.

Variation in monthly operating capacity and number of plants per Source in Italy 2023¹

[MW]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Photovoltaic	296	376	386	360	435	468	406	396	424				3,548
Wind	4	93	48	50	53	25	63	80	11				426
Hydroelectric	1	2	-111 ²	1	2	3	-6	-1	6				-103
Geothermal & Biomass	-4	0	1	-2	9	1	-5	39	0				41
Total	297	471	324	409	499	498	458	514	441				3,911

Number of Plants	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Photovoltaic	29,651	35,807	37,586	30,690	35,485	33,722	29,478	25,845	27,249				285,513
Wind	0	17	7	3	3	3	5	9	5				52
Hydroelectric	6	3	8	3	12	6	3	2	8				51
Geothermal & Biomass	2	7	3	6	9	6	0	8	7				48
Total	29,659	35,834	37,604	30,702	35,509	33,737	29,486	25,864	27,269				285,664

Source: Terna

The evolution of operational capacity by source in 2022 is shown below.

Variation in monthly operating capacity and number of plants per Source in Italy 2022¹

[MW]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Photovoltaic	106	117	155	282	163	189	269	171	186	257	299	287	2,482
Wind	1	1	7	5	57	53	34	129	83	72	3	82	526
Hydroelectric	3	2	-3	4	-6	3	2	-5	5	11	12	3	31
Geothermal & Biomass	0	1	0	1	-5	0	0	1	0	3	1	-4	-2
Total	110	121	159	292	210	245	305	296	274	343	314	368	3,037

Number of Plants	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Photovoltaic	9,003	10,033	13,394	10,489	14,371	14,661	15,667	15,616	18,901	26,003	28,514	29,154	205,806
Wind	6	6	18	10	7	19	18	14	18	76	6	10	208
Hydroelectric	14	6	12	10	8	12	7	7	13	33	11	10	143
Geothermal & Biomass	3	4	0	7	-3	6	2	5	6	6	5	2	43
Total	9,026	10,049	13,424	10,516	14,383	14,698	15,694	15,642	18,938	26,118	28,536	29,176	206,200

Source: Terna

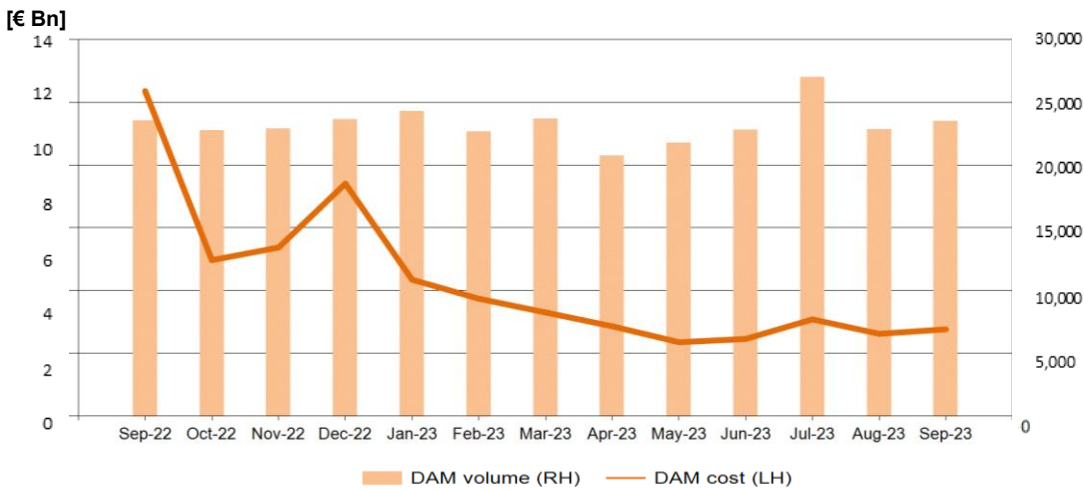
1. The operating capacity and the number of plants take into account new activations, upgrades and decommissioning of plants
2. The decrease in renewable hydroelectric capacity is due to a change in the master data on the technical sub-type of a plant, changed from mixed pumping (Renewable) to pure pumping (Non-Renewable). Therefore, the plant has not been decommissioned, but excluded from renewables

Day-Ahead Market

The September total for withdrawal programmes on the DAM was approximately €2.8 billion, up 6% compared to the previous month and down 73% compared to September 2022.

The increase compared to August is due to growth in both average PUN and demand, while the decrease on the previous year is due to a drop in average PUN from €429.9/MWh in September 2022 to €115.7/MWh in September 2023.

Day Ahead Market – amounts and volumes

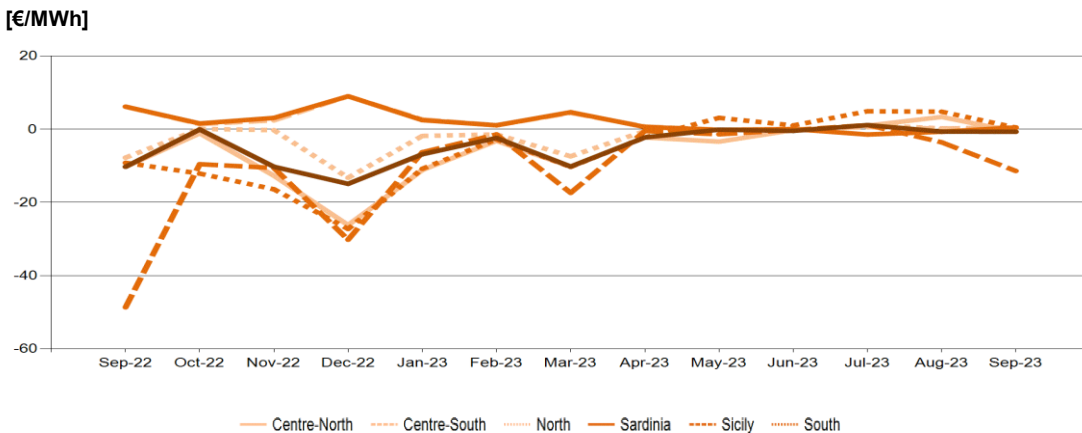


Total amount in September 2023 down 73% compared to September 2022

Source: Terna calculation on GME data

In September, the zonal prices were basically in line with the PUN, with the exception of the Sardinia zone, which recorded a spread of €-11.4/MWh.

Spread compared to the PUN



September 2023 zonal prices in line with the PUN for all zones with the exception of Sardinia

Source: Terna calculation on GME data

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The spread between the peak and off-peak prices in September was, on average, € 8.8/MWh. The highest spread was recorded in the Centre-North zone, where it was € 13.1/MWh.

Day Ahead Market – PUN and zonal prices [€/MWh]

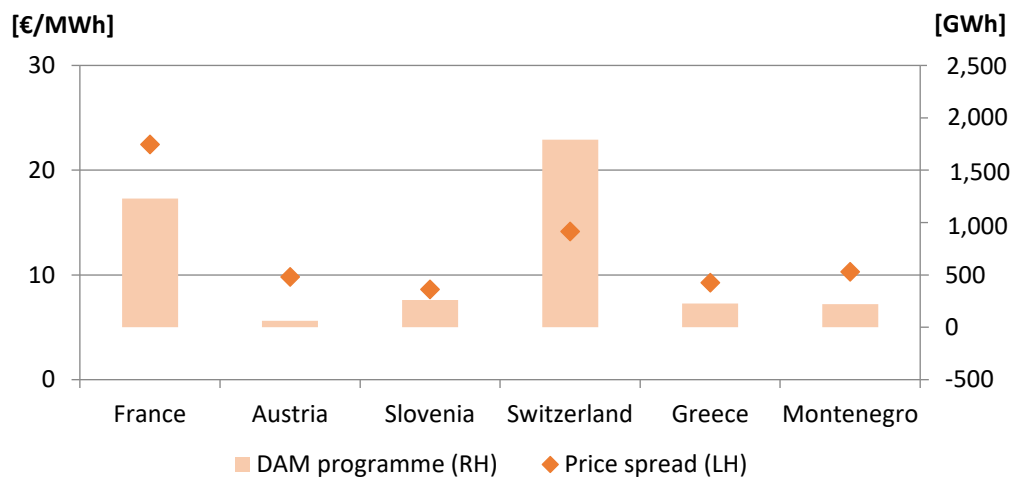
€/MWh	PUN	North	Centre-North	Centre-South	South	Sicily	Sardinia	Calabria
Media	115.7	116.1	116.2	116	115	116.1	104.3	115
Y-o-Y	-314.2	-319.9	-319.8	-306.2	-304.6	-304.6	-277	-304.7
Δ vs PUN	-	0.4	0.5	0.3	-0.7	0.4	-11.4	-0.7
Δ vs PUN 2022	-	6.1	6.1	-7.8	-10.3	-9.2	-48.7	-10.3
Peak	123.4	124.6	124.7	123.7	121.1	121.9	101.9	121
Off-peak	111.5	111.6	111.6	111.8	111.7	113	105.6	111.7
Δ Peak v Off Peak	11.9	13	13.1	11.9	9.4	8.9	-3.7	9.3
Minimum	10	10	10	10	10	10	0	10
Maximum	227.3	227.3	227.3	227.3	227.3	244.5	227.3	227.3

Peak-off peak spread up compared to the previous month for all zones

Source: Terna calculation on GME data

September 2023 saw a decrease in price spreads on the Northern border compared to the previous month. The exception was an increase in the price differential with France. Imports totalled 3.9 TWh, up slightly compared to the previous month (+3%), with France accounting for 31% of the total and Switzerland 46%. Total exports were 0.15 TWh, with Slovenia accounting for 34% and Greece 30%.

Price spread with foreign exchanges and day ahead programmes



Net imports on the northern border of 3.3 TWh

Source: Terna calculation

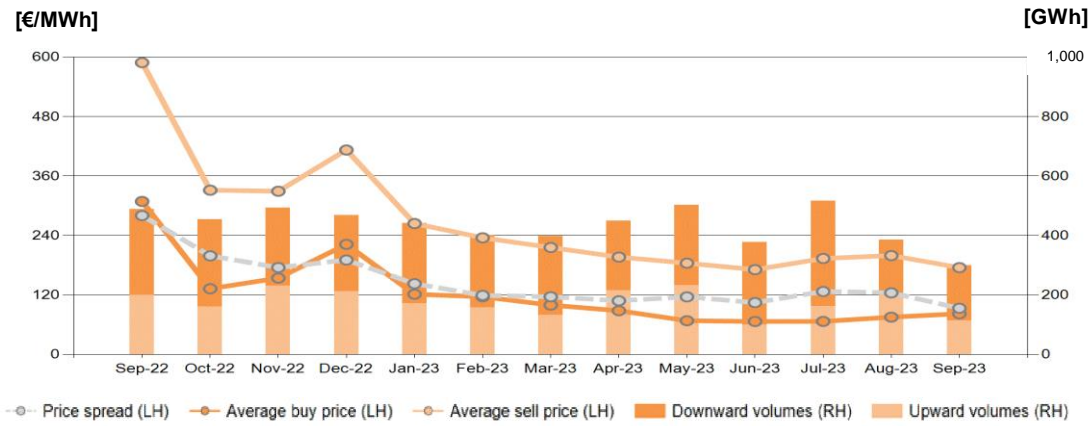
Ex-ante Ancillary Services Market

In September 2023, the spread between average bid-up and bid-down prices was €93/MWh, down 25% compared to the previous month and down 67% compared to September 2022.

Total volume fell compared to the previous month (-22%). In particular upward volumes decreased by 43%, and downward volumes by 1%.

The upward volumes decreased by 43% and downward volumes by 36% compared to the same month of the previous year.

Ex-ante Ancillary Services - prices and volumes

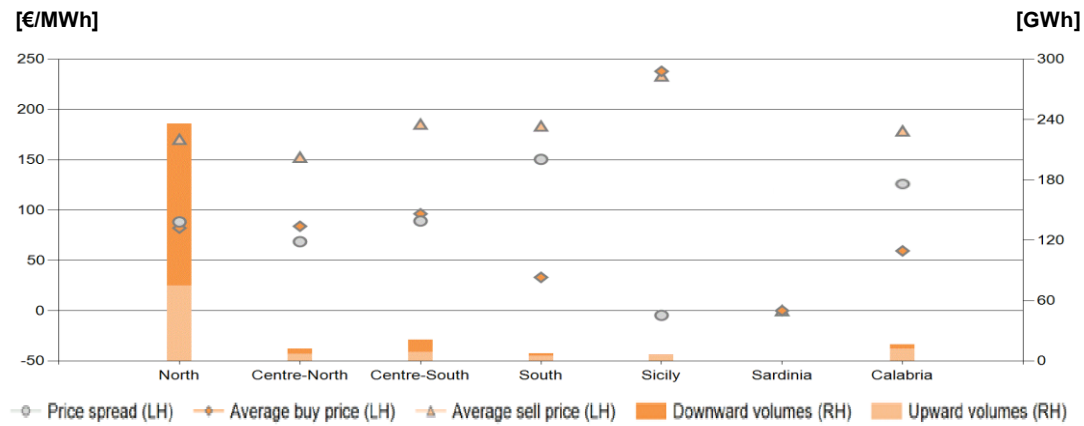


Average bid-up price in September 2023 of €175/MWh
 Average bid-down price in September 2023 of €82/MWh

Source: Terna

The market zone characterised by the highest spread (€150/MWh) is the South. This spread recorded a 6% decrease compared to the previous month, due both to a reduction in the average bid-up price of 5% (from €193/MWh in August to €184/MWh in September) and to an increase in the average bid-down price of 3% (from €32/MWh in August to €33/MWh in September).

Ex-ante Ancillary Services - prices and volumes by market zone



South: zone with the highest price spread
 North: zone with the largest volume moved

Source: Terna

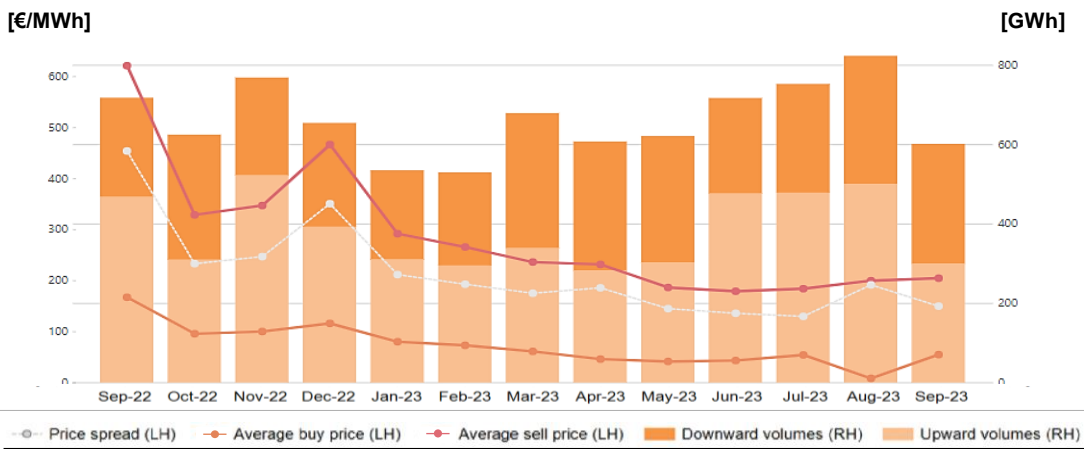
Balancing Market

In September 2023, the spread between average bid-up and bid-down prices was €93/MWh, down 25% compared to the previous month and down 67% compared to September 2022.

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Balancing market – prices and volumes

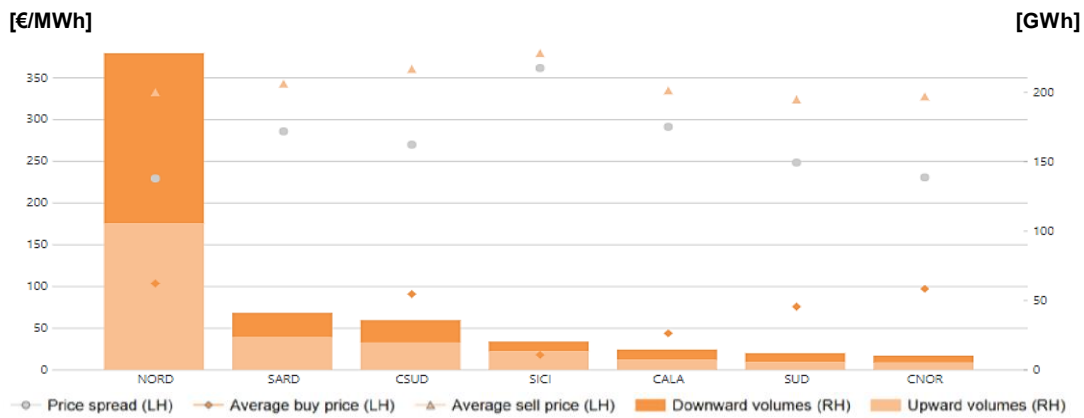


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Balancing market – prices and volumes by market zone



South: zone with the highest price spread
 North: zone with the largest volume moved

Source: Terna

Commodities – Spot Market

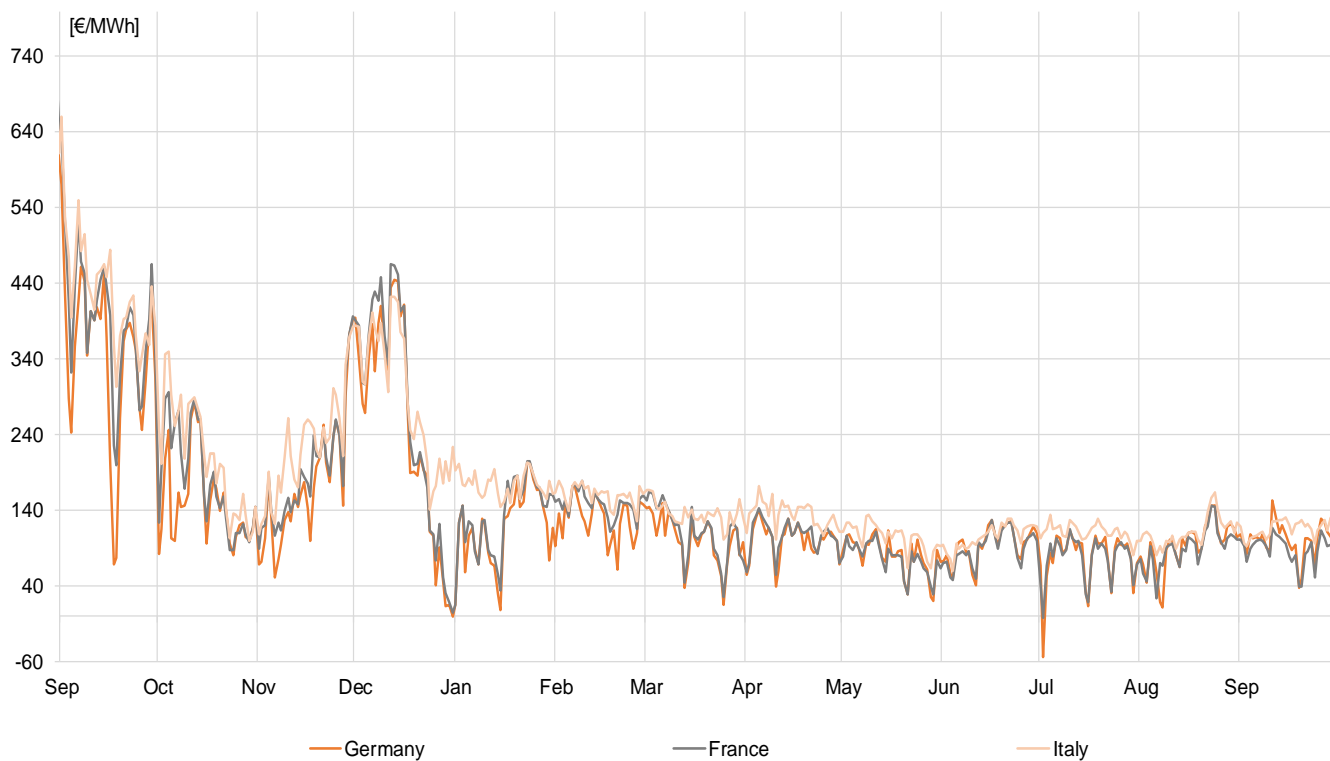
In September, Brent prices recorded an average value of \$93.8/bbl, up on August (+8.8%).

The average prices of coal (API2) were up compared to August, settling at around \$120.4/t (+4.2%).

European gas prices (TTF) in September increased compared to August, with a monthly average of €36.2/MWh (+6.5% compared to the previous month). The PSV recorded an increase, settling at €38.0/MWh (+11.3%).

Electricity prices in Italy rose in September compared to the previous month, with a monthly average of €115.7/MWh (+3.4%). The French power exchange was down, with the price of electricity at €88.7/MWh (-2.4%), while the German exchange price rose, at €100.7/MWh (+6.8%).

Spot electricity prices



Source: Terna calculation on GME and EPEX data

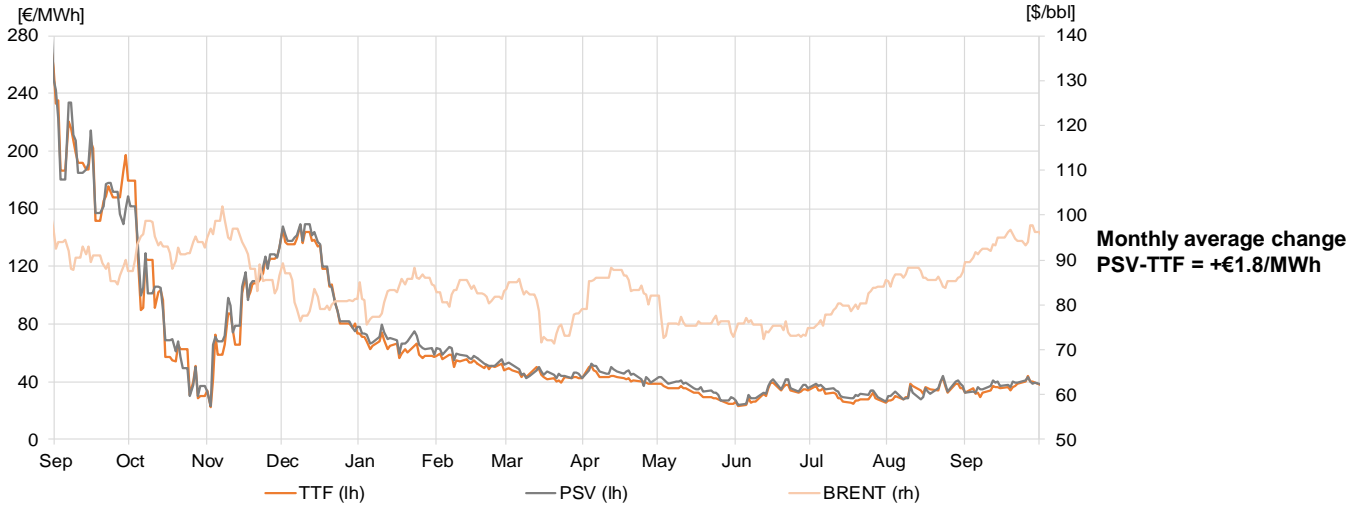
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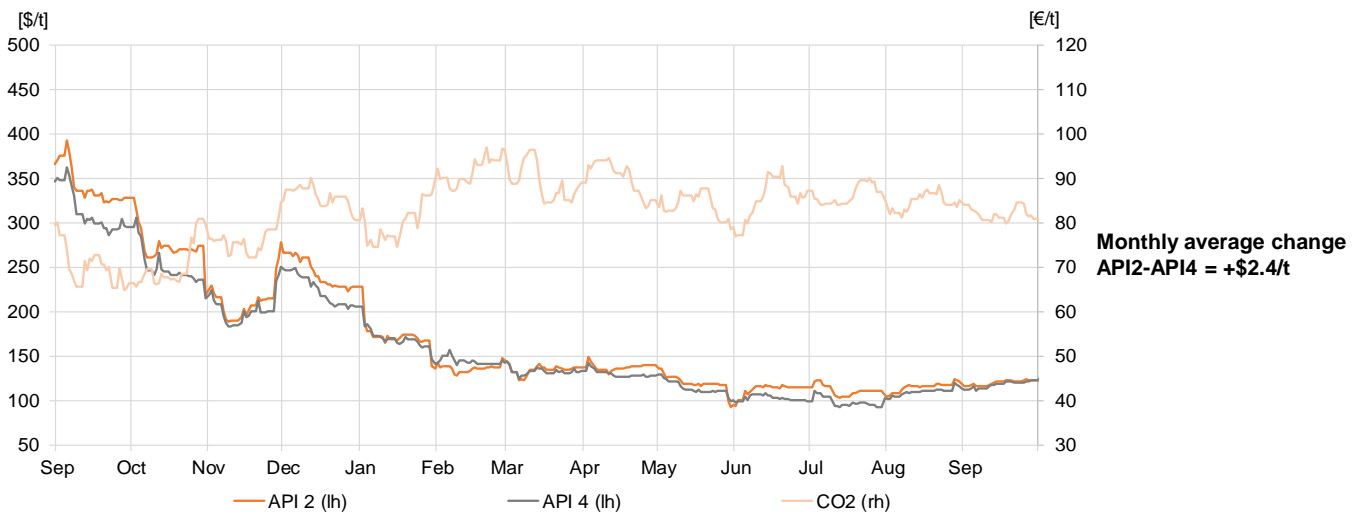


Gas & Oil spot prices



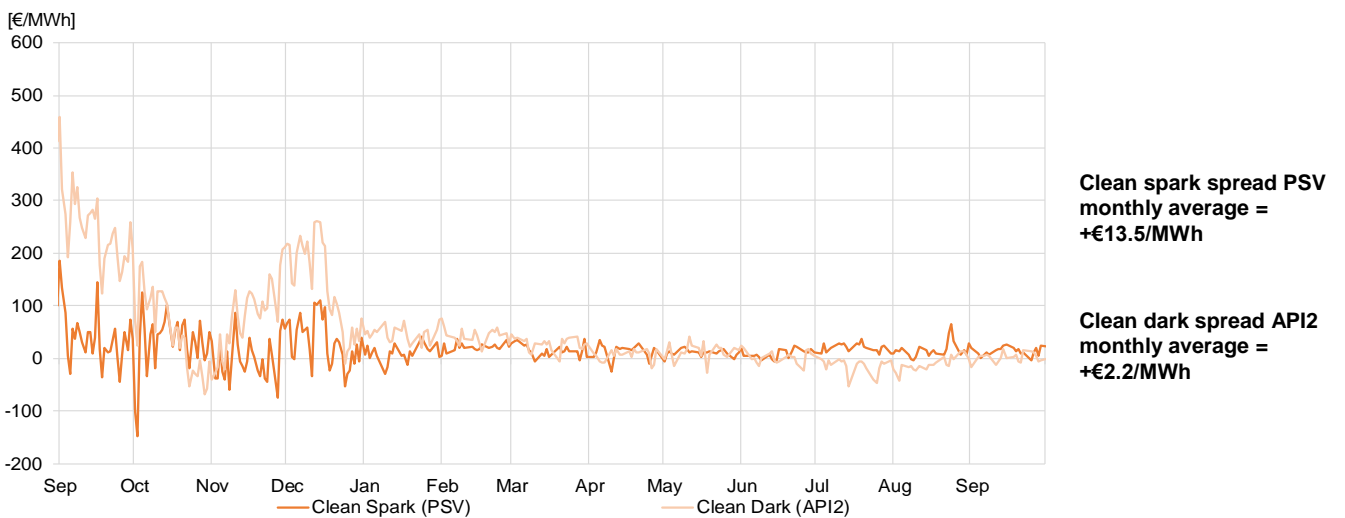
Source: Terna calculation on Bloomberg data

Coal & Carbon spot prices



Source: Terna calculation on Bloomberg data

Clean Dark & Spark spreads Italy



Source: Terna calculation on Bloomberg data

Commodities – Forward Market

In September, Brent forward prices recorded an average value of \$91.3/bbl, down compared to August (+8.3%).

The average forward prices of coal (API2) were up compared to August, settling at around \$130.7/t (+1.9%).

Forward prices of gas in Europe (TTF) were down compared to the previous month (-2.4%), settling at around €50.8/MWh. Forward prices in Italy (PSV) were also up, which showed an average figure of €52.0/MWh (-3.0%).

The average forward prices of electricity in Italy stood at around €147.6/MWh, down compared to the previous month (-2.2%). The French power exchange was down, where the price stood at around €135.7/MWh (-13.6%), as was the German power exchange, where the price was €127.8/MWh (-6.9%).

Forward Electricity Prices – Year+1



Source: Terna calculation on Bloomberg data

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Electricity Market



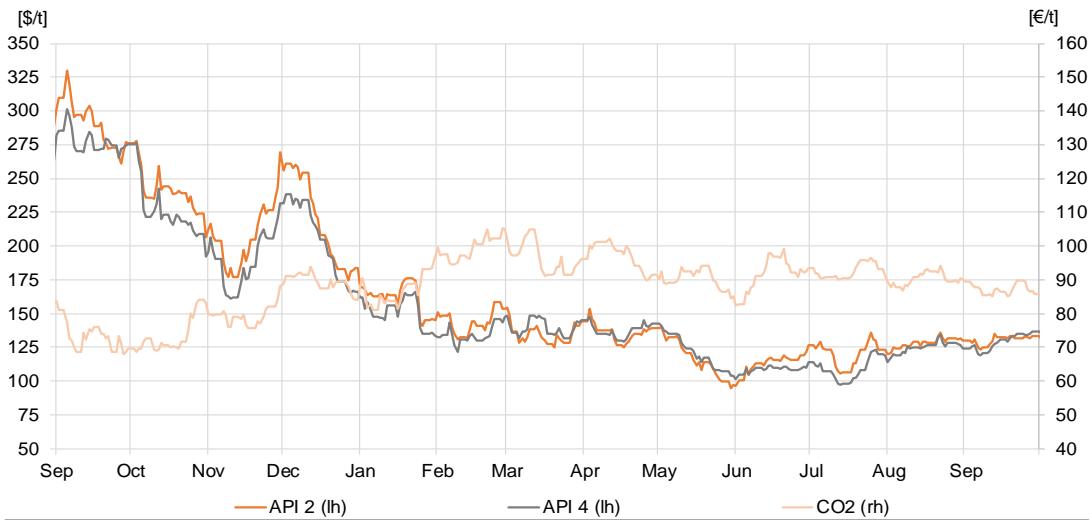
Year+1 Forward Gas & Oil Prices



Monthly average change
PSV-TTF = +€1.2/MWh

Source: Terna calculation on Bloomberg data

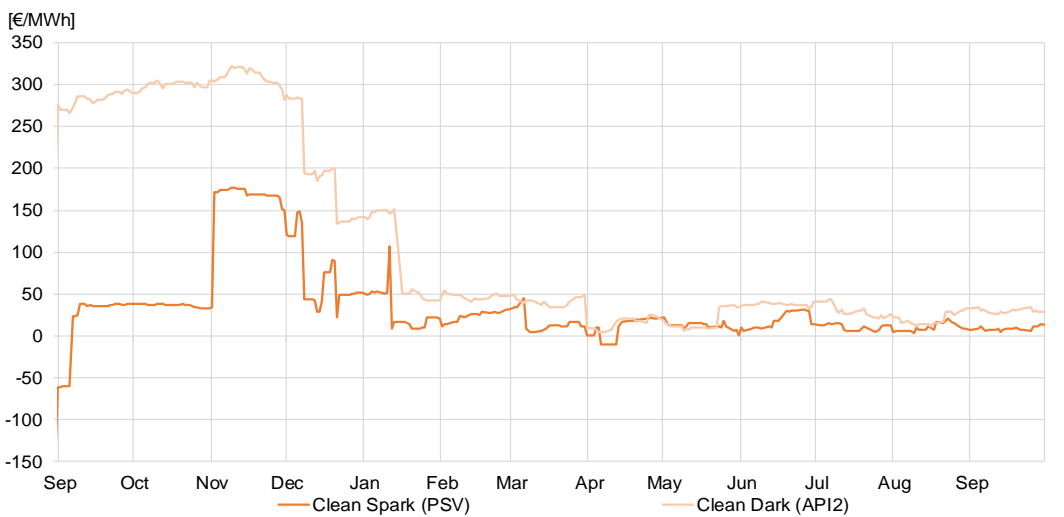
Year+1 Forward Coal & Carbon Prices



Monthly average change
API2-API4 = +\$1.7/t

Source: Terna calculation on Bloomberg data

Clean Year+1 Forward Dark & Spark spreads Italy



Clean spark spread PSV
monthly average =
+€8.8/MWh

Clean dark spread API2
monthly average =
+€23.1/MWh

Source: Terna calculation on Bloomberg data